

Official Transcript of Proceedings
NUCLEAR REGULATORY COMMISSION

Title: NRC/DOE Joint Public Meeting
NDA Section 3116 Accomplishments,
Challenges, and Lessons Learned

Docket Number: (n/a)

Location: Aiken, South Carolina

Date: Thursday, July 18, 2013

Work Order No.: NRC-092

Pages 1-107

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

+ + + + +

NRC\DOE JOINT PUBLIC MEETING

NDA SECTION 3116 ACCOMPLISHMENTS, CHALLENGES,
AND LESSONS LEARNED

PUBLIC MEETING

+ + + + +

Thursday,

July 18th, 2013

+ + + + +

Aiken, South Carolina

The Public Meeting was held at 5:00 p.m., at
the U.S. Department of Energy Meeting Center, 230
Village Green Boulevard, Suite 220, Aiken, South
Carolina, Mark Gilbertson, Facilitator, presiding.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

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
26

PRESENT:

MARK GILBERTSON, U.S. DOE HQS., FACILITATOR

LARRY W. CAMPER, NRC

SHERRI ROSS, DOE-SR

LINDA SUTTORA, DOE HQ

CHRISTOPHER MCKENNEY, NRC

VIRGINIA (GINGER) DICKERT, DOE Contractor

KENT ROSENBERGER, SRR

ZAHIRA CRUZ, NRC

TOM CLEMENTS, Friends of the Earth

KAREN PATTERSON, SC GNAC

LARRY ROMANOWSKI, SRR

STEVE THOMAS, SRR

CLINT WOLFE, CNTA

ROGER SEITZ, SRNS

SCOTT L. SIMONS, SCDHEC

KATHRYN L. BEATTY, SCDHEC

JOHN TSENG, SRR

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

A-G-E-N-D-A

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

Introductions and Opening Remarks 4

NDAAs Section 3116 Process for Disposal Actions
and Status of Activities 5

DOE Perspective: Linda Suttora, DOE

NRC's Perspective: Christopher McKenney, NRC

NDAAs Section 3116 Accomplishments, Challenges,
and Lessons Learned 21

EFCOG Perspective: Ginger Dickert, Savannah River
Remediation (DOE Contractor) 48

DOE's Perspective: Mark Gilbertson, DOE 65

NRC's Perspective: Larry Camper, NRC 76

Questions and Public Comments 92

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

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

5:00 p.m.

1
2
3 FACILITATOR GILBERTSON: I think what we
4 will do is to get started here. My name is Mark
5 Gilbertson, I'm from DOE headquarters, I'm here to
6 help.

7 But I wanted to welcome you, in here, to
8 the meeting today. What we are going to do is go
9 around the room and introduce each of us. We are a
10 tiny enough group that I really encourage we have a
11 break after the first two speakers, for questions.

12 So I encourage people to, you know, not
13 sit quietly, but raise your hand and ask questions to
14 us. So we will start here.

15 MR. MCKENNEY: Chris McKenney, I'm the
16 Branch Chief of the Performance Assessment Branch at
17 the NRC.

18 MR. CAMPER: Larry Camper, Director of
19 the Division of Waste Management, and Environmental
20 Protection, at the Nuclear Regulatory Commission.

21 MS. DICKERT: I'm Ginger Dickert, the
22 Senior Technical Advisor to the Office of the
23 President, with Savannah River Remediation.

24 MS. ROSS: I'm Sherri Ross, with DOE
25 Savannah River, Waste Disposition and Tank Closure

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Application.

2 MS. SUTTORA: I'm Linda Suttora, and I
3 work for the U.S. Department of Energy Headquarters
4 in the Office of Site Restoration, Office of
5 Environmental Compliance.

6 And I'm the program manager for these
7 kinds of projects across the country, the Section
8 3116 and Tank Closures.

9 Can everyone hear us, or are we speaking
10 too -- okay.

11 MR. ROMANOWSKI: Larry Romanowski with
12 Savannah River Remediation.

13 MR. THOMAS: Steve Thomas with Savannah
14 River Remediation.

15 (Rest of introductions off microphone)

16 FACILITATOR GILBERTSON: Okay. We will
17 turn it over to Linda to kick things off here, for
18 the presentation.

19 MS. SUTTORA: Let me know if I speak too
20 quickly, or too softly.

21 So just to orient you to, or remind you
22 of how this process works, in 2005, in the National
23 Defense Authorization Act, there was a section 3116
24 in there.

25 And what that did was it provided a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 system for allowing DOE to close these waste tanks
2 that contained waste from reprocessing of spent fuel,
3 and other fuel, other wastes.

4 And we had these tanks located in four
5 sites around the country, and two states signed up to
6 be part of this Section 3116, the State of South
7 Carolina and the State of Idaho.

8 And then New York and Washington opted
9 out. They also had tanks, but they have been
10 watching this process carefully, and trying to decide
11 whether they want to opt in, or stay the way they are
12 right now.

13 But what we do is, under the Section
14 3116 process, we write documents that describe the
15 waste, how we are going to clean up. We have tanks,
16 and then we also do it on the waste itself, when we
17 are going for disposal.

18 The Secretary of Energy has to make a
19 determination that the waste, that the low activity
20 portion, of the waste, or the cleaned emptied tanks,
21 no longer constitute the type of threat, or risk,
22 that it once did, when it was filled with high level
23 waste, or when it once did, before it was separated
24 into the low activity portion, and we could manage it
25 as low level waste.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 And the higher activity portion of the
2 waste, after it has gone through a separation and
3 treatment facility, goes into vitrification, for
4 eventual repository disposal repository.

5 But part of the Section 3116 was that
6 DOE would consult with the Nuclear Regulatory
7 Commission, that is the first part of that, 3116, is
8 that DOE would consult with the Nuclear Regulatory
9 Commission, on our documents supporting the
10 Secretary's determination.

11 And the next part, and part of that
12 consultation is NRC would do a technical review of
13 all of our documents, and then DOE would respond to
14 all those questions they had, and comments.

15 And then the Nuclear Regulatory
16 Commission had designed a procedure for how they
17 would do the consultation, as they would produce
18 something called the Technical Evaluation Report.

19 We have done this several times, now.
20 The first one was done in 2006, with the salt waste
21 disposal, so that is the low activity portion of the
22 former tank waste.

23 And that was done in January of 2006,
24 after consultation with the Nuclear Regulatory
25 Commission for the entire year of 2005.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Also, in 2006, we did the Idaho Waste
2 Determination. And that was for a total of 15 tanks,
3 at this Idaho site, 11 large ones, and 4 small ones.

4 The large ones, my goodness I forget
5 now, but I think they were about 700,000 gallons.
6 I'm sorry, they were 300,000 gallons. That just
7 popped into my head.

8 They were 300,000 gallons, and the small
9 ones are 30,000 gallons. And waste determination was
10 done in November of 2006. And of the 11 -- all the
11 four tanks were closed, the four little ones, right
12 away.

13 Of the 11 large ones, 7 have been
14 closed, and four are still awaiting treatment. And
15 as soon as the treatment facility is up and running,
16 and the tanks can be emptied, then those tanks will
17 also be closed, under that 2006 waste determination.

18 The next site we did was the F-Tank
19 Farm, and that was done last year, in 2012. And we
20 have, so while the waste determination was done for
21 the entire site, for the entire tank farm, we have
22 continuously emptied and cleaned the tanks, and will
23 be grouting them, as we finish them, and as that will
24 be done, we have finished two tanks last year.

25 We will do two more this year, and then

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 we will continuously do, probably, pairs of tanks, as
2 we move along with the process.

3 And, as I said, it is only applicable to
4 those two states. But let me tell you --

5 MR. CLEMENTS: Let me ask a question of
6 the previous slide?

7 MS. SUTTORA: Sure.

8 MR. CLEMENTS: It is basically a
9 question of --

10 FACILITATOR GILBERTSON: Tom? Could you
11 go up to the microphone, so that we can get a
12 recording?

13 MS. SUTTORA: Yes.

14 MR. CLEMENTS: Tom Clements, Friends of
15 the Earth.

16 Managed as low level waste and, maybe,
17 forgive my ignorance. But does managed as low level
18 waste means it meets the legal definition of low
19 level waste?

20 MS. SUTTORA: Yes. And it has the risk
21 of low level waste. Okay?

22 So, but this isn't all that DOE does.
23 We don't just do the Section 3116 process, to close
24 the tanks. We also must comply with our own internal
25 regulations.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 And our regulations are found at DOE
2 Order, and it is called DOE Order 435.1. And there
3 is a high level waste section, and this, we call it
4 the waste incidental to reprocessing process.

5 And there are several ways to become
6 incidental waste. One is to go through this full
7 evaluation, which is almost identical to the Section
8 3116 process.

9 And we will talk, later, what the
10 difference is. And the other thing we do, it is
11 another thing called the citation process.

12 And citation process is pieces of
13 equipment, laboratory containers, where we had
14 samples, let's say, in a little metal, glass vial or
15 something.

16 We decontaminate that. But because it
17 was just in there for temporary use, or maybe it was
18 a pipe that went down into the tank, and came back
19 up, and was decontaminated, that gets managed as low
20 level waste, because it hasn't been sitting in the
21 high level tank for a long time.

22 So we have that citation process, and we
23 have lists of materials, that once it is assayed, and
24 shown to be clean, then we actually dispose of it in
25 a low level waste disposal facility.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 So under the Order 435.1, we have a
2 special review group, with funding, we call it the
3 LFRG. It is the Low Level Waste Disposal Facility
4 Federal Review Group, and short to be LFRG.

5 And after the site completes doing the
6 performance assessment documentation, which is the
7 long term assessment of the future risk of a disposal
8 facility, the LFRG develops a technical team.

9 It puts together a technical team of
10 experts. And we don't just pick from DOE. We take -
11 - there can't be anybody, on that special review
12 team, from that site. They have to be from other
13 sites DOE has, from both DOE, or their contractors.

14 We also bring in consultants, we bring
15 in academics, we bring experts from around the
16 country. And they join up in a technical review
17 team, and they review all the documents.

18 It is a long, several month, process.
19 And at the end they produce a report, whether the
20 facility passes, or does not pass. And if it does
21 not pass, we make them go back to the drawing board,
22 and answer a bunch of questions.

23 Very much like the NRC process. We
24 pepper them with questions, they have to respond.
25 And Steve is smiling because he has been doing that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 for years.

2 So we pepper them with a lot of
3 questions. And the last review I led was at the
4 Hanford Facility, their CERCLA disposal cell.

5 And I meant to go back and count, but it
6 was about 26 pages on the table of questions. So it
7 is not all a very easy process. The site has to do
8 a lot of work to comply.

9 What is different is we, as we are a
10 regulatory body, we also view ourselves as an
11 assistance body, because we want success.

12 So while the site might come in and they
13 might, quote unquote, fail their first review, we
14 tell them what they need to do to fix it, how to fix
15 their document, how to fix their facility, what they
16 need to do to pass.

17 And so we do get to success in all of
18 our facilities. But it is not a rubber stamped, by
19 any stretch of the imagination.

20 And then once that review is complete,
21 then they get an authorization to dispose, or an
22 authorization to continue disposing of waste, if it
23 has already been operating. And Mr. Gilbertson is
24 the signatory on that.

25 Now, when we do a waste and facility

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 reprocessing process, we do the evaluation, that is
2 what the end product is, for that, under the DOE
3 Order.

4 Instead of calling it a determination,
5 we do an evaluation process. And the decision maker,
6 when we do it under the DOE Order, like we do in
7 Washington and New York right now, the decision maker
8 on whether, to determine whether that waste can be
9 managed as low activity waste, low level waste, is
10 the Assistant Secretary of Environmental Management,
11 it doesn't go to the Secretary.

12 And that is how we have written it in
13 the Order. So the way that we did the last few waste
14 determinations, under Section 3116 we, consulting
15 with the Nuclear Regulatory Commission, we have
16 evolved.

17 The very first one we sort of just did
18 between the two agencies, and brought in the state a
19 little bit, but not that much.

20 And we wrote down what we thought were
21 the assumptions that would go into the modeling, that
22 goes into the performance assessment. But that
23 performance assessment had already been done, years
24 before.

25 So they were just reviewing an old

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 performance assessment, but they had a lot of
2 questions, where did you get this assumption, where
3 did you get, why did you write that?

4 And so it, over time, we recognized we
5 really needed to start from scratch. So the first
6 couple had old PAs that were done with the waste
7 determinations.

8 And the last couple we started from
9 scratch. And we, and that is three, I guess, that we
10 started from scratch, and walked through with the
11 State, and with the Nuclear Regulatory Commission,
12 and EPA, and started from scratch, and said, why do
13 you have your conceptual model developed this way?

14 Which is the basis of your eventual long
15 term modeling, you know, what is your basis for your
16 groundwater flow, what is your basis for why you
17 think whatever barriers, man-made and natural
18 barriers, why they would last the way that you think
19 they are going to last and model?

20 So we stepped through it. And, in fact,
21 the current performance assessment, and waste
22 determination basis documents, that we have produced,
23 we did in a public setting, rather than just between
24 the Nuclear Regulatory Commission, the Department of
25 Energy, and DHEC, and EPA.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 We actually had a public meeting,
2 several years ago in about, I think, July that we
3 walked through with, in a public setting, where we
4 were getting all our assumptions for the model.

5 So as we are evolving with this process,
6 recognizing that the public part of the process is
7 extremely important. We didn't realize it would be
8 and now we know, and we are fixing things.

9 So when we finish up this draft
10 determination basis, and the draft performance
11 assessment, now we call it a draft performance
12 assessment, but it has already been through that LFRG
13 team review.

14 And we then release it, now, to the NRC
15 and to the public, and state and EPA are members of
16 the public in that part of the 3116. And we get
17 comments back, both from the Nuclear Regulatory
18 Commission, and the public.

19 And we respond to each and every
20 comment. And then the Nuclear Regulatory Commission
21 issues their technical evaluation report, and DOE
22 finalizes the waste determination, and the
23 performance assessment, and makes the changes
24 necessary in that process, and then walks up to the
25 Secretary's office and says, are you ready to sign

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 this waste determination?

2 And then that office beats us up, until
3 they ask all their questions, and we get everything
4 answered, and then they sign.

5 And we have been able to dispose of the
6 treated waste, from the tanks, and close some of
7 those tanks, under this process. And we decrease the
8 long term risk to the site.

9 Now, the next step of Section 3116 is
10 the monitoring. Also, under Section 3116, the second
11 part, which is 3116(b), the State and NRC, in
12 coordination, conduct long term monitoring of those
13 sites, and facilities, that have had the closed, or
14 the disposed of waste.

15 So that is the second step. And here,
16 as I talked about, the other previous determinations
17 that have been done, and we are hoping for the H-Tank
18 Farm to be completed in December of 2014.

19 And I wanted to step back a little bit.
20 So I talked about that we have this Order that we
21 follow. And then we have this Section 3116 that we
22 follow.

23 But, in fact, they are very similar
24 processes. And both WIR determination, waste
25 incidental to reprocessing determinations, which are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 done under the Order, and the waste determinations
2 under Section 3116, use identical processes.

3 And I was going to say, we have done a
4 couple of WIR determinations under 435, at New York.
5 We haven't done any at Hanford, yet. And one was a
6 vitrification melter, and the other was this two
7 process vessel tanks that fed into the vitrification
8 melter.

9 And Hanford Tanks have started working,
10 again, at their C Tank Farm performance assessment.
11 They started the scoping process, that we talked
12 about, where we all discuss with the public or
13 stakeholders, all the assumptions that go into the
14 modeling, so people know where we came from.

15 They actually held twelve meetings in
16 2009, 2010, and then funding was cut. But now the
17 funding is back on as of this week. And so they
18 started working on that again.

19 And they are going to just take all the
20 information they had, from a few years ago, and roll
21 it up and get it moving again. So, hopefully, we
22 will get somewhere on those.

23 And I just also wanted to mention that
24 the DOE Order is under revision, just like 10 CFR
25 Part 61 is under revision, both processes are moving

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 along the same path, pretty much.

2 And due to the successes that we have
3 had, with the Section 3116 consultation process, with
4 the Nuclear Regulatory Commission, we are taking all
5 the lessons learned that we can.

6 We are taking the lessons learned, from
7 the current Section 3116 process, and bringing it
8 over to the 435 evaluation process, such that we are
9 making it very public, lots of stakeholder input.

10 And we are also, we didn't require
11 consultation for that, in the past, but we are now.
12 So under our current Order it is recommended, that
13 you consult with NRC.

14 And we had, on some of the work that we
15 had done earlier, thinking that we were going to get
16 closure on some of those tanks at Hanford, we
17 actually had done that back in the '90s, right, where
18 we had consulted with the NRC.

19 So even though we didn't require it, we
20 were doing it anyway, because we decided let's just
21 make it so. And we have decided to make it a
22 requirement.

23 And, but just to mention that the Order,
24 the revised Order, is going to be going out for
25 public comment. It is still under development, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 under review, right now, at headquarters. But it is
2 close.

3 We believe, probably, in the next three
4 or four months it will be ready for it to go out for
5 public comment. And that will be in the Federal
6 Register for public comment. And we would like
7 anybody's comments that is willing to read it.

8 It is not that long. I have been
9 working on it, also, as a side part of my job. And
10 we have gotten it down -- the current Order has kind
11 of a general requirements, and then three chapters
12 for each waste type, high level waste, transuranic
13 waste, and low level waste.

14 But we -- they were very repetitive. So
15 for disposal you need to make sure you characterized
16 your waste, and you need to package it appropriately,
17 you need to -- you know, each section had that in it.

18 And the new Order moves all that up in
19 the general requirements. The general requirements
20 is a very long section. And then once you have
21 determined what kind of waste it is, then there are
22 small sections for each of those. So it is a pretty
23 quick read, actually.

24 Now, under the monitoring, and I think
25 Chris is going to mention this a little bit further,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 under monitoring the NRC, the DOE currently monitors
2 our facilities, and the State monitors our
3 facilities. And we report everything,
4 immediately, that we find to the -- the State
5 identifies, and tracks what they track. So the
6 Nuclear Regulatory Commission, under Section 3116,
7 also has a monitoring role for these facilities.

8 And they work in coordination with the
9 State. And we have had, I guess you will talk about
10 more how we have been, the NRC comes down and has
11 monitoring observations, of our facilities, on a
12 regular basis.

13 And when we do that they have a lot of
14 questions, and we have to respond to them. And they
15 also walk-down our facilities, and it is an excellent
16 technical exchange.

17 And all of the monitoring meetings are
18 made public. The -- not transcript, but a summary of
19 those meetings.

20 And, also, let me just take it one giant
21 step back. Under the H-Tank Farm performance
22 assessment, one of the things that we modified, as
23 part of our lessons learned, from working over the
24 past several years, is it took a long time for NRC to
25 review the thousands of pages that we threw over the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 fence at them, with the performance assessment, and
2 the waste determination basis.

3 And performance assessment is about an
4 800-plus page document, plus several thousand pages
5 of references. So it is not an easy process to
6 review that.

7 So what we have discovered, and what we
8 have worked together, is identifying other ways that
9 we can help speed up their process of reviewing.
10 Because it has been kind of a data dump, and they
11 just have to try to figure out where everything is.

12 So we have had about eight, I can't
13 remember how many calls we have had. We have had
14 what we call technical clarification calls that we
15 have, where they pick a topic, and we just run
16 through, this is where this, you know, this page
17 describes this, this is where we got that
18 information, over here is this reference.

19 So we are going through a lot of those.
20 And the summary of those meetings are put up on the
21 web, on the NRC page, also. So it has all been
22 public. There hasn't been anything done behind
23 closed doors. Members of the public are always
24 invited.

25 And so that is, I think I did it. Yes,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 okay, thank you. And Chris McKenney is going to
2 speak next, from the Nuclear Regulatory Commission.

3 MR. MCKENNEY: So I'm going to be
4 talking about the fact that we are sort of standing,
5 today, on this meeting, and if you look at our
6 overview, we are standing in the cusp.

7 This is where the program sort of
8 changes. Whereas Linda said, we are in the midst of
9 doing consultation on, effectively, the last major
10 consultation for a very long time.

11 There isn't anything in the horizon,
12 right now, with DOE that the two agencies would be
13 consulting on, within the two states of Idaho, or
14 South Carolina, any time soon.

15 So from that point, from NRC's point of
16 view, we have been trying to see how will our program
17 change? Because we won't be doing the consultation
18 space, for 3116.

19 And, also, we have been at this for,
20 now, a little more than six years, on consultation,
21 on monitoring activities.

22 So how do we incorporate those lessons
23 learned? How do we update everything so that it is
24 clear what our processes are, and what our, what we
25 are doing?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 So we have plans, over the next few
2 years, to modify our guidance, which drives both our
3 consultation activities, which will be used mostly in
4 the Hanford space, and also our monitoring guidance.

5 So I'm going to go over the guidance
6 structure, and the planning permits, and the general.
7 The guidance and public involvement opportunities for
8 those, because we are going to be putting these
9 guidance documents out for the public, and talk to
10 those.

11 So our hierarchy of our guidance is that
12 we have a general guidance document, NRC calls of our
13 reports, that we call it the NUREGs. But that is
14 just a big compilation of all of our guidance, for
15 our staff, on how do we look at all the things that
16 are 3116?

17 How do we look at the removal of the
18 highly radioactive radionuclides? How do we look at
19 their conceptual models; how do we look at their
20 basis for their assumptions?

21 And all that sort of stuff goes through
22 there. It also has a chapter on how do we monitor
23 under this law. However, of course, it was written
24 in 2007. That monitoring section is really thin
25 because we hadn't monitored yet.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 But it does still provide the general
2 overview of the 20,000 foot level of what we do in
3 monitoring space, you know, how we do coordination
4 with the State, what would happen if there were to be
5 issues that were to arise.

6 And under the requirements of the NDAA,
7 if we find that the DOE is not meeting the
8 performance objectives, as specified in the law, we
9 are to report to Congress.

10 So we have a little bit of monitoring of
11 what would be the process if that were to occur. Our
12 real workhorses, for monitoring, are the fact that we
13 create site-specific monitoring plans for each
14 project.

15 These are based on our technical
16 evaluations, this is why consultation actually is so
17 important. It allows us to go through and find out
18 what is driving the risk at this site?

19 Because every site is different, every
20 site has different radionuclides, every site has,
21 possibly, a different disposal structure, and
22 different barriers.

23 So what is, where is the performance
24 needed, and where do the questions rise with that
25 site? And so the monitoring plan, while they are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 both tank farms, the monitoring plan for Idaho
2 National Labs, looks quite a bit different, than the
3 Savannah River Site.

4 Because we have stainless steel tanks,
5 we have carbon steel tanks, we've got humid site,
6 versus an arid site, and so forth.

7 And so right now we have three
8 monitoring plans, as we are now monitoring at three
9 sites. And these go down into, these are the
10 technical issues we want to deal with, that we think
11 are important to a site, site performance.

12 And these are the things that we are,
13 possibly, looking for, these are the types of
14 information that could be addressed to either close
15 that issue, or put it off to the side.

16 Now these are one for one comparisons,
17 unfortunately, because the performance of the site
18 can be quite complex. So we may have, we may list
19 ten different processes, like how fast waste could
20 move out of grout, how fast the grout could crack,
21 how fast the -- how long will the pad underneath a
22 tank last.

23 All of those issues will be listed, but
24 maybe a very good data support for one of those
25 issues may close them all. Because all three of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 those processes are doing the same thing. They are
2 holding up and isolating the waste, is what they are
3 trying to do, as a barrier.

4 So it doesn't mean in our monitoring
5 plan while we have a lot of different areas, it
6 doesn't mean they have to go through, DOE has to
7 check off every one of them, because a lot of them
8 work together.

9 And so -- but our document goes through
10 and says, we don't know how the research is going to
11 go. Well, they could close it this way, or they
12 could field the issue this way, or they could deal
13 with the issue this way.

14 We want to have it say all of those
15 things, especially since these projects are going to
16 take a lot of years, and the monitoring plan becomes,
17 for us, especially a knowledge management tool.

18 So that anybody entering into the
19 program can know, these are the important issues on
20 the thing that we are tracking.

21 And, similarly, as information is
22 developed, we may revise the monitoring plans. These
23 are living documents that we will revise based on
24 site knowledge.

25 And an example of that is the Saltstone

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Monitoring Plan. The Saltstone Monitoring Plan was
2 developed in 2007, on the original DA, and as Linda
3 said, that technical analysis was based on, largely,
4 based on an analysis that was much older than that,
5 with some supplements right in the 2005 time period.

6 But, since then, they have had
7 operations, they have gathered more data, did lab
8 studies, actually changed the design of their
9 structures, out in the field.

10 So DOE went ahead and created a new
11 performance assessment, in 2009, and provided that to
12 us. And we reviewed it and came out with the 2012
13 review.

14 And Larry is going to talk a little bit
15 more about that in his talk. But for this talk, we
16 took the findings in that to develop our new
17 monitoring plan.

18 Because the new modeling had some, of
19 the important issues we were tracking in 2007 on,
20 almost all of them are still the most important
21 issues. It is just that we have a little bit more
22 precision on what is the exact issue in that complete
23 topic.

24 Like we had, you know, we had an issue
25 of wanting more data, and to get better modeling

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 support for the long term aspects of the grout
2 structure. That was in the 2005, 2007 time period.

3 In the 2012 time period we are talking
4 about specific things within that, exactly what is
5 the PH of the concrete, and some other things. So it
6 is not, instead of a huge broad topic, they have
7 narrowed it down.

8 So we are in the process, right now, of
9 issuing the revision 1 for the Saltstone Monitoring
10 Plan. After we get done with H-Tank Farm, we are
11 going to be merging, and coming out with our merged
12 monitoring plan for both F and H, together.

13 Because as the federal facilities
14 agreement here is there will be some moving back and
15 forth between the tank farms, from year to year. The
16 tank farms have largely similar issues. There are
17 some tank-specific issues on each tank farm.

18 But those can all be put into the same
19 monitoring plan. In actuality I have the same staff
20 on both tank farms. So it merges into one tank farm,
21 and that way we will have that.

22 And then, again, another point of the
23 cusp of, always been the question about this
24 monitoring that Congress put together with us, is
25 that the monitoring role that Congress put together,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 has no specific end date.

2 And so, as Linda said, INTEC, up in
3 Idaho, is about to, as soon as they get the
4 processing done, in the next couple of years will
5 have moved all the tank waste out and grouted the
6 final four tanks.

7 So they will have 15 tanks, sitting up
8 there, full of grout. Well, a lot of our issues will
9 have been closed by then. So we will still be
10 monitoring the site, but we will have to revise the
11 monitoring plan to show the status of that being the
12 end state.

13 Because we won't be really monitoring
14 worker protection, or anything else. We will mostly
15 be focused on what is the groundwater monitoring
16 showing, is there any actions related to the CERCLA
17 cover development nearby?

18 Those sort of questions, not exactly
19 what is the composition of the grout that is being
20 put in the tanks because, of course, that will
21 already be known.

22 And, also -- sorry, on the slide you see
23 the general plans will be being revised for the next
24 few years. And that is important because we do have
25 a couple drivers on that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 The Guidance was developed in 2005 to
2 2007, especially it was all a new process, and we
3 have learned a lot. Not only from the public
4 meetings but the way we put out, the way we focus on
5 how we do the review on the technical side.

6 The way we use both the scoping, in
7 those cases, but also how we use the computer models
8 that they've developed. That wasn't really in the
9 document, before, or how does the staff actually use
10 that, how does the staff document that part of the
11 review.

12 That needs to be added into the actual
13 review part. But even more is, the monitoring
14 section itself has grown, as we got lessons learned,
15 as we had to go through activities.

16 You know, last April we did issue a
17 letter of concern on the Saltstone facility, sorry,
18 April of 2012, not April of 2013, sorry.

19 And we are working through that. The
20 DOE has responded with a letter about how they are
21 putting in, right now, the Saltstone much lower
22 technetium than they assumed in the models.

23 So the current structures that they are
24 filling are nowhere near even what they modeled. So
25 we are comfortable with that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 And we are working, very well, together
2 on closing the technical concerns that were also
3 raised in the letter. And so I think that is in
4 Mark's upcoming talk, mentions a couple of that, and
5 the time frame of those.

6 But when we went to actually try to
7 publish a letter of concern we found that the process
8 we wrote, back in 2007, had a lot of little hiccups.
9 So we are trying to from, you know, government red
10 tape type point of view, we are trying to make it
11 clearer, make it much more, make the process more
12 realistic on how it works, and really document how we
13 found that we had to do it to get out a letter of
14 concern.

15 Or, in the future, if we had to do this,
16 a letter to Congress. The other thing that has grown
17 over time, that we didn't have hardly anything on the
18 monitoring plan for was our coordination with the
19 covered states.

20 We have done a lot of coordination, now,
21 with DHEC. DHEC, we have monthly phone calls with
22 them, we -- they are on all of our observations. We
23 talk to them before our observations.

24 They read our monitoring plan and can
25 understand what we are looking for, in case something

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 were to come up on, because they are on the site a
2 lot more often than we are.

3 So if they were to see something, like
4 last year when we were doing, when the DOE was
5 pouring grout into 18 and 19, we came down here, did
6 an observation, and DHEC was able to go, that is what
7 you are looking for, if the grout is mounding a lot,
8 very high, in the tanks.

9 And so they were looking at that for
10 other reasons. But they knew that they could tell us
11 if something would happen, so that we could ask for
12 that day's video, or something like that.

13 So we want to clarify that. The
14 document, as a whole, we are going to have to deal
15 with how we are changing the regulations for low
16 level waste.

17 We are about to, we have been working on
18 modifying and updating the regulations for low level
19 waste, over the last several years. In this, more
20 likely, winter time period, if the Commission
21 approves, if our top part of the Agency, the
22 Commission, approves our proposed rule for public
23 comment, we will be issuing it for public comment in
24 about the January time frame.

25 Then we will take those public comments,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 respond to them, modify the Rule, and come out with a
2 final Rule some time in late '14, early '15.

3 That -- those changes will actually make
4 modifications to performance objectives, which are
5 cited in 3116. So, therefore, we need to revise the
6 Guidance to be consistent with the Guidance for Part
7 61, and any rule changes that occur, if they do
8 occur, because that has not been, it hasn't gone out
9 as proposed rule, yet.

10 Now, it is all great, it is all
11 wonderful. But we live under continuing resolutions,
12 right now. And so these are not fast actions,
13 unfortunately, because my resources I go to
14 monitoring and consultation first.

15 And I'm trying to get the consultation
16 done, so that we are not, so that we are not the hole
17 in the tent, that we are not causing things, because
18 getting the tanks, the most bulk waste out, is
19 important for just risk reduction.

20 Now, risk reduction is not the -- the
21 law does not have NRC to have that as a pure goal.
22 But we understand that goal when we are trying to
23 support that.

24 Our monitoring role is to look at
25 whether it is above or below this one number, in the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 performance objectives. But we do understand that,
2 so we are trying to get that in consultation.

3 Also in monitoring, we are trying to do
4 our monitoring in a timely manner. So I put my
5 resources there, too, so that we get comments before
6 they finish out a decision with DHEC on is tank 5 and
7 6 done so that it can be grouted?

8 We want to be there early enough in the
9 process so that there is no effect, even if somebody
10 does raise the question.

11 So all my resources, most of all my
12 resources go to that. And until I get each tank farm
13 consultation done, they still will do that. That is
14 priority one.

15 The Guidance will then come on. Some
16 people are like, you know, why aren't your resources
17 going down right after your consultation? It is,
18 like, well we now monitor a few more things.

19 But, also, I need to bring the whole
20 program up to, up to its modern level. So the data
21 is a knowledge base for the future, again. And there
22 are lessons learned here in case other states opt in,
23 which then all of a sudden the program will be much
24 bigger, much longer in time.

25 But the, but also the use of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 consultation, anyway. I will be out, thanks to the
2 fact that the PA is starting again, we will be having
3 a meeting out in Hanford in October, it looks like,
4 to really kick it off. And that will be exciting to
5 see, to get some of that work going on there.

6 So I did say we are doing public
7 involvement on this, and we will, and we want it.
8 Just about everything is a bit approximate, right
9 now, on dates.

10 Because, again, -- I had my finger on
11 that one. So right now, since I will be getting H
12 done at the start of the year, we are thinking that
13 we can come, that we can have a meeting, where we
14 came up with some projected changes to modernize our
15 general monitoring chapter, in the document.

16 And talk about exactly how does
17 monitoring work, and how -- and versus how is it
18 written in the document. And come down here and talk
19 about that.

20 And that will be even prior to us
21 actually really putting in true pen to paper, for
22 making the changes. We want to talk to you guys
23 before we do that, not go away and write the
24 document, then throw it out for public comment, and
25 then come in.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 It won't be thick, we are going to have
2 thought process, we are going to come and get
3 proposals of how we are going to do the changes, then
4 we are going to do the writing.

5 And then in the next year we will be
6 near the final part of part 61. So I will know,
7 again, similarly a, how do I need to change 1854 to
8 make it go in parallel with the -- yes, I know, I
9 don't have this. A lot of places -- so I can face
10 everybody.

11 No other projector says that we have to
12 look at the projector. But that we will be
13 discussing the rest of the document, which is all of
14 the performance objectives.

15 So the -- so those are the time periods.
16 Now, there are ways to keep up on this, is that we do
17 have a spot on our NRC website, which will be
18 updated, and you will get plenty of notice for these
19 meetings.

20 We will also be emailing out, we have an
21 extensive general email list that all documents come
22 out. So you will get a notification every time we
23 send out a document, actually.

24 But on WIR, not on everything. This
25 list doesn't give you everything that the NRC puts

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 out. But we do put out, I have an email list, just
2 like the old list we used to have, where you get a
3 mailed copy of everything, now everything is by
4 email.

5 That is another way you can stay
6 informed of when are we going to be working on these
7 things. And also for, on this, I did get, I did
8 provide access to the various documents just to, if
9 people are interested. Most of them are tagged on
10 our website, too.

11 But those are how we are going to try to
12 take our lessons learned, which we have discussed a
13 little bit, and try to incorporate that and move
14 forward. And also, in fact, take into account that,
15 from NRC's role, we are going to be going to
16 effectively be monitoring normally.

17 And while DOE is largely going to a
18 permutation, so we are working on the paperwork. If
19 anybody has any comments, or questions, on the first
20 two presentations, come up to the mike, so that we
21 can get it recorded, and introduce yourself.

22 MR. CLEMENTS: Tom Clements, again.
23 Once the monitoring program is, basically, finalized
24 and in place, how can it be modified, in the future,
25 based on lessons learned along the way?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. MCKENNEY: It is, again, we have
2 our general areas that we have to look at. Those
3 normally don't change. We are always looking at
4 compliance of -- we have corporate forms, objectives,
5 within -- that are told to us by the law.

6 One is the long term isolation of the
7 waste. And are the dose, if there is waste that ever
8 gets out of the site, will the doses remain below 25
9 millirem, to the general public.

10 Is the waste protected from intruders so
11 that if an intruder accidentally gets into it, they
12 won't get a dose that would require medical care,
13 basically, or anything else like that.

14 And worker protection is another
15 requirement, and stability. So a different phase,
16 when INTEC is done worker protection is pretty much
17 not there, because their dose rates are going to be
18 zero, and everything else.

19 So my monitoring plan on that part of
20 it, my monitoring role is that DOE will be meeting
21 that requirement, I won't have to do much activities
22 under monitoring because the physical design of the
23 site will be that way.

24 Now, when you talk about like stability,
25 or talked about doses to the general public, those

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 become much more technical on how we are modifying
2 them.

3 We are saying, like, again where we
4 started out with questions of what is the actual
5 chemical characteristics of Saltstone. That was one
6 of our monitoring areas under, in REV 0 of Saltstone.

7 We have modified it because of our
8 knowledge, we have removed a number of questions, and
9 areas, because they have been able to find data, and
10 provide it to staff.

11 And we have narrowed it down to just a
12 few things of, you know, a comparison between how
13 could this, or the representativeness between lab
14 studies, and field placement, and how much is
15 technetium actually reduced.

16 And so they become specific issues. As
17 model support, and through various means of getting
18 that support through the studies, or direct
19 measurements, or other things occur, we close those
20 individual technical issues. And that, then, changes
21 in scope the monitoring over time.

22 And so we are not, like, making huge
23 veers off the road to make a whole new bypass, or
24 anything like that. We are just trying to focus on
25 those things that are important, that we don't have,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 that we feel we don't have good answers for, or that
2 we have not enough model support to be able to come
3 to certain conclusions.

4 But -- so that is how we modify the
5 monitoring plan, we are not changing it all of a
6 sudden, and just going off into another direction.
7 We are trying to take the knowledge we have now, and
8 what is important to the site, what barriers are
9 important, and continue just to focus on those.

10 And as the data comes in, and we can
11 decide maybe the process changes, or maybe --
12 whatever. Sometimes it is barrier shift, a little
13 bit, in focus. But we change the monitoring plan
14 according to that, according to the safety evaluation
15 and what is important for the site.

16 MR. CAMPER: Chris, I wanted to get you
17 to clarify. I had a meeting, this afternoon, with
18 Karen Patterson, the Governor's Advisory Council.

19 And, of course, Karen is quite concerned
20 about resources, understandably. And you mentioned,
21 in your presentation, that we are going to be
22 providing our questions on the H-Tank Farm to you,
23 soon.

24 And I was wondering if you might clarify
25 when you think we will do that? And then to what

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 degree we are prepared to interface with DOE, between
2 now and, say, the end of the calendar year, as their
3 funding becomes more complicated, to do everything we
4 can to get the consultation wrapped up.

5 MR. MCKENNEY: Consultation.

6 MR. CAMPER: Consultation, yes.

7 MR. MCKENNEY: And, again, either
8 tomorrow or Monday it will be sitting on my desk,
9 will be the request for additional information for
10 providing back to DOE.

11 We are, we have completed it, we are
12 putting it together, and it should be issued next
13 week or so. I think next week. Maybe a couple of
14 days. But we will meet the August 1st date.

15 And as part of that we, also, are having
16 a public meeting at the end of August, on the H-Tank
17 Farm consultation process, where we will talk
18 through, after having, after DOE having a chance to
19 spend some time looking at those questions.

20 Now, again, because as Linda mentioned,
21 we have had a number of technical meetings and
22 discussion, over the past several months, during this
23 consultation process.

24 The questions that are going to be
25 coming to them are largely known, because during the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 calls we have had statements like, well, I don't
2 think we can deal with it on this phone call. How
3 about you just ask it as a question?

4 And they knew that that question was
5 going to be coming. So they have been able to start
6 already on the ground, running a bit.

7 After the fiscal year starts, September,
8 after September 30th, again, H-Tank Farm is still my
9 large priority because, honestly, on the other side
10 is, the only other one that would become higher
11 priority would be Saltstone if it came in.

12 But it is not likely to cross over at
13 that point yet. So the first few months, of the next
14 fiscal year, will still be, H-Tank Farm will be the
15 highest priority.

16 There are a few things I have closed
17 out, just to make sure that they got everything done
18 on 5 and 6 before it is all closed out, because we
19 have everything in the process for just closing that
20 out.

21 But H-Tank Farm is my highest priority.
22 And that is, again, why I wouldn't be doing Guidance,
23 I would be doing H-Tank Farm. We are shooting for
24 the dates we've provided DOE, and we are trying to
25 stick with them, and we are going to make every

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 effort to, so that we don't have a problem with that
2 part of it.

3 We do have limited resources, too.
4 Honestly, at the start of the year, the NRC will
5 probably be under a continuing resolution, and we
6 will be under an hours limit for my staff, or I will
7 have to ask my staff, these are how many hours you
8 have, this week, to work on it, get what you have --
9 we have to focus on the highest priority issues,
10 because we have to do that triage.

11 But when we do get it done, and we are
12 going to get it done.

13 MS. SUTTORA: I probably didn't say
14 this, when I was talking about it. So in addition to
15 NRC is reviewing the H-Tank Farm performance
16 assessment, the draft waste determination basis,
17 other changes are occurring, as we learn new
18 information.

19 One of the things that we have done,
20 recently, is modified some of the modeling that was
21 done for the Salt Waste Disposal Facility. And that,
22 the revised model was worked very closely with the
23 Nuclear Regulatory Commission technical staff.

24 And, in fact, we had a public meeting,
25 back in January, where we discussed the specific

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 modified parameters that would go into the model.
2 The site has written that up in what is called the
3 special analysis, which is it modifies those portions
4 of the performance assessment that it changes.

5 So when a site gets new information, and
6 it is not enough new information to do a whole new
7 performance assessment, but it has some significance,
8 the site will do a special analysis.

9 And when a special analysis is
10 significant enough, that low level waste group, the
11 LFRG, will do a review of those changes to make sure
12 that, you know, there is enough technical support,
13 and they have provided enough information.

14 And that we have actually put together
15 an LFRGreview team for that special analysis. And
16 that review team is actually currently undergoing the
17 review.

18 And we are expecting to be done in early
19 August. And what we did for that review, because the
20 only thing that changed was certain parts of the
21 model, but the rest of the assumptions that went into
22 the original performance assessment were the same, we
23 approached the guys who did the original review, that
24 did the modeling portion of the performance
25 assessment review, and asked them to come back and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 just do that special analysis review.

2 And two of them had retired. And I had
3 to beg and plead to get them back to be part of the
4 team. And -- but because -- and they were willing to
5 do that. They said it was such an interesting
6 performance assessment to review that they were very
7 excited, actually, to review the special analysis.

8 So that is ongoing now. And that is what
9 Chris was referring to, is the Saltstone changes,
10 that those are the changes that he is discussing.

11 So we have been looking, very closely,
12 and it is directly in response to the letter of
13 concern that we received last year. We are working
14 very closely to answer all those questions, and in
15 order to answer them appropriately we had to modify
16 the model.

17 FACILITATOR GILBERTSON: Any other
18 questions?

19 MR. WOLFE: Clint Wolfe, with CNTA. I
20 was just curious about the extent to which the
21 criteria, that we are talking about here, are
22 codified in a rigorous manner, versus how much room
23 is there for collaborative adjustment of what we are
24 looking for in these performance assessments, and
25 otherwise. Or does it depend on the situation?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. SUTTORA: I'm not sure I understand
2 the question.

3 MR. WOLFE: Okay, the question is really
4 more about, when we go to a new Order, a NUREG, and
5 find all the criteria that you are working to, say,
6 in a performance assessment?

7 Or is there room for modification --

8 MS. SUTTORA: So, yes.

9 MR. WOLFE: -- of that?

10 MS. SUTTORA: So the Nuclear Regulatory
11 Commission has a NUREG specifically on how to do a
12 performance assessment that is in NUREG 1573.

13 And then the Department of Energy has
14 developed extensive guidance, for our facilities, on
15 how to do a performance assessment. And that is
16 located on our webpage under our Environmental
17 Management webpage under the, I think it is the
18 compliance page.

19 And we also have what we call a
20 performance assessment community practice, and we
21 share best practices. So it is not codified. It
22 really is specific to the site, but we identify what
23 we have to do to do a good one.

24 And the primary thing is to identify the
25 natural and man-made barriers for the waste to be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 released. So if you identify, if you are doing a
2 disposal in cement, so it is how quickly does the
3 cement degrade, what kind of radionuclides are
4 involved, and how will they be released?

5 For example, are they highly soluble and
6 water was able to infiltrate, and the water was able
7 to carry off a solid radionuclide that is a
8 technetium, or iodine.

9 So we do very complex analysis of how
10 those radionuclides move through the system.

11 MR. WOLFE: I'm just wondering if there
12 is any room for taking a standard that says, there
13 shall be no more than 10 MR exposure to somebody at
14 the boundary of this facility --

15 MS. SUTTORA: Well, those --

16 MR. WOLFE: -- versus --

17 MS. SUTTORA: -- are performance
18 objectives.

19 MR. WOLFE: Okay. But versus saying,
20 you know really, we can save 50 million dollars if we
21 make that 20 MR.

22 MR. McKENNEY: Right. In that case,
23 yes, the performance objectives, which, which the
24 Congress put as what we, what NRC is to monitor to,
25 are written down in our rules, which was done by the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Procedures Act.

2 So it is in the regulations, not in a
3 guidance document, or Order. It establishes that the
4 25 millirem per year dose limit to the general
5 public. So that one is there.

6 I mean, there is other ones that we have
7 had discussions with the Department of Energy before,
8 and the State was involved in it, too.

9 MR. WOLFE: Okay.

10 MR. MCKENNEY: Which was where does that
11 apply? And some other assumptions like protection
12 intruder. Can you actually, could somebody actually
13 drill through the, drill through a tank?

14 And, you know, in the end we agreed with
15 the Department that that is highly unlikely in South
16 Carolina. So while they did that analysis, that was
17 not the analysis we used for comparison.

18 MR. WOLFE: Okay.

19 MR. MCKENNEY: So because that sort of
20 scenario was not there. When you are talking about
21 the rules themselves, like the dose and stuff, those
22 are codified, so there aren't room to move.

23 There is a lot more of being able to be
24 reasonable and take discussions of what is the
25 scenarios, how could this thing degrade, where is the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 receptor? Those things have been discussed before in
2 various scoping meetings, and things like that.

3 MR. WOLFE: Okay.

4 MR. MCKENNEY: And we try to take those
5 into account.

6 MR. WOLFE: Yes. I just think that it
7 is important that with budgets being what they are,
8 and what they look like they might be, that we just
9 take a good hard look at the criteria, and what it
10 costs what might be a marginal increase in a safety
11 margin, if you will.

12 MS. DICKERT: For those of you who don't
13 know me, I'm Ginger Dickert, and although I work for
14 the Savannah River Remediation, today I'm here
15 speaking on behalf of the Energy Facility Contractors
16 EFCOG, Waste Management Operations Group.

17 And so that encompasses contractors
18 across the entire DOE-EM complex. And we have
19 working groups that work in particular areas, to work
20 on common issues that all the contractors are seeing
21 are common needs that the contractors have.

22 And the group that I'm representing
23 today is the EFCOG Waste Management Operating Group.
24 And it is my pleasure to talk to you about some of
25 the work that has occurred as a result of that waste

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 management group.

2 But this year, at the Waste Management
3 2013 Conference, we had an imbedded theme that ran
4 throughout the conference, around the waste
5 incidental to reprocessing, both under the 435.1
6 Order and the NDAA Section 3116 process.

7 It was a first of a kind, for the Waste
8 Management Conference, to have an imbedded theme.
9 Conferences have tracks that look at high level
10 waste, low level waste.

11 But when we looked at what does it
12 really mean to do a waste incidental to reprocessing,
13 or a waste determination, it doesn't fit just in one
14 of those tracks.

15 Because if we are going to be successful
16 the case has to be built from the very beginning, and
17 cross-cuts all of those tracks.

18 And so it was recognized as something
19 that was going to touch every part of the business,
20 and every part of the conference.

21 It was done to recognize the importance
22 of the progress, and moving forward, in the DOE
23 clean-up mission, that we can't move forward.

24 Our basic way of looking at this is,
25 this process says, when is something clean enough?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 When is a tank clean enough, when is the facility
2 clean enough, when is the actual waste itself, clean
3 enough to where you are able to move forward with a
4 closure, or a disposition decision.

5 And if we are going to make progress in
6 the high level waste world, this is so integral to
7 every decision that is made, and so important to long
8 term decisions, which are very hard to reverse.

9 And that there was now enough experience
10 to where we could look at the lessons learned that
11 could be applied across the entire complex, and look
12 at this very important process that had occurred.

13 It involved participation from many
14 different sites. It is not just Savannah River, it
15 involved participation from the West Valley
16 Demonstration Project, the Idaho National Laboratory,
17 the various factions within the Hanford site, both RL
18 and ORP, and DOE-EM headquarters personnel.

19 It involved personnel at all levels
20 within the organizations, the practitioners, the
21 engineers, the operations personnel, that are
22 actually working the issues in the field.

23 Personnel that are preparing the
24 performance assessments, the regulators,
25 stakeholders, like those of you here in the room, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the policymakers, who were setting the policies at
2 the higher level.

3 It allowed us to have collaborative
4 integration of all of those groups, in a setting
5 outside of our normal workplace, where folks could be
6 -- could set aside some of those issues, and talk
7 openly about what we were learning, and sharing our
8 experiences.

9 I want to acknowledge a few folks, here,
10 that had a very key role in the Savannah River
11 portion of this. Not to say that there were not
12 others from other sites, because there were.

13 But for this community to let me
14 acknowledge some of those. The Chairman of the Waste
15 Management Corps of Engineers, Sonny Goldston, in the
16 DOE-EM Headquarters, Mark Gilbertson, very actively
17 supported, served on panels for us, Bill Levitan,
18 Linda Suttora, and the list goes on.

19 But these were a few people who were
20 very key in there. For DOE Savannah River, Dave
21 Moody, Terry Spears, and Sherri Ross. And, again,
22 there were a number of others who supported, that
23 these were very key in participating, and in
24 supporting the participation of their organizations
25 and of the contractor organizations, in making this

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 lessons learned process a reality.

2 For the NRC, Larry Camper and Chris
3 McKenney. Larry not only supported, from an NRC
4 standpoint, with his personnel attending and making
5 many presentations, and his participation on the
6 panel.

7 But he also is on the Board of Directors
8 for the rest of the Waste Management Symposium, and
9 provided a lot of support, for us, to be able to do
10 this first of a kind activity, throughout the Waste
11 Management Conference.

12 We also had regulatory participation.
13 And I'm going to apologize, right now, to Karen
14 Patterson, whose name should be on here as well, from
15 the Governor's Nuclear Advisory Council, Shelley
16 Wilson from the Department of Health and
17 Environmental Control, and Rob Pope, from our
18 Regional EPA office.

19 And I do want to acknowledge two other
20 folks from SRR, John Tseng, and Steve Thomas, who
21 were key in helping put together all the sessions
22 that occurred throughout the conference.

23 Because we were looking to cover the
24 entire cradle to grave nature of it, is why it became
25 an imbedded theme.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 So far we have talked about the
2 paperwork process that occurs at the end to ensure
3 the work is right. But if you don't start out, from
4 the very beginning, beginning with the end in mind,
5 you get to the end and you hope you have the case,
6 instead of having built your case all along.

7 So we recognized that from a contractor
8 perspective it starts with initial characterization
9 of the waste, the selection of the technologies, for
10 retrieving the waste, or for treating the waste once
11 retrieved.

12 The selection of the technologies on how
13 we are going to sample, and characterize, what you
14 have left. The R&D that is required to define the
15 parameters for the long term performance of the final
16 closed facility.

17 And then the actual process of closing
18 it. Those don't happen by accident, they require a
19 very structured approach.

20 And so, through the conference, we built
21 it to look at all of those, in a very structured
22 manner, on how all those pieces fit together.

23 We opened with panel discussion about
24 policymakers, to talk about what were each of the
25 agencies, the Department of Energy, the Nuclear

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Regulatory Commission, the various States, what were
2 they looking to accomplish, and how were they going
3 to see this process accomplish the objectives of each
4 of those policymaking bodies.

5 We held a panel of discussion on the
6 associated accomplishments that have occurred as a
7 result of the 3116 and 435.1 processes that were
8 used. And the significance of those accomplishments.

9 You know, we talk about the closure of
10 waste tanks, and recognize that it is significant.
11 But I'm not sure all of the public clearly understand
12 the years of work, and the amounts of effort, and
13 expenditures, that go into ensuring that we have got
14 the right technologies, the right equipment, that we
15 are protecting the personnel, as we do the work, and
16 that we are protecting the public today, and in the
17 future.

18 A very lengthy process and we wanted to
19 capture all of the perspectives of the policymakers,
20 and then the accomplishments, were.

21 Then, throughout the conference we had
22 sessions in every single time slot, from technical,
23 regulatory, and stakeholder involvement sessions.

24 Again, to look at all of the various
25 aspects of that. And it culminated in an all day

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 lessons learned workshop, on the last day of the
2 conference.

3 Now, as an output of this, there is a
4 document that has been issued. It is the Lessons
5 Learned in Management of the U.S. Department of
6 Energy Waste Incidental to Reprocessing.

7 I don't think we could have made the
8 title much longer. It is not your catchy, quick,
9 title. It was issued in April 2013. This is a copy
10 of it, if someone would like to look at it.

11 This is a website for the EFCOG
12 organization, at which it is available. And there
13 are slides in the back, where anyone who didn't get a
14 copy, to ensure that you would have access to this
15 document.

16 This document was, also, provided to the
17 Department of Energy, to contain, from a contractors'
18 perspective, it documented accomplishments, the
19 lessons learned, and a few recommendations for some
20 areas where we thought we could collectively continue
21 to improve the process.

22 As far as accomplishments, and some of
23 this has already been discussed, at the West Valley
24 Demonstration Project, 435.1 Order, and the DOE
25 Manual 435.1-1.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 The authorization for handling of the
2 failed vitrification melter, as a low level waste,
3 was approved, as well as some processing vessels.
4 This was done through the WIR evaluation process that
5 Linda talked about, through the WIR citation process.

6 Throughout the DOE complex we have been
7 able to dispose of things like decontaminated tools,
8 what we call job controlled waste, the personnel
9 protective clothing, the personnel where, when they
10 enter contaminated areas, things that have very, very
11 low levels of contamination, and very, very low risk.

12 So that has enabled us to do that
13 throughout the DOE complex.

14 Under the 3116 process, at Savannah
15 River, it has enabled us to close two waste tanks,
16 tanks 18 and 19, and with plans to close tanks 5 and
17 6, later this year. And it allows us to dispose of
18 the decontaminated salt solution, in the Saltstone
19 Disposal Facility.

20 For Idaho you have also heard about the
21 various volume tanks, 11 waste tanks there, that have
22 been closed through the use of this process.

23 This lessons learned document looks at
24 lessons learned for DOE Order 435.1 processes, as
25 well as the 3116 processes.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Since this meeting, today, was really
2 about the Section 3116, I have limited my discussion,
3 here, to the specific lessons learned and
4 recommendations for the 3116 process.

5 We looked at all of these together,
6 because the DOE 435.1 process is so similar to the
7 3116, and the work that is going on through the DOE
8 Order Revision process, to make them even more in
9 lockstep, in exactly how they are done.

10 And so we made sure to look at them all
11 in a very holistic manner, and not to look at them
12 just individually.

13 When we first started out with the 3116
14 process it was a whole new world for everyone. It
15 was a new role for the NRC, not a regulatory role, a
16 consultative role, a monitoring role, new terms that
17 were very, very different, for the Department of
18 Energy.

19 It was a whole new set of roles on how
20 we are going to interact with the NRC, how we are
21 going to interact in conjunction with the State. For
22 the State it was a whole new role of, I've got
23 somebody else who is in my regulatory world, and I'm
24 not sure how I feel about that, and how I want to
25 work.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 And I heard Larry refer to it once, and
2 I really think it was applicable, and he has heard me
3 say this before; that we started out doing the Kabuki
4 dance, you know? Where there was a whole lot of arm
5 waving going on.

6 I don't know exactly what a Kabuki dance
7 is, but it looks like a whole lot of arm waving, and
8 a whole lot of noise, and no forward progress. So we
9 started out with everybody trying to find their
10 roles.

11 From there we have come a very long way
12 to having a very effective process, having strong
13 technical exchange. And we feel like it has come a
14 long way.

15 So we are talking about a few of the key
16 lessons learned, as we have come through that course.
17 And, again, we look at continued opportunities for
18 improving the process.

19 So some of the things that we
20 recognized. It is really important to have clear,
21 open, and frequent communications, not only between
22 DOE and its regulators, and consultants, but with the
23 stakeholders as well, so that there was a much
24 clearer understanding of the kind of decisions that
25 were being made.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Mr. Wolfe asked, was there ability for
2 collaboration in the process? There is collaboration
3 to try to determine the absolute values and
4 assumptions that you are using.

5 And the scoping meeting process, where
6 you get all of those folks into the room, and try to
7 talk about the various perspectives, and the various
8 technical opinions, to define some of those
9 assumptions that you are going to use, before all the
10 work is done.

11 Doing that in a public environment,
12 where the public can see that deliberation that
13 occurs. Doing that with the regulators as well, so
14 that everybody is participating, and their viewpoints
15 are all heard, as we are defining the new assumptions
16 up front.

17 Linda talked about the scoping meetings,
18 or maybe it was -- you talked about the 12, and you
19 talked about when it would start again, the scoping
20 meetings that are occurring at Hanford, and that is
21 where that process, and that was a process we
22 developed here, to try and get more involvement,
23 early on, and have more transparency.

24 Providing the DOE models that were used.
25 And the first ones, as Linda said, all the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 information was given over, and everybody sorted
2 through it, and we kind of threw stuff back and forth
3 at each other.

4 It was not the most efficient and
5 effective way to do it. What we found, then, is that
6 we can work together, provide the models that are
7 used, that have shown us what we think are the most
8 important, the most sensitive, the key parameters,
9 those things that we need to focus on.

10 And allow the NRC to improve their
11 efficiency, and effectiveness, by having that,
12 instead of having to totally recreate it all, on
13 their own, to do the same thing, much more effective
14 and efficient process to do.

15 The rest of the document, I selected
16 those key lessons learned because they were
17 identified throughout all of the contractors, as key.

18 The document itself contains about 40
19 detailed lessons learned. But I thought that you,
20 perhaps, did not want to hear me talk about every one
21 of them.

22 So I picked the top three for all of the
23 contractor sites. But, again, the other 37 are
24 available for your reading in the document.

25 Key Recommendations. And here we were

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 trying, as a contractor group, to focus on, given all
2 the progress that we have made, and given that moving
3 forward with other sites through the DOE Order 435.1
4 process, what would we recommend in the vein of
5 continuous improvement, as areas that we see, that
6 would help us, as contractors, perform this scope.

7 And the first one, and you are going to
8 see a theme in a few of these, the first one is to
9 develop and define the document, the scope of
10 consultation.

11 It has changed over time, it has
12 improved over time. And what we would like not to
13 become, as contractors, is personality-driven, but
14 more of a defined process.

15 I think some of that is going to occur
16 through the DOE Order 435.1 Revision, and that is
17 going to help us, as contractors, too. So as that is
18 evolving, you know, we know where it is, and we are
19 able to efficiently execute it.

20 The DOE and the NRC to continue to
21 explore methods to expedite the process. We believe
22 in the importance of independent review. We think it
23 is important to protect the safety of the public now,
24 and in the future.

25 And we don't want to compromise either

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 of those two. But we would encourage the continued
2 opportunities to reduce that schedule, and allow us
3 to accomplish the work more effectively.

4 As I said, before, with defining the
5 scope of consultation, we would encourage DOE and the
6 NRC to work with us to define the scope of
7 monitoring, and that is much of what Chris McKenney
8 spoke of, so that we have more clear expectations,
9 and understandings, and there is not confusion, as we
10 go through, as to what is expected.

11 We would ask that DOE and the NRC work
12 to define, give us a better understanding of some of
13 the subjective terms. Terms, and this is in both of
14 these, terms like non-compliance with the performance
15 objectives.

16 That is something that if it is going to
17 occur, it is going to occur 10,000 years from now.
18 So what are we looking for today, as the indicators,
19 or how are we measuring, today, what we are seeing.

20 So we would then know how to set up our
21 own monitoring and information flow out to those
22 agencies.

23 Some other subjective terms, reasonable
24 assurance. Having reasonable assurance that the
25 performance objectives are met. If I ask each person

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 in this room what reasonable assurance means, I
2 venture to say I would get about that many different
3 answers.

4 And so trying to work collaboratively to
5 say, how much conservatism is enough? Is it truly
6 bounding, or is there a reasonably conservative
7 position, and what should that be?

8 How much uncertainty needs to be
9 tolerated in the numbers? If we could define that
10 type of thing and the term to an extent practical,
11 what does that mean to us?

12 Because those make a big difference,
13 even within the performance objectives. You know,
14 performance objective of 25 millirem, if I've got to
15 have a 10 percent uncertainty, versus a 20 percent
16 uncertainty, that is vastly different in where that
17 number, that we are calculating, might come out.

18 And what we need to be doing on the
19 front end, to plan to achieve that by the time we get
20 to the back end.

21 So those are the key recommendations
22 that, as a contractor group, we provided to the
23 Department of Energy. And, as I said, many of those
24 are already being worked.

25 And we appreciate, very much, the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Department's receptiveness to that report, and
2 participation with us in developing that.

3 And at that point, if there are any
4 questions I would be happy to entertain those.

5 MR. CAMPER: I don't have a question, as
6 such. But I do want to make a comment. I really
7 want to thank you for your recognition of the support
8 that I gave you, and Mark Gilbertson is also on the
9 Board of Directors.

10 And I just want to commend you, and
11 Sonny, and everyone involved, that week-long
12 workshop. That was, really, well done. And I
13 encourage those of you, in the audience, who are
14 interested, read the report, the EFCOG management
15 working group.

16 It really is an excellent document that
17 will teach you even more than you already know about
18 what is going on. It is really well done, well
19 done.

20 MS. DICKERT: Any other questions?

21 (No response.)

22 FACILITATOR GILBERTSON: So I'm going to
23 start off with a little bit different kind of intro,
24 here.

25 To also let you be assured that we are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 not only kind of looking across our knowledge base,
2 here, in this country, with regard to, you know, what
3 best practices are with regard to the management of
4 nuclear materials.

5 Larry and I were, earlier in this year,
6 were invited by the IAEA, to attend an expert's
7 conference in Vienna, where all of -- several of the
8 countries, from around the world, came together to
9 share lessons learned, with regard to the
10 remediations of sites, and with regard to response to
11 accidents, and with regard to regulatory frameworks,
12 on how you conduct those kind of activities.

13 And so we are reaching out,
14 internationally, to understand what is going on
15 internationally, and the international community is
16 reaching out to us, to get our expertise, and lessons
17 learned, to conduct these kind of activities, as we
18 move forward.

19 So what do we do from a Department of
20 Energy perspective, what are we trying to accomplish
21 overall? So we are trying to work across sites to
22 bring some consistency to what is happening at the
23 individual sites.

24 Although there is differences, as Chris
25 mentioned, in the environments that we are disposing

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 of these materials, I want to make sure that
2 everybody is taking a sound technical approach with
3 regard to the modeling and monitoring, and approaches
4 that they take to do this.

5 And that we are sharing lessons learned
6 across all of the sites, so the best people in the
7 complex are involved with the processes of trying to
8 make these determinations, overall.

9 And so we are sharing lessons learned.
10 They are practical things about, you know, how do you
11 grout piping, and how do you grout tanks? So what is
12 the best formulation for it.

13 And, you know, types of models that we
14 are using. The sophistication of our models are
15 constantly increasing. The ways that we characterize
16 particular materials are all things that are lessons
17 learned, that we share, as we move forward.

18 And it is all being done to try to
19 strive to bring more confidence to our decisionmaking
20 processes, and to make sure that these materials are
21 dispositioned in a way that protects human health and
22 the environment overall.

23 So that is, you know, some of the
24 overall reasons of why we do things across the board,
25 in the Department, and have driven things to share

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 these lessons learned.

2 Other things that we do, you know, is we
3 focus on, from a headquarters perspective, a
4 technical review of the documents. We are not so
5 stuck down in the weeds that you get a second look at
6 it, from a headquarters perspective of somebody that
7 has not lived it for three or four months, and has
8 done it.

9 And so we give, at headquarters, and
10 through our LFRG reviews, a second look of eyes, and
11 that is why it is even beneficial, with the NRC to
12 have that third set of eyes that looks at it.

13 And along with you, in the public, as
14 you are reviewing these documents, to ensure that we
15 are doing the right things, and making the best
16 judgement possible as we move forward with these.

17 Staff at headquarters, and in the field
18 are free to raise concerns up to our level at
19 headquarters, to try and implement changes, and get
20 things resolved across the board.

21 Now, it is not set up in a process, so
22 it is just a chain. There are many checks and
23 balances that happen as we move through the
24 documentation of these efforts, and go to making
25 these decisions, so it is not a unilateral decision

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 that is made by a field office manager.

2 It is not a unilateral decision that is
3 made by somebody that is a technical person at a
4 site, but there are many checks and balances to make
5 sure that, from a technical perspective, we have made
6 the proper determination and decisions for the
7 country.

8 And that goes with regard to the
9 performance of the performance assessments, with
10 regards to performance in the documentation to
11 support these determinations.

12 But it also goes, fundamentally, to the
13 final kind of decisions with regard to the actual
14 disposal of the material itself, to authorize things
15 for disposal.

16 And so senior management is briefed,
17 political people are briefed, the Secretary is
18 briefed, and we make the decisions to move forward.

19 You may not be quite as familiar, you
20 know, we talk a little bit about the Idaho kind of
21 instances. Sites are different, Chris mentioned
22 about stainless steel tanks.

23 Stainless steel tanks are very different
24 to clean out than the fundamental processes than were
25 used out there than the carbon steel tanks.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 And also the innards of the tanks are
2 very different down here, at Savannah River, with
3 regard to piping that exists on the inside of the
4 tanks, than existed at the Idaho site overall.

5 So, you know, we are making progress
6 associated with it. We are learning from each site.
7 But you will recognize, as you look to the
8 documentation that exists in Idaho, and in Savannah
9 River, that there are differences between how we did
10 what we are trying -- did the closure of the tanks up
11 in Idaho, versus at Savannah River.

12 You have heard a little bit about we
13 have some tanks that are waiting. Well, you
14 understand that -- you may not know, but at Idaho,
15 you know, the waste that were generated were part of
16 the -- we were dealing with the calcite process, up
17 in Idaho, and we stopped that plan.

18 And so we have some material in the
19 bottom of the tanks, the sodium bearing waste that we
20 have to treat out there, yet. And so the technology
21 that we picked, which is a first of a kind
22 application out there, is a steam reforming one.

23 So we are working to get that plan up to
24 speed out there. And when we do, we will treat the
25 material, that is in that tanks, and proceed on with

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the grouting of those tanks and then, ultimately, to
2 the final cover of those tanks out there.

3 At Savannah River, you know, I'm not
4 going to go too much, because you guys are really
5 intimately familiar with it, and it has been talked
6 about the processes that we are using here, at
7 Savannah River, to close the individual tanks that we
8 have, and how we are stepping through the process.

9 And we will talk about we are constantly
10 evolving and improving the way that do we things.
11 And the modeling that we are using for groundwater is
12 much more sophisticated than when we started out
13 modeling groundwater.

14 And I envision, as we move into the
15 future, that it is going to continue to be more
16 sophisticated as we move forward.

17 In my program, in another part, we have,
18 you know, some new modeling that is coming on board
19 with regard to, it is called the ASCEM modeling, but
20 it is -- it gets to more visualization.

21 We talked about how important it is to
22 work with stakeholders, to allow people to understand
23 what is going. Well, we believe, as we move into the
24 future, an important component of it is going to be
25 allowing you to visualize this material moving

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 through the subsurface, so you can understand exactly
2 what is happening at each individual level.

3 And so that is where the future is
4 going. So as we go and manage these materials, at
5 Savannah River, into the future you can envision, as
6 we move forward, you know, your site-wide composite
7 analysis and PA information putting into system like
8 that, so that you can monitor the performance of
9 those materials through the groundwater monitoring
10 system.

11 And look at how things are performing.
12 So we are kind of on that, kind of long term track,
13 and a vision for where we wanted to go with regard to
14 monitoring these activities.

15 And I think one thing to keep in mind is
16 with regard to how we move forward, with the program
17 itself, we are going to be here for a long time, at
18 the Savannah River Site.

19 And so we are going to be monitoring,
20 the State will be monitoring on a regular basis for a
21 long time out into the future. So we have time to
22 continually improve what we are doing with regard to
23 watching these materials.

24 Now, as specifically we talk a little
25 bit about, you know, the Saltstone disposal, and we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 talked about the PAs, and the revisions for it, you
2 know, the letter of concern with regard to
3 potentially reasonable assurance.

4 And then we talk a little bit about so
5 this is a living kind of a process. And I think what
6 Larry alluded to, and Chris did. So we are working
7 out, you know, what that kind of letter to Congress
8 might be, and what that process might be.

9 Because just because there is a
10 particular concern that is raised up, or a letter of
11 concern, you know, for a lot of these, what it
12 requires is more technical information gathering to
13 alleviate that technical concern.

14 And so I think, as we went forward, what
15 was mentioned was the fact that we had made some very
16 conservative assumptions with regards to amounts of
17 technetium that were going in, that were effectively
18 being disposed of in materials.

19 And we had a lot more effective removal,
20 you know, as we actually went down and performed
21 processes that allowed for us the source term that
22 actually was going to be dispositioned, is a lot
23 less, than what we originally had planned for it to
24 be.

25 So it is that kind of give and take, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 communication, in an open transparent manner that I
2 believe it is going to, you know, it is going to go
3 on, but it is a healthy kind of dialogue between us,
4 NRC, the State and the community.

5 And so we are going to strive to
6 continue to do that, as we move forward.

7 You heard a little bit about it. Our
8 lessons learned is, so we were just learning the
9 process in the early stages of it, and didn't involve
10 the public as much as we should have.

11 And so that was one of our lessons
12 learned, and we are probably at the point, you know,
13 just by the turnout to this meeting, where we are
14 starting to have enough public involvement, or maybe
15 a little bit more, because the issue is, I guess, you
16 might reach a saturation point.

17 But, you know, the public involvement is
18 important. And I think our websites, and other
19 tools, are becoming more effective, also, in getting
20 out information associated with the public
21 involvement.

22 And so that, I think, is a really
23 improved part of the process overall. Our
24 documentation and references. We want to make sure
25 that it is there for people to understand now and way

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 into the future.

2 And I think that is a critical component
3 of what we have done. And so if anybody has a chance
4 to look at one of these documents, you will see that
5 we are in the process of documenting a whole lot of
6 information associated with it, so that people can
7 review those things.

8 And in the future, as we move forward,
9 can make changes to the process, to better understand
10 how to monitor things, and do things more
11 efficiently.

12 So where our challenge is. Yes, I
13 understand some of you heard about them this morning.
14 You know, our challenges are, you know, continued
15 funding and impacts of the sequestration.

16 The Department has a lot of important
17 work to do for across the country, you know, keep
18 your cards and letters going to your Congress
19 persons, you know, about the nature of that work.

20 But it takes, it takes a lot of
21 different people to communicate the importance of the
22 work that is being performed, and the pace at what it
23 needs to be done at.

24 You know, the country has a lot of tough
25 decisions that we have. The impacts, you know, we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 are doing a lot of first of a kind technologies in
2 tackling problems that haven't been tackled before.

3 You know, when we run into technical
4 snags, like we did with saltwaste processing
5 facility. The issue is, it is a very integrated
6 system, as we move to disposition these materials.

7 And there is a ripple effect that
8 happens from one area to the next. And so the delay
9 in saltwaste processing facility startup, you know,
10 will affect, you know the tank cleaning phase and
11 closures, just because of what is available from what
12 we had planned.

13 As we move into the future, and because
14 some additional resources are going to be required to
15 tackle the issues associated with that.

16 So kind of, in summary, I think that
17 there has been some challenges that we have had as
18 we, you know, moved forward with this process.

19 I encourage you to continue to be vocal
20 about it. If you have concerns, if you have things
21 that you think need to be improved, you know, both
22 the Department of Energy as well as the NRC is very
23 open to receiving comments and suggestions, as we
24 move into the future.

25 But it is a tough job that needs to be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 done for this country. And so we are dedicated, and
2 I think you can tell, from the NRC's kind of
3 dedication to getting these things reviewed, that we
4 want to make sure that this is done, and that it is
5 done right for the country.

6 So what I'm going to do, is I'm going to
7 let Larry go next, and then we will take questions at
8 the end.

9 MR. CAMPER: Good evening, everybody.
10 Thanks for being with us this evening. It is a
11 pleasure to be here with you and to work, again, with
12 our colleagues in DOE, and the State.

13 I would like to start off by echoing
14 some of the things that Ginger has said it, Mark has
15 said it, Linda said it.

16 We were all brought together in a very
17 challenging way, by the legislations passed in 2005.
18 It was different for all of us. I mean, generally
19 you have the Department of Energy, a 30 billion
20 dollar, very large agency, doing all kinds of things.

21 And, suddenly, it has an agency that is
22 an independent regulator of 4,000, like a gnat flying
23 around its ear, asking lots of questions. And we did
24 have challenges, we really did.

25 I will tell you I have always felt that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 the level of dedication and professionalism, here,
2 was tremendous. We have worked to overcome our
3 differences in cultures, and communications, and so
4 forth.

5 But now I look around, I didn't know
6 what the audience would be. By now I look around and
7 realize that most of you knew this subject matter
8 very well.

9 So I won't draw upon a lot of this. I
10 was going to cover the basis for involvement and our
11 accomplishments, of course, challenges, and the path
12 forward.

13 I think by now you pretty much know the
14 basis for our involvement. But I would point out
15 that we talked a lot about the 2005 Act, 3116 but it
16 is, really, about public health and safety.

17 I mean, that is what brought us
18 together. But DOE is in the mission of public health
19 and safety, and so we are we. So we are working
20 together to protect public health and safety.

21 We want to enable the Department of
22 Energy in the consultation phase to go about making
23 the waste determinations. And then, of course, there
24 are lessons learned along the way.

25 This is a dynamic thing. A gentleman,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 earlier, asked the question about how are you
2 monitoring, we will in time. This is a very dynamic
3 process, and it will continue to be a dynamic
4 process.

5 Section 3116 A and B, A we consult; B we
6 have a monitoring role. And I think the thing that I
7 would point out, from our perspective, I mean, we
8 don't regulate the Department of Energy.

9 We have absolutely no regulatory
10 authority, whatsoever, over the Department of Energy,
11 around this activity that we are working together on.

12 But the closest thing that we do have,
13 to what we normally do, and how we are accustomed to
14 functioning, is what B of 3116 says, and that was
15 assess compliance.

16 That is pretty much the role that we
17 normally travel in. And so we do ask a lot of
18 questions, and those questions are designed to assist
19 DOE in its consultation efforts, for waste
20 determinations.

21 But we also have a monitoring role to
22 assess compliance. And we will be here, doing this,
23 for a very long time, working with the Department of
24 Energy and the State, to assess compliance.

25 So we took that very seriously, and we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 have asked a lot of challenging questions as a result
2 of that.

3 This is an interesting -- this slide has
4 four performance objectives in it. But every time I
5 look at this, and when I first read the Act, the
6 thing that I was struck by then, and continue to be
7 struck by, is -- and the gentleman earlier, again he
8 is gone, he asked a very interesting question, about
9 what standards are being brought to bear here.

10 The standards that are brought to bear
11 were the cleanup effort of the Cold War legacy waste,
12 including large quantities of plutonium, is the
13 standard that exists in Part 61, for a low level
14 waste commercial disposal facility.

15 And for 61.41, that is 25 millirem whole
16 body exposure, 75 millirem to the thyroid, or 25
17 millirem to any organ of the body and, of course,
18 ALARA, as low as reasonably achievable.

19 Folks, that is a conservative standard
20 being brought to bear by Congress, on what is taking
21 place here.

22 Now, if you are a member of the public,
23 and you are concerned about these types of things, as
24 well most are and should be, that is a good thing.
25 We like for the number to be conservative.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 But I'm just trying to put it in
2 perspective, as to what the standard is, that is
3 being brought to bear, as the Department of Energy
4 goes about this remediation, and we go about our
5 review.

6 We do evaluate the standard at 100
7 meters from the tank farm boundary for a period of
8 10,000 years. There is no period of compliance in
9 Part 61. So what we did was we brought to bear the
10 information that we had in our NUREG 1573, which is
11 performance assessment for low level waste disposal
12 facilities.

13 And that is what we, in conjunction with
14 the Department of Energy, determined that that would
15 be the period of compliance for this particular
16 process that we are using here.

17 In terms of the implementation of our
18 responsibility, we did put in place NUREG 1854, Chris
19 talked about that quite a bit, I won't belabor that.

20 I mentioned that we do not regulate the
21 Department of Energy. We have gotten a lot of
22 comments. This process, as Linda pointed out, has
23 increasingly been a process subscribing to public
24 input.

25 We have, both agencies, have interface

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 with the Governor's Advisory Council, that Karen
2 chairs, to provide information, and answer questions.
3 And it has been dynamic.

4 Chris mentioned that we are going to be
5 updating the document in the near future. So it will
6 continue to be a process that will gather public
7 input, and chain.

8 There are some notification letters that
9 are involved. Mark, in his comments, pointed out the
10 challenges around these. The first three, you see
11 there, I, II, and III, deal with non-compliance, or
12 is there non-compliance, and to what degree is there
13 non-compliance.

14 Category IV is a letter of concern. We
15 did provide a letter of concern to the Department of
16 Energy. Mark commented about that. I will talk
17 about that just a bit more.

18 And then type V is a letter of
19 resolution, with regards to any letters of concern
20 that is issued. And then you see at what level,
21 those types of things need to be signed.

22 With regards to the type IV Letter of
23 Concern, we did provide a Letter of Concern in April
24 of 2012, indicating that we could not get to the
25 point that we had reasonable assurance that the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 performance objectives would, in fact, be met. We
2 weren't for certain.

3 We could not reach that position of
4 reasonable assurance. We weren't saying that they
5 wouldn't. We were saying that we couldn't reach a
6 reasonable assurance that they wouldn't be.

7 And so we wrote the letter, and we also
8 discussed that in the TER, for the updated
9 performance assessment for Saltstone. But we made it
10 a point, in that letter, to put that in context.

11 I was certainly very concerned, in
12 meeting with the staff, that we were at a point where
13 we were not going to be able to meet the reasonable
14 assurance. That is a very serious thing in my mind.

15 But in talking with the staff, you know,
16 we talked about what is the dose? And so we decided
17 that we would put some indication, in the letter,
18 that the dose was on the order of one mSv, or 100
19 millirem per year, which is, in fact the public dose
20 limit that is set forth in Part 20 of our
21 regulations.

22 And that is the dose that if it is
23 allowed to a member of the public from a licensed
24 operation. So, in other words, while it was exceeding
25 the 25 millirem, and the 75, and the 25 millirem, but

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 in particular the 25 whole life, it was at a point
2 that it was close to the dose limit for a member of
3 the public from operations.

4 So we hoped that that would, you know,
5 reduce some of the alarm, and put the actual
6 parameters within context.

7 DOE then responded, subsequently, in
8 July of 2012 by providing us with additional
9 information regarding the actual technetium inventory
10 that was anticipated from the disposal operations.

11 Mark pointed that in his comments, how
12 it was determined that it was much less than was
13 originally anticipated.

14 And that is terribly important because
15 on a serology note, technetium is a very challenging
16 isotope, in the short term, because it is a highly
17 mobile radionuclide, and it is a great dose
18 contributor, therefore.

19 So with the reduction in the technetium
20 inventory, that made quite a bit of an impression
21 upon our concerns. We then, subsequently, sent an
22 acknowledgement letter, in August, indicating that
23 if, in fact, the technetium inventories are lower, as
24 you have indicated, then we find that that is most
25 likely that will result in the dose standard being

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 satisfied.

2 It was a letter of acknowledgement, not
3 a letter of resolution. The movement, and the
4 action, the activities that would hopefully lead to a
5 letter of resolution, eventually, are ongoing.

6 The Department of Energy, in other
7 words, is still gathering information, still
8 conducting analyses. They are working toward what
9 they hope will be a level of information, and detail,
10 that will satisfy us, and we can then, in turn,
11 provide the letter of resolution.

12 But a number of observations, public
13 meetings have been held since August, and as I said,
14 we have been provided with additional information,
15 and the additional analyses ongoing.

16 So it is always fun to talk about
17 accomplishments. And some have been under our
18 consultation, some have been under monitoring.

19 But I, as I have said before, and I
20 think it is worthy of reiterating, I think the degree
21 to which the communication has been enhanced.

22 If I go back to the initial meeting
23 between our two organizations, in around 2005, 2006,
24 and think back to the tension that was in the room,
25 as you know, DOE was trying to tell us what they are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 doing, and why.

2 And we are asking lots of questions, and
3 we can't get them to understand why we have all these
4 questions, and how we do business. I mean, the
5 tension was palpable, it really was.

6 And, frankly, working with my
7 counterparts in DOE, overtime, as well as Chris and
8 the other managers at his level, and the other staff,
9 I mean, everybody has worked together to greatly
10 enhance the communication and the working
11 relationship. And I think it is in a very, very good
12 place.

13 In terms of consultation, we did issue
14 the technical evaluation for Saltstone back in 2005.
15 We issued the TER for the F-Tank Farm, back in '11,
16 the beginning of '12, we issued in '12.

17 H-Tank Farm review ongoing. Chris
18 indicated to you when we anticipate getting the RAIs
19 out. I was glad that he reiterated what I told Karen
20 today, because he is very concerned about the
21 funding, that we would work together, as well as we
22 can, between now and the next fiscal year, and make
23 as much happen as possible.

24 So thank you, Chris, for reinforcing my
25 commitment to Karen today. The Idaho National

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Laboratory, we reviewed that, and issued a TER back
2 in 2005, of course that is not Savannah River Site,
3 it is covered under the 2005 Act.

4 In terms of monitoring, a lot of
5 monitoring activities are going on. Saltstone, of
6 course, it is the most, because we have been working
7 on that the longest.

8 As you can see, there have been a number
9 of observation trips to Saltstone, and a number of
10 technical reviews. We did issue a monitoring plan
11 back in 2007. And we have actually, also, done a TER
12 on an updated performance assessment because of a
13 change in tank design at Saltstone.

14 The Tank Farm, not quite as many
15 observations, yet. Then, again, it was a little bit
16 later in the process, as compared to Saltstone. But
17 there have been activities, three technical meetings,
18 and we did develop a monitoring plan in 2012.

19 Also in Idaho we have had a monitoring
20 plan in place since 2007, and conducted a number of
21 observations and visits out there, as well.

22 And then we are going to combine, and
23 create a monitoring plan for each tank farm, and then
24 combine them, as Chris pointed out in his comments.

25 We have produced reports every year,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 since 2007. The one for 2012 is currently in
2 development. We are thinking about combining 2012
3 and 2013, because of the number of observations, and
4 the amount of commentary have become fairly steady
5 states, so it might be more efficient to combine
6 those.

7 And then the number that you see there,
8 for those who might now know, is our ADAMS document
9 system. Try ADAMS, it is incredibly user friendly.

10 In terms of communications, I have
11 probably said a lot at this point in time. But the
12 mechanics of that enhanced communication has multiple
13 points to it.

14 We do have periodic management meetings,
15 we have telephone management exchanges, as necessary.
16 Any time we are getting ready to go out with a
17 report, to DOE, I'm on the phone with Mark, and we
18 are talking about what is in the report, and why, and
19 he and his staff are asking a lot of questions.

20 So then extensive technical exchanges
21 between NRC and the DOE staff. As I said before, and
22 will say again, I think we have gained a much greater
23 understanding and respect for our various systems.

24 We do face programmatic challenges.
25 Synchronizing our respective efforts to assist the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Department of Energy and satisfying its milestones at
2 the Federal Facilities Agreement is challenging.

3 There is a lot of information. Linda
4 pointed that out in her comments. We have to do a
5 lot of review. And getting that review done
6 promptly, to try to stay on schedule with the DOE,
7 and the FFA, and expectations of the State of South
8 Carolina DHEC, is indeed challenging.

9 We need to make sure that we have the
10 right level of detail to inform our decisions. You
11 know, we don't want to do too much, we don't want to
12 ask questions that are unnecessary.

13 We try to strive for the right level.
14 There are cultural and procedural differences between
15 the agencies, not that one is better or worse than
16 the other, it is just simply different, and they are
17 complex.

18 And we each have to deal with our
19 respective protocols. Available resources. What can
20 I say, Karen? I share your concern greatly. Mark
21 has alluded to it. It is a tough time, it really is.

22 And we all are living with continuing
23 resolutions, this Administration hasn't helped. I
24 can only tell you that we all do the best we can with
25 the resources that we have, and hope that in due

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 course things will get better.

2 The good news, for the NRC, in terms of
3 consultation is, and for DOE too, is that the
4 consultation part for us ends pretty much at the end
5 of this year.

6 That is a good thing. So we are left
7 with monitoring, it doesn't require quite as many
8 resources for monitoring. But we can certainly use
9 more resources. Chris often reminds me of that.

10 Continuing with challenges. You know,
11 going back to the question that the gentleman raised.
12 Probably one of the most challenging has been this
13 notion of removing the highly radioactive
14 radionuclides to the maximum extent practical.

15 And, you know, that is a variable. It
16 is a variable based on source term in a given tank,
17 and it is a variable based upon the particular
18 characteristics of that tank.

19 So it is a challenge that is not, that
20 one can write it down in a few words and say, this is
21 it. It is really, there is some variability in
22 there.

23 Assessing whether the data
24 agrees with assumptions. DOE has to be bold, and
25 right on point, and make some assumptions, and then
collect data to verify those assumptions.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Sometimes that works as well as
2 predicted, and sometimes it doesn't, or to some
3 degree. That is always the case when you are making
4 assumptions.

5 Then, of course, assessing whether the
6 Part 61 performance objectives are in fact met. I
7 think it is, for us, as time marches on, I have
8 always said the big concern in this entire process is
9 will we always know, as we move into the future, and
10 go beyond consultations, with a high degree of
11 confidence that, in fact, those performance
12 objectives are still being met.

13 Environmental data is telling,
14 radiological data is telling, compromise of the
15 structure is not so telling. And it is challenging,
16 and it will be a challenge for the NRC, and DOE, for
17 a very long time to come.

18 I always like to have graphics in my
19 presentation. People get tired of seeing boring
20 bureaucratic slides. I want pictures.

21 And what I'm trying to say, in this
22 particular slide, is something that I once said in a
23 CAB meeting. And that is, what the Department of
24 Energy is doing with WIR, and what we are being asked
25 to review is rocket science. It really is, it is a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 pretty challenging science.

2 And there are limits to the technology.
3 We have agency conflicts to deal with. Public
4 acceptance is always an issue. It is no different
5 here, than other places.

6 Resource constraints and, yes, I would
7 suggest that the standard that is brought to bear on
8 the performance objectives is a conservative
9 standard, especially for the type of waste strains
10 that we are dealing with here.

11 We have lots of players, lots of players
12 in the room, and that always complicates things. We
13 have Congress, the NDAA, bringing together our two
14 agencies.

15 The Federal Facilities Agreement, and
16 the expectations, rightly so, that the State of South
17 Carolina as carried out by DHEC. EPA is in the mix,
18 as well as the Department of Energy and NRC.

19 And, of course, you have stakeholders.
20 You have the Citizen's Advisory Board, you have the
21 Governor's Nuclear Advisory Council. And you also
22 have members of the public at large.

23 When you bring all that to bear on WIR,
24 at the Savannah River Site, in particular, more so
25 than the Idaho National Laboratory, because it is a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 different setup, it is a different set of
2 circumstances.

3 But all of that, together, does create
4 quite a Kabuki dance, and quite a set of challenges.

5 So I think with that we go to path
6 forward. And that is we want to continue to keep
7 public health and safety as our highest priority.
8 And I emphasized that earlier. I saw a lot of heads
9 nodding around the room, despite the law, or
10 consistent with the law, however you want to look at
11 it, public health and safety is what it is all about.

12 We are going to continue our
13 consultation activities and, when complete, we are
14 going to be publishing a combined monitoring plan for
15 the F-Tank Farm, and the H-Tank Farm.

16 We are going to continue to monitor
17 activities for Saltstone, and the F-Tank Farm, and
18 continue to coordinate monitoring activities with
19 South Carolina DHEC, and the Environmental Protection
20 Agency.

21 And, of course, we are going to continue
22 to interact with the Citizen's Advisory Board, as
23 well as the Governor's Nuclear Advisory Council.

24 And, Karen, I want to thank you again
25 for the opportunity to get together today, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 exchange information. I found it very, very useful,
2 and I thank you for that.

3 So with that I will stop and we will see
4 if we have any questions for Mark or I. Mark will go
5 first. Any questions?

6 FACILITATOR GILBERTSON: Tom?

7 MR. CLEMENTS: Tom Clements. I just had
8 one question. I don't know if it relates to the
9 second bullet on slide 17, in assessing whether data
10 agrees with the assumptions.

11 But if you go back to page 10, also the
12 second bullet --

13 MR. CAMPER: Slide 10?

14 MR. CLEMENTS: Ten, yes, please. Where
15 it says if DOE's new projected technetium 99
16 inventory, so my question is, how dependent on DOE's
17 assessment of information, like radionuclide content,
18 is the NRC? Are you doing any of your own
19 assessing, or do you have to simply take what is
20 given to you, from DOE with contractors? And how do
21 you asses if that information is accurate?

22 MR. CAMPER: Well, I will started the
23 answer, then I will let Chris, because he and the
24 staff would know it more closely than I do.

25 But DOE is collecting that data, they

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 are conducting analyses based upon review of that
2 data. That information is provided to us, we review
3 it, and we ask, through critical commentary, concerns
4 that we might have.

5 Now, we are also down here conducting
6 observation visits, which lead to more questions.
7 But the actual collection of the data, and the
8 analysis that goes with that, is done by the DOE.

9 MR. CLEMENTS: I mean, how can you
10 validate that it is correct, or that their models are
11 correct, that they plug things in properly?

12 MR. MCKENNEY: This is Chris McKenney.
13 But there is a couple more things that we also did,
14 in some areas we actually do, do perform our own
15 research.

16 We have a lab, down in Texas, which is
17 not associated with DOE, and not associated with any
18 of DOE's contractors. And we do, do certain research
19 on different types of processes.

20 Most of our research, in the Saltstone
21 area has been around how, well actually, how immobile
22 is technetium in the original Saltstone matrix, when
23 it is made.

24 And so we do, do some research in some
25 areas. We ask some very, like in the area of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 inventory. While we don't take the actual
2 measurements, per se, we have went down to getting
3 the actual lab reports, and talking to exactly how
4 they not only track down the actual measurements,
5 once they put them all in the tank, together.

6 But, also, the paperwork, the, the
7 history documents that occur, which is this part of
8 the waste came from this tank, that tank has a
9 history of -- it came, from these dates, from the
10 Canyons.

11 And the history of that waste type. So
12 we go through and say, you know, through all the data
13 that is available, are those consistent? And then
14 there are other checks between not only technetium
15 dies, but other radionuclides you can check to make
16 sure that ratios are within common sense, and making
17 that they are consistent.

18 And so we do, do that. I mean, yes, we
19 do not do independent measurements, per se, on all of
20 these things. And that would be quite a bit of a
21 challenge to try to actually do that.

22 But we have done that, to try and track
23 it back to the original documents, not just saying,
24 thanks for the summary and we don't do that.

25 On the models side, we actually get

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 their computer models. We get the actual running
2 computer models that they are running for the
3 results.

4 We are able to delve into them, take
5 them apart, see did they actually put them together?
6 Does cell A actually provide the data to cell B, and
7 not cell C?

8 And so we look through that. And then,
9 for every assumption, we are going back again, just
10 like we did for the, not for every assumption, but
11 for all the important assumptions, because we run
12 them and find out what the important things in the
13 model.

14 But we go back into base documents.
15 They refer to this document. Well, that document
16 refers to something else for its value.

17 And we go back on key data points, we
18 will go back all the way to original datas. You can
19 see that we actually did have an RAI, in one case,
20 where it was -- I think it is selenium, I can't
21 remember.

22 There was a difference between where
23 there was supposed to be selenate or selenite. One
24 letter difference, but it is a serious difference in
25 the performance.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 And so it was confusing because when you
2 go back all the way in the data, it looked like it
3 may be the other type. So we don't just take all the
4 summaries and go, read through them and say that.

5 We are delving into the models, we are
6 delving into the important piece of the data, and
7 going all the way back to primary data sources, when
8 it is important, and when that is the only valid way.

9 And in addition we do, do our own
10 research on a few, what we think is key pieces, that
11 we can actually do within our level of funding.

12 MS. SUTTORA: Do you want to mention
13 that when we are filling the tanks you actually got
14 all the videos?

15 MR. MCKENNEY: Yes. And then on tape
16 side, okay, so we also watch the videos of -- well,
17 we just watched the videos of Saltstone 2, to watch
18 the humidity levels, we got all the data on how the
19 temperature graphs go across on various ones, because
20 we had questions on how hot the grout gets, as it
21 dries.

22 Because that is actually important to
23 how it acts long term. And, similarly, when we were
24 doing an F-Tank Farm, we were down here, we looked at
25 their chits that they pass between the trucks, that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 they come in with, so that they verify that they meet
2 the specs for the grout coming in.

3 We watch the videos of the pouring of
4 the tanks, because there are some -- we had a bit of
5 research to do in the center, at the center down in
6 Texas, that showed that the way that a mound can
7 actually make preferential pathways inside of a big
8 concrete monolith.

9 So that we were watching for was the
10 level of mounding that they were getting, because
11 they were pouring from a central spot. So we were
12 looking for that in the video, and stuff like that,
13 because that could give us some indications.

14 We did a number of other things like
15 that, that are done. And then, you know, we work
16 with the DOE, in our monitoring plan we have
17 prioritized the technical issues.

18 We have said, these are the issues that
19 are really driving, that are driving performance.
20 And these are the issues where additional model
21 support would be most beneficial in the near term.

22 And we have, in our observation
23 meetings, both in December for Saltstone, and in the
24 F-Tank Farm that we just did recently, in March, we
25 discussed their research plans, over the next few

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 years, to show how does that mesh with the data that
2 we think we need? Are they performing that data?

3 In addition, we are not limited to DOE's
4 data. When we are looking at an important parameter,
5 we go out and search for the relevant literature,
6 also, to see are there any contradictory reports,
7 that are of similar materials?

8 And has DOE addressed those and said why
9 those are not applicable, or like the material that
10 they are actually producing.

11 So we are not -- we are definitely, yes,
12 we ask a lot of those questions, because we are,
13 like, we got this report, and how does this comport
14 to what you assumed? And that is -- so it is a whole
15 integrated system.

16 So that, you know, --

17 MS. DICKERT: Could I have one thought?

18 MR. CAMPER: Sure, please.

19 MS. DICKERT: Tom, also, specifically on
20 the inventory question, during the very early
21 monitoring visits, it is not that the NRC even just
22 takes the lab reported data, and accepts it.

23 They came and did a monitoring visit
24 around going to the Savannah River National Lab,
25 looking at the procedures, and the protocols that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 were used, looking at how the work was actually done,
2 so that they would have confidence, then, that when
3 they got the laboratory reports, that the appropriate
4 protocols, the appropriate quality assurance, in
5 terms of blanks, and that kind of thing, had all been
6 done before they would even accept, you know, just
7 blindly a laboratory report.

8 So those kinds of things have been
9 pretty extensively done.

10 MS. ROSS: Let me, also, say that we do
11 the same thing with SCDHEC and EPA under the FFA.

12 MR. CAMPER: The other thing that I
13 would point out, too, in additional to all the
14 details that Chris gave, that from a process
15 standpoint, even though we are in constant touch with
16 DOE, we have maintained an arm's length relationship
17 with regards to RAIs.

18 They don't see the RAIs. I mean we have
19 technical exchanges, and those are the ones -- they
20 do not see the RAIs, or what we provide them. The
21 same thing holds true for the TER.

22 So we maintain an arm's length
23 relationship, much like our classic relationship with
24 the licensees even though we don't regulate them. We
25 wanted to make sure that the system had a lot of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 integrity in that regard. And we continue doing it.

2 MR. CLEMENTS: Just one more kind of
3 generic question.

4 MR. CAMPER: Sure.

5 MR. CLEMENTS: Tom Clements. We are
6 having some unusual weather today, I don't think it
7 has rained since --

8 (Laughter.)

9 MR. CLEMENTS: I'm kind of thrown off
10 here. It is bizarre. But just looking at all the
11 rain we have had. I mean, it has really rained every
12 day for a month or so.

13 Have, and anybody can answer the
14 question, has there been any different run of models
15 about what were the assumptions, initially? Because
16 I would never have thought we would have a spell like
17 this.

18 And does it have any impact on the
19 assumptions that were made, and the degradation
20 models for Saltstone over time?

21 MR. MCKENNEY: I mean, I can talk about
22 generically.

23 MS. SUTTORA: Specifically? Well, one
24 would think that the generic would be first, and then
25 the --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. MCKENNEY: Because of the fact that
2 these are, in the long term, these are varied
3 structures. There will be a cover across them, and
4 other things like that.

5 Short, relatively short term rain events
6 will have a much smaller impact, because it will have
7 to infiltrate down through the over ten meter, I
8 think it is a ten meters of cover, minimum, in lots
9 of the places.

10 And most of that will be diverted away,
11 because that is what the cover is supposed to do. So
12 that does result in a very much of a mitigated
13 impact.

14 Now, but from a sensitivity point of
15 view, we look at that. We look at what is the
16 expected range of rainfalls. How, you know, could it
17 get wetter within the data, the history of this area,
18 you know, for extended periods of times, or is it
19 drier?

20 Actually like one test, actually, that
21 Hanford did, they looked at one of their covers and
22 actually denuded it by setting it on fire, to see how
23 it would perform over some period of time, too, just
24 as if in a natural process.

25 So the models, we do look at sensitivity

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 rain input, to infiltration input. And that is a
2 very important parameter. Because infiltration is
3 your driver for getting the waste out of isolation.

4 It either is the mover itself, or it
5 brings in oxygen that would actually transform the
6 waste so that the technetium would change from not
7 being able to move, to being able to move.

8 And so that becomes, conventionally,
9 that is the thought of first let's look to see how
10 sensitive is infiltration to the system? But a few
11 weeks of rainfall, at this pace, is not really
12 generally that sensitive to the whole model.

13 But it is definitely something. The
14 other point of view would be a question we did raise
15 in the F-Tank Farm. We asked, how would the water
16 table change affect you?

17 Because if it rains a lot more than your
18 water table could, potentially, move going closer to
19 the surface. And so we raised those things, they have
20 addressed several of them.

21 And although it is sort of a very hard
22 thing to talk about, because we are talking about
23 what is the water table today, in the future we are
24 going to have this big cover on the site, on that
25 area, and that is going to drop it and everything

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 else.

2 MR. CLEMENTS: One reason I asked the
3 question is because, and the old designs are
4 different from the old type, to the new type.

5 MR. MCKENNEY: Right.

6 MR. CLEMENTS: It is because leakage
7 involved, I guess, because of all of the rain that we
8 have had.

9 FACILITATOR GILBERTSON: Any questions
10 on the phone?

11 (No response.)

12 FACILITATOR GILBERTSON: Okay. Any
13 other public questions?

14 (No response.)

15 FACILITATOR GILBERTSON: Thank you. I
16 want to thank you for bearing with us over dinner,
17 and the time, and if you think of any questions in
18 the future also be sure to let us know. Thank you.

19 (Whereupon, at 7:15 p.m., the above-
20 entitled matter was concluded.)

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com