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I have attached copies of the transcripts from the public meeting on Dec 8th. These are being put in ADAMS today and should be available to the public next week.

Justin C. Poole Project Manager NRR/DORL/LPWB U.S. Nuclear Regulatory Commission (301)415-2048 email: <u>Justin.Poole@nrc.gov</u>

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Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: Watts Bar Nuclear Plant EIS Public Meeting: Evening Session

Docket Number: (n/a)

Location: Sweetwater, Tennessee

Date: Thursday, December 8, 2011

Work Order No.:

NRC-1313

Pages 1-34

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1	UNITED STATES OF AMERICA
2	NUCLEAR REGULATORY COMMISSION
3	+ + + +
4	PUBLIC MEETING TO DISCUSS
5	DRAFT SUPPLEMENT TO THE
6	FINAL ENVIRONMENTAL STATEMENT
7	FOR WATTS BAR NUCLEAR PLANT, UNIT 2
8	+ + + +
9	Thursday, December 8, 2011
10	Magnuson Hotel
11	1421 Murrays Chapel Road
12	Sweetwater, Tennessee
13	+ + + +
14	Evening Session
15	6:30 p.m. to 8:30 p.m.
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1	PROCEEDINGS
2	(6:30 p.m.)
3	MR. CARPENTER: Good evening. We're ready
4	to go ahead and get started now. I'm Gene Carpenter.
5	I'm with the U.S. Nuclear Regulatory Commission.
6	Thank you for coming. This is the second meeting
7	today of the Public Meeting to discuss the Draft
8	Supplement to the Final Environmental Statement for
9	Watts Bar Nuclear Plant, Unit 2.
10	What we will be doing today is Patrick
11	Milano and Jeremy Susco will be giving presentations
12	at the beginning of this meeting. Then we will go
13	into a question and answer portion. And then once we
14	finish with your questions, we will go into a comment
15	period. And that will allow everyone here to ask
16	questions specifically related to the Environmental
17	Statement Supplement. And then if you have comments
18	about related to Watts Bar, we will go into that.
19	We do not have because this is a
20	meeting between the NRC and the public, we will not be
21	taking questions specifically for the licensee. If
22	there are TVA people here who would like to talk to
23	someone about something after the meeting, certainly
24	welcome to do so. But today's meeting is specifically
25	for the NRC to interact with the public. And we do
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3 appreciate your taking your time to come and chat with 1 2 us. Now as I said, Pat will be giving the 3 4 presentation. And then Jeremy will be giving a 5 presentation. Let's go ahead and get started. We also have Steve Campbell. Steve is the 6 Branch Chief for the Watts Bar Special Projects 7 8 Alan Howe, he is the Deputy Commission Branch. 9 Director for the Division of Operating Reactor These folks are all in the Office of 10 Licensing. Nuclear Reactor Regulation in Rockport, Maryland at 11 12 the NRC Headquarters. We also have some folks here from the 13 Regions. If you have questions about that, we can 14 talk -- introduce those. 15 And we also have a representative from our 16 Office of General Counsel if 17 there's legal anv questions that we need to answer. 18 19 Couple of administrative aspects first. Obviously everybody came in this door; that's one of 20 21 the fire exits. The other fire exit is the other side of the room. There are the restrooms right there on 22 the left. So if you need to do something like that, 23 you don't have to run downstairs. 24 25 We do have some sign-in sheets right over NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 www.nealrgross.com

here. And I would like to encourage anyone who is interested in asking questions or providing comments to go ahead and sign in. You're obviously not required to, but we would like to be able to keep a record of who's asking questions and who are giving comments in case we need to get something back to you.

Also we have here at the table also some public meeting feedback forms. And as with any NRC public meeting, we do encourage you if you do have any comments about the meeting, how it runs, anything we can do to improve it, please provide that. We always appreciate that.

Also there are some handouts on the table. There are some hard copies of the book in case some of you have interest in that. They have electronic copies of those again for your personal use and feel free to take them. If you do sell them, more power to you, but they're free for you to take, okay?

The other thing is I do encourage everyone to please turn off your cell phone or at least put it on mute just to give everybody a chance.

When we go to the question and answer portion of the meeting, anyone who has signed in and has indicated that they'd like to do questions, I will take those people first. And then we will throw it

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So I will initially limit the question and answers to three minutes for each question and three minutes for each comment. If we have fewer or more comments than that after we've gone through the first or second round, we'll expand the time as appropriate.

With that I think we're good to go. At this time we'd like to introduce Pat to come and have a talk -- present his talk.

MR. MILANO: Thank you, Gene.

indicated, 14 Aqain as Gene my name is 15 Patrick Milano, Pat Milano. I'm Licensing Project Manager with the NRC's Office of Nuclear Reactor 16 17 Regulation. We commonly refer to it as NRR and you may hear that again repeated several times tonight. 18

19 Our office is responsible for the Agency's 20 of the application from Tennessee Valley review Authority to operate -- to license and operate a 21 second unit at the Watts Bar Station, 22 Watts Bar Nuclear Plant, Unit 2. And I will be discussing a 23 little bit about in general what's going on with the 24 25 licensing process for Watts Bar.

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And Jeremy will be taking and talking about the environmental related activities for this operating license application.

As all of you are probably aware, on 5 November 10th of this year, the NRC published its notice of availability of the Draft Supplement to the 6 Final Environmental Statement related to the operation 8 of Watts Bar Unit 2. The Draft Supplement documents the NRC's preliminary review of the environmental impact associated with operating this unit for the 10 duration of the proposed operating license period. 11

Next one.

Oh, Before 13 excuse we start, me. а question came up earlier this evening with regard to 14 15 the docket number for this the operating license activity at Watts Bar. And in general the docket 16 number is 50-391. However, if you're trying to find 17 information in our document control system that the 18 19 NRC maintains, it's called ADAMS; that's the acronym It's the Agency-wide Document Access and 20 for it. Management System. And if you're using that, it's got 21 a field to put in the docket number and rather than 22 23 using the dashes, they use 05000391 there.

So we put it up on the screen just in case 24 25 somebody wants to find some of the information related

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to overall as to what's been going on with Watts Bar Unit 2 and the flow of information both from TVA and from the NRC.

Next slide.

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5 On this slide we're showing you the basic agenda for today's meeting. I will be discussing, 6 like I said, a short discussion about the NRC's 7 8 regulatory role. Then we will provide you with a 9 summary of the environmental review, some of the 10 upcoming milestones, and then also how to submit comments after this meeting if you'd like to submit 11 12 them either electronically or by some other written method. 13

At the end of the presentation, like I indicated, there will be some time for interested parties to ask questions on the environmental review process and more importantly time for you to present your comments on the Draft Supplement too to the Final Environmental Statement for Watts Bar Unit 2.

Next slide.

The NRC established to 21 was regulate civilian uses of nuclear 22 materials, including 23 facilities that produce electric power. The NRC is responsible for licensing and regulating the operation 24 25 of commercial nuclear plants in the United States.

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Watts Bar, like the other currently operating nuclear plants, is being licensed under a two-step process described in Part 50 of the NRC's Regulations. And when I say two-step process, what I'm saying there is there was a process to -- wherein TVA was granted a permit to construct the facility. And then separate from that there's the process that we're currently in right now where we're evaluating TVA's application to operate the facility.

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In all aspects of the NRC's Regulation, the Agency's mission is to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment. Next slide.

All nuclear power plant applications must 15 undergo a safety review, an environmental review, and 16 17 an anti-trust review by the NRC. In order to construct or operate a nuclear plant, an applicant 18 19 must submit a Safety Analysis Report. This document contains basic design information criteria 20 for the reactor and comprehensive data the 21 proposed on 22 proposed site.

As part of the application for an operating license, an applicant provides more details in its Final Safety Analysis Report, commonly referred

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to as the FSAR, that provides further details about the facility, presents the design basis and the limits on its operation, and presents the safety analysis of structures, systems, and components and the facility as a whole.

6 It also discusses various hypothetical 7 accidents and the safety features of the plant that 8 would help to either prevent or to lessen the effects 9 of an accident. The NRC Safety Review covers a broad 10 range of areas, including those that are shown in the 11 upper portion of this slide.

The National Environmental Policy Act, 12 requires federal agencies 13 NEPA, to integrate environmental values into their decision 14 making 15 process by considering the environmental impacts of the proposed actions and reasonable alternatives to 16 17 those actions. To meet NEPA requirements, federal agencies prepare a detailed statement known as an 18 19 Environmental Impact Statement. And this is in part 20 what we're here today to do. The NRC has prepared a supplement to the Environmental Statement that was 21 done for Watts Bar Unit 1 and 2. And this supplement 22 is for Unit 2. 23

24 Because TVA is also a federal agency, it 25 was also required by NEPA to prepare an Environmental

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Impact Statement to support the operation of Watts Bar Unit 2.

The NRC's Regulations also define criteria 3 4 wherein licensing and regulatory actions require an 5 Environmental Statement. One of those criteria is the issuance of a full power, or also you may hear it 6 7 called a Design Capacity License, to operate a plant. 8 The criteria for an identification of licensing and 9 regulatory actions of requiring Environmental Impact Statements are found in Part 51 of our Regulations. 10

11 These Regulations require that an 12 license contain comprehensive applicant for а а statement of the environmental impacts of the proposed 13 plant. And because of the two-step processes, as I 14 15 was indicating, an Environmental Statement was prepared to support the construction permit. 16 And this 17 environmental report at the operating license stage that we're at right now expands on that initial report 18 19 and focuses specifically on the plant operation and also it's submitted only in connection with the first 20 licensing action authorizing full power operation. 21

During the licensing of a nuclear plant 22 like I indicated, 23 the NRC, also issues а Final Statement, which identifies 24 Environmental those 25 potential impacts and evaluates them and the benefits

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of the proposed plant. After completing the review, the NRC issues a Draft Environmental Statement for comment by the appropriate federal, state, and local agencies as well as the public. And then once all those comments are received, the NRC addresses the comments and issues the document in the final form called the Final Environment Statement.

Next slide.

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9 Here's a simplified chronology of some of 10 the major things that have taken place at the plant as to the environmental review. 11 it relates As Т 12 indicated, because of the fact that TVA is a federal required to 13 aqency and it was submit its own Environmental 14 Impact Statement, that was done 15 initially in September of 1972 to support the construction permit. 16 And the operating license 17 application came in several years later in June of And although I don't have it on here, the 18 1976. 19 Environmental Impact Statement to support operation at that time of Watts Bar Unit 1 and 2 was submitted by 20 TVA in about September of `76. 21

The NRC evaluated the information that TVA provided along with its doing some of its own reviews and issued its Final Environmental Statement for Watts Bar's Units 1 and 2 as an NRC document or an NRC

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report. And the number of it is NUREG-0498. And that was done in December of 1978.

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As some of you are aware, in around 1985, 3 4 when TVA thought that Unit 1 was about ready to be 5 issued an operating license, a number of issues came up and construction stopped at both Unit 1 and Unit 2. 6 And subsequently after a number of those issues were 7 8 corrected and TVA completed the remainder of the 9 in the mid-`90s TVA did a review of its plant, 10 Environmental Impact Statement for Unit 1 in May of 1994. And in April of 1995, the NRC supplemented that 11 12 December 1978 Environmental Statement for Unit 1 and specifically for Unit 1 operation. 13

July 2008, submitted 14 In of TVA а 15 Supplemental Environmental Statement to support operation for Watts Bar Unit 2. And as indicated in 16 17 the report, there was some additional information that was necessary to be submitted to support some aspects 18 19 of the environmental review. And that information was submitted in January of 2009, wherein the staff felt 20 it had a complete submittal from TVA. 21

And also at the time that TVA informed the NRC of its intent to reactivate construction of Watts Bar, our five member Commission provided some direction to the staff on how they wanted the review

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to be conducted. And one of those things that they did tell the staff to do was they wanted to offer the public another opportunity to request a hearing if need be.

5 And because of that the NRC issued a Federal Register Notice of Availability of an updated 6 7 operating license application and opportunity for 8 hearing. This March 2009 date here is the date that 9 the information that updated the original operating 10 license application came in from TVA. And then May 2009, the NRC issued its Federal Register Notice for 11 12 the updated application.

And so that basically takes you up to 13 today with regard to what's been going on licensing 14 15 wise for Watts Bar Unit 2. If you've got some more questions about some of the details, I know I went 16 through -- a lot has taken place in the last three 17 So if you've got other questions or want to 18 years. 19 know a little bit more specifics about it, feel free to ask me after the environmental review. 20

In any case I'm going to turn over the floor now to Jeremy Susco, who's going to go into the specifics about the staff's Environmental Review.

Thank you.

MR. SUSCO: Thanks, Pat. My name is

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Jeremy Susco and I work for the Environmental Team that put together the document that we're here to discuss today. And for those of you who heard me speak earlier, my presentation hasn't gotten any funnier or more interesting. So I hope you can stay awake until we get to the Q&A period.

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So why we're here today is to talk about 7 8 the Draft Supplement to the Final Environmental 9 Statement, which is kind of a confusing thing to say. So to help kind of clear that up, so there's two 10 11 Environmental Impact Statements we're talking about, 12 one submitted by TVA and one done by the NRC. The one submitted by the TVA I'm not going to call it an 13 That Environmental Impact Statement. 14 was their 15 application, just so we can make that a little less confusing. 16

17 TVA submitted their application. And 18 we're working on our Environmental Impact Statement 19 now.

20 So why are we doing a supplement to what 21 used to be a final and now it's a draft?

22 So back in '78, we put out our Final 23 Environmental Statement related to Watts Bar 1 and 2. 24 If they had gone up and operating since then, that 25 would have been it. There was a 20-year hiatus. And

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1	so we decided back in the `90s, when they started up
2	Unit 1, that was going to be Supplement 1, so
3	Supplement 1 to their 1978 document. Worked on that
4	while the conditions were still the same so we wanted
5	to supplement that and build on it for Unit 1.
6	That brings us up to Unit 2 and now we're
7	talking about Supplement 2. And so now we're also
8	we're supplementing that `78 document, kind of
9	building on what was in there, building on Supplement
10	1 that was in the `90s. Again a lot of similar
11	issues. And now we're here at Supplement 2.
12	And this is draft and so that's what we
13	just put out a couple of months ago is the Draft
14	Statement that we're here to receive your comments on.
15	And if you're interested the third bullet on there,
16	our Part 51 requirements, that discusses what's
17	supposed to be on TVA's application as well as the
18	issues that we look at at the NRC. And further
19	guidance at the NRC is that fourth bullet down there,
20	another report called our Standard Review Plan.
21	That's what we look at.
22	And really what the Environmental Impact
23	Statement looks at is what would be the environmental
24	impact of granting that second license to our Watts
25	Bar 2 to operate.

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1	Next slide, please.
2	So putting together our Environmental
3	Impact Statement, this is not complete, but it's a
4	very good example of why the issues that we looked at.
5	And so some of the things that we're looking to hear
6	from the public on today are did we miss an issue.
7	And for the issues that we did examine is our analysis
8	complete? Is there something that we missed?
9	And so if we hear up at the podium and we
10	speak later as well in written comments you provide
11	later, those are the kind of things that we're looking
12	to hear about. That's why we have this public comment
13	period when it goes from draft to final.
14	The next slide, please.
15	So to give you an idea of some of the
16	information sources that we looked at, you can see it
17	there, the license application. That is TVA's
18	Environmental Impact Statement.
19	Public comments, we were here two years
20	ago about this time to hear public comments on the
21	scope of our view, what things should we look at, what
22	shouldn't we look at. Different permitting
23	authorities, the NRC is not the only person that TVA
24	has to answer to as far operating and a lot of their
25	permits they have to receive. We talked to those

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17 authorities and agencies, different state, federal, 1 2 and local agencies as well as some local tribal 3 councils, and NRC staff site eyed. 4 We actually came here back in October of '09. 5 And we actually examined the site and the environmental issues to get a better idea of what was 6 really going on at this than we can realistically do 7 8 from our Headquarters in Washington, D.C. But as part of this -- again everything 9 10 we're looking to hear public comments on is did we use the best available data? And if we didn't, in your 11 12 public comments, let us know. Point us to that -- to a particular reference and we will definitely take a 13 look at that. 14 Next slide, please. 15 So our preliminary conclusion -- and I'll 16 read this, "The NRC staff preliminary recommendation 17 to the Commission is that the environmental impacts 18 19 are not significant enough to forego issuing operating license for Watts Bar Unit 2." 20 I just wanted to kind of break down that 21 overwrought statement and kind of highlight some of 22 the salient points there. The first one I want to 23 point out is preliminary. And synonymous we're using 24 25 here the term draft. We put out a Draft Environmental NEAL R. GROSS

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Impact Statement. And our preliminary recommendation is we haven't considered everything yet because we haven't seen our public comments. And so that will become a final recommendation after we do so. And we're looking to put out our final document in May.

6 The next key word there is recommendation. 7 And the Watts Bar 2 license is not just resting on 8 this Environmental Impact Statement. This is just one 9 of the documents that goes up to the Commission when 10 they're looking to make the decision on whether or not 11 to grant that operating license.

12 They have the Environmental Impact 13 Statement, the Safety Evaluation Report that Pat 14 talked about earlier, different inspection reports. 15 And so this is just one component to the Commission 16 making that decision.

17 And then the not significant enough to What that legal term of art what that really 18 foreqo. 19 means is that it's not an unreasonable environmental 20 choice to make to issue an operating license. It's not to say that there will be no impacts. It's that 21 there not will be impacts that are great enough that 22 it would be a ridiculous option environmentally to 23 grant the operating license. 24

So that's what we really tried to examine

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when we put together this Environmental Impact Statement.

And next slide, please.

4 So this milestone review, this is just the 5 documents that we're talking about here. The black text here that's where we are now. We put out the 6 draft for public comment in October and we're here to 7 8 the public meeting to hear your public comments just 9 very shortly. And the public comment period is going to close on December 27th. 10

11 And I do want everyone to know there were 12 several commenters in our meeting earlier today who did ask for an extension. I just want everyone else 13 to know that we're going to take that request back to 14 Headquarters and look at the option of extending that 15 comment period for a little longer, especially past 16 17 the holiday period. And we're looking to put out our final document after we consider and respond to all 18 19 the public comments in May.

Next slide, please.

other ways to submit 21 So four public Number one, you have the podium today after 22 comments. we're done speaking. And I promise this is my last 23 Next way is by mail and you have the address 24 slide. 25 Probably there. the easiest is way on

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regulations.gov. And that docket ID is what's particularly important there. When you qo to regulations.gov, you can put that docket ID and it the web page for this particular 4 will bring up 5 And there's a pretty easy form where you document. can -- just a blank space for you to submit your 6 7 comments. And you press the Submit button and it 8 heads out to the NRC. And the last way if you so choose, we do also have a fax number for comments. It's like I said the current due date for

10 11 comments is December 27th. But we are going to look 12 at potentially extending that based on public request.

So that concludes my do. And I'll turn it 13 back over to Gene. 14

15 MR. CARPENTER: Thank you. All right, now the real meat and potatoes part of the 16 this is 17 Well, the reason that we're here today, and meeting. that is to get your questions and comments to the 18 19 staff. Now the first part of this that we're going to 20 qo into is the question and answer portion of this meeting. And specifically if you have any questions 21 that the staff here they can answer, that we will 22 write down and take back and respond back to you in 23 writing. This is the portion that we would like to 24 25 have you go ahead and ask your questions.

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1	As soon as we're finished with all the
2	questions that we may have from the floor, then we
3	will go into the comment period so that any comments
4	that you have that you'd like us to consider then we
5	will take those. All right?
6	Now I'd ask at the beginning of the
7	meeting anybody who was interested in having to be
8	asked first for questions, comments to sign in and to
9	mark it that they would like to do so. With that
10	there is nobody who has done so, so I'm just going to
11	throw it open to the audience. Does anybody have any
12	questions of the staff?
13	Because we are having this transcribed
14	when I bring the mic over to you, please stand up and
15	tell your name when you do so. Or you can sit.
16	MS. HARRIS: Earlier today we talked about
17	
18	MR. CARPENTER: Give your name.
19	MS. HARRIS: He knows. Ann Harris.
20	MR. CARPENTER: Thank you.
21	MS. HARRIS: Earlier today we talked about
22	some of the documents that you used to make your
23	judgment in here and some of them refer to 40-year-old
24	documents. Now I realize some things haven't changed,
25	but a lot more has changed than has not.
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And I'm wondering on these documents where you used TVA's documents when you did use them and did you just accept TVA's documents without going back and checking to verify in those old documents and did you go and look for new information concerning those same documents because I'm not finding consistency between what you've put in and some things that I personally know about? And I'll put those in my comments. But I'd like to know how you made those determinations.

MR. SUSCO: It's kind of a combination of 10 all of those things. So it really kind of depends on 11 12 the issue. For example, one issue that there's not going to be a lot of new information is going to be on 13 the geology and soils of the area. Nothing has really 1415 changed as far as what this -- what Watts Bar is built on in the last 40 years. So we really could use some 16 of the older studies. 17

But for something like aquatic impacts, 18 19 now we might start -- as a starting point we might 20 look at something that was from when the plant was initially built, but then we're -- I guarantee that 21 we're going to look at new information for that type 22 of impact, in particular because we really want to see 23 24 what has changed. And we already got the documents 25 from 40 years ago. We can see the delta and what sort

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of impact the plant may have had on that particular type of issue.

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3 But as far as documents submitted by TVA, 4 yes, we do put a certain amount of trust in our 5 licensees that what they are submitting to us is truthful. But that's not the only place that we look. 6 There's a lot if you look in the referencing section 7 8 for each of the chapters, you'll see 10 pages for 9 every chapter and all the references that we looked. 10 And only a small portion of those are TVA's. There's 11 a lot of expert studies that we look at from all sorts 12 of different sources. So it's kind of a combination of all those things. 13

14 MR. CARPENTER: Any other questions for 15 the staff?

MR. RIDEN: David Riden from Riceville, Tennessee. I signed the sign-in thing earlier. Had no intent to ask a question, okay? What you said two things that raise two questions in my mind.

The first one relates that I've lived three years in Minot, North Dakota prior to 1968, when the Mouse River flooded. And then recently I was a contractor at Fort Calhoun on the Missouri River.

NRC was concerned about the data that the utility had used for Fort Calhoun as far as the flood

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projections were for the Missouri River. Fort Calhoun had used data from the Corps of Engineers. And NRC has a process to calculate each utility to calculate that without utilizing the data from the Corps of Engineers. And the reason why I was there was to look back over their information that they were going to present to NRC. And they did extensive updates. Don't need to go into that.

But the bottom line is the information 9 provided by the Corps of Engineers was faulty. 10 And they made great improvements at Fort Calhoun and 11 12 they're still working on it. If you watch the news, if they hadn't prepared for it, they'd be in a lot of 13 trouble, lot worse trouble. And I attribute NRC 14 15 pushing them to correct what they had there and it made a bad situation a lot better. 16

17 And my question is has TVA depended on the Corps of Engineers data for anything related to the 18 19 Tennessee River at Watts Bar? And if they have, will NRC then go back to the Tennessee Valley Authority and 20 21 ask them the same prudent questions they asked the utility owner on the Missouri River to do it 22 in 23 accordance with the federal regulations and not depend on the Corps of Engineers? So that's the first 24 25 question.

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And if there's any response, you've got my email address. If there's any response back, I would like to know because I'm an old-time resident of East Tennessee, okay?

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And that leads into the second question. You want me to go ahead with the second question?

7 So that was the first question. I don't 8 know the answer to it even though I'm a former NRC 9 employee and a former TVA employee. I was here in 10 1978, when we were originally trying to start up Watts 11 Bar Unit 1. And I was the Nuclear Assurance Engineer 12 at the time.

And TVA upper management gave up on Watts Bar and said, "David, we brought you here to start up Watts Bar. We want you now to go to Sequoyah because we changed our mind. We want to put our effort in Sequoyah." So I went to Sequoyah and I was there helping them start up the Sequoyah units.

And for whatever reason they wanted to -it doesn't hurt my feelings -- but TVA ripped me along with everybody else that were supplement people that they moved over to Sequoyah. And when they released me, they said, "Oh, by the way, David, we like what you do. You're going to be back cause we've got a lot more in TVA to do especially at Browns Ferry." So in

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the last 20 years I've spent over half of that time as a contractor for TVA.

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Before all that I mentioned I spent three years in Minot, North Dakota. That's because I was with the United Stated Air Force. I'm a Nuclear Weapons Specialist. I was there to start up the Minute Man Three Multiple Independent -- where you had three vehicles.

9 So I preface this question with I am proenvironmentalist. 10 nuclear. I'm an And there's 11 nothing with a more green environmental impact than 12 nuclear power. Its carbon footprint is zero. So I come from a pro stance, okay? 13

the question is -- and I 14 But quess Ι 15 should preface it. Having come from the nuclear weapons industry and then going to the University of 16 17 Tennessee and getting a degree in nuclear engineering and then getting into the nuclear power part and 18 19 working for NRC, people would beg me, "David, counting 20 on you to make sure that what you're doing out there is safe. We don't know enough to even ask the 21 question." 22

And this is general. I get this everywhere I go across the United States for the last 35 plus years. Will that thing blow up?

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And my answer has always been no, there is 1 2 no nuclear special grades material in our commercial reactors in the United States that is used to make 3 4 nuclear weapons grade material. That is all made at 5 Savannah River. Don't even concern yourself. Well, now I have to eat crow because the 6 7 Department of Energy got into an agreement with NRC 8 and TVA to shut down Savannah River and make their special nuclear grade material at Watts Bar. 9 Doesn't 10 hurt my feelings one bit at all. It's closer to home. That's fine with me. 11 12 But I happen to know back in 1978 we didn't even consider having a special core in Watts 13 It wouldn't in the Environmental Bar Unit 1 or 2. 1415 Impact Statement to even look at that question of that special nuclear grade material in the rods to go into 16 17 for the Department of Energy the core then to 18 reprocess. 19 So what I would expect or what NRC taught me to do back in 1978, come up with some good words. 20 21 And so even though I haven't had a chance to read this, one of the good things was you are here to find 22 23 out if you missed an issue or has something changed. Well, something has changed. And it could be for the 24

good. I'm all for it; I'm not against it.

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28 What I'd like to see are words added to 1 2 the Final Environmental Impact Statement that address 3 the issue of the relationship with the Department of 4 Energy and the core that's being used that 5 That's what I'd like to see. everything's okay. Good words to address it. And I don't know, maybe it's 6 7 addressed in here. But if it's not addressed at all, 8 then I think that leaves the door open for somebody later on to raise an issue and I don't like issues 9 10 that fall under the area of assumptions or unverified I would like to know that NRC addressed 11 assumptions. 12 it and everything is okay. That's the two questions I have. 13 MR. MILANO: Again it's Pat Milano. 14 Since 15 my organization, the organization I'm with, has done the Safety Evaluation Report, in Section 2 of the FSAR 16 17 and the final Safety Analysis Report as provided by TVA and in Section 2 also of the staff's Safety 18 19 Evaluation Report, we address issues that relate to 20 site characteristics. And one of which is hydrology. And that information has significantly 21 been supplemented in several of the last supplements to the 22 23 Safety Evaluation Report that the NRC has done. And let me -- I'll try to give you a 24 25 little bit of a brief history of what's gone on. The NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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NRC staff was reviewing the code, the computer code, and the input assumptions that were being used by TVA to assess the overall operation of, you know, in the Tennessee Valley, you know, the river operations. And because of that the staff had a number of questions and comments related to how well TVA had managed that code.

8 And based on the staff's -- based on the 9 issues that the staff raised, TVA spent an over a year 10 upgrade the computer code itself effort to and 11 reassess all the input assumptions that qo into 12 utilization of that code. And they did that for the whole river system that's under their control. And so 13 that was recently done and you'll see that documented 14in the staff's review as such. 15

So as you had originally indicated when 16 17 you were talking about the Corps of Engineers, it's not -- the Corps of Engineers did not do the studies 18 19 for flood height and stuff like that. That was done 20 by TVA and utilizing these codes. And the staff, the NRC staff, put a significant effort into reviewing 21 TVA did in terms of upgrading the code and 22 what rerunning it. So that's been documented in Chapter 2. 23 24 So does that answer your question? 25 MR. RIDEN:

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1	MR. MILANO: Okay.
2	MR. SUSCO: So on to the second half of
3	that. To be perfectly honest I don't know if this
4	particular environmental statement we're talking about
5	now mentions or discusses that particular issue about
6	
7	MR. MILANO: First of all, I'm sorry to
8	take it away from you, Jeremy, but I'll turn it back
9	to him anyway. What you're talking about is the
10	production of tritium. And TVA in their negotiations
11	and their Memorandum of Understanding with the
12	Department of Energy they TVA is currently only
13	producing tritium with Unit 1 and there are no current
14	plans at least before us right now for them in the
15	core for Unit 2 to produce tritium.
16	And they're not I can talk to you later
17	a little bit. Some of this is somewhat security
18	sensitive and stuff.
19	But it's not something that's done
20	throughout the core. There's specific rods that
21	produce the tritium and sequester it and stuff. And
22	again it's currently only planned for Unit 1.
23	TVA may ultimately elect to do that for
24	Unit 2, but if they do do that, they're going to have
25	to come in and request an amendment to the operating
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license for Unit 2. And right now we're not evaluating tritium production for Unit 2 because TVA has not requested that.

And currently the core that TVA has purchased from Westinghouse does not have that capability with it. There are no tritium producing rods in the current core.

8 When DOE and TVA requested to do this for 9 Unit 1, that came in as a specific request. It was 10 evaluated by the NRC staff and as part of that 11 evaluation the NRC staff is required to do an 12 environmental assessment of that. And SO that environmental assessment was done for Unit 1, not at 13 the original licensing, but as an amendment to the 14 15 operating license several years ago.

And if you want to know the specific amendment, I'll have to get back with you because I don't generally deal with Watts Bar Unit 1. But you can find that type of information that you're looking for in the information that supported that amendment to the operating license for Unit 1.

22 MS. HARRIS: It's not hard to find in 23 ADAMS since TVA is the only one that makes it.

24 MR. SUSCO: Just to add a little bit. 25 When Pat was talking there -- Becky if you want to

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raise your hand, she -- it actually is in Chapter 4. And Becky is one of the engineers that worked on putting together different parts of this Environmental Impact Statement.

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And so I do encourage you to do those. Read Chapter 4. And if somehow we didn't properly characterize it or if there's pieces of information that we're missing, let us know in your public comments and we'll take a look at that.

MR. CARPENTER: Any other questions? 10 11 MS. HARRIS: One of the things that you 12 should know about the tritium is that DOE worked on the evaluations from Sandia when they were done out in 13 New Mexico for a long period of time, like 20 years. 14 15 And they've had to back off of the amount that they're producing at Watts Bar because it was not designed for 16 There's a lot of information out there that you 17 that. can find. 18

MR. CARPENTER: Thank you. Any other questions?

And again if you have questions and you'd like to give it to us in writing, we have some 3x5 cards here on the table, or you can send it in via the regulations.gov website, mail it to the Chief, Rules, Announcements and Directives Branch, or fax it in to

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1	us. We'll always take your questions at any time.
2	If there's no further questions, I'd like
З	to go ahead and open it up for comments. Do we have
4	any comments?
5	And we will take written comments also if
6	there's no public ones here.
7	None?
8	Pat, Jeremy, any last comments?
9	MR. SUSCO: No.
10	MR. MILANO: All I want to mention is I
11	don't want to take thunder away from Gene here, but
12	we're not the NRC we're not going to leave here
13	right away. If you've got anything else that's not
14	related maybe to the Environmental Statement, you want
15	to ask some general questions about and stuff like
16	that, we'll be here for a while. And if you want to
17	ask some more questions, we'll do what we can to
18	answer them for you.
19	MR. CARPENTER: Any other?
20	Well, thank you all for coming. We do
21	appreciate your taking the time and effort to come
22	here. I hope that this was informative for you. And
23	I do appreciate the questions and the comments, both
24	in this meeting and in the earlier ones.
25	We will of course try to get the answers
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1	back to you if there's any other questions. We did
2	have written questions in the afternoon session. If
3	there's any further written questions, we will get
4	back to you on those.
5	So this is, as we put it out earlier, is
6	being transcribed. The transcription will be
7	available later once that is completed.
8	So at this point unless questions,
9	comments? Thank you all very much for coming. We do
10	appreciate your time. Thank you.
11	(Whereupon, this meeting was concluded at
12	7:18 p.m.)
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NUCLEAR REGULATORY COMMISSION

Title: Watts Bar Nuclear Plant EIS Public Meeting: Afternoon Session

Docket Number: (n/a)

Location: Sweetwater, Tennessee

Date: Thursday, December 8, 2011

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NRC-1313

Pages 1-53

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II	
1	UNITED STATES OF AMERICA
2	NUCLEAR REGULATORY COMMISSION
3	+ + + + +
4	PUBLIC MEETING TO DISCUSS
5	DRAFT SUPPLEMENT TO THE
6	FINAL ENVIRONMENTAL STATEMENT
7	FOR WATTS BAR NUCLEAR PLANT, UNIT 2
8	+ + + + +
9	Thursday, December 8, 2011
10	Magnuson Hotel
11	1421 Murrays Chapel Road
12	Sweetwater, Tennessee
13	+ + + + +
14	Afternoon Session
15	2:00 p.m. to 4:00 p.m.
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1	PROCEEDINGS
2	(2:00 p.m.)
3	MR. CARPENTER: Good afternoon. Can
4	everybody hear me now? Okay, good. All right,
5	welcome. I'm Gene Carpenter with the U.S. Nuclear
6	Regulatory Commission. And thank you for joining us
7	today.
8	This is a public meeting, a Category 3
9	Public Meeting, to discuss the Draft Supplement to the
10	Final Environmental Statement for Watts Bar Nuclear
11	Plant, Unit 2. We have still two paper copies up here
12	and a variety of electronic copies of that if anyone
13	would like to get a copy of it.
14	Today we are going to be discussing the
15	various aspects of this report and where we're going
16	from here. We have at the table Patrick Milano. Pat
17	is the Project Manager for Watts Bar 2. We also have
18	Jeremy Susco; he is the Environmental Project Manager.
19	He'll be also detailing this.
20	Today we will be going over various slides
21	to give you some information about what is happening
22	to date. The slides are also up here at the table if
23	anybody would like a copy of the handouts. And of
24	course they will be up here on the screen.
25	Now as we go forward with this, my purpose
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for the meeting is to facilitate it, to ensure that we do hear from the public. This is not only informing you of what's going on but also to get your feedback. That's the whole purpose behind a Category 3. So after we go through the presentation materials, we will then open the floor to questions and answers.

We have up here at the table some sign-in 7 8 We encourage you that if you will be asking sheets. 9 questions of the NRC to sign in and to just put a check mark beside it because I will use that sign-in 10 sheet to have those people do the initial sign-in --11 12 or pardon me -- the initial questions for this. And then as we have time, we will open the floor to other 13 people who would like to ask questions. 14

Now as I said, I've introduced Pat and Jeremy. We also have Steve Campbell. Steve is the Branch Chief for the Watts Bar Special Projects Branch.

19 Α couple of other things for your 20 information. Right over here at the corner there are You see the fire escapes, the door 21 the restrooms. that you came in on right over there. 22 Hopefully we won't have any need for that, but just in case. 23

We also have here at the table public feedback forms. We do encourage you that if you have

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any feedback, go ahead and fill those out and provide 1 2 them to us. And the other thing that I'd like to 3 4 remind you -- and it's something that I always forget 5 so I did it before the meeting start -- please silence your phones. Thank you very much. 6 For those of you who want to ask questions 7 8 but are feeling a little shy about asking them, I do 9 have 3x5 cards. Anybody who would like some, just raise your hand, I'll hand them out. 10 That way we'll ask those questions from there. 11 12 And then going forward with this, again this is a meeting between the NRC and the public. 13 This is not a meeting with licensee. We do have some 14 15 members from the TVA here. But if you have questions specifically for the TVA, that will have to be in 16 another forum. Staff cannot answer for the licensee. 17 With that I'd like to introduce Pat. 18 He 19 will give the first of the presentations. 20 Thank you for coming. Thank you, Gene. Go to next 21 MR. MILANO: slide, please. 22

Good afternoon. Again, my name is Patrick Milano. And as Gene indicated, I'm Licensing Project Manager with the NRC's Office of Nuclear Reactor

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Regulation. And if I talk to it again as I go through my portion of the presentation, I'll refer to it as NRR. It's our headquarters organization. And again we do the technical reviews of operating license applications.

6 The office is responsible for the Agency's 7 review of the application for -- from TVA for a second 8 unit at the Watts Bar Nuclear Plant site. While today 9 I'll be talking just generally about what's been going 10 on from the licensing side, it's not where our 11 predominant focus is today. So I'm going to try to go 12 through my six or seven slides relatively quickly.

Along with me as Gene indicated is Mr. Jeremy Susco. And he will be presenting some information with regard to the environmental review that took place to support the operation of Watts Bar Unit 2.

18 On November 10th of this year, the NRC 19 published in the Federal Register the notice of the Draft Supplement to the Final Environmental Statement 20 related to the operation of Watts Bar Unit 2. The 21 Supplement documents 22 Draft the NRC's preliminary review of the environmental impact associated with 23 operating a unit for the duration of the proposed 24 25 operating period, license period.

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I'll be providing you with some background information, the details of which are for the overall effort to review the application. And Mr. Susco again will be addressing questions and on the results of the staff's position on the application related to the environmental impacts of operation.

I hope that the information that we provide to you today will help you understand what we've done so far and the role that you can play in helping us make sure that the Final Environmental Impact Statement is accurate and complete.

Next slide.

here's the aqenda for today's 13 Thus Again I'm going to, like I indicated, I'm 14 meeting. 15 going to try to keep it short. The real purpose of the meeting today is to obtain comments and questions 16 from the public. However, we will be discussing a 17 little bit about the NRC's regulatory role. Some of 18 19 the summary of the environmental review that took place itself, some upcoming schedule or milestones, 20 21 and then finally we'll go through some detail as was presented in the Federal Register notice also how to 22 23 submit comments after this meeting if you want to do so in writing or some other electronic way. And then 24 25 we'll go into a question and answer period and then

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also into discussing comments or obtaining comments itself.

Next slide please.

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4 For those of you that may be have not been 5 at some of our other public meetings, I'm just going to spend a little bit -- just a few seconds here 6 7 describing the NRC's role. The NRC was established to 8 regulate civilian uses of nuclear materials, including 9 facilities that are used to produce electric power. The NRC is responsible for licensing and regulating 10 the operation of commercial nuclear plants in the U.S. 11

12 And Watts Bar, like the other currently operating nuclear plants, is being licensed under a 13 two-step process that's described in Part 50 of the 14 15 NRC's Regulations. This process requires both a construction permit and an operating license. 16 NRC approval is necessary before a nuclear plant can be 17 18 built and operated. The NRC maintains oversight of 19 the construction and operation of а facility 20 throughout its lifetime to ensure compliance with the 21 Commission's Regulations. In all aspects of the NRC's Regulations that the Agency's mission is to assure 22 23 adequate protection of public health and safety, to promote common defense and security, and to protect 24 25 the environment.

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Next slide.

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All nuclear power plants must undergo a safety review, an environmental review, and an antitrust review by the NRC. In order to construct and operate a nuclear plant, an applicant must submit a Safety Analysis Report. This document contains the design information and criteria for the proposed reactor and comprehensive data on the proposed site.

9 the application for As part of an operating license, an applicant provides more details 10 in its Final Safety Analysis Report, commonly referred 11 12 to as an FSAR, that describes the facility, presents the design basis and the limits on its operation, and 13 presents a safety analysis of the structures, systems, 14 and components of the facility as a whole. 15

It also discusses various hypothetical accident situations and safety features of the plant that would prevent accidents or would lessen their effects. The NRC Safety Review covers a broad range of areas, including those that are shown on this slide.

National Environmental Policy Act, 22 The 23 requires federal NEPA, agencies to integrate environmental values into their decision 24 making 25 process by considering the environmental impacts of

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the proposed actions and reasonable alternatives to those actions. To meet NEPA requirements, federal agencies prepare a detailed statement known as an Environmental Impact Statement. Because TVA is also a federal agency, it was required also by NEPA to prepare an Environmental Impact Statement to support the operation of Watts Bar Unit 2.

8 The NRC's Regulations define criteria 9 wherein licensing and regulatory actions require an 10 Environmental Impact Statement. One of these criteria it's also 11 is the issuance of a full power, or 12 sometimes called the Design Capacity License, to operate a nuclear reactor. That criteria for 13 an identification of licensing and regulatory actions of 14 15 requiring Environmental Impact Statements are found in Part 51 of the NRC's Regulations. 16

17 The regulations require that an application for a license contain a comprehensive 18 19 assessment of the environmental impacts. And because an operating license applicant would have already had 20 to prepare an environmental report at the construction 21 22 permit stage, the environmental report at the 23 operating license stage expands on that initial report and focuses predominantly on plant operation and is 24 25 submitted only in connection with the first licensing

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action authorizing full power operation.

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2 During the licensing of a plant, the NRC 3 issues its own Final Environmental Statement, which 4 identifies these potential impacts and evaluates them 5 and the benefits of the proposed plant. After completing this review, the NRC issues Draft 6 а 7 Environmental Statement for comment by appropriate 8 federal, state, and local agencies as well as the 9 Afterwards the agency issues its Final public. Environment Statement that addresses all comments that 10 were received. 11

12 Lastly I'd just like to indicate to you this chronology is not all inclusive. It's just some 13 that are more appropriate towards the environmental 14 15 review that took place. As you can see here, the TVA submitted an Environmental Impact Statement for the 16 construction of Watts Bar Unit 1 and 2 back 17 in The original operating license 18 September of 1972. 19 application came in and was docketed by the NRC in 1976 with the application coming in about June of 20 1976. And Ι believe the Environmental 21 Impact Statement for operation came in around September of 22 23 that same year.

Based on the information that was provided by TVA and the NRC's own analysis, we issued our Final

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Environmental Statement for operation of both Watts Bar's Units 1 and 2 in a form of an NRC report, the number of which is NUREG-0498. And that was done in December of 1978.

5 And as all of you are aware, between that time and the start of operation of -- or the licensing 6 7 of Watts Bar Unit 1 -- a number of things occurred. 8 And there was a period wherein TVA was stopped 9 construction for a period of time and then had to 10 correct a number of both corporate and site specific And because of that, because of that long 11 issues. 12 duration between the 1976 or 1978 environmental supplemented its of 13 statements, TVA review its Environmental Impact Statement for Watts Bar Unit 1 in 14 15 May of 1994. And likewise the NRC supplements its Final Environmental Statement in April of 1995. 16 Both 17 of which supported the operation of Watts Bar Unit 1.

Watts Bar Unit 2 was not completed at the 18 19 time and it was not until 2008, when TVA made the decision to take Watts Bar Unit 2 out of the deferred 20 plant status and to complete construction, ultimately 21 leading to operation of Watts Bar 2. 22 And that was done -- it was a supplemental Environmental Impact 23 24 Statement that was done by TVA to support operation of 25 Watts Bar 2. And that was submitted in July of 2008.

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There were several items that TVA also needed to provide to further supplement its supplement. And those things came in in January of 2009.

Lastly based on -- based in part on a 6 direction from the NRC's Commission, we requested that 7 8 TVA update the original operating license application 9 because of the long period of time that had progressed from the original application until 2009. And as such 10 11 in March of 2009, TVA provided an update to its 12 operating license application and the NRC in May of that same year issued a Notice of Availability and 13 Opportunity for Hearing based that updated 14 on 15 operating license application.

And with that, that's about all my prepared notes are for a little bit of the background of Watts Bar and where the plant currently stands.

And with that I'm going to turn over the floor to Jeremy Susco, who's going to go into the details of the Environmental Review, which is the reason why we're here today.

23 MR. SUSCO: Thanks, Pat. My name is 24 Jeremy Susco and I work for the Environmental Review 25 Team that helped put together the document that we're

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here to discuss today. So some of you may find it a little bit confusing to kind of describe how we got to where we are today. So first thing I guess I want to make I guess a little bit clear. We're talking about two different user terms. TVA has their EIS and then we have our Environment Impact Statement that we're putting out. So I'm not going to call TVA's EIS their EIS. It's part of their application.

9 So TVA put in their application. It also happened to include their assessment of environmental 10 11 impacts. We use that as one of the sources of 12 information put together our Environmental Impact So we have TVA's application. 13 Statement. And we have the Environment Impact Statement that we wrote 14 15 that we're here to describe today.

So back in '78, assuming the plants were 16 17 get done then, we qoinq to put out our Final 18 Impact Statement. And that Environmental never 19 So come back in the `90s, then we decided happened. 20 to supplement that. When TVA came in, they said we 21 want to build Watts Bar 2. And then we said, okay, we're going to take what we've done. We're not going 22 23 to throw away what we did back in '78. We're going to supplement that. It's got a lot of good information. 24 25 That's the first And supplemented that. SO we

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supplement we did back in '95 for Watts Bar Unit 1.

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Now we get to that really long complicated name we put up in the first slide, we're Supplement 2. And so now we're talking about Supplement 2 to that 1978 document. So again we're taking what was in that '78 document and we're building on it. And that's where we are today. We've got Supplement 2 to that document.

And now we get to the word draft. And now 9 10 that Supplement 2 is in its draft form. And that's 11 what we're here to talk about and get your comments 12 The Draft Environmental Impact Statement is not on. final and it won't be final until -- I think our 13 schedule now has it being put out in May. But after 14 15 we receive your comments and after we examine them and take a look at how it might impact our Environmental 16 17 Statement, then get put out final Impact as а statement, very similar to the final statement that 18 19 was put out back in '78.

So as Pat said if you're interested in any of requirements that go along with what's in TVA's application and in our review, those are in Part 51 of the NRC's Regulations and as well another publicly available document is the last document on the bottom there. That discusses what we look at and how we put

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together an Environmental Impact Statement.

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This is not an all-inclusive list, but I wanted to give you an example. I mean you can see the same thing in our Table of Contents. These are some of the issues that we looked at and again why we're here today.

So one of the things to think about is did we miss an issue? Great source of public comments. Is our analysis complete? Again we encourage you today to make comments on that and as well any written comments.

The next slide, please.

So where did we get our information from? 13 License applications, that is TVA's EIS. 14 I wanted to make that clear. 15 That's one of the sources of information. Public comments, we were here back in I 16 think it was October 2009 to receive public comments 17 on the scope of what we should look at. Different 18 19 permitting authorities that are also involved in 20 different permits that TVA is required to get as part of operation. We talk to many federal, state, and 21 local agencies as well as some tribal organizations in 22 23 the area.

And we also came here back in -- oh, so it was November of '09, October, November of '09. And we

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did a site on it where we actually went to the site and it's a very -- we all live and work in Washington. So we wanted to make sure we got out to the plant to see what everything looked like, what species were here, and the representative things. And so that's why we came here.

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7 But again another good source of 8 information we're looking for is you see all this 9 stuff that we kind of looked at and you'll see all the 10 references in our document.

Did we use all the best available data? Another great source of public comments. And you can either tell is that we didn't or even better yet you point us to -- if you have data that we didn't use, point us to that data in your public comments.

the conclusion -- I'm 16 So sorry, our 17 preliminary conclusion. So the staff have preliminary 18 recommendations Commission that the to our 19 environmental impacts are not significant enough to forego issuing Watts Bar Unit 2 license. 20

I'm a full-time bureaucrat and I probably 21 have 22 would а hard time making that any more 23 complicated than it already sounds. So I'll just kind of break that down a little bit. So there's a couple 24 25 important key in there. Number is words on

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preliminary. And it synonymous with a draft. It's not a final yet. And that's again why we're here today to hear your comments.

Second one is the word recommendation. 4 So 5 the Watts Bar 2 license is not going to stand alone on the Environmental Impact Statement. We're going to 6 give our recommendation in this document to 7 the 8 Commission, the ultimate decision maker on whether or 9 not Watts Bar Unit 2 is going to get a chance to 10 operate.

And the Environmental Impact Statement is 11 12 going to be one part of the things that go to those decision makers to make that decision. It's going to 13 be the Environmental Impact Statement, the Safety 14 15 Evaluation the NRC performs as the result of So this is just -- it's one component 16 inspections. 17 and it's just our recommendation on the environmental impact associated with operating Unit 2. 18

19 And the last one is not significant enough 20 So just to say that in more plain English, to forego. 21 it's would not be unreasonable to go forward. The impacts would not be so unreasonable that it wouldn't 22 23 make any sense to possibly operate this plant. Now that's not to say that there will be no impacts. 24 But 25 what we're trying to say is that they will not be

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significant enough that this decision would be totally ridiculous.

So those are the kind of key breakdown of what that really means. And it will go from preliminary to final with our Final Environmental Impact Statement that we put out next year.

7 this particular side is just So the environmental review milestones. So we are down at 8 9 the black one down there. Since we're here today for 10 the public meeting, we're going to receive your 11 comments here in the microphone after a short Q&A 12 session. Your comments are due by December 27th.

So the next slide does show other waysjust to make comments.

And it's May 2012 after examining all these comments when we're anticipating putting out the Final Statement.

So other ways to submit comments. 18 So 19 first one, the microphone. I've got transcriber here. 20 And so today or you can come back to the meeting this evening. Also you can do mail. And there's the 21 address there. Probably the easiest way now to do it 22 23 is on the internet, regulations.gov. That's where actually all federal agencies post -- do all their 24 25 rule making and ask for comments.

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I	10
1	19 The important thing you note there is the
2	docket ID. And that's so when you go to
3	regulations.gov and you enter that docket ID, you'll
4	go right to this particular I don't know the right
5	word. It's not rule making, but this particular
6	document will give you a chance to make the comments
7	there.
8	And the last thing is if you want you can
9	fax them as well. But again remember December 27th is
10	the due date for comments.
11	And so that's all I have. And we'll turn
12	it back over to our Facilitator, Gene.
13	MR. SAFER: Can we ask a question?
14	MR. SUSCO: Yeah, Gene's going to
15	facilitate it.
16	MR. CARPENTER: We're going to leave that
17	one on up here for a little while so that everybody
18	who'd like to write it down will have an opportunity
19	to do so.
20	Now this is we've gone through the
21	formal presentation portion of the meeting. Pat and
22	Jeremy have told you what it is that we're doing now.
23	Now is the time that we are going to throw
24	this open for questions that we have. The way that I
25	will do this, first off is when you came in we asked
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you to sign in. And the individuals who signed in and told us before the meeting started that they wanted to ask questions put a little check mark beside their name. I've got the list.

So Ms. Ferris, we're going to start with you. And then Mr. Safer, you'll be the second question. The reason for that is simply that Ms. Ferris' name is first on there and you're the second name on there. Okay.

And what we'll do, if you don't mind, 10 11 we'll going to start this with a three-minute time 12 limit for questions and answers. That's to give anyone else here a chance. If we go through the first 13 set of questions and there's nobody else, we'll throw 14 it open for a second round, a third round, however 15 many we need. And then we'll go into -- once we're 16 17 through with the questions and answers, we'll go into the comment period. Okay? Very good. 18

Justin here is going to help me. He will raise his hand whenever we get to three minutes. So again, just give everybody an opportunity to have their time to talk. Okay?

Ms. Ferris. Would you like to stand up?Would you like me to hold that for you?

MS. FERRIS: No. My question has to do

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with the geology, the underground structures that this plant has been built upon. And my question is whether this is karst, k-a-r-s-t. Don't ask me what that stands for. But it's limestone. And I'm wondering whether this is being built and has been built on limestone topography?

7 MR. MILANO: Sorry about that. There were 8 too many switches. Although today we're not here to 9 discuss the safety analysis that was done for the 10 plant, the aspects of geology were discussed and can 11 be seen in Section 2 of the staff's Safety Evaluation 12 Report of which is in it's also an NRC Regulation.

that's the Final Environmental 13 No, Statement, Gene. The Safety Evaluation Report is also 14 another NUREG document. 15 And it's NUREG-0847, zero eight four seven. And it's -- you can observe it on 16 17 the NRC's website. And both the original that was done to support the operation of Watts Bar Units 1 and 18 19 2 when TVA at the time was proposing licensing both 20 units at the same time.

And it has been supplemented. It was supplemented through Supplement 20 to support Watts Bar Unit 1 and right now we're at Supplement 25 --Supplements 21 through 25 have been specifically for Watts Bar Unit 2 operation. And I'm sorry. I'm not a

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geologist or seismologist. So all I can do is refer 1 2 you to those documents and it's discussed in there. And also there's some -- there is information in TVA's 3 4 Final Safety Analysis Report and also in Section 2 on 5 site characteristics that describes that. MR. CARPENTER: Mr. Safer. 6 MR. SAFER: I have a couple of questions. 7 I don't think it will take three minutes. 8 The first 9 one since the public comment period is over is 10 December 27th, right in the middle of the holidays, I think that's extremely inconvenient. Those of us that 11 12 think the NRC is not that cooperative to the public comments feel like it's by design. But we would ask 13 for an extension of 45 days so that people have an 14 15 opportunity to comment on this outside of the holiday period. And I don't know that that can be granted 16 17 today, but I think that's a formal request, as formal as I can get right here. 18 19 So I don't know if there's a response to And I have another question. 20 that. MR. SUSCO: Very reasonable request, and 21 in many other proceedings we've entertained 22 we've Andrea, can you speak to -- we've one of 23 extensions. our lawyers here -- what the process is as far as 24 25 requesting an extension? NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 (202) 234-4433

23 MS. JONES: Sir, I am a lawyer for the 2 NRC. I'm actually not very clear on what the 3 extension process is. But I do know that the timeline 4 -- I don't mean this to patronize you either. But I 5 do know that the timeline is set according to Regulation. But as far as extensions are concerned, I 6 think that would be a matter we'd have to take back to 7 8 the office and ask them. That would be a decision for 9 the office to make. 10 MR. SAFER: And how would we get the 11 answer? When would we expect an answer? 12 MS. JONES: I'm not sure, because I'm not sure what the process for getting an extension would 13 actually be. We don't necessarily have a process for 14 that in our Regulations, not that I can recall. 15 MR. SUSCO: We will grab your information 16 and we can discuss that afterwards about the exact 17 process for making that occur. 18 19 SAFER: Okay, well, that would be MR. something that of course other members of the public 20 21 would be interested in. Then another technical question. In 2.6, 22 the radiological environment, it references a report, 23 Annual Radiological Environmental Operating Report, 24 25 RAMP, and also the Annual Radioactive Affluent Release NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. WASHINGTON, D.C. 20005-3701

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Report. I believe those are from TVA, but -- and I know you all are not TVA. But I'm just wondering how to get a hold of this document.

MR. MILANO: Both of those documents are 4 5 available through -- they were submitted on the docket And if you're familiar with our Agency-wide 6 by TVA. 7 Document Access and Management System, ADAMS, you can 8 find them in ADAMS. They're probably -- since both of 9 those documents are generally to support operation of the facility, probably use the Watts Bar Unit 1 docket 10 number which is 50-390. So in ADAMS they use a bunch 11 12 of zeros so you qo like zero five zero zero zero three nine zero. 13

THE REPORTER: Zero five --

MR. MILANO: Zero five zero zero zerothree nine zero.

MR. SUSCO: If you look in the references to that particular chapter -- actually any chapter -almost everything that we reference will give that specific ADAMS number. So if you go on our website and you go in ADAMS, type in that number, it'll pull up that report for you. So look in the references for Chapter 2 for the ADAMS number.

24 MR. CARPENTER: Thank you. Other 25 questions?

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MS. HARRIS: We've got a new guy here. We 2 have a lot of people from headquarters that should come here more often to see what's really going on. 3 4 The other thing is -- my name is Ann Harris. And I'm 5 with We the People. And I want to second Mr. Safer's request that an extension be given to this because 6 7 that right now I'm looking at 13 different comments that has been requested that I make on. And all of 8 9 them are due within like 6 days of each other. 10 And then when we can't get the documents, 11 because this document is -- it's a nightmare. I'm 12 seeing a lot of information that has not been updated I'm a local resident so I know. from 1972. 13 Ι don't know where 14 So you qot your 15 information. You may have gotten it from different agencies. You said federal, state, and local. 16 Well, some of these with information in here that whenever I 17 went, I got different information. So I'm having a 18 19 hard time dealing with your numbers and the 20 information that you're giving as opposed to what I'm getting from the same agencies. 21 Because they said, "Oh, they've already 22 23 And I asked. I said, "Give me the been here." information you gave them." And they said, "Oh, we 24 25 can't do that." So I said, "Okay." So they're making NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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me do FOIA requests over your documents that you requested to put into this. So this is a nightmare.

And I don't know how that somebody that can read and write out of the third grade could discover what you've done here. It's so convoluted. It's really, really a written nightmare. Now I've been through about half way through it. And it's taken me two and a half weeks. And I spent at least two to four hours at night trying to go through it.

But some of the information -- let's go 10 over one issue. You talk about the tritium in the 11 12 And I know nobody don't want to hear about it. water. And you're here sick and tired of hearing me talk 13 about it. I'm sick and tired of having to deal with 14 15 it. But the other thing is, you've not dealt with the You call it a spill. 16 tritium.

Three years of over the limit and then you didn't even do anything to TVA about it to begin with. That is still sitting out there. Don't tell me the tritium is gone because I know better.

And the other thing is you're relying on these local state agencies through your agreement state letter to do a lot of your work for you. That's just so that you're further removed. The state is not testing for a lot of this stuff. So there's no

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27 records and no benchmark for you to start with. And 1 2 you're using old data to do that. Well, somebody's 3 got to go back in there and do some real work instead 4 of just dropping it into this. 5 So I'm making a formal request that we have an extension for 45 days. And this is strictly 6 7 up to the staff, ma'am. I don't know how long you've 8 been in General Counsel's office. But this is just --9 it's not something that's a big deal. These quys 10 here, they can do it today or Bob Petty has the authority to say I will see that the extension goes 11 12 through. Thank you. 13 MR. CARPENTER: Thank you. Appreciate the 14 15 comments. Any questions? No other questions for the 16 staff? 17 18 And now we'll go on to the comment section 19 since we've basically already have been in comment's section. So do we have comments? 20 MS. FERRIS: Can we comment more than 21 once? 22 23 You may comment as many MR. CARPENTER:

times as you wish. But we'll go one time each. And then everybody else has a fair term before we go to

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28 the second. 1 2 MR. SAFER: Is there a time limit on these 3 comments? 4 MR. CARPENTER: Want to say again, three 5 minutes. Well, my first comment is MS. FERRIS: 6 that last Christmas, I had 20 people coming to dinner. 7 8 And I was spending time trying to get the NRC to give 9 us a public hearing on the German waste that's being imported into Tennessee to be burned at Oak Ridge. 10 And I had -- I was working on my computer by night and 11 12 cooking by day. It is not a dot away. If you put these 13 comments and these deadlines right at Christmas time, 14 you're going to get a lot fewer of them. 15 And you probably are aware of that. Donnie took it from 16 there. The time my company arrived, he worked on the 17 proposal yet. 18 19 Of course we were told we had no standing after spending untold hours trying to get an appeal to 20 21 the NRC to at least give us a public hearing on the fact that radioactive waste is being imported into the 22 23 state. So I think this matter of a deadline is 24 25 extremely important. NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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1	MR. CARPENTER: Any comments?
2	MR. SAFER: Hello, everybody. I think we
3	were here in, what was it, 2007, you said, or '09
4	nine. I read some of my comments in the book. If you
5	didn't listen the first time, you probably don't
6	listen this time. But I'll say it again because maybe
7	it makes a few people squirm in their seats.
8	I speak today for all the future
9	generations that have no voice in this proceeding but
10	will be terribly affected by the decisions that are
11	being made that are allowing this plant to be built.
12	I think we all have seen what has gone on
13	at Fukushima and it's terrible. People are having to
14	leave their homes. School children's tennis shoes are
15	contaminated with radiation. Whole areas are
16	evacuated. Farms that have been in families for
17	generations are now abandoned and probably never to be
18	returned to.
19	So when you talk about the environmental
20	impact of this type of reactor, of any nuclear
21	reactor, you have to realize that the effects are not
22	small. And that was what in this document what they
23	came up with was that the environmental impacts are
24	small. Now tell that to the people in Fukushima.
25	Tell that to the people in Chernobyl. That's really

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the crux of it.

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I realize that there's nothing that I can say here today that's going to turn this thing around. I feel like David and Goliath. And I don't have the magic stone that he had and I wish I did. And I wouldn't throw it to hurt anybody, but I would sure throw it to stop this reactor because I think the effects of it -- unfortunately if something goes wrong, something go monumentally wrong.

And I do find it troubling that in this 10 document there is -- I didn't see the word Chernobyl 11 12 one time. I understand from the discussion earlier in the informal period with Mr. Susco that it's included 13 in the computer model. But including 6,000 thyroid 14cancers into the computer model is not quite the same 15 thing as stating that when that reactor blew up the 16 effect was 6,000 at least documented cases of thyroid 17 cancer. And if we understood us to say, oh, it was a 18 19 minor thing. The effects aren't that great.

But you know, they're still monitoring a lot of the agricultural products in that region. There are still great areas that are uninhabitable for many years. It's the *cesium that's going to stay positive for 300 to 500 years. That's what we're talking about here.

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Now Fukushima you've got enormous releases of radiation. You've got just today in the newspaper the announcement that baby food is being recalled, 90 containers of baby food because the Japanese are catching it. But the rice has been contaminated. It's a nightmare. The economic effects, the human effects, and the ecological effects are going to reverberate around the planet till kingdom come basically. And that's what's at stake here.

10 And I'm just going to keep saying it even 11 though it seems to fall on deaf ears because 12 everything that was brought up leading up to that document there was always an answer to it and don't 13 worry, pat us on the back and say --well, when I went 14 to the Atlanta hearing on the Blue Ribbon Commission 15 for high level waste, they kept on saying that the 16 17 more -- it's just you're not educated.

18 Listen, I've been studying this stuff for 19 about 15, 20, 30 years. I mean I was involved in this 20 process back the first time around with TVA and the 21 nuclear plants. The more I know, the more it troubles So don't be saying that, oh, all you need to do 22 me. 23 is know more about it and you won't be so concerned. The more I know, the more concerned I get. 24

MR. CARPENTER: Any other comments?

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5 Sandy Kurtz. I'm with Bellefonte I'm 6 Efficiency and Sustainability Team and we are a 7 concerned citizens group, a chapter of the Blue Ridge 8 Environmental Defense League. And of course we don't 9 care much for the idea of building yet another nuclear 10 in the Chattanooqa region. Ι live in plant 11 Chattanooga.

12 And it just -- I quess I can summarize my comments with these words, more is not better. And as 13 I told the press, it makes no sense to say there will 14 15 be no significant environmental impacts when you double the number of nuclear plants at the same site. 16 17 The only reason I can think that they could possibly say that is because the environment has already been 18 19 ruined with the first plant. Two plants in the same 20 place makes twice as much risk for accidents, for 21 human error, for radiation in the water, for tritium in the water, and for ongoing aquatic danger to the 22 23 aquatic species, not to mention the health of our people themselves. 24

And I just think that we should not

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1	continue to add more risk to what's happening already.
2	We already had six nuclear reactors in this area and
3	we don't really need another one.
4	The Environmental Impact Statement, I just
5	can't believe that there would be no more impacts when
6	you're actually doubling the possibilities.
7	Thank you.
8	MR. CARPENTER: Other comments?
9	MS. HARRIS: Questions?
10	MR. CARPENTER: You have a question? Yes.
11	MS. HARRIS: At what point cause we
12	don't seem to have a benchmark of what how far TVA
13	can go that you won't let them go any further? You're
14	saying in here I see about the tritium. TVA managed
15	to fill a leak so they're containing the tritium.
16	Now whatever that magic thing is, Mr.
17	Stinson (phonetic), I hope, will sell it to the other
18	100 nuclear plants in this country which leak every
19	day during their operations. So it's worth bazillions
20	of dollars to stop the tritium leaking into the river.
21	Now the State of Tennessee, TDEC, they're
22	not even testing for anything like that. They don't
23	look at it. They say it's not they don't have the
24	money to test for it. Well, whenever I question an
25	NRC person, they look at me and say, "That's TDEC and
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we don't have authority over them." Well, you gave them a letter of authority under the agreement state letter in -- I'm sorry, Roger. Yeah, it went into your hair on your head, into your ears. But the thing is that there has to be a limit of how far they can go.

7 The other thing is that I want to know 8 what kind of security is around the intake pumping 9 station. And I'm talking about serious security and 10 about the outfalls. Now everybody says, oh, nobody 11 don't know where they're at. They don't know what's 12 going on with them. Get real. These things are not 13 secrets.

I mean when you live here on this river like I have all my life, you know all the secrets on this river. They ain't secrets. And then the idea that there is a swimming hole within a thousand feet of that plant is just sick.

I have -- the media that has come in here, they wanted to talk and use this plant as a poster child, some of it for good and some of it for bad. But some of it has been good for the NRC. But I don't see the NRC -- is it you don't have the regulations in place? Is that the point?

Do I need to start pounding on Senator

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Boxer's door more often? I mean I'm up there on a regular basis with information and talking about the problems and the things that are good and bad about here because I want a safe plant cause I still have relatives that lives in the evacuation zone. I just buried my mother with colon cancer.

7 These things are significant to people 8 like myself who live here. I have children; I have grandchildren; 9 great-grandchildren. Ι have My 10 grandson just came back from Baghdad. He's fighting 11 for us to have clean air and clean water and go by the 12 rules and have rules to go by.

But I don't see the cooperation. I just got told that whenever I make a statement about a problem at this plant that if I won't give up my sources, NRC just flips it over in the garbage can. Now that pissed me off. I can tell you it did.

Because whenever I tell you something, I 18 19 don't have a problem; my credibility is not on the 20 line here. Whenever I tell you that there's a problem in the area and you don't deal with it, then it 21 aggravates me to no end. And I'm not seeing when you 22 23 just fluff them off. It's like you're swatting at This is our life and our community and our 24 qnats. 25 future and our whole future of these communities and

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these mountains.

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I'm deeply resentful that there is a fan crane 2,500 acre island down here that is so contaminated that the geese are even -- they're not even coming in there anymore. The cranes don't want to go there. You can't entice them; you can't put enough food on them to entice them in is what I'm seeing.

Now come on, guys, let's get real about this. Can we please tell me what rules you go by? I mean some of the things that you say I can't even find. So somewhere along the line you've got to put some reality in here instead of all this fluff and pie in the sky.

15 MR. CARPENTER: Any other questions or 16 comments?

My name is Kathleen Farris. 17 MS. FARRIS: I'm from Rutherford County, Murfreesboro, Tennessee. 18 19 And if you're wondering why I'm here, it's because four years ago we discovered we had low level waste 20 going into our landfill. That landfill is right on 21 the Stones River, which provides the drinking water 22 23 for most of Rutherford County. That includes the city of Murfreesboro. 24

My first interest was in water and it's

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about water that I want to speak today. It's a source of life. If our drinking water is polluted and we're taking radiation or chemicals into our bodies, I think that can very well account for the epidemic of cancer that we have in this country today.

And furthermore, it's not just a question 6 7 of pollution. It's a question of consumption. Only a 8 very -- I wish I had all my figures with me today, but I left my computer at home by mistake. But I had read 9 10 very recently the report that was done by the Union of Concerned Scientists on water consumption and energy 11 12 production and it's available the Union of on Concerned Scientists' website. And most of what I'm 13 going to say is taken from that information. 14

15 Only a very small fraction of the earth's water is potable. And already huge corporations are 16 17 buying up water supplies all over the world, which means that before long anybody who can't afford to buy 18 19 water won't have clean water to drink or may not have 20 water at all because there are water wars going on. We've already had it over the Tennessee River here 21 where Georgia and North Carolina want their share of 22 our water, right? 23

Global warming and climate change, which I see you have noted in your study, are going to affect

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the supplies of water and threaten -- think about it - land masses are shrinking; populations are growing.
The demand for water will ever be greater,
particularly if we are able to continue in what we
think of as an advanced civilization.

The single largest use of fresh water in 6 the United States is thermal nuclear -- no, I'm sorry 7 8 -- the thermal energy, either by nuclear or coal. And I have -- the study that I referred to has a pie 9 10 chart, shows that 41 percent of the water, the largest usage is for these forms of energy production. Now if 11 12 you look at the chart, here is nuclear, here is coal, oil, gas. Solar thermal uses a lot of water, so does 13 However, solar photovoltaic and wind, look, 14 biofuel. 15 you can't even see a line for how much water is required to produce energy in those ways. 16

17 Now it's not just on a global scale that we have to think, although I think we need to think 18 19 that way as well. One of the things that the Union of 20 Concerned Scientists have pointed out is that in the Southeast United States we have a particularly severe 21 problem of water and energy production. 22 That drought and heat have caused many -- and we all know this --23 many closings, shut-downs of nuclear reactors because 24 25 the water is too hot or there's not enough of it.

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39 Same thing has happened in -- and the drought is 1 2 threatening the nuclear industry in Europe now. 3 Particularly Browns Ferry has been closed, 4 heavens knows, how many times. 5 I was in Texas this summer. The darker 6 the area, the greater the intensity of drought. People are losing their crops. In Fort Worth they're telling 7 8 you don't use too much water, constantly reminding 9 people not to use too much water. That's this year. If you look at 2007, this is right where 10 11 TVA is building all these plants, six, going on seven, 12 on the Tennessee River. And TVA wants to put four more at Watts Bar. Now that Tennessee River provides 13 for the cities Knoxville, 14 drinking water of 15 Chattanooga, Huntsville, all the communities in between. 16 17 TVA's plan is to become, The as Mr. Kilgore said, the foremost producer of nuclear energy 18 19 in the country. And that means this Watts Bar 2. Ιt also means the plant at Bellefonte, the first one, and 20 then three more. 21 22 And I propose that this is a threat to our drinking water. It's not what your study says. 23 And I went through and I marked all the 24 25 sections in which you claim that the impact will be NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W. (202) 234-4433 WASHINGTON, D.C. 20005-3701 (202) 234-4433

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1	very small. Section 4, 4221, surface water use
2	impact, based on the NRC staff's independent analysis
3	the staff concludes that because of the small amount -
4	- small volume of water consumed relative to the
5	Tennessee River flow, the impact on surface water use
6	of operating WBN Unit 2 is small.
7	The same thing it says further on, on
8	ground water use, No. 4-11, Page 4-11, we're told that
9	based on the independent analysis of additional
10	information since the 1978 whatever this is, FES-OL,
11	the NRC staff concludes that the impact on ground
12	water from operating Watts Bar Unit 2 would be small.
13	Now I asked the question, is this karst
14	topography? And nobody really answered my question.
15	I'm sorry, sir.
16	MR. MILANO: It is.
17	MS. FERRIS: Karst topography is
18	limestone. It's got cracks and crevices everywhere.
19	If it gets into if radiation gets or pollution
20	gets into that, you have got an effect on the ground
21	water.
22	Now we know about that in Dickson,
23	Tennessee right now, which is also a landfill built on
24	karst topography. There are people who have become
25	terribly ill and they're bringing a lawsuit against
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1	the county and state for that polluted landfill
2	because of the topography.
3	The same thing is true of the Stones River
4	in Rutherford County. It's built on this landfill
5	sits on limestone right over our drinking water
6	supply.
7	If we I'm sorry. I think I'm allergic
8	to something here.
9	MR. SAFER: It's the radiation.
10	(Laughter)
11	MS. FERRIS: I hope not. In any event I
12	want to say to you the population of the earth is
13	growing. The water demands are growing. And one way
14	we can make sure that other industry and agriculture
15	and people have enough clean water is to use clean
16	means of producing energy. And we've got them. I
17	couldn't get up here if I didn't know the technology
18	already exists for wind and solar energy production.
19	And I get this argument with people all
20	the time, both at these meetings and elsewhere. Say,
21	oh, they can't produce enough. Well, if we put the
22	billions of dollars into solar and wind energy that we
23	are putting into nuclear energy, we could do it. We
24	went to the moon. We're sending off explorers into
25	space. The technology is there. What's lacking is
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And I would like to -- all of you would be dead without water. Your children will die without water. Other species will die without water. We have got to preserve it. There was a documentary made on water wars called Blue Gold and that's water that they're talking about. We've got to have it and we've got to preserve it while there's still some left to preserve.

Thank you.

MR. CARPENTER: Other comments?

12 MR. SAFER: I can go again. I wanted to get into some specifics. One thing in this document, 13 and I of course haven't read all of it. It was much 14 harder on the computer. I appreciate having a hard 15 copy now; that does make it a lot easier. I realize 16 it is more costly to the NRC, but this is an important 17 18 issue.

The Watts Bar -- this book says that no other new nuclear facilities within 50 miles are being considered. That's just false. Oak Ridge is within 50 miles.

TVA is on record as being far beyond considering small modular reactors. They're in communication with the NRC, other branches of the NRC,

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43 daily. There's meetings; there's been several 1 2 meetings this month on SMRs and TVA. They plan to build -- first they planned to build six up at the 3 Clinch River site; now I think it's down to two. 4 5 These are 125 to 150 megawatt reactors that are modular built and they're sunk into a hole 6 7 150 feet deep in the ground, the same karst geology. 8 So I wish that would be corrected or you check that. 9 I know there was some discussion about whether that's 10 accurate or not. 11 I don't see -- if you speak English, 12 considered means considered. And they're certainly being considered. So that's one thing. 13 The second thing, the highly irradiated 14 used fuel that's often called spent fuel is being 15 stored in fuel pools as long as possible. And that's 16 17 just the biggest danger that it can be. They need to be moved to a hardened onsite storage. And I know 18 19 they have to be in the pools for about five years till they cool down. But beyond that point the packing of 20 these pools with more and more rods that way beyond 21 what they were designed for is a real huge risk that 22 23 the community is taking on and needs to be aware of. And the community needs to support the idea of 24 25 hardened onsite storage.

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The reason that's not happening is 2 strictly cost. And when you're talking about cost, 3 this whole reactor is nuclear power on the cheap. And I don't know why we're accepting the cheapest possible 4 5 nuclear power plant. TVA tried to build a new AP 1000, two of them at Bellefonte. They found out they 6 7 was going to be so much more expensive than finishing 8 this reactor and the Bellefonte Unit 1 that they 9 backed off from it.

Well, excuse me, but this is not the place to cut costs. If they want to build these things, they have to be state-of-the-art. This is far from state-of-the-art.

This ice condenser design is really a joke 14 15 in the industry. And I mean I talked to the operators at Sequoyah and they just kind of grinned when I asked 16 them about -- the ice condenser design means there's 17 three million pounds of ice, literally three million 18 19 pounds of frozen water, that's in the reactor within the containment structure. And should they have a 20 21 loss of coolant, all of that hot gas is supposed to go through that ice room to lessen the pressure. And so 22 23 they've made the containment less sturdy than the other reactors around the country and around 24 the 25 world.

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Nobody else is building any ice condenser designs ever again. They were built back in the `70s. Sequoyah, ice condenser designs; Watts Bar 1 is an ice condenser design. There's no justification for finishing this thing.

6 I talked about this the last time in 2009. 7 Obviously it was not heard. But just so everybody 8 knows, it's a Rube Goldberg contraption. If you don't 9 know Rube Goldberg, look him up on the internet 10 because he was a fascinating guy. But, you know, I 11 could go on about that.

12 But the other specifics about this particular Environmental Impact Statement, on Page H-13 3, Appendix H is the Severe Accident Mitigation Design 14I'll quote, "TVA did not include the 15 Alternatives. contribution from external events in the Watts Bar 16 Nuclear Plant risk estimates." 17

18 External events. Now whether those is a 19 tornado like the one that almost hit Browns Ferry, a The very same day, April 27th, tornadoes 20 F-5 tornado. came through here and they got pretty close to Watts 21 They went right across Bellefonte, where that 22 Bar. 23 reactor was going to be built as soon as they finish Watts Bar. And it's just kind of -- to me it's kind 24 25 of eerie, but in the same day all of TVA's nuclear

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power plants were affected by tornadoes. If that's not a message from on high, I don't know what is, to be honest, folks.

4 So those kinds of things, plus terrorist 5 attacks, that's an external event. They just don't even factor that into this. And I'm sorry that we 6 live in a world where that has to be factored in, but 7 8 we all know that it does. And that these things are -9 - they're the biggest target for a terrorist that you can imagine and the effects would be -- they'd put 10 9/11 into a footnote of history almost. 11

12 these things are huge target So for external events and that really needs to be factored 13 into the design. And believe me, in 1970, they 14 15 weren't factoring in the possibility of a terrorist attack on U.S. soil in the design of the containment 16 structure which, as I've said, is already thinner than 17 other nuclear power plants of that era. 18

19 Ι just make note that the have to 20 definition of risk in this document is it's the product of frequency and the consequences of 21 an Work on that one for a while. I don't 22 accident. 23 know.

As I said, it's in 6.2.4, where the staff concludes that the environmental consequences of a

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severe accidents are small, 6.2.4. I don't know how you get that.

Severe accident mitigation alternatives in 6.3, there's a quote in here. I'll read it directly because I didn't copy it all down. They eliminate the severe accident scenarios that were "excessively costly to implement such that the estimated cost would exceed the dollar value associated with completely eliminating all severe accident risks at WBN 2."

I take that to mean that some of the risks it was just too costly to mitigate those risks, so we just threw them out because, if it costs too much, we couldn't possibly deal with it. So we'll just deal with the risks. That's what that says to me.

And by the way that whole severe accident thing was required of the NRC by the Third Circuit Court's opinion in Limerick Ecology Action, Inc. versus the NRC in 1989. It was a court ordered thing for the NRC to have to take into account these risks. It took a federal court to require that in 1989.

If you read this document, you'll see -- I don't think you'll see the word Fukushima or even Chernobyl in there. As I said earlier, they say it's factored into the computer models, but that sure is sanitizing the realities.

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48 Page 6-15, "It is noted that the risks 1 2 from deliberate aircraft impacts explicitly were excluded since this was being considered in other 3 4 forms along with other sources of sabotage." I don't 5 know where the other form is. I asked an individual, a couple of individuals, with the NRC here. They were 6 7 going to get back to me on that. But again deliberate 8 aircraft impacts were explicitly excluded from this 9 document. 10 And I think that concludes my comments. 11 Thank you. 12 MR. CARPENTER: other questions? Any Comments? 13 MS. HARRIS: I'm not going to ask anything 14 15 else because you don't get an answer. You get fluffed off and I'm not interested in that. So I'll just put 16 it online in writing. It's become a task to deal with 17 the NRC whenever you get kindergarten answers to 18 19 chemistry questions. And I'm kind of over it. I just 20 want the time so that I can do the writing. I want 21 the extension that should be granted. MR. CARPENTER: Anything else? 22 MS. FERRIS: I would like to add something 23 to what Donnie said about terrorists. There was a 24 25 Newsweek article either last week or the week before NEAL R. GROSS COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVE., N.W.

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of an FBI undercover agent who was working with extremist groups in the South. And some of the people he encountered were planning an attack on Browns Ferry. So this isn't some hypothetical. I mean there are people out there who would love to attack these reactors and probably many of them don't have any idea of what the real consequences would be.

8 MR. SAFER: I'm sorry you have to listen 9 to me again. I think unfortunately a lot of people 10 that believe the same thing that Kathy and Ann and I 11 do have gotten so discouraged from this process that 12 they just don't show up at these meetings anymore. So 13 I feel like I have to speak for many, many people.

I think that one of the things that the 14 community needs to realize is that decommissioning of 15 these reactors, both Unit 1 and Unit 2, is going to be 16 a huge task on down the road. Now the decommissioning 17 fund, TVA and the other utilities put money into it 18 19 all the time, but they invest that money just like anybody that has a little money tries to invest it in 20 21 the stock market or wherever to do the best they can. Well, when the stock market took a big hit, that 22 decommissioning fund took the same hit. And there's 23 24 just simply not much money as you need to as 25 decommission these reactors.

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recently of the government shutting down and the government saying no more loans, no more deficit. We don't know who is going to be charge of our government in 10, 20, 30 years. But the reality when it comes to these nuclear materials that are being manufactured at these sites is that they're going to have to be dealt with.

9 But if the federal government refuses to do it, it's going to be the community's problem just 10 11 to safequard that plant from now until kingdom come 12 again, till eternity. And I think we've all been sort of shaken in our confidence of the federal government 13 being able to continue its obligations into 14 the 15 future.

these materials, these radioactive 16 And 17 materials, need to be kept out of the environment for half a million years. Now if you think the federal 18 19 government is going to be here half a million years 20 from now, I'd like to see your information.

But I'm just trying to point out that all 21 of these things are built on a best-case scenario, 22 23 that everything is going to go perfectly and the world 24 is going to operate in a way that we wish it would. 25 And I think we've all seen that the world does not

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operate in that way.

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2 And whether it's Chernobyl or Fukushima or the fire at Browns Ferry or Three Mile Island, these 3 4 nuclear reactors are just as prone to accidents, 5 mistakes, failures, human error, whatever, terrorism, or whatever it might be as any other human enterprise 6 7 other human activity. They will and any have 8 They will have worse-case scenarios. It problems. 9 may not happen very often, but that doesn't mean it 10 can't happen tomorrow here. And if you have two 11 reactors, it just doubles the chance.

12 And again the whole clean-up thing is a whole nother issue that whether that money is really 13 going to be there. The same is true for the high 14 15 level waste that's in those fuel pools. The federal government is trying to figure out how to take care of 16 17 its responsibilities on that and they're struggling with that. They have struggled with it for over 50 18 19 years.

There's not a single deep repository for 20 radioactive waste that I know of in the world. 21 There's some talk in France about they maybe started 22 to experiment with one and maybe Finland has done a 23 little, but Finland doesn't have very many nuclear 24 25 So talking about the amount of high power plants.

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level radioactive waste we've been generating in the United States, it's a lot of material and we simply don't have any place to put it.

The Blue Ribbon Commission has been 5 working on it for over a year. They're due to release their report which is highly controversial in 6 my But you can't take it on face value that opinion. 8 these materials are going to be able to be handled the way they need to have been.

10 MR. CARPENTER: Thank you. Any other comments? Questions? 11

Anything from the staff?

that case I would like to 13 In thank everyone for participating. We did have some very 14 15 good comments and questions today. We will get back to those who have given us questions as quickly as 16 possible. I do know that we have at least one written 17 18 set of questions already. If there are any other 19 written questions that you'd like to provide, you can do it both by submitting from here or leaving it with 20 us before you leave. 21

I would like to remind everyone that again 22 23 there is a meeting comment sheet. We do like to get It tells us how to do these meetings a little 24 those. 25 bit better each time. So thank you for doing that.

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1	We will finish up now and reconvene for
2	the second part of this at 6:30 tonight. Anybody that
3	would like to come back, you're more than welcome.
4	We'd like to have you. It will be in this room again.
5	And with that I quit and close the
6	meeting. Thank you again for coming. Thank you.
7	(Whereupon, this portion of the meeting
8	was concluded at 3:20 p.m. to reconvene for the second
9	portion at 6:30 p.m.)
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