

Official Transcript of Proceedings
NUCLEAR REGULATORY COMMISSION

Title: Environmental Scoping Opportunity for
Public Comments: RE Watts Bar Unit 2
Afternoon Session

Docket Number: 50-391

Location: Sweetwater, Tennessee

Date: Tuesday, October 6, 2009

Work Order No.: NRC-3114

Pages 1-74

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

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

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

+ + + + +

-----x

MEETING ON ENVIRONMENTAL SCOPING
OPPORTUNITY FOR PUBLIC COMMENTS Docket No. 50-391
WATTS BAR NUCLEAR PLANT UNIT 2

-----x

Tuesday, October 6, 2009

Andrew Johnson Room
Magnuson Hotel
1421 Murrays Chapel Road
Sweetwater, Tennessee

The meeting convened at 1:30 p.m.

PANEL MEMBERS:

FRANCIS X. "CHIP" CAMERON, Facilitator
PATRICK MILANO, Sr. Project Manager
DENNIS BEISSEL, Environmental Project Manager

NEAL R. GROSS

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

P R O C E E D I N G S

1
2 MR. CAMERON: Thank you. My name is Chip
3 Cameron, and I work for the Executive Director for
4 Operations at the Nuclear Regulatory Commission, the
5 NRC. And it's my pleasure to serve as your
6 facilitator for today's meeting.

7 And our topic today is the NRC's process
8 for reviewing potential environmental impacts from the
9 licensing of a new nuclear reactor at Watts Bar. We
10 received a license application from the Tennessee
11 Valley Authority, TVA, to finish construction and
12 operate a new reactor, Watts Bar 2.

13 And what I'd like to do is just go through
14 a few meeting process issues so you know what to
15 expect this afternoon, before we get to the substance
16 of our discussions, and I'd like to talk to you about
17 the format for the meeting, some simple ground rules
18 to help us all to have a productive meeting this
19 afternoon, and to introduce the NRC staff that will be
20 talking to you today.

21 In terms of the format for the meeting,
22 it's really a two-part format. The first part is the
23 NRC is going to give you some brief presentations,
24 some information on the background on the NRC review
25 process for a license application such as this.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 And we're going to go to the second part
2 of the meeting, which is an opportunity for the NRC to
3 listen to your advice, your comments, your
4 recommendations on what the NRC should look at when
5 it's preparing its Environmental Impact Statement,
6 when it's performing its environmental review.

7 Now, the NRC staff is going to tell you
8 that they're also accepting written comments on these
9 issues, but whatever you say today will carry the same
10 weight as any written comments that you may wish to
11 submit, and of course you can talk today and then
12 submit a written comment; all of that is welcome and
13 fine.

14 When the NRC presentations are done, we're
15 going to have some time for a few questions about
16 those presentations, to just make sure that all of the
17 information -- this process is clear to all of you,
18 and I would just ask you to just hold your questions
19 until both of the NRC presenters are done with their
20 talks, and then we'll go for questions.

21 If we don't have time to get to all of
22 your questions before we need to move on to the
23 comment part of the meeting, the NRC staff will be
24 here after the meeting to talk with you in more detail
25 about any questions that you might have.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Ground rules are very simple. When we get
2 to the question period, just signal me, and I'll bring
3 you this cordless microphone, and if you could just
4 introduce yourself to us and ask your question. and
5 then we'll go to the NRC staff for answers.

6 Second ground rule: I would ask that only
7 one person at a time speak, most importantly so that
8 we can give our full attention to whomever has the
9 floor at the moment, but also we're transcribing the
10 meeting, and Brenda Thompson is our stenographer, our
11 court reporter today, and that will be the NRC's
12 record of the meeting, and it also will be your record
13 of the meeting.

14 And if we follow the one-person-at-a-time
15 ground rule, Brenda will be able to get what I call a
16 clean transcript; she'll know who is speaking at a
17 particular moment and identify them like that in the
18 transcript.

19 I would also ask you to be brief in your
20 comments so that we can make sure that we get to
21 everyone today. I don't think we're going to have any
22 time problems, but I always like to make people aware
23 of the need to be brief.

24 Usually we have a five-minute ground rule
25 on presentations, and then people can expand in their

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 written comments, but obviously we have a little
2 leeway today on that five-minute ground rule.

3 And the NRC staff is here today to
4 carefully listen to any comments that you make, and
5 they're not going to be talking to you about your
6 comments. We're going to be listening to the
7 comments, but the NRC staff is going to carefully
8 consider those comments, and they'll issue what's
9 called a scoping report, and we'll tell you a little
10 more about that.

11 And finally I would just ask all of you to
12 show courtesy to each other today. You may hear
13 opinions today that differ from your own, and I would
14 just ask you to respect the person who is giving that
15 opinion.

16 And with that, let me introduce our two
17 speakers. First we're going to hear from Pat Milano,
18 and Pat is the senior project manager for the safety
19 review on the Watts Bar 2 license application, and
20 he's going to give you an overview of the entire NRC
21 review process and, importantly, some history on this
22 particular application.

23 And then we're going to go to the heart of
24 the topic today, and we're going to Dennis Beissel,
25 who is the environmental project manager on this

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 particular license application, and Dennis is going to
2 go into some more detail on the environmental review
3 process.

4 So we would all thank you for coming out
5 to be with us today to help us with this important
6 decision, and with that, I'm just going to go directly
7 to Pat, then we'll go to Dennis, and then we'll go on
8 to you for questions. Thank you.

9 MR. MILANO: Thank you, Chip.

10 Again, as Chip mentioned, my name is
11 Patrick Milano. I'm from the NRC Headquarters office
12 in Rockville, Maryland, and I'm the project manager
13 assigned to the review of the operating license
14 application within the Office of Nuclear Regulation.

15 A little background for you: Under the
16 Atomic Energy Act and the Energy Reorganization Acts,
17 regulations were formulated to provide for the
18 licensing of new reactors. More specifically, the
19 NRC's review of the Watts Bar Nuclear Plant Unit 2
20 will be governed by the provisions of Part 50 of Title
21 10 of the Code of Federal Regulations, 10 CFR 50.

22 Again, that's unlike what you're seeing if
23 you're aware of the New Reactor Program that's
24 being -- where some of the new plants are going under
25 Part 52. Watts Bar is going to remain under the Part

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 50 regulations.

2 An application for operating license is
3 required to submit information that describes the
4 facility, presents the design basis and the limits of
5 its operation and presents a safety analysis of the
6 structure, systems, and components and the facility as
7 a whole.

8 This is commonly referred to as the safety
9 portion of the review, which is what I and our
10 organization, and NRR is primarily responsible for.

11 In addition, an application for a facility
12 whose construction and operation may have a
13 significant impact on the environment is also required
14 to be accompanied by an environmental report under
15 Subpart A of Part 51, 10 CFR Part 51.

16 The NRC recognizes a continuing obligation
17 to conduct its licensing and regulatory functions in a
18 manner which is both receptive to the environmental
19 concerns and is consistent with its responsibility as
20 an independent regulatory agency for protecting the
21 radiological health and safety of the public.

22 Today we're here as part of the process
23 for the review of the environmental report for Watts
24 Bar Unit 2. In this regard, the purpose of this
25 meeting, as you see up on the slide, is to establish

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 an early and open process for determining the scope of
2 the issues to be addressed and then, more so, for
3 identifying the significant environmental issues
4 related to the operation of Watts Bar Unit 2.

5 I'd like to give you a little bit of
6 history of the licensing of Watts Bar 2. The National
7 Environmental Policy Act of 1969, commonly referred to
8 as NEPA, directs that all agencies of federal
9 government comply with NEPA procedures, except where
10 they're inconsistent with other regulatory
11 requirements.

12 Under NRC's regulations, an applicant such
13 as TVA desiring to construct or operate a nuclear
14 plant, must submit an environmental review for review
15 by the NRC staff. However, as a federal agency
16 itself, the Tennessee Valley Authority is also
17 required to comply with NEPA procedures.

18 Therefore, in 1972, TVA submitted its
19 Environmental Impact Statement to support its proposed
20 construction of Watts Bar Units 1 and 2. The NRC
21 reviewed this, along with other facility design
22 information when it issued the construction permits
23 for both units in early 1973, specifically January
24 1973.

25 TVA supplemented its Environmental Impact

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Statement in 1976, along with its application for
2 operating licenses for both units. After review, NRC
3 prepared an environmental statement detailing its
4 review of the environmental effects of the operation
5 of the plant.

6 As you are aware, TVA halted construction
7 of Watts Bar in the mid 1980s due to a series of
8 construction and management difficulties and
9 deficiencies within its organization, and after
10 construction resumed in the early '90s and Watts Bar
11 Unit 1 was nearing completion, NRC supplemented the
12 environmental review, in 1995, for Watts Bar Unit 1,
13 and the plant received a license to operate later on
14 in that year, in November of '95.

15 During this period Unit 2 remained in
16 what's called a deferred plant status. Then in August
17 of 2007, TVA notified the NRC that it planned to
18 reactivate construction of Watts Bar Unit 2 and to
19 complete the licensing of that unit.

20 To support this effort, TVA supplemented
21 its Environmental Impact Statement for Unit 2 in July
22 of 2008 and updated its overall license application
23 March of this year.

24 As some of you are aware, the NRC has held
25 two meetings for the public, in December -- the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 previous December, that try to explain and address for
2 the public the process that the NRC was going to take
3 in reviewing the operating license application for
4 Watts Bar 2. However, I'm going to highlight some of
5 the major aspects of this process.

6 As I mentioned to begin with, there are
7 several facets of the review of any operating license
8 application. The NRC's safety findings are documented
9 in a safety evaluation report, and also there are some
10 several other reports that are also prepared, dealing
11 with such aspects as environmental, which we're here
12 today to discuss, as well as security and emergency
13 preparedness.

14 After these reviews are completed, the
15 staff will present its findings to the Commission's
16 independent advisory committee, called the Advisory
17 Committee on Reactor Safety, or you may also hear the
18 acronym ACRS.

19 ACRS provides its recommendation about whether the
20 plant should be given an operating license directly to
21 the commissioners, rather than to the staff itself.

22 During the same time period, the NRC will
23 be inspecting the construction of the facility to
24 determine if it's been constructed in accordance with
25 the approved design requirements and industry codes

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 and standards.

2 Lastly, if the Commission determines that
3 the plant should be given an operating license, it
4 will authorize the director of the Office of Nuclear
5 Reactor Regulation to issue that license.

6 And that pretty much is my presentation
7 with regard to the safety portion of the review. With
8 that, I'm going to turn it over to Dennis Beissel, who
9 will provide you with an understanding of what's going
10 to transpire on the environmental side.

11 MR. BEISSEL: Thank you.

12 My name is Dennis Beissel; I'm a project
13 manager and a hydrologist with the Nuclear Regulatory
14 Commission in Headquarters in Rockville.

15 As Pat said, the NRC's evaluation or
16 environmental review is governed by NEPA, and NEPA
17 requires that all federal agencies follow a systematic
18 approach in evaluating potential environmental impacts
19 associated with certain actions. And we at the NRC
20 consider the environmental impacts of the proposed
21 action, and in this case it is issuing or not issuing
22 an operating license.

23 The process is specifically structured to
24 involve public participation, which is -- and obtain
25 public comment, and this meeting is a very large part

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 of that.

2 While we prepare an Environmental Impact
3 Statement, we're going to consider, analyze, and
4 evaluate the impacts of issuing the license. During
5 the review we look for and evaluate any new and
6 significant information that might call into question
7 the conclusions that were previously reached in the
8 1978 FES or EIS that we produced. In addition, we'll
9 search for new issues that may not have been addressed
10 in the document of 20 years ago.

11 The purpose of an EIS -- among all these
12 bullets, the important part is -- all being important,
13 but that it provides full and fair discussion and
14 disclosure of environmental impacts. This is not a
15 regulatory requirement document; it's a disclosure
16 document. We are going to evaluate and disclose
17 environmental conditions, even though we don't
18 actually as an agency regulate those conditions; it's
19 done by state agencies or other federal agencies.

20 While we evaluate the impacts and the
21 resources, we're going to consider these resources,
22 which are aquatic and terrestrial ecology; the
23 hydrology will be both groundwater and surface water
24 hydrology. We have cultural resources, human health,
25 land use, and any subcategories of these that may be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 relevant to the site.

2 For our information gathering, we'll use
3 information that was in the environmental report
4 submitted by TVA as part of their license application.

5 We're going -- actually this week we're conducting an
6 environmental audit of the site, where we tour the
7 facility; we observe plant systems and evaluate the
8 interaction of plant operations with the environment.

9 We talk to plant personnel and review
10 specific documentation of plant operations. We will
11 speak to and consult with federal, state, and local
12 officials, permitting authorities, and social
13 services. We've already submitted letters and have
14 had phone calls with them and invited them to come and
15 talk to us this week or any other week during the
16 comment period, if they wish.

17 We'll consider the comments received
18 during the public scoping period in this meeting and
19 the scoping period that carries on past this meeting,
20 and all of this information forms the basis of our
21 preliminary conclusions which will be presented in a
22 Draft Environmental Impact Statement.

23 Just a little bit of background, again, to
24 repeat some things: The NRC issued the Final
25 Environmental Statement in 1978. What we're going to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 produce now is a draft, which is an Environmental
2 Impact Statement, but it serves as a supplemental to
3 the Final Environmental Statement.

4 The regulatory requirements that govern
5 what we do is found in 10 CFR Part 51. And our staff
6 guidance is found in the NUREG-1555, which describes
7 for us what we should look at, and it's in a very
8 detailed guidance. But it's nonprescriptive; it is a
9 guidance document.

10 The process -- right now we're in the
11 first bullets here during environmental scoping and
12 this public meeting. We're going to then perform our
13 review and evaluation of the information, and we'll
14 produce a Draft Environmental Impact Statement, and at
15 that time -- I don't have the schedule in front of me,
16 but we'll have another meeting or two meetings similar
17 to these meetings today, where we'll present our
18 results, and then we invite comments and questions on
19 them at that time.

20 Then after all the review and evaluation
21 of the draft, then a Final Environmental Statement is
22 published by the NRC.

23 As far as scoping comments for
24 environmental, I think there were copies of these in
25 the back, so if you don't want to have to try to write

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 down the address -- and the e-mail's kind of a
2 mouthful, so I'm not going to read it, but these are
3 available in the back so you can copy them from there.

4 And that's really all I had for a summary.

5 I didn't want to get into too much detail. Do we go
6 to questions now?

7 MR. CAMERON: Yes. Let me just --

8 MR. BEISSEL: Go ahead.

9 MR. CAMERON: Let me just say that Pat and
10 Dennis are our two speakers today, but we also have
11 many others here from the NRC staff from our Office of
12 General Counsel, our Office of Public Affairs, our
13 resident inspectors, so that we can make sure that we
14 answer your questions, but also so that they're here
15 to talk to you after the meeting about anything that
16 you might have.

17 And I don't know if our handouts have them
18 on, but Dennis and Pat are fully available through
19 phone and e-mail to all of you if you have any
20 questions or concerns, because these meetings are just
21 one dot in time, and we'd like to maintain some
22 continuity with you throughout this process.

23 But thank you, Pat; thank you, Dennis.

24 Are there questions about the NRC process
25 that's going on now that we can answer for you?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Yes. And just please introduce yourself
2 to us, sir.

3 DR. McCLUNEY: Yes. I'm Dr. Ross
4 McCluney, and I'll be speaking a little bit later. I
5 just had one question; let me find it.

6 MR. CAMERON: Sure.

7 DR. McCLUNEY: In the process of the
8 Environmental Impact Statements -- here it is. The
9 history of license applications: I noticed the NRC
10 supplement to the Environmental Impact Statement,
11 April 1995 was the date, but in the more recent one,
12 in July, it referred back to that statement with a
13 date of December 1995, with reference to the
14 alternatives.

15 It didn't provide alternatives that I was
16 interested in seeing, and the current one referred
17 back to that one, and I didn't -- I was confused
18 whether it's the April one or the December one.

19 MR. CAMERON: Can we provide some
20 clarification on whether there was a separate December
21 1995 document on alternatives? Do we have any
22 information on that? And we have to get you on the
23 transcript, so that we'll need to have you use the
24 microphone.

25 MR. BEISSEL: Yes. I'm not sure the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 alternatives -- the 1995 document was for the -- it
2 was a supplement to the Final Environmental Statement
3 for the cooling system. And I don't think it had
4 alternatives to, you know, power generation or
5 anything; it wasn't that kind of an alternative
6 discussion.

7 MR. CAMERON: So there was an April '95
8 Environmental Impact Statement, and then a few months
9 later we issued something that discussed the cooling
10 aspects.

11 VOICE: Yes.

12 MR. CAMERON: Is that correct?

13 MR. BEISSEL: I think there was one
14 document in '95 that was published. I don't know -- I
15 wasn't there then; I don't know when the draft was
16 issued, but I know the final date is in -- is from
17 1995.

18 MR. CAMERON: And I think obviously the
19 doctor is asking to make sure that he has complete
20 information from the past. Is there anything else
21 that we can offer on this, Pat?

22 MR. MILANO: Well, first of all, those
23 are -- those supplements in 1995 were only for Unit 1;
24 they were not for Unit 2. The April '95 supplement --
25 there were some other documents of lesser nature that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 I did not include in the list, and those are all
2 referred to in the record and stuff.

3 If you do need some help with other
4 documents that form up the environmental report, I can
5 try to get that to you.

6 MR. CAMERON: Okay. And I just want to
7 make sure that -- I don't want to beat this to death,
8 but the 1995 was Unit 1.

9 MR. MILANO: That is correct.

10 MR. CAMERON: And Dr. McCluney, I think it
11 is, talked about this July document referring back to
12 something in December 1995? Is that what you're
13 saying?

14 And was the December 1995 -- we don't know
15 what you're specifically referring to, but maybe after
16 the meeting we can try to clear up all those
17 documents, to make sure that you know exactly --

18 DR. McCLUNEY: I'll mention it in my
19 testimony.

20 MR. CAMERON: All right. Thank you.

21 Other questions on any of the process
22 issues?

23 Yes. And Sandy, could you just introduce
24 yourself.

25 MS. KURTZ: I'm Sandy Kurtz. I just had a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 question for Mr. Milano regarding your summary on the
2 safety reports. I was wondering if the safety
3 evaluation report was delivered to the Advisory
4 Committee on Reactor Safety, who you said reported
5 directly to the Commission and not to the staff.

6 So is the safety evaluation report done by
7 the staff? Do they give it to the advisory committee?

8 MR. CAMERON: Okay. Pat, let's get you on
9 the record here.

10 MR. MILANO: The safety evaluation report
11 is provided to the Advisory Committee for Reactor
12 Safety when -- understand, too, that it's not just a
13 single document. As you'll see, there was the
14 original safety evaluation report that was done for
15 both Watts Bar Units 1 and 2, and that was
16 supplemented 20 times and ultimately culminated in the
17 licensing of Watts Bar Unit 1.

18 We have -- in February of this year we
19 supplemented it for Watts Bar Unit 2, basically to lay
20 out the framework -- it wasn't predominantly there to
21 reflect any safety reviews; what it was done for was
22 to give everybody the starting point for where the NRC
23 is picking up its review of Watts Bar Unit 2, and that
24 was supplement 21, and there'll be subsequent
25 supplements as the NRC reviews its -- the operating

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 license application for Unit 2.

2 Now, understand, too, that there were
3 other -- safety evaluation report is a term for our
4 reporting system, and the environmental side also --
5 you know, there'll be other reports that are listed as
6 safety evaluation report, but the one that we're
7 talking about, NUREG-0498 and its supplements, are the
8 ones that handle just the safety reviews of the design
9 and operation of the facility.

10 MR. CAMERON: And just to add on a little
11 bit for Sandy and others on this, Pat, the safety
12 evaluation report will be available to the public, and
13 that's still being performed and, thirdly, can you
14 just tell people a little bit about the request-for-
15 additional-information process so that they know what
16 to expect along those lines?

17 MR. MILANO: What happens along the way is
18 that currently the NRC is reviewing the final safety
19 analysis report that TVA prepares to detail its design
20 and operation of Watts Bar Unit 2.

21 And you'll see in there that they -- as
22 they complete designs and make changes to what was
23 previously described in earlier versions, they amend
24 the FSAR, final safety analysis report.

25 And indeed they have done that. We

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 have -- so far we have gotten amendments 93 and 94,
2 which came in in April and August of this year, that
3 provided a certain amount of design material to
4 support some sections of the FSAR.

5 Those are currently under staff review.
6 If the staff does not -- feels that they don't have
7 enough information to make a finding in those areas,
8 we put out what's commonly referred to as an RAI, a
9 request for additional information.

10 All those type of documents are all made
11 publicly available; they're all in our -- both in our
12 document control system -- it's called ADAMS -- and
13 also the more significant documents we put on our
14 agency website for Watts Bar Unit 2.

15 MR. CAMERON: Thank you, Pat.

16 Dennis, RAI, same process followed on the
17 environmental review?

18 MR. BEISSEL: Yes. A very similar
19 process. Primarily we request additional information
20 that we couldn't find during our site audit or site
21 visit or that hasn't been published and not publicly
22 available or it's not already in the record.

23 And then we submit a formal request. The
24 applicant responds and gives us the information we
25 require to finish our evaluation. Then all the -- the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 basis of our evaluation, then, is all docket -- all
2 the information we get from them is put on the docket,
3 so it's publicly available.

4 MR. CAMERON: Great. Thank you, Dennis.

5 Does that answer your question, Sandy?

6 Anybody else have a question?

7 (Pause.)

8 MR. CAMERON: And, Lou, just introduce
9 yourself.

10 MR. ZELLER: Thank you. My name is Louis
11 Zeller. I'm with the Blue Ridge Environmental Defense
12 League.

13 I have a question about the environmental
14 side. Can you tell me if TVA has submitted its post-
15 construction environmental report, as required under
16 10 CFR 51.53?

17 MR. CAMERON: So post-construction
18 environmental report from TVA. Do we have an answer
19 on whether that's been -- whether that's applicable in
20 this situation or --

21 MR. BEISSEL: Well, I believe they're
22 still undergoing -- they're still doing construction,
23 so we're not at post-construction yet, so I -- there
24 is -- I haven't seen that report; I don't think it's
25 due yet.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 I don't know the -- I don't have the
2 regulation memorized as to how many days or months or
3 it's due after the end of construction, but we could
4 find out.

5 MR. CAMERON: Okay. Let's see if we can
6 get that information. But I guess the bottom line is
7 since construction is still ongoing, that that
8 particular document has not been developed yet.

9 Okay. Anybody else?

10 (No response.)

11 MR. CAMERON: All right. And as I said,
12 the staff will be here after the meeting to answer
13 anything else you might have.

14 We'll go to the part of the meeting where
15 we're going to listen to all of you, and our first two
16 speakers are Shane Burris and then Louis -- Lou
17 Zeller.

18 And, Shane, would you like to come up here
19 and give us your comments.

20 MR. BURRIS: Thank you all. I'm Shane
21 Burris; I'm director of Monroe County Economic
22 Development, and I'm here representing the Monroe
23 County mayor, Allan Watson. His apologies; he
24 couldn't be here.

25 We fully support licensing Watts Bar

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Number 2. Our unemployment rate in Monroe County
2 right now is over 16 percent, so we would like to see
3 jobs from that plant as it is being constructed and
4 then once it's completed.

5 You know, the electric power that it will
6 generate is very necessary. There's something that
7 most people in this room may not know. They're going
8 to build a company, Beikler, in Cleveland, Tennessee,
9 that will build solar panels; they will also make
10 semiconductors, but mostly solar panels. That build-
11 out, that plant will require a quarter to a third of a
12 nuclear power plant to run its full operation.

13 From my understanding, at the presentation
14 that I went to, TVA's engineers are looking at, on
15 their grid, to supply it from two nuclear power
16 plants: one from Sequoyah and one from Watts Bar, to
17 my understanding.

18 And isn't that ironic, to build solar
19 panels, that you need so much power. So we fully
20 support this licensing; we think the electricity is
21 necessary. I know there's some people in the room
22 that probably don't think so, but as an economic
23 developer in the state of Tennessee, most economic
24 developers know that the United States and the state
25 of Tennessee's manufacturing base runs on cheap power.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 And if your cap and trade bill passes in
2 Congress, the electric bill will go up about 300
3 percent, and also that will end manufacturing in this
4 country as we know it, and we will only be one mass
5 distribution center.

6 So I fully support, and the Monroe County
7 mayor does, too -- we support the jobs, we support the
8 electric power that we feel is necessary for this
9 country and for the benefit of Monroe County and its
10 citizens.

11 Thank you.

12 MR. CAMERON: Thank you very much, Shane.

13 And now we're going to hear from Lou
14 Zeller, and then we'll go to Dr. McCluney and William
15 Reynolds.

16 MR. ZELLER: Thank you. My name is Lou
17 Zeller, and I'm the science director with the Blue
18 Ridge Environmental Defense League, which was founded
19 in 1984 on the crest of the Blue Ridge and has been
20 operating in Tennessee since 1992. It's done a
21 variety of projects.

22 I will have written comments to submit
23 today, but I just wanted to hit on the highlights of
24 perhaps one of the most important issues which relates
25 to public health and general safety issues. That

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 would be the fact that Watts Bar Unit 2, as its sister
2 reactor, Number 1, would utilize an ice-condenser
3 containment structure -- many people have referred to
4 this as an eggshell-type containment -- in order to
5 reduce costs of construction, concrete and steel, in
6 the construction of the containment vessel, that large
7 domed structure.

8 Ice-condenser units employ baskets of ice.

9 During an event inside of a nuclear reactor, excess
10 heat and pressure are created. Ice-condenser reactors
11 are designed to reduce that heat and pressure by using
12 baskets of ice.

13 There are relatively few of these reactors
14 in operation, and they are fraught with fundamental
15 engineering flaws and also real-world difficulties in
16 keeping baskets of ice free, operating over a period
17 of decades, which they are required to do.

18 The ice-condenser system should not be
19 constructed in the 21st century; it should not have
20 been constructed at all.

21 The cost-cutting measures designed to make
22 construction cheaper result in some of the most
23 dangerous reactors on the planet. A Sandia study
24 which is memorialized in Nuclear Regulatory's own
25 guidance documents, NUREG/CR-6427, in April 2000,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 states that ice-condenser plants are at least two
2 orders of magnitude more vulnerable to early
3 containment failure than other types of pressurized
4 water reactors. Two orders of magnitude: ten times
5 ten, 100 times more vulnerable to a catastrophic
6 disaster.

7 Hydrogen buildup during an event inside of
8 a nuclear reactor is one of the reasons for this
9 vulnerability. Measures over the years, which have
10 been added to or retrofitted to existing ice-condenser
11 reactors have addressed part of the problem. Buildup
12 of hydrogen is why the pressure gets so high and can
13 cause a rupture in the containment structure.

14 Backfitting of hydrogen igniters over the
15 years have not addressed the full problem. Ice-
16 condenser reactors are still vulnerable to hydrogen
17 ignition during a reactor event which would otherwise
18 be contained inside a more robust containment
19 structure.

20 This spells danger to people in Rhea
21 County, eastern Tennessee, if and when one of these
22 reactors was to be breached. Combined with the
23 fundamental problems of nuclear power, this presents
24 an unacceptable risk in this case.

25 For example, "the most complete and recent

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 probabilistic risk assessment suggests core melt
2 frequencies in the range of 1 in 1000 per reactor year
3 to 1 in 10,000 per reactor. A typical value is 3 in
4 10,000." I'm reading from David Lochbaum's monograph
5 which quotes a Nuclear Regulatory Commission statement
6 to US Congress, and that's what I am citing here.
7 This is the NRC to the Congress: "Were this the
8 industry average, then in a population of 100
9 reactors," which we have today, "over a period of 20
10 years, the crude cumulative probability of a severe
11 reactor accident would be 45 percent."

12 That is for all reactors combined,
13 including the more robust designs. The ice-condenser
14 reactor can withstand half the pressure of the more
15 robust old designs, not talking about the new AP-1000
16 and other designs which have not yet been built under
17 10 CFR Part 52.

18 This reactor should not be built. Thank
19 you.

20 MR. CAMERON: Thank you, Lou.

21 Next we're going to go to Dr. McCluney.
22 Thank you.

23 DR. McCLUNEY: Good afternoon. I have a
24 bachelor's degree in physics from Rhodes College in
25 Memphis, master's degree in physics from UT-Knoxville,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 not far from here, PhD in physics from University of
2 Miami.

3 I worked for Eastman Kodak Company, NASA's
4 Goddard Space Flight Center, and for 30 years at the
5 Florida Solar Energy Center. That's a research
6 institute of the University of Central Florida.

7 Following retirement from that
8 organization, I moved to Chattanooga, and I've been a
9 technical consultant since that time.

10 In addition to my general concerns about
11 nuclear power -- I won't list all the concerns and
12 fears; they're in the media. They've been examined
13 quite a bit, and there's a lot of controversy about
14 most of it, but I think the dangers are real; the
15 potential environmental impact in the event of
16 accidental releases of materials, either fuels or
17 waste, are severe and consequential.

18 What we're counting on is the probability,
19 hopefully, of that happening being low, but as the
20 number of these power plants and materials being
21 transported across the country increase, the
22 probability may change that something can happen, and
23 if it does, it could spell serious consequences.

24 But I'm also concerned about the high cost
25 and the delayed return on that investment of a nuclear

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 power plant. It's required to go through a lot of
2 work like this meeting in preparation, a lot of
3 analysis, and even when you get close to construction,
4 it takes quite a while to get the plant operating and
5 then tested and presumed safe enough to turn it on and
6 finally start generating revenue.

7 Well, in this economic time it's rather
8 risky, and I'm sure -- I believe not a very good idea
9 to invest so much money in something that may not be
10 needed.

11 So my concern is that there are lots of
12 moves afoot to reduce our needs for electricity in the
13 Tennessee Valley and around the country that aren't
14 really addressed in TVA's Environmental Impact
15 Statements, that I've been able to find.

16 In particular, I'll refer to sections
17 relating to alternatives, alternatives to building the
18 plant. And sometimes TVA will put a little bit in
19 about that, in other cases, so I searched the most
20 recent Environmental Impact Statement prior to this
21 meeting, and what I found was a statement that
22 referred back to that 1995 -- December 1995 earlier
23 Environmental Impact Statement for finding something
24 about alternatives.

25 We don't know -- because I couldn't find

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 that document -- whether those alternatives were just
2 alternatives to the design of the plant, alternatives
3 to mitigate environment impact, or whether it actually
4 included alternative power sources or other options
5 for reducing the need for the plant in the first
6 place. So I believe TVA is fairly deficient in that
7 area.

8 Even if the 1995 report addresses the
9 subject, a whole lot has happened since then, in 14
10 years. There's been an enormous amount of research,
11 development, and promulgation of energy-efficient
12 technology and renewable energy choices.

13 It doesn't take a particularly astute
14 observer to know about a lot of this. If you watch
15 TV, and especially if you go to the science
16 channels -- Discovery, National Geographic, and these
17 channels -- if you read the paper, read magazines,
18 you'll see about this, because everybody's excited
19 about these relatively pollution-free or somewhat
20 benign alternatives -- energy alternatives.

21 But even I was surprised when I read a
22 book -- it was called *Earth: The Sequel*, written by
23 Fred Krupp and Miriam Horn. It came out a couple of
24 years ago. It's a remarkable tour through the
25 technological developments, both in energy efficiency

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 and in renewable energy, as well as some other energy
2 options.

3 Millions and even billions of private
4 money have been spent to explore, develop and actually
5 commercialize an enormous variety of technologies we
6 still don't know too much about unless you really dig
7 in.

8 A good -- some good searches on the
9 internet will reveal a lot of this technology, a lot
10 more about it, and yet we see nothing about this in
11 TVA's reports.

12 So the question is, Do they fail to
13 include it because they've already decided, years ago,
14 that solar can't work here, or whatever decision they
15 make, and so because they made that decision -- and if
16 we trace it back, we may have to go back to the
17 original -- I fear we have to go back to the original
18 Environmental Impact Statement in 1978.

19 So I glanced through this document to see
20 if I could find a reference to that, and there was
21 nothing there. So I fear that the really viable
22 alternatives in renewable energy and energy efficiency
23 have not been addressed and therefore the decision
24 could be one based on inadequate information that will
25 endanger the public.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 The journalist Tom Friedman has also
2 written a book called *Hot, Flat, and Crowded* that also
3 details the opportunities available to the United
4 States -- it's a very patriotic book -- to get off of
5 foreign oil and dirty coal without having,
6 necessarily, to go to nuclear to do it.

7 So the point I'd like to make in response
8 to my enormous sympathy to the economic problems of
9 the area, and the mention of jobs in solid-state and
10 other areas, is that renewable energy is a really
11 labor-intensive operation, so that your intensive
12 worker group that comes in to build the nuclear power
13 plant, usually from outside the region, most of those
14 leave when the plant is built, and a moderately small
15 task force remains.

16 Whereas if you instead focused on
17 attracting some of this new technology development and
18 factories, you could build up this region enormously,
19 building and making environmentally benign technology
20 to provide what electricity is needed.

21 I admit that TVA will need electricity,
22 not necessarily because it expects a growth in
23 demand -- I really don't think because of all this
24 technology is getting out there that the demand will
25 be as high as they think it's going to be; I think the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 lower growth in their Environmental Impact Statement,
2 the one that's slightly negative, may be closer to the
3 truth.

4 But even if the demand is lower, that
5 doesn't mean they won't have to build new plants,
6 because hopefully they'll be taking out of operation
7 all those dirty coal plants, and so they'll need to
8 replace some of those, and I admit that.

9 But I'd hate to see it with nuclear, when
10 abundant natural energy is available from the sun and
11 from other sources, outside this region, with long-
12 distance transport of energy as well as within this
13 region, and yet TVA is silent on this.

14 So what I urge the Nuclear Regulatory
15 Commission to do is insist that, before they give any
16 permit to this Unit 2, that TVA do a truly
17 comprehensive study of these other alternatives:
18 improved energy efficiency and renewable energy
19 development.

20 In fact, TVA can make money off of this.
21 They can put the solar systems out and lease the
22 rooftops of customers in a whole new mode of power
23 plant production which is called distributed energy.

24 The beauty of distributed energy is
25 they're relatively small; they're distributed over the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 region. They're not terror-susceptible, because you
2 want to take out the power in the region? How many
3 rooftops do you have to go and knock out in order to
4 have an event? So distributed power has an inherently
5 higher security factor to it.

6 And the utility can participate; in fact,
7 it already is, in very tiny, little minuscule power
8 programs, where the homeowner pays to put the solar
9 power on their roof, and then the utility pays them a
10 double price for the electricity that's generated.

11 So I think if they could look at that
12 model more, look at these new technologies, including
13 battery storage -- battery storage is amazing; I
14 thought it was the unsolvable problem, because solar
15 power, we know, is intermittent, and therefore we need
16 a way to store electricity or some other form that can
17 be turned into electricity and then produce it where
18 it's needed.

19 TVA has a facility for that near my home
20 in Chattanooga; it's pump storage on the top of a
21 mountain, and then they pull the water down when the
22 need the power at peak periods.

23 So there are options available, and so I
24 urge NRC to insist that TVA do this truly
25 comprehensive study. If they do that, I suspect that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 what TVA will discover is they can withdraw their
2 application for this new plant.

3 Thank you.

4 MR. CAMERON: Thank you, Ross.

5 And now we're going to William Reynolds,
6 and then we're going to go to Representative Jim Cobb.

7 MR. REYNOLDS: Also known as Bill
8 Reynolds. I live down the river, so to speak, in
9 Chattanooga, been a citizen there for over 30 years.
10 And by the way, when I filled in my card for the
11 title, I just wrote in "citizen." It occurs to me
12 know that maybe I should have written in "concerned
13 citizen" and added also that one who's been concerned
14 particularly about the impacts on human health -- my
15 health, my family's health, and the future of my
16 children's and grandchildren's health -- for a long
17 time and has taken great interest in studying and
18 learning all about energy production, energy use, and
19 those kind of things, to study all about, as much as I
20 could have.

21 I daresay I've learned a lot of valid
22 lessons in my studies and private individual studies
23 through the years, and I think I just recently, within
24 the past year, less than a year, have learned a most
25 important new lesson that I think a lot of folks,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 including TVA itself, probably has learned as a result
2 of the horrible disaster of the Kingston ash spill,
3 not far from here, that you all probably are very well
4 informed with the great disaster, and I'm not going to
5 go into details about it.

6 I bring this up at this time because I
7 think it's a lesson learned that should be known and
8 paid attention to in the practice of producing nuclear
9 power plants and managing nuclear power plants and so
10 on.

11 I want to define a lesson learned that I
12 think we should all apply, particularly to the scoping
13 of building a new nuclear power plant here. And
14 here's my definition: "Regulations, monitoring
15 inspection regimens, and compliance enforcement must
16 absolutely be maintained and sustained with absolute
17 unwavering consistency in perpetuity, as long as the
18 waste remains."

19 And we -- those who are informed about
20 nuclear power waste products, some of those waste
21 products remain lethal to human life and health for
22 multiple centuries. There must never be a single
23 occurrence of slacking in maintaining and sustaining
24 protection of our supremely precious air, land, and
25 water from exposure to the poisons contained in the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 waste produced by electrical power generation.

2 Nothing akin to the Kingston coal ash
3 spill should ever happen with nuclear power plants,
4 whose waste is even more toxic than coal ash.

5 I hope this less has already been learned
6 among those who manage nuclear power. If not, I want
7 you to start to learn it now. This bears saying in a
8 scoping session for the environmental impact
9 assessment of a new nuclear power plant here, because
10 the most noble and honorable Union of Concerned
11 Scientists, who are not antinuclear, by the way, but
12 they do totally responsible scientific evaluation and
13 assessment of the nuclear power industry and, upon
14 close scrutiny of the Nuclear Regulatory Commission's
15 track record and their oversight of nuclear power
16 plant operation, concluded as follows:

17 "Nuclear power is riskier than it should
18 and could be. The United States has strong
19 regulations on the books, but the Nuclear Regulatory
20 Commission does not enforce them consistently."

21 I agree with the implication in this
22 statement that emphasizes the consistency. TVA has
23 done a lot of good things; we all know that. We
24 appreciate the great service they've done, but -- and
25 it's not all their fault, because the regulations were

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 not in place regarding the coal ash spill.

2 Regulations are, according to the UCS, in
3 place for strong management of nuclear power, so
4 consistency is what's needed, unfailing consistency.
5 NRC cannot be given a passing grade on their
6 regulation enforcement for anything less than a
7 perfect 100.

8 One percent slackness on enforcement is a
9 failing grade. Why? -- because of what it can do to
10 human beings and their lives and their health.
11 People's lives and future genetic transmission, by the
12 way, is on the line with radioactive pollution.

13 Necessary ramifications, lesson learned,
14 is the assertion that and Environmental Impact
15 Statement that omits responsible, honest accounting
16 for perpetual vigilance through the eons to come,
17 continuously and consistently, is not worth the paper
18 it's written on.

19 So I'm here encouraging NRC to make sure
20 they get all that covered, all that protection of
21 human health and life in perpetuity, as long as the
22 waste will last.

23 I see this is quite a problem to
24 accomplish, in other words, a gargantuan challenge, at
25 the very least. And environmental protection plan

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 that could be fail-safe for eons to come would
2 obviously run into costs over much time adding up to
3 multi-trillions of dollars, I would imagine.

4 Part of the gargantuan challenge, then, is
5 creating such a plan that it provides and requires a
6 funding system that will never fail. It will cost
7 lots of dollars. If the funding system fails, the
8 regulation enforcement will not be done, and it will
9 present an unacceptable risk to the public.

10 The Environmental Impact Statement must
11 contain assessment of how these funds will be
12 guaranteed. To me it is obvious those funds will have
13 to come out of the pockets of either the ratepayers
14 who buy the power or the taxpayers who bail out when
15 the funds aren't there, or both, which is the kind of
16 situation we have now, those of us who are ratepayers,
17 in particular, with -- dealing with the cleanup of the
18 toxic ash spill.

19 Environmental Impact Statement must meet
20 all the gargantuan challenges or it will be a failed
21 Environmental Impact Statement. So I sound kind of
22 negative here, but I'm encouraging you to do the job
23 and do it right in these terms.

24 Thank you.

25 MR. CAMERON: Okay. Thank you, Bill.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Let's go to Representative Cobb, and then
2 we're going to go to Mary Mastin and Brian Paddock.

3 MR. COBB: Thank you. Well, I've heard so
4 much already that I really don't know where to start
5 with defending TVA, the Nuclear Regulatory Commission,
6 their commitment to protect the health and safety of
7 the public.

8 I know that because I have lived with it for decades.

9 A little bit about my background: I am
10 state representative, and I have -- my district is
11 House District 31, and it includes the only two
12 operating nuclear plants in the state of Tennessee.

13 It includes north Hamilton County and Rhea
14 County, so I have Watts Bar and Sequoyah both in my
15 district, but I also have the distinction of having
16 held an SRO, a senior reactor operator license, at
17 Watts Bar Unit 1. I was actually the first senior
18 reactor operator to tie Unit 1 on line.

19 I know that my primary objective when I
20 was a licensed operator in a nuclear plant was to
21 protect the health and safety of the public.
22 Ironically, that is still my number-one goal as a
23 state representative.

24 I heard concerns about the ice condenser,
25 and I heard concerns about what if we run out of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 funds, but -- and I heard concerns about, you know, we
2 need to keep a scorecard that accepts nothing less
3 than 100 percent, and I agree with that.

4 The fact is that the Nuclear Regulatory
5 Commission and Tennessee Valley Authority have a
6 standard that the average person's 100 percent is
7 probably the TVA and NRC's 50 percent.

8 So I think that they go above and beyond
9 the call of duty to make sure that we have safe power.

10 Also, if they run out of money, there are provisions
11 in the technical specifications to shut the plants
12 down and put them in a safe condition so the public is
13 not threatened.

14 That being said, I really admire Mr.
15 Burris for the comments he made about the economic
16 impact this will have on our area, but I can tell you
17 that the Nuclear Regulatory Commission does not have
18 compassion at the level that they're really concerned
19 about jobs.

20 They are concerned about the health and
21 safety of the public, the environmental impact, the
22 physical security of the plants, and I firmly stand
23 behind the continued construction and moving forward
24 with Unit 2, and I'm very proud to be here today. And
25 if you have any questions for me, I'll take them, but

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 I'm on my way out the door if you don't.

2 MR. CAMERON: Okay.

3 MR. COBB: Thank you.

4 MR. CAMERON: Thank you, Representative.

5 And we're going to go to Mary Mastin.

6 MS. MASTIN: Thank you. I hadn't really
7 planned to speak. I thought I was just driving over
8 here from Cookeville with my husband, but I heard some
9 things and decided I needed to.

10 I am a lawyer; I'm active with the
11 Tennessee chapter of the Sierra Club and the Tennessee
12 Environmental Council, and I have litigated NEPA
13 cases. I also grew up in Chattanooga; I grew up on
14 Lookout Mountain, just above Browns Ferry and around
15 Sequoyah and Watts Bar 1 and 2, and I've got
16 grandchildren whose other grandparents have a house on
17 Chickamauga Lake, where my grandchildren, who are five
18 and eight, swim and fish, although they don't eat the
19 fish; they throw them back in.

20 I am really concerned about the water
21 quality in the Tennessee River, and I think that as
22 TVA goes forward with this Environmental Impact
23 Statement, they are going to be required to take a
24 hard look at the new information on water quality,
25 discharges of heavy metals, serious long-term

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 consequences from the Kingston coal ash spill.

2 I think this really is new information and
3 is going to require a detailed, comprehensive, hard
4 look. I am very afraid that we are killing the
5 aquatic life in the Tennessee River and that the
6 thermal discharges from Watts Bar 1, Watts Bar 2, then
7 you go down to Nickajack or Sequoyah, and Nickajack,
8 you start up there where Oak Ridge -- there are still
9 sediments with radionuclides -- I don't know the
10 technical language on this, but I know that TDEC and
11 EPA and TVA have been very concerned about the
12 dredging as they are trying to clean up the Kingston
13 coal ash spill and not getting down to the bottom and
14 stirring up all of this really terrible stuff that's
15 there.

16 So you have got a very degraded, fragile
17 river system and aquatic life. You know, we are in
18 one of the most beautiful places on earth -- you know,
19 the Tennessee River valley -- I grew up here; I
20 actually fished I guess in Watts Bar Lake.

21 I was trying to figure out; I was in the
22 6th grade; it was 1958, and my father took us on a
23 fishing trip, and I guess it was at Pete Smith's; I
24 don't know -- he was open; the nuclear plant wasn't
25 going, but we fished in Watts Bar Lake in 1958. My

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 grandchildren are fishing now in Chickamauga Lake.

2 Please, as you go forward with the
3 environmental work on this, consider the water quality
4 and the new information -- I mean, not only is
5 there -- are there sediments on the bottom where the
6 Clinch River comes into TVA, coming down from Oak
7 Ridge, there apparently is some other stuff from some
8 old paper mill or lumbering operations; there has been
9 a huge concern about doing that very carefully.

10 I'm working with scientists who have
11 talked to us about the discharges from selenium; you
12 got arsenic and mercury; you got heavy metals; you've
13 got fragile fish; you've got mollusks. You have got a
14 whole downstream river system and people who are
15 dependent on your doing this with a great amount of
16 care.

17 Thank you.

18 MR. CAMERON: Thank you very much, Mary.

19 And we're going to go next to Brian
20 Paddock.

21 MR. PADDOCK: I'm Brian Paddock. I am a
22 sort of retired lawyer. I'm here today for the
23 Tennessee Chapter of the Sierra Club, and I start from
24 the national policy of the Sierra Club, which is that
25 nuclear power plants should not be expanded as a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 source of energy in this country until we've solved
2 the waste-disposal problem.

3 And the situation, as I understand it, in
4 the environmental assessment that's being done right
5 now is that indefinite on-site retention of spent fuel
6 is proposed.

7 So I hope you folks locally are prepared
8 to take care of this stuff for at least a quarter of a
9 million years, because with respect to spent fuel,
10 it's pretty clear that Yucca Mountain is dead. I'm
11 not sure exactly the state of the post mortem and
12 rites, but it appears that the federal government is
13 not going to invest more in the development of that
14 site, and no other site has as yet been suggested even
15 as a possible target.

16 In fact, the most recent geologic reports
17 that I happen to come across suggested that the best
18 possible, most geologically stable for the
19 multimillions of years that were required are probably
20 here on the East Coast, so the next nuclear waste
21 repository you may see from the generation of power
22 might here be east of the Mississippi. It comes from
23 having some of the oldest mountains on the North
24 American continent, and the most stable.

25 But TVA, of course, has no right, even if

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Yucca Mountain were to open, to send the waste from
2 Watts Bar 2, as I understand it, to that repository,
3 even if it were to open, and it simply has, as far as
4 I can see, no real plan other than just keep stacking
5 it up locally.

6 The second thing is basically the -- and
7 this goes to the question of whether or not a license
8 should be granted at all under NEPA standards, but
9 also to the environment assessment, is options and
10 alternatives, as Dr. McCluney addressed.

11 Basically you have a situation where,
12 according to the reports to the Tennessee Valley board
13 of directors, power production and sales have dropped
14 approximately 9 percent during the current economic
15 downturn, the end of which one can debate if it's
16 begun to happen, let alone any true date for that.

17 In the past TVA, in its power projection
18 demands, including those I assume that were used when
19 the board decided to go ahead and restart construction
20 on Watts Bar Unit 2, was that there would be an annual
21 2 percent increase in demand.

22 That in fact hasn't happened; the reverse
23 has happened. And if in fact we were to have
24 effective conservation and efficiency programs, it
25 would never happen. We would go into a flat or

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 declining demand usage, and we would have reduced
2 energy intensity on a per capita basis in the TVA
3 service area.

4 But one of the things I think TVA should
5 be held to respond to in its environmental assessment
6 is how poor its energy efficiency and conservation
7 programs are. And I say that with respect to the
8 staff who I've sat with a number of times and
9 discussed with them the activities that they're
10 rolling out, including the home energy audits and
11 retrofits and so forth, and with respect to the State
12 of Tennessee, which is going to I think not only get
13 on board with solar generation but is going to join
14 the national effort to invigorate the purchase of
15 Energy Star appliances.

16 Unfortunately, TVA, in its approach to
17 energy efficiency and conservation, has made a number
18 of missteps. If you'll remember the strategic plan,
19 the first thing it did was to fail to have a target
20 even for efficiency and conservation.

21 After a good deal of public debate and
22 lobbying, it put in, I believe, a 1400-megawatt
23 cumulative demand reduction target, and as it has
24 carried that out, by limiting its instructions to its
25 consultants, the reports of which have not been

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 released to the public on energy efficiency and
2 conservation and the limited results that have
3 probably come if you tell them only to look at a very
4 narrow slice of the issue, is that you now have
5 programs that really go to peak shaving only.

6 There has been no effort really to engage
7 with reducing baseload demand, and clearly the Watts
8 Bar 2 plant is about baseload demand, not just about
9 peaks. And it seems to me that as part of the
10 environmental assessment, TVA should be made to
11 explain why it does not expect the baseload demand to
12 continue to decline as efficiency and conservation
13 roll out, and why it should not have efficiency and
14 conservation that reduces baseload demand to the
15 extent that this plant, with its outdated technology,
16 is no longer required.

17 The second point in the scope of the
18 environmental assessment is that there's an
19 interaction here, because the State of Tennessee has
20 just released the draft NPDES, National Pollution
21 Discharge Elimination System, permit for "the Watts
22 Bar nuclear plant."

23 That seems to be talking just about Unit
24 1, but in fact the way TDEC has written the draft
25 permit, it's not clear if you could turn the switch

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 on Watts Bar 2 if it were ready and use that same
2 permit.

3 And there are a number of defects and
4 concerns specifically with that permit. We're going
5 to talking with TDEC about this, and the time for
6 public comment has been extended, so that permit is
7 probably not going to be coming down the road until
8 early next year, at the best, but here are some of the
9 difficulties:

10 And we're assuming -- and I think TVA
11 asserts this in their comments on the NPDES -- that
12 the phase 2 regulations don't apply here; that the
13 content of this permit under Section 316 is remitted
14 to TDEC in terms of its best professional judgment.
15 That could change if EPA puts the phase 2 regulations
16 back into effect following the most recent Supreme
17 Court decision.

18 But right now it's up to TDEC, and there
19 are limitations in both the Clean Water Act and in the
20 state regulations. One of the main problems is that
21 most of the environmental information that TVA brought
22 to TDEC for the renewal and extension of the NPDES for
23 the nuclear plant basically was ten and twelve years
24 old.

25 And the entrainment information in terms

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 of aquatic species going into the plant and being
2 caught in the cooling water system and cooked as they
3 pass through, including fish eggs and fish larvae, has
4 not been re-examined.

5 TVA asserted in 1966 and '67 that only
6 one-tenth of 1 percent would happen, but when you
7 actually look at the underlying study, you find that
8 17 percent of these species passing the intake area
9 were being sucked in and essentially cooked.

10 So that information needs to be brought up
11 to date; it needs to be accurate, and it needs to be
12 accurate not just for the TDEC but for the purposes of
13 the NRC's scope of study for the Environmental Impact
14 Statement.

15 There are a number of other things.
16 There's a whole lot of assumptions about what's a
17 normal condition in the river and what's a normal
18 year, and I think if you've noticed, the last decade
19 we've seen increasing changes, perhaps due to climate
20 change, where the definition of what's normal needs to
21 be re-examined.

22 The appropriateness of the measurements
23 for fish monitoring for the supplemental cooling water
24 system needs to be re-examined, and I will send the
25 formal written comments that we're preparing for TDEC

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 for inclusion in this record so that you will have
2 this.

3 There is, we think right now, a clear
4 failure of TVA with respect to the NPDES, and we think
5 if they were held to this in the EIS for the
6 additional thermal impacts from Watts Bar 2, that they
7 simply have not been able to show that they won't
8 violate the water quality criteria.

9 They don't provide data on the drift
10 community, the spacial or temporal distribution of the
11 plankton in the mixing zones. The mixing zones, by
12 the way, according to the diagram, as I read it -- and
13 I admittedly am no expert on this -- seem to be
14 substantially larger.

15 And by the way, the initial mixing zone in
16 the renewed permit that's proposed actually goes
17 border to border in the river. There is no way for
18 aquatic life to go down the river without being in
19 either what essentially is a dead zone immediately
20 next to the discharges or on the cooler but active
21 side of the river where they would have impacts.

22 There are a lot of questions with respect
23 to the mortality of mussels downstream, even though
24 TVA has spent a good deal of effort over the years
25 relocating mussels. I'm not sure when we started

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 rebuilding natural populations in different places in
2 order to allow this kind of project to go forward, but
3 it seems to me that the impact on mussels and the
4 impact of mussel relocation needs to be documented
5 currently.

6 As was mentioned earlier, you now have
7 operating six nuclear plants plus one thermal plant on
8 the same river system, and you're now about to add a
9 seventh, and the cumulative impacts of this amount of
10 cooling water, cooling water loss from evaporation,
11 thermal -- cumulative thermal effects and so forth,
12 needs to be looked at.

13 TVA has already experienced the situation
14 where, during summer peaks, it had to derate
15 downstream nuclear plants. Building another one
16 toward the top of the river system, when it simply, as
17 a consequence of the thermal discharge, will then have
18 to shut down the plants lower on the river system
19 during the hottest times of the peak loads, is not
20 going to make any sense at all.

21 So TVA may have run out of running room in
22 terms of thermal discharges. Let's identify that now
23 before we go ahead and license this plant. In fact,
24 let's make sure that we do it in such a way that those
25 of us who are ratepayers don't wind up for another

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 white elephant that's never licensed to operate.

2 I think that the environmental impact
3 assessment needs to look at the effects of an equal-
4 dollar investment in renewable energy. Nuclear is
5 extremely expensive. We're talking about \$7 billion
6 for these plants, \$8 billion, and it seems to me that
7 that kind of money, put into efficiency, conservation,
8 and renewables, might in fact go a long way to meeting
9 what would be the reduced loads that you would have
10 with good efficiency and conservation programs.

11 Finally, I would make a couple of other
12 notes. As noted also, the Watts Bar Lake area already
13 is highly polluted, particularly at the junction with
14 the Clinch River and is already a designated Superfund
15 site.

16 And I have not had a chance to review the
17 documents, but it's not clear to me that the -- what
18 happened -- if there's any mobilization of those
19 upstream legacy sediments from that Superfund site and
20 moving down into the cooling-water intakes for this
21 plant.

22 The same thing is true with respect to the
23 coal ash spill, because we've already seen the coal
24 ash migrate during high-water events. They now
25 they're going to get it out of there by -- worst of it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 out of there by next year, but they also say there
2 won't even be the phase 2's plan for getting some of
3 the rest of it cleaned up until next year.

4 To the extent that those heavy metals are
5 in solution, are in compounds and can travel freely
6 with the flow of the river, you essentially have a
7 different condition in the river at the point that you
8 hit the cooling-water intakes, and we're not sure that
9 the environmental assessment at this point has
10 recognized that condition and has looked at the
11 consequences of having heavy metals in solution in
12 larger proportions at the point of intake and
13 discharge from the cooling water.

14 TVA overall has a very mixed and, I think,
15 unbalanced, poor environmental record, and I would
16 invite the Commission to look at the inspector
17 general's report on Kingston, which found a culture in
18 TVA of dispersed responsibility, lack of
19 accountability, lack of internal communication -- it
20 was always somebody else's job.

21 And you cannot really think that you're
22 going to have a safe 40- to 60-year operation of a
23 nuclear plant in a culture where plant operations
24 suffer from those same defects.

25 Now, that was respect to a fossil plant,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 where, if something goes wrong, ordinarily you think
2 it's not going to be a big deal. Of course, that was
3 a miscalculation, because when you lose 5 million tons
4 of coal ash, it is a big deal. In fact, it's probably
5 one of the biggest environmental disasters on the
6 North American continent in our lifetimes.

7 But please do look at the inspector
8 general's report on the culture in TVA and decide what
9 you have to do in terms of building that into the
10 evaluation of environmental impacts.

11 And the final note is that the
12 decommissioning funds that TVA already has set aside
13 for its existing nuclear operations were badly
14 depleted by the change in the economy and the stock
15 market decline.

16 TVA is already trying to figure out ways
17 to steal money from within its operating budget and
18 perhaps pass through charges to ratepayers to rebuild
19 that decommissioning fund, along with the retirement
20 funds for its employee retirees, and the whole issue
21 of an adequate decommissioning fund and how that's to
22 be accomplished and whether it's really adequate in an
23 age when you don't have nearly the options for the
24 disposal of high-level radioactive materials which
25 come when you disassemble a plant -- unless they're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 planning to just, you know, build a mountain over the
2 thing, which I guess is the other option.

3 But I would again ask that
4 decommissioning -- both its costs and its
5 practicability -- be listed as one of the
6 environmental concerns that has to be addressed.

7 Thank you.

8 MR. CAMERON: Okay. Thank you very much,
9 Brian.

10 We have one more speaker, Ann Harris, and
11 then we're going to go to another speaker.

12 MS. HARRIS: My name is Ann Harris, and
13 for those of you who have not been around as long as I
14 have, I was here for the first go-around, and it was a
15 go-around.

16 I went to work for TVA at Watts Bar
17 Nuclear Plant in nuclear construction in January 1982.

18 They told me I'd be there nine months. It was nine
19 years before I got a paycheck that did not have
20 overtime on it.

21 And I left under -- for me it was quite
22 a -- I don't want to say victory, because I didn't
23 really win anything; what I did is I turned some
24 magnificently strong lights into some really dark
25 areas of TVA's management, their money, their funding,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 how they spend that money, and how they abuse not only
2 ratepayers, but they abuse each other, they abuse the
3 public, they abuse their future, and they abuse my
4 children and my grandchildren's future.

5 Couple of things that I want to address up
6 front that Brian talked about earlier: TVA's debt
7 that they admit to today is at \$29.5 billion. That's
8 not my assessment anymore; that's what they admit to,
9 but it's more like 42 billion whenever you take all
10 that other rinky-dink stuff they don't count in; it's
11 called creative bookkeeping.

12 And they're in DC now, asking for more
13 funds. That doesn't even address the issue of
14 decommissioning funds, which they had a major start on
15 back in 1995, but somehow those funds got -- nobody
16 could ever tell me what they spent them on. So at
17 that point they had \$257 million. The last time I
18 asked, they had 42 million, so you -- I'll let you
19 adjust your own mind as to where that money went.

20 Browns Ferry Nuclear Plant is listed by
21 Region 2 as the worst nuclear plant program in
22 America. Now, the same person that was over Browns
23 Ferry's fiasco is heading up the Unit 2 fiasco at
24 Watts Bar.

25 The amount of money that was spent at

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Browns Ferry was two times the original designated
2 amount, and longer term, so if -- TVA's habits have
3 not changed in the past 25 years, the way I --
4 according to what TVA puts out. Now they're asking us
5 to believe -- or at least you to believe; they don't
6 want to ask me -- that they can do Unit 2 at Watts Bar
7 for less than \$4 billion or thereabouts.

8 Well, they started out telling people that
9 they -- that Watts Bar 1 was \$7 billion. That is not
10 true. When you add in the interest, the amortized
11 part of Unit 1 that you -- or Unit 2 that you already
12 paid for, it comes up to closer to \$12-1/2 billion.
13 So now you're going to ask to be paid for probably
14 another 6 to \$8 billion on this one.

15 I'm told by inside sources that are
16 working with the engineers that we have engineers on
17 site that don't know the difference between a code
18 plant and a noncode plant. Maybe the NRC can describe
19 to the engineers that are working on Unit 2 at Watts
20 Bar what the difference is and how they need to -- how
21 they can see that what they're doing is not working.

22 Browns Ferry is a noncode plant. Watts
23 Bar Unit 2 is a code plant. And for those of you that
24 don't know and didn't work at the plant, you'll just
25 have to look it up and trust me on that one.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 I find that the evacuation plan -- and
2 this is just kind of silly. I'm appalled that the NRC
3 even lets this get put in print. But in the
4 evacuation plan, that they're going to take the people
5 that live north of the plant, in Spring City and ten
6 miles on both sides of the river, and they're going to
7 move them up the valley 20 miles downwind; that means
8 north of -- the prevailing winds all move north in
9 this valley. You can't -- it's just common sense --
10 and if you live here, you would know that and wouldn't
11 question it.

12 But to take people that would be evacuated
13 from Watts Bar Nuclear Plant or the surrounding
14 community and move them 20 miles up the valley to put
15 them in storage in a gymnasium at the junior
16 college -- I mean, I live there, in the connecting
17 community. This is just beyond the pale. I mean, I
18 just -- I don't know if the NRC -- if they just really
19 and truly don't care any more or if they're just too
20 ignorant to ask anybody besides themselves, who don't
21 trust each other.

22 My mother lives in a direct line of eight
23 miles from Watts Bar Nuclear Plant. She's blind.
24 She's 86 years old, and she's in severe bad health. I
25 take care of her. In fact, somebody's hired today so

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 I could be here with y'all. I know that you're going
2 to enjoy what I have to say, but this is the truth.

3 My mother gets a calendar; it's this size
4 (indicating). She didn't know what it was, because
5 she couldn't read it. And then we put all of the
6 announcements on Knoxville and Chattanooga radios.
7 What's the problem with putting it out on the local
8 radios? My mother doesn't listen to Chattanooga and
9 Knoxville; she can't even get them. She listens to
10 Athens; she listens to Dayton; she listens to
11 Crossville.

12 What is it with you guys? My mother
13 cannot read this calendar, and I go into it, and I
14 find something that is so disgusting y'all all ought
15 to get up and walk out; I think you ought to be fired
16 now, because in this calendar it says, Take this
17 calendar and keep it with you wherever you go, so that
18 whenever the accident happens, you'll know which
19 direction to go in.

20 And part of the direction is to come back
21 toward the area that will be so bad that it'll be
22 blocked off. What is it with you people? Don't y'all
23 read what you write? Don't you ever look at it? I
24 mean, it's just really disgusting.

25 This is what you're doing to my family.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 Think about -- there's other -- I'm not -- my mother's
2 not the only elderly woman in these communities; she's
3 not the only one. There's little children. I've got
4 great-grandchildren that will be affected by this,
5 sitting in close proximity to Watts Bar.

6 How do you think this makes me feel, to
7 know that I'm paying your salaries, and you're not
8 doing your job. You're just accepting whatever TVA
9 hands you, and TVA will hand you a bunch of garbage,
10 because they will lie. Got it? I don't even want to
11 have to say it anymore: You can't trust TVA. You
12 can't trust TVA. How long do you have to have that
13 said to you?

14 And now you can't trust the NRC, because
15 the NRC, they are so close in bed with TVA, that
16 you're beginning to look a bit foolish, even from
17 other people, not just me.

18 Somehow or another this Environmental
19 Impact Statement has to address these issues that
20 concern and deal with people's lives on a day-to-day
21 basis, and if these jobs are the best that TVA can
22 provide, somebody else needs to be running TVA besides
23 somebody that's running a bunch of serfdoms.

24 I am told by workers -- this is not
25 engineers; this is workers, from the inside -- that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 the 21 million that you paid Bechtel to go in and see
2 if Unit 2 could be brought up to speed, they spent
3 their \$21 million, walked around, and said, Yeah, we
4 can do it; y'all have a good time.

5 Then, guess what? Bechtel turned around
6 and said, Okay; we're going to start letting them
7 decide what all needs to be done. Bechtel's still
8 looking at what needs to be done; they're still
9 looking at it, because they're finding such massive
10 amounts of rust and corrosion and equipment that
11 cannot be used, won't be used, and cannot be replaced
12 with what is there, because those people left and seen
13 better days somewhere else that got the money, that
14 took it and run.

15 So, yes, am I angry about this? Yeah, I
16 am, because this is my money; this is my family. So
17 what about yours TVA? You going to set by and let
18 your own people swallow you whole? I mean, it's
19 just -- it's really disgusting.

20 You don't have -- there's no water testing
21 in this river of radionuclides by an outside sources.
22 That's according to TDEC's own mouth. That's not my
23 opinion. They trust TVA.

24 Well, we trusted TVA up at Kingston.
25 There's tritium in the soil and the water, above legal

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 limits. It's sitting there, and nobody's doing
2 anything about it; you're just pumping more.

3 And this idea that tritium won't hurt
4 you -- why do we use it to make bombs go off faster
5 than what they did when just a normal bomb? There's
6 no wastewater program to stop the radionuclides going
7 into the Chattanooga and others' drinking water.

8 Now, then for the bigger problem. I'm not
9 going to read this seven-page letter, because it
10 appeared in the Nashville Tennessean, but I'm telling
11 you, Region 2, we're asking for Congressional hearings
12 on you and your inability to deal with TVA.

13 This is a repeat of the 1985 and '86
14 hearings, and you can look for these to be just as
15 disgusting whenever we uncover that pile of crap.

16 MR. CAMERON: Okay. That's the inimitable
17 Ann Harris. Thank you.

18 And this is Don Safer. Sorry, Don, that I
19 missed you before: Tennessee Environmental Council.

20 MR. SAFER: Well, I apologize to the crowd
21 for getting you excited that Ann was the last speaker.
22 I signed the wrong sign-up sheet.

23 I'm the chairman of the board of the
24 Tennessee Environmental Council. I live in Nashville.
25 We are a private nonprofit, nongovernment agency that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 is concerned with statewide environmental issues, and
2 this to me is a very large, important statewide
3 environmental issue.

4 The -- I'm going to start by going into
5 the storage casks -- the spent-fuel storage casks that
6 are being placed by the river right now. They're
7 going to be placed there with greater frequency if
8 this second plant goes on line.

9 I think it's important to know that inside
10 of those casks the radiation is far worse than what
11 went in. The radionuclides in there, there's
12 plutonium, which didn't even exist on the face of the
13 earth until we started fooling with the atom 60, 70
14 years ago, and that's one of the most awful substances
15 on the face of the earth.

16 It is bomb-making material, but one atom
17 of that that gets into your lungs, if it gets
18 airborne, will give you lung cancer; it will kill you.

19 It burns on contact with the air, spontaneously.
20 It's sitting in there.

21 It's not a whole big lot of plutonium in
22 there; that's why reprocessing is such a nightmare,
23 because to get enough plutonium to make it work,
24 you've got to create a lot of other waste.

25 But inside of there is just this cauldron

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 of about 500 degrees -- it's too hot at the beginning,
2 for the first five years, to put these fuels rods into
3 these dry casks; they have to be put into the storage
4 pools, which are overloaded currently and have had to
5 be modified because of the lack of any real storage
6 solution.

7 And then after five years they go into
8 these concrete-steel dry cask storage that are not
9 hardened, and they are out -- I've seen them at Browns
10 Ferry; they are just out in the open.

11 I went there for an NRC hearing about the
12 unscheduled shutdowns of that unit that they brought
13 back on line, the five of them in the first five or
14 six months. It caused a big, huge slap on the wrist
15 by the NRC. I will have to support some of what Ann
16 said about the NRC seems to be the enabler of the
17 nuclear industry and not the watchdog, and that's not
18 any news for people that have been following this
19 issue for quite a while, but in those casks, that
20 cauldron of 500-degree Fahrenheit radioactive material
21 that's 1000 or 100,000 times more radioactive than the
22 original fuel rods is doing who knows what.

23 I mean, I asked -- I've forgotten your
24 name, but I asked three gentlemen from the NRC earlier
25 today, in private, or in a conversation at the open

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 house, What's going on inside of those casks? Has
2 anybody taken one of those apart after ten years?

3 To my knowledge, nobody has, and what I've
4 heard is that it's all sort of, you know, just kind of
5 decomposing. Nothing stays the same. You put it in
6 there, and it's 500 degrees of boiling radioactive
7 science experiment.

8 And they were supposed to last for about
9 20 or 30 years at first; now they're saying, well,
10 they'll go for 50 and probably a hundred. Well, it's
11 your community here that is the guinea pig on this, as
12 well as the community at every other nuclear reactor
13 site, because that's what's happening with all of
14 these; there's no plan at all to move them away from
15 your community, and these things, as Mr. Paddock said,
16 they remain toxic for literally several hundred
17 thousand years.

18 And we're talking about 2000 years ago was
19 when Jesus lived, and we're talking about a substance
20 that is that kind of a legacy to our -- the heirs that
21 come behind us.

22 And some people have said that the
23 electricity you get from the nuclear reactor is not
24 really the primary component or the primary outcome;
25 it's really all this nuclear waste, because the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 electricity you generate, we use it or we don't, and
2 it's gone.

3 And currently, as has been mentioned,
4 we're wasting a large percentage of what is being
5 generated at these plants. People in California has
6 easily as nice a lifestyle as we have, and they use
7 about 50 percent of the electricity, per capita, that
8 we use. So that's getting into the energy
9 conservation side.

10 So that's what going on inside those
11 storage casks, which are going to be more and more
12 along the river. They are not designed to be flooded.

13 I don't know this particular site; I haven't seen it.

14 I know at Browns Ferry they're not that high off of
15 the river, and if they're flooded, then the cooling
16 that is just a convection cooling with vents gets
17 clogged with debris and what-not, and who knows what
18 can happen.

19 I think as -- since this reactor was
20 proposed in the '60s, designed in the -- or licensed
21 in the '70s, we had a lot of opportunity to have all
22 these nuclear plants that have been operating.

23 And I haven't seen any public health
24 studies about the communities that are downwind, you
25 know, with the windrows of where the wind blows, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 if it's true that nobody is getting sick, that their
2 cancer rates and leukemia rates are not elevated,
3 wonderful; I would love to see it. But I haven't seen
4 it. I've looked for it. It's not easy to find.

5 I think in this Environmental Impact
6 Statement we need to have a clear study of Watts Bar
7 1; Sequoyah, the two units, and -- well, in particular
8 those three, because they're the same design of
9 reactor.

10 Getting into that reactor design, that
11 design dates from the 1960s. I was in high school
12 when that thing was first proposed. I'm retired now.

13 A lot of things have changed. You know, a lot of
14 people in this room are not that much different in age
15 from me; many are younger.

16 But, my gosh, that design comes from the
17 middle '60s; that was when the Mustang -- the first
18 iteration of the Mustang was the hottest car going.
19 You wouldn't buy the Mustang if it was in the
20 showroom -- the 1965 -- well, you might buy it as an
21 antique, but it's not going to perform up to
22 environmental standards or whatever; the point being
23 that this design was put together was an idea of cost
24 containment and not safety.

25 When it was originally designed and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 approved, there was -- Chernobyl had not happened.
2 They thought an event like Chernobyl, an event like
3 Three-Mile Island was not even possible; it was not in
4 the design criteria for the original design, so that
5 there -- and that's why they've had to go back with
6 this hydrogen, you know, ignition system and how you
7 take care of all that hydrogen.

8 This was the cheapest reactor TVA could
9 build at the time. It's a clear indication of the
10 same culture that put that ash into the river. TVA
11 was dumping that ash into that pile for 50 years.
12 They had plenty of indications that the ash pile was
13 suspect.

14 I mean, there were leaks; there were wet
15 spots. There were studies that \$26 million could have
16 saved that whole billion-dollar nightmare. One of the
17 ten worst environmental disasters on the planet is
18 what that was called by Newsweek, and it could have
19 been saved with \$26 million worth of investment, and
20 TVA would not spend it because of their slavish
21 devotion to the bottom line and keeping our electric
22 rates low, which I appreciate, but it's given
23 everybody the wrong message.

24 The era of cheap energy is over. We can't
25 go back to it. We have got to get more efficient with

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 the energy we use. I love electricity; I use it every
2 day, and I'm not wanting to go into the dark either,
3 but we can be a lot smarter, and we are -- the nuclear
4 option is a false avenue to go down; it's a dead-end
5 that takes a lot of money and is taking far too much
6 of the research dollars that should be going into all
7 the renewable possibilities.

8 Back to that ice-condenser design, who can
9 imagine putting 3 million pounds of ice in a nuclear
10 reactor so that you can make the containment structure
11 half as thick?

12 My gosh, that's a fabulous idea. I
13 applaud whoever came up with it. It's a wonderful
14 idea. It's just like Rube Goldberg, though; it's
15 stupid. You know, I mean, you have all that ice,
16 which has problems with subsidence. I went on line,
17 you know, last few days, and somebody patented an idea
18 of what do you do with the ice that's compacted in
19 there?

20 The ice, from what I read, it's one-foot-
21 wide cylinders that are 50-feet tall, and they're
22 wrapped with these steel containment things that are
23 sort of straps. And so they can't get in there to
24 replace the ice very easily, and somebody invented
25 some sort of a -- I didn't look at the design, but

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 some sort of a contraption to replace the ice, because
2 they were having problems with the ice just melting
3 away, which it does naturally, and not having the 3
4 million pounds they needed to survive an incident,
5 which is really a core meltdown, and to keep that
6 containment structure, however fragile it is, from
7 melting down.

8 So in closing, I'm very sympathetic to the
9 16 percent unemployment in this county. Green jobs,
10 the green economy is really the way the new jobs are
11 going to be. There's the solar industry.

12 Admittedly, the current designs of solar
13 take energy to create the solar panels. Thankfully we
14 have hydro power in the Tennessee Valley that could be
15 used for that.

16 But the green economy is the economy of
17 the future. The solar industry is booming in
18 Tennessee; it works. One thing that people aren't
19 even thinking about in terms of solar is solar hot-
20 water heat.

21 It's the most simple thing in the world.
22 They do it in Israel; they do it all around the world.

23 It doesn't involve, you know, polysilicon crystals;
24 it just involves putting something black with the
25 water in it where the sun hits it. You do have to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 figure out how to not make it freeze, but, hey, it's
2 not rocket science.

3 So anyway, the green economy is how we're
4 going to get back, and part of that green economy is
5 to learn how to reintegrate our rural areas, our
6 smaller towns with our urban centers and create the --
7 you know, in Nashville people are nuts about local
8 produce.

9 There's a whole industry of local growers
10 that is growing up all around Nashville, and people
11 are making a living at it. It's hard work; it's
12 honest work. You get your fingernails dirty, but it's
13 just an old-fashioned way to do it.

14 And, you know, getting back to more
15 locally based economies with an eye toward creating
16 jobs in our rural counties is definitely something
17 that we need to do, but these nuclear plants don't
18 create very many jobs after construction, and they
19 leave these legacy of these storage casks that our
20 grandchildren, our great-grandchildren and those
21 beyond that will not remember us will curse us for
22 those storage casks.

23 Thank you.

24 MR. CAMERON: Thank you, Don.

25 That's our last speaker for this

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

1 afternoon's meeting. We're going to be back here
2 starting at 6:30, and we have a 5:30 open house before
3 that for those of you who want to return.

4 But I would just thank you for all of your
5 comments, and with that, unless Radovan wants to say
6 anything, we will adjourn.

7 Thank you very much.

8 (Whereupon, at 3:20 p.m., the public
9 hearing was concluded.)

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701