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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING

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PUBLIC SCOPING MEETING FOR THE ENVIRONMENTAL REVIEW OF THE SUBSEQUENT SITE PERMIT APPLICATION FOR THE CLINCH RIVER NUCLEAR SITE

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TUESDAY,

JUNE 5, 2018

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The meeting was convened in Noah's Event Venue, 1200 Ladd Landing Boulevard, Kingston, Tennessee, at 2:00 p.m., Chip Cameron, NRC, facilitating.

NRC STAFF PRESENT:

CHIP CAMERON, Facilitator, NRC

ROBERT TAYLOR, Director of Licensing, Siting and Environmental Analysis, NRO

ANNA BRADFORD, Deputy Director of Division of Licensing, Siting and Environmental Analysis, NRO

TAMSEN DOZIER, Environmental Project Manager, NRO

DR. JESSICA KRATCHMAN, Environmental Scientist,
NRO

ANDREW KUGLER, Environmental Project Manager, NRO

JOHN PELCHAT, Regional State Liaison Officer,
Region II

JOEY LEDFORD, Regional Public Affairs Officer,
Region II

MALLECIA SUTTON, Safety Project Manager, NRO

MEGAN WRIGHT, Attorney

OLIVIA MIKULA, Attorney

C-O-N-T-E-N-T-S

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

2 2:01 p.m.

3 MR. CAMERON: Good afternoon, everyone.
4 My name is Chip Cameron and I'm going to serve as your
5 facilitator for today's meeting. And in that role,
6 I'm going to try to help you all have a productive
7 meeting this afternoon.

8 And this is an NRC public meeting on the
9 NRC's Environmental Review of TVA's application for
10 an Early Site Permit. The Early Site Permit would be
11 for a potential site for a small modular reactor on
12 the Clinch River in Roane County.

13 And we're going to limit the use of acronyms
14 today, but three that you are going to hear, you're
15 going to hear NRC, that's the United States Nuclear
16 Regulatory Commission. You're going to hear ESP, for
17 Early Site Permit.

18 And you're also going to hear NEPA, that's
19 the National Environmental Policy Act, and EIS, for
20 Environmental Impact Statement. But other than that,
21 we hope we don't have to use any acronyms, but if we
22 do, we'll explain that to you.

23 And the focus of the meeting today is on
24 the NRC's draft Environmental Impact Statement that
25 they prepared as part of their review on whether to

1 grant the Early Site Permit.

2 So, we have two objectives today. The

3 first one is to clearly explain the preliminary findings

4 in the draft EIS, and I stress the word preliminary,

5 stress the word draft.

6 Those conclusions will not be finalized

7 until the NRC hears your public comments from this

8 meeting or tonight's meeting or the written comments

9 that are submitted to the NRC on the draft Environmental

10 Impact Statement.

11 And the second objective is to give the

12 NRC staff an opportunity to listen to your concerns,

13 your advice, your recommendations, on the draft

14 Environmental Impact Statement.

15 And we are taking a transcript of the

16 meeting. Our court reporter, our stenographer, is

17 Jenny Bernardi, right here. So, all of the comments,

18 the NRC presentations, they're going to be on the record

19 comments. And that transcript will be publicly

20 available to you probably in about two weeks' time.

21 And the NRC staff is going to tell you how

22 to submit written comments if you want to, they're going

23 to tell you how to access the transcript from this

24 particular meeting.

25 And when we get to the comment portion of

1 the meeting, I'm going to call your name, either from
2 advanced sign-ups from people to speak or from the
3 yellow cards that were available at the front desk.
4 And if the urge grabs you that you want
5 to comment today, there's some yellow cards right at
6 the back of the room on the table, if you don't mind,
7 fill one of those out and then, we'll get you up here
8 to speak.
9 And I'll ask you to come up to the podium
10 and talk to us. And we don't have many people who want
11 to speak tonight. Usually, I recommend a five-minute
12 guideline for your comments, and try to do that, but
13 we have some flexibility tonight on the time.
14 And if you don't get all of your comments
15 in tonight, or if you want to amplify on comments, or
16 you may hear -- one of the values of these meetings
17 is not just for the NRC staff to hear your comments,
18 but it's for people who are in the audience, you may
19 hear a comment tonight that will say, you know what,
20 I would like to expand on that through a written comment.
21 And the NRC staff is here to listen
22 carefully to your comments tonight. They're not going
23 to respond to the comments you make. And sometimes,
24 people ask questions in their comments and then, they'll
25 look at me or at the NRC, thinking that the staff is

1 going to answer their questions.
2 Well, we won't be doing that, we won't be
3 answering questions, but the NRC staff will carefully
4 evaluate your comments and your questions, as they
5 prepare the final Environmental Impact Statement.
6 And during the open house portion of the
7 meeting, sometimes people, they talk to the NRC staff
8 and they think that anything that they said is going
9 to be registered as a formal comment.
10 Well, that's informal, so if you said
11 something to the NRC staff, it's not going to be on
12 the record. If you want it on the record, please come
13 up and repeat that for us and we'll get that on the
14 record.
15 And the subject is the draft Environmental
16 Impact Statement, so comments that are relevant to the
17 draft Environmental Impact Statement are going to be
18 most helpful to the NRC staff.
19 But we know that you have a lot of different
20 concerns about this subject, so if you do have something
21 that's different, that's fine, it'll be on the record
22 and the NRC staff will evaluate it accordingly.
23 The NRC staff may hear a particular comment
24 and they may want to talk to you in more detail after
25 the meeting, so they may come out and say, I just want

1 to talk to you more about a particular comment.
2 And allow me to introduce the NRC staff
3 to you. We're going to start with two presentations,
4 and one is from Tami Dozier, who is right here. And
5 she's the Project Manager for the Environmental Review
6 on this ESP application.
7 And then, we're going to hear from Dr.
8 Jessica Kratchman, who is right here. And she's going
9 to give you an overview of the draft EIS. Tami's going
10 to tell you about the EIS process, Jessica will tell
11 you about some of the information that's in the draft
12 EIS.
13 We also have someone from the NRC Safety
14 Staff, Mallecia Sutton is right here. And she's going
15 to be listening to all of your comments. So, two
16 primary aspects of the NRC review of the ESP, the
17 Environmental Review, Safety Review.
18 We also have some senior NRC managers here
19 today to listen to your comments. And we have Rob
20 Taylor, right here. And Rob's the Director of the
21 Division Licensing, Siting, and Environmental
22 Analysis, in the NRC's Office of New Reactors. And
23 we also have Rob's Deputy here, Anna Bradford. She's
24 the Deputy Director.
25 I want to introduce two people from the

1 NRC's Regional Office in Atlanta, that's Region II.
2 And this is John Pelchat. John is the Regional State
3 Liaison Officer in Region II.
4 And Region II, obviously, includes
5 Tennessee and this facility. We also have our Regional
6 Public Affairs Officer in the back and that's Joey
7 Ledford. Okay.
8 I guess a final thing is that, you're going
9 to hear a lot of information from both Tami and Jessica.
10 And so, it makes sense you're going to have questions
11 on that. So, when they're done with their
12 presentations, we're going to go to you for questions.
13 And we have about 15 minutes or so to answer
14 your questions. This is going to be at a high level,
15 okay? And we may have to stop the question period,
16 because we want to get to the public comments.
17 But what I'd like to do is, if you have
18 a question and we're out of time, we can get the question
19 on the record, the transcript, and also, if you're here
20 after the meeting, the NRC staff will note who asked
21 the question and they'll come up and try to give you
22 an answer for that. So, it won't just be a complete,
23 well, it's over.
24 And with that, I'm going to go to Tami.
25 MS. DOZIER: So, thank you, Chip. Thank

1 you all for coming out here this afternoon and
2 participating in this public meeting on the draft
3 Environmental Impact Statement, or DEIS, you'll hear
4 me refer to that a lot, for the Early Site Permit the
5 Tennessee Valley Authority is seeking to receive from
6 the NRC.
7 And, again, as Chip said, my name is Tamsen
8 Dozier. I am the Environmental Project Manager for
9 the NRC's review of TVA's application. I am with the
10 NRC's Office of New Reactors. Presenting here with
11 me, as Chip said, is Dr. Jessica Kratchman, an
12 environmental scientist working on the review.
13 She and I are two members of what we call
14 our Environmental Review Team. It's the group that
15 basically we go out and work on the application and
16 then, put together the draft Environmental Impact
17 Statement.
18 Some other members of that team are here
19 as well and they'll be listening to your comments,
20 they're here to listen to your comments. So, next
21 slide.
22 So, what we're going to cover here this
23 afternoon is we're going to give you a little bit of
24 background about the review process. I will also be
25 giving you a brief description of the project that TVA

1 is proposing in its ESP application.
2 Dr. Kratchman will then come up and share
3 with you an overview of the environmental evaluations
4 that are presented in the EIS. She will present the
5 NRC's preliminary recommendations on the Commission's
6 decision on whether to grant the Early Site Permit.
7 So, I will then describe the various ways
8 that you can provide comments to us regarding the draft
9 EIS. And that's the main part of why we're here today,
10 we gather your comments that we then take back with
11 us and consider as we prepare our final document, and
12 then, along with the comments that the public provides
13 in other ways that I'll be describing later.
14 Your comments help us ensure that we have
15 a high-quality document, as we evaluate the federal
16 action that is being proposed, which is the Commission's
17 decision on whether to issue the Early Site Permit.
18 Next slide.
19 So, before we talk about our review
20 process, I'm going to talk a little bit about the NRC,
21 for those of you who are not familiar with our agency.
22 The NRC's mission is to protect public health and
23 safety, promote common defense and security, and
24 protect the environment, by regulating the civilian
25 use of radioactive materials.

1 It's important to note that the NRC does
2 not promote nuclear power. We are an independent
3 federal agency, with our Headquarters in Rockville.
4 There are four Regional Offices, one of which Chip
5 talked about, Region II in Atlanta. And there also
6 -- staff is located onsite at nuclear facilities across
7 the country.
8 The NRC is led by five
9 Presidential-appointed Commissioners, referred to in
10 this presentation as the Commission. And the NRC staff
11 consists of technical experts in various fields. Next
12 slide.
13 So, what is this thing called an Early Site
14 Permit that TVA is seeking to receive from the NRC?
15 Well, an ESP is a Commission approval of a site for
16 one or more nuclear reactors.
17 The NRC's issuance of an ESP does not
18 authorize the construction of any new nuclear
19 facilities. Before any plant is constructed and
20 operated, an ESP holder must seek an additional approval
21 from the NRC, such as a Combined License or a
22 Construction Permit.
23 The benefits of obtaining an Early Site
24 Permit for any applicant who wishes to eventually build
25 and operate a nuclear facility is that it allows for

1 early resolution of siting issues.

2 If an ESP is obtained, that means that the

3 site has been approved and the applicant can rely on

4 that approval while making other decisions that are

5 important to the determination of whether to build and

6 operate a nuclear power facility.

7 As Chip said, there are two aspects to the

8 NRC's review that must be completed to inform the

9 Commission's decision on whether to issue the ESP,

10 safety and environmental. Next slide.

11 So, here, we see an overview of the ESP

12 review process. This step-by-step approach is how our

13 agency meets its obligations. First, under the Atomic

14 Energy Act, which is the safety portion, which is

15 located across the top.

16 And then, under the National Environmental

17 Policy Act, we do the Environmental Review. And that

18 is the row across the bottom.

19 The rectangular shaped boxes indicate NRC

20 activities. The ovals indicate times throughout the

21 process when the staff's findings are presented in

22 publicly available documents, such as the Safety

23 Evaluation Report or the Environmental Impact

24 Statement, draft and final.

25 Please note that the starburst areas are

1 those areas where you, as members of the public, can
2 and have been involved.
3 The results of the staff's Safety and
4 Environmental Reviews are then presented at the
5 mandatory hearing that the NRC will conduct at the end
6 of the process.
7 In addition, the Atomic Energy Act provides
8 opportunities for public hearings at various points
9 in the review process, before a permit is issued. More
10 information about our public hearings can be found in
11 the NRC regulations, 10 CFR Part 2.
12 In this meeting, we focus on the
13 environmental portion of the ESP review, along the
14 bottom row. And we are currently at the point in our
15 process where we solicit comments regarding our draft
16 EIS. And that's indicated by the starburst in-between
17 the draft and the final EIS.
18 Many of you may have been here last year,
19 when we were here for our scoping activities, which
20 is this first starburst area on the left side of the
21 draft EIS oval. Okay, next slide.
22 So, shown here is the timeline for the
23 Clinch River Environmental Review. So, where -- we
24 took that row across the bottom and now, we have oriented
25 it vertically, and the arrow shows where we currently

1 are in our process. And we have the dates, some of
2 the key milestones in our review indicated up here.
3 The 75-day comment period on the draft EIS
4 began on April 27 and will remain open until July 13.
5 Once the comment period is over, the staff will then
6 review all of the comments that we received on the draft
7 EIS. That includes anything you want to share with
8 us this afternoon.
9 Based on the comments we receive, we adjust
10 our analysis as needed and then, finalize the EIS.
11 The NRC's current schedule is to issue the final EIS
12 in June 2019. The comments and responses on the draft
13 EIS will be included in an appendix in the final EIS.
14 Before I present information on how to
15 provide comments, Dr. Kratchman I are going to talk
16 a little bit more about the draft EIS and some of the
17 evaluations that we conducted.
18 Our Environmental Review, as documented
19 in this draft EIS, is based on the requirements of the
20 National Environmental Policy Act, or NEPA, and the
21 systematic approach that the review team uses to
22 evaluate the environmental impacts of the NRC's federal
23 action uses the NRC regulations and guidance as is
24 listed in these bullets, this first two bullets at the
25 top.

1 The NRC is what is called the Lead Agency
2 for this review. If the ESP is issued and TVA decides
3 to construct a nuclear facility, TVA may require a
4 permit from the U.S. Army Corps of Engineers.
5 Although the permitting review that the
6 Corps would conduct is a separate federal action, the
7 NEPA process allows for something called cooperating
8 agencies on the Environmental Impact Statement. And
9 that results in a more efficient overall NEPA process.
10 And so, while TVA has not applied to the
11 Corps for a Department of the Army permit, the Corps
12 is cooperating with the NRC on this EIS and staff from
13 the Corps of Engineers are part of the Clinch River
14 ESP Environmental Review Team. Next slide.
15 The TVA's application is for an Early Site
16 Permit for the Clinch River Nuclear Site in Roane
17 County, Tennessee, which is adjacent to the southern
18 border of the Oak Ridge Reservation in Oak Ridge.
19 So, you can see the site here, shaded in
20 red, surrounded on three sides by the Clinch River.
21 So, the Oak Ridge Reservation is to the north,
22 Interstate 40 is to the south.
23 And also shown on this map are two of the
24 three alternative sites that the NRC evaluated along
25 with the Clinch River site. And Dr. Kratchman will

be discussing those evaluations in more detail later.

The ESP would be for nuclear power units to demonstrate Small Modular Reactor technology, or SMR is one the acronyms that I'd like to define for you. Next slide.

So, what is an SMR, or Small Modular Reactor? By definition, it is a light water -- a light water SMR is defined as a light water reactor unit with a nominal output of 300 megawatts electric or less which is able to be factory fabricated and transported to the site for assembly of components and operation.

It is important to note that TVA has not selected an SMR design for its ESP application. Most ESP applicants have used what is called a Plant Parameter Envelope, or PPE, as we refer to it, to describe the reactor design for the purposes of the site evaluation.

The set of parameters serves as a surrogate plant, so that the NRC may conduct an ESP review prior to an applicant choosing a final design. The PPE is a set of parameters that are intended to bound the reactor design that would be built at the site.

TVA's PPE for the Clinch River Nuclear Site describes two or more SMRs that would produce a total of 800 megawatts electric.

1 As we talked about earlier, an ESP does
2 not authorize the construction and operation of a
3 nuclear facility, however, the Environmental Review
4 for the ESP decision does evaluate impacts from building
5 and operating the project that TVA proposes in its
6 application.
7 So, the draft EIS presents the staff's
8 evaluation of the environmental impacts from building
9 and operating at the Clinch River Nuclear Site two or
10 more SMRs and associated facilities, as described in
11 TVA's application. Next slide.
12 So, here, we can see a graphic of most of
13 the resource areas for which impacts are evaluated in
14 the draft EIS. As I mentioned earlier, the draft EIS
15 has been prepared by a team of experts in the various
16 scientific and technical disciplines.
17 In addition to staff from the Army Corps
18 of Engineers that I mentioned earlier, the NRC has
19 contracted with Pacific Northwest National Laboratory
20 to assist in preparing the EIS.
21 So, the Clinch River Environmental Review
22 Team is comprised of a wide range of experts
23 knowledgeable in environmental issues and nuclear
24 reactor technology.
25 So, at this time, I'm going to ask Dr.

1 Kratchman to come up and give a brief summary of the
2 environmental evaluations from some of the resource
3 areas that you see here.
4 Jessica Kratchman is the NRC's staff
5 reviewer for the alternative sites section of the draft
6 EIS, which is one of the review areas that she will
7 be presenting.
8 And because we want to leave time to hear
9 from you, Jessica will only be presenting information
10 from some of the resources areas you see in this graphic.
11 But at the end of our presentation, we will
12 direct you to where you can find similar summaries for
13 all of the areas covered in the EIS.
14 DR. KRATCHMAN: Thank you. Thanks, Tami.
15 Hello, my name is Dr. Jessica Kratchman, and as Tami
16 mentioned, I'm one of the lead environmental reviewers
17 on this effort. The subsequent slides will provide
18 you with an overview of our assessment. Next slide,
19 please. Oh, we're on, okay.
20 This slide shows how impacts to the
21 environment are characterized in the draft EIS. The
22 NRC evaluates the potential environmental impacts
23 during both the construction and the operation phase
24 of the SMRs at the Clinch River Nuclear Site in various
25 resource areas.

1 The impacts are classified into three
2 areas, small, moderate, and large, to help explain the
3 environmental effects in consistent terms.
4 As the review team conducts the
5 evaluations, they use these descriptors to consider
6 such questions as: were the evaluated impacts during
7 both the construction and operation phases minor? If
8 yes, the documented result would be small.
9 Do the effects noticeably change the
10 environmental attributes of the resource during either
11 phase? If yes, then the impact would be designated
12 as moderate.
13 If the team determines the effect
14 destabilizes important attributes of the resource, even
15 if much of the destabilization had occurred previously
16 through other cumulative effects, then the effect would
17 be considered large.
18 It is also important to note that an
19 applicant can take actions to further mitigate impacts
20 after its been classified. Next slide, please.
21 Now, let's get into more detail about the
22 technical areas. First, I'll start with water
23 resources. Our evaluation considered impacts on
24 groundwater and surface water, both the use and quality
25 of these two resources.

1 The primary use of water at the Clinch River
2 Nuclear Site is for cooling during operations. Water
3 for this purpose would be obtained from the Clinch River
4 arm of the Watts Bar Reservoir. Normal withdrawals
5 are determined to be much less than the typical
6 discharge from the upstream Melton Hill Reservoir.
7 Some water for building and operation would
8 be obtained from the City of Oak Ridge Public Works
9 Department water system. No groundwater would be used
10 during building or operation.
11 Plant discharges would be to the Clinch
12 River arm of the Watts Bar Reservoir, and would have
13 to comply with applicable state and federal permits
14 and regulations.
15 Additionally, TVA said in its application
16 that it will build a continuous-flow bypass at the
17 Melton Hill Dam to mitigate the effects of the discharge
18 on the surface water quality.
19 As a result of our review, we've determined
20 that the potential impacts on the use and quality of
21 ground and surface water from the building and operation
22 of a new nuclear plant at the Clinch River Nuclear Site
23 would be small. Next slide, please.
24 Terrestrial and aquatic ecologists on the
25 review team evaluated potential impacts from building

1 and operation of the proposed reactors on terrestrial
2 and aquatic habitats and biota. The ecologists
3 considered potential effects on mammals, birds, fish,
4 reptiles, amphibians, insects, plants, and other biota.
5 Building the reactor and associated
6 facilities could disturb up to 539 acres of terrestrial
7 habitat, and that includes 1.2 acres of wetland.
8 It could also impact portions of existing
9 transmission line rights-of-way and small areas of the
10 Clinch River arm of Watts Bar Reservoir, to install
11 intakes and discharge.
12 The team has sought technical information
13 and input from the Tennessee Ecological Field Office
14 of the U.S. Fish and Wildlife Service and the Tennessee
15 Natural Heritage Program.
16 Of particular interest is the potential
17 use of forested habitat on the proposed site for
18 foraging and roosting by three federally listed bat
19 species. This includes the Indiana bat, the northern
20 long-eared bat, and the gray bat, as well as other
21 non-listed bats that also have declining populations.
22 The review team concluded that the
23 potential impacts on the terrestrial ecology would,
24 therefore, be moderate during building and small for
25 operation. The review team concluded that potential

1 impacts to aquatic biota would be small for building
2 and operation. Next slide, please.
3 The socioeconomic review encompasses
4 potential impacts on many different factors, such as,
5 the local economy, taxes, housing, education, traffic
6 and transportation, populations, infrastructure, and
7 community services.
8 The review team that found that during
9 building, most adverse impacts would be small, except
10 for traffic, which would be large.
11 There would also be moderate impacts to
12 the aesthetics during building from tall structures
13 and cranes and during operation from the cooling tower
14 plume.
15 All adverse impacts would be small during
16 operation and beneficial economic impacts from tax
17 revenues would be small for both building and for
18 operation.
19 The staff found no evidence that any
20 possible pathway could result in disproportionately
21 high or adverse impacts to any minority or low-income
22 population during both building or operation. Next
23 slide, please.
24 The review team evaluated impacts on
25 eligible and potentially eligible archeological and

historical places and cultural resources through consultations with 20 Indian tribes and the Tennessee Historical Commission.

The team determined that the building and operation of a Small Modular Reactor at the Clinch River Site has the potential to adversely affect 16 eligible historic properties and one potentially eligible archeological site.

The review team concluded that there would be potentially moderate to large impacts to these historical and cultural resources. These would mainly occur during the building phase.

To resolve potential adverse effects of building-related activities on historic properties, TVA has worked with the Tennessee Historical Commission and consulting tribes to develop a programmatic agreement. Next slide, please.

As part of the NRC staff's analysis, we evaluated potential radiation exposure to workers during construction, exposure to members of the public and power plant workers during operation, and exposure received by vegetation and wildlife.

Radiation exposure is a very well-studied health risk. Natural radiation exposure to individuals in the United States comes from such sources

as cosmic radiation, naturally occurring radioactive material in the soil, and building materials.

For the Clinch River review, the staff found that radiation exposure during construction and operation to workers, the public, and vegetation and wildlife are well below the regulatory limits and a small fraction of the exposure from these natural background sources.

The impact on all three groups, nearby members of the public, power plant workers, and the surrounding vegetation and wildlife, would be small, because the impacts are below the NRC and the Environmental Protection Agency's regulatory limits, and mitigation is not necessary, since TVA must continue to comply with all regulatory limits. Next slide, please.

An important part of an Environmental Review under NEPA is the evaluation of cumulative impacts. Cumulative impacts are the collective impacts of the proposed action, which in this case is issuing the Early Site Permit and other past and future actions.

The conclusion is a discussion of the impacts to the different resource areas and can be found in Chapter 7 of the draft Environmental Impact

1 Statement.

2 Small impacts, as you might recall, are

3 those where the environmental effects are generally

4 minor or not detectable. Our review team found there

5 to be small impacts in water-related resources,

6 demography, air quality, radiological impacts of normal

7 operations, postulated accidents, and fuel-cycle and

8 decommissioning.

9 Moderate to large impacts are those that

10 are significant enough to alter the environment or

11 possibly even destabilize part of it. Moderate to

12 large impacts are identified for the Clinch River

13 Nuclear Site for infrastructure and community services

14 associated with workforce traffic. However, this

15 impact would mostly be during the building phase.

16 The additional impact to historical and

17 culture resources, which we previously discussed, was

18 determined to be moderate to large. This impact will

19 primarily occur during site preparation activities.

20 During the operation, the additional

21 contribution of activities at the Clinch River Nuclear

22 Site is not a significant contributor to the cumulative

23 impact. As a result, during operation, the impact on

24 historical and cultural resources of the proposed site

25 would be small.

The cumulative impacts to aquatic ecosystems are also categorized as large. This is primarily from past activities, such as historical river impoundment. Next slide, please.

The Alternatives Analysis is often referred to as the heart of NEPA. In Chapter 9 of the draft EIS, the staff evaluated alternatives to the Clinch River Site, alternative system designs, as well as the no-action alternative.

Under the no-action alternative, the NRC would not issue an Early Site Permit, which the review team determined would result in no environmental impacts. We further concluded that the no-action alternative provides none of the benefits intended by the ESP process.

As for an analysis of the alternative sites, the staff considered sites throughout the TVA service territory, as can be seen on this map, which is a little small, with four candidate sites selected for a more detailed overview.

Preference was given to sites which, for example, were immediately adjacent to an adequate water source. Of those candidate sites, three were analyzed as alternate sites.

This includes Redstone Arsenal Site 12 and

1 Oak Ridge Reservation Sites 8 and 2. The review team
2 determined that none of the alternative sites were
3 environmentally preferable to the proposed site at Oak
4 Ridge Reservation Site 3.
5 The review team also considered a variety
6 of alternatives for heat dissipation systems, the
7 intake system, discharge system, and water supply
8 system.
9 In our Alternatives Analysis, we looked
10 at these types of systems, because they have the
11 potential to significantly impact the environment.
12 The review team did not identify any alternative system
13 designs that were environmentally preferable to the
14 proposed plant system design.
15 After analyzing reasonable alternative
16 sites and systems, the NRC review team did not identify
17 any environmentally preferable site or system. Next
18 slide, please.
19 In Chapter 10 of the draft EIS, the NRC
20 staff made a preliminary recommendation to the
21 Commission that the Early Site Permit for the Clinch
22 River Nuclear Site be issued.
23 The recommendation is considered
24 preliminary -- just making sure everybody was
25 listening.

1 (Laughter.)

2 DR. KRATCHMAN: So, it's a preliminary

3 finding and we're waiting -- and part of our review

4 is to consider all of your comments that you're giving

5 here today and through other forums.

6 This recommendation is based on

7 information provided in TVA's ESP application,

8 consultation with federal, state, tribal, and local

9 agencies, the staff's independent review, public

10 comments, and the assessment that is summarized in our

11 draft EIS.

12 This recommendation is also based on the

13 conclusion by the review team that no alternative site

14 would be environmentally preferable.

15 This recommendation is only for the

16 Environmental Review portion of the Early Site Permit

17 review. As mentioned in the beginning of this

18 presentation, there are two important aspects of NRC

19 reviews associated with an ESP application: an

20 Environmental Review and a Safety Review.

21 The safety portion of the review is ongoing

22 and will be documented in the final Safety Evaluation

23 Report.

24 With that, I'd like to turn the

25 presentation back over to Tami and she will proceed

1 in discussing the Environmental Review schedule, how
2 to access the draft EIS, and how to submit comments.
3 Thanks.
4 MS. DOZIER: Thank you, Jessica. So, we
5 have a variety of ways that you can obtain copies of
6 the draft EIS or additional information. For those
7 of you who do not have copies already, we are providing
8 CDs out at the front desk that contain volumes of the
9 DEIS, along with a reader's guide.
10 The reader's guide is what we call the Cliff
11 notes of the DEIS, it's a sort of shortened version,
12 you can read it a little bit faster, hit the high points,
13 and then you can find where you might want to go back
14 into the actual EIS for more.
15 So, for additional questions, my contact
16 information is provided here. If you don't have a pen,
17 this slide set is part of the presentation packet that
18 is available out front if you didn't get a copy, you
19 can take it home with you.
20 And also, I recommend that everyone visit
21 our project-specific website listed on this slide.
22 It's the best one-stop shop for the documents and the
23 information that is related to the NRC's review.
24 And also, the Kingston Public Library and
25 the Oak Ridge Public Library have been kind enough to

1 offer shelf space for both the TVA's Environmental
2 Report and the draft EIS.
3 And if you want to be on our mailing list,
4 be sure and provide your name and address to one of
5 the NRC staff out at the registration table.
6 So, these are the ways that you can submit
7 comments on the draft EIS. First of all, you may
8 provide comments by speaking today as this meeting is
9 being recorded, as Chip explained. If you haven't done
10 so already, you may sign up to speak this evening, cards
11 are in the back, and I believe Chip may talk a little
12 bit more about that.
13 Other ways to submit comments are via
14 email, the email address is shown here, or regular mail
15 to the address shown here. Again, hard copies of this
16 slide are out front if you don't have it already.
17 So, please note though that the end of the
18 75-day comment period is July 13, 2018. And this
19 concludes our presentation. Thank you again for your
20 time and we look forward to hearing your comments.
21 MR. CAMERON: Okay, thank you. Thank you,
22 Tami. Thank you, Jessica. And, I think -- okay, we
23 do have time for a few question before we go to comments.
24 And we know that there's questions on
25 emergency planning, and what I'd like to do is turn

1 it over to Mallecia Sutton, who is the Safety Project
2 Manager, to just say a little bit about that. Can we
3 do it from here?
4 MS. SUTTON: Okay. So, TVA ESP application
5 includes a methodology that, if approved at the ESP
6 stage, will be used to select a site-specific EPZ size
7 at the COL stage.
8 The submitted application requests two
9 sets of exemptions for approval to deviate from the
10 current ten-mile EPZ requirement specific in 10 CFR
11 50.47(c)(2), if certain conditions are met: one for
12 EPZ at the site boundary and one for an EPZ at a two-mile
13 radius.
14 If these sets of exemptions are approved
15 as part of the ESP, they'll be accompanied by specific
16 requirements under which they can be used at the COL
17 stage.
18 The COL applicant would apply the
19 methodology if approved at the ESP stage to design
20 selected for the COL application in order to determine
21 whether the conditions for either of the two sets of
22 exemptions have been met.
23 This is part of the Safety Review. The
24 Safety Review is ongoing and no decision has been made.
25 You can make an oral statement in front

1 of the ACRS regarding the Safety Review once the staff
2 evaluation of the exemption requests have been
3 determined. Thank you.
4 MR. CAMERON: Thank you. Thank you,
5 Mallecia. Questions? Okay, Sara?
6 MS. BARCZAK: Thank you. Sara Barczak,
7 Southern Alliance for Clean Energy. If somebody could
8 explain, in terms of the Plant's Parameter Envelope,
9 which she used the PPE acronym, in part, can you describe
10 -- what I'm getting at is, are there any certified Small
11 Modular Reactor designs?
12 MR. CAMERON: Okay, great question. Tami,
13 are you going to do that? Okay.
14 MS. DOZIER: So, that is true, right now,
15 there are no certified Small Modular Reactor designs,
16 which is part of the reason why TVA has a Plant Parameter
17 Envelope.
18 It's not -- the SMR designs are not the
19 only places where we use PPEs at the ESP stage. It's
20 been very effective, we believe, in helping -- well,
21 in helping us to take a look to resolve some issues
22 ahead of the designs being certified.
23 And so, that's true, the Plant Parameter
24 Envelope, it is designed to bound things that would
25 be at the COL or at whatever stage, whatever future

1 licensing actions.

2 However, they -- if, as Andy Kugler may

3 want to elaborate on that, when the COL does come in,

4 then if it's not bounded, we evaluate it at that time.

5 MR. CAMERON: Okay. Let's go to Andy and

6 see if he wants to add anything. This is Andy Kugler,

7 from the NRC staff. Andy?

8 MR. KUGLER: I'm not sure how much more to

9 add, she basically said it, which is if, at the time

10 of the Combined License, if somebody applies for that,

11 if we or the applicant find that the design is not within

12 the bounds of the Plant Parameter Envelope that we've

13 evaluated for this application, then they would have

14 to evaluate how that difference effects the analysis

15 that's already done.

16 And then, we would do our own review in

17 the Environmental Impact Statement for that application

18 and determine whether the impacts were greater, the

19 same. We would evaluate it at that time.

20 So, it doesn't have to fall within the Plant

21 Parameter Envelope, but if it does fall within the Plant

22 Parameter Envelope, for issues we've already resolved,

23 then they would remain resolved.

24 MR. CAMERON: Okay, thank you. Thanks,

25 Andy. And I think one part of that question might be,

1 are there any design certification proceedings going
2 on in front of the NRC? No?
3 MS. SUTTON: We do currently --
4 MR. CAMERON: Mallecia, let me get you on
5 the record.
6 MS. SUTTON: We do currently have a review
7 for the NuScale Small Modular Reactor design that is
8 currently on NRC's review.
9 MR. CAMERON: Okay. And people can go on
10 the NRC website and see what the progress is --
11 MS. SUTTON: Yes.
12 MR. CAMERON: -- on that? Okay. Thank
13 you. Any other questions? Okay. Well, let's go to
14 public comment. And just let me state that, the NRC
15 staff is going to be here after the meeting, okay?
16 And if you want to talk to them about anything, they'll
17 be out there for you.
18 Just let me check in with my colleague,
19 Trish. Is there somebody -- did I miss a question?
20 Oh, hi. Sorry, I didn't see you, let me get you on
21 the transcript here.
22 MS. KELLY: Hi, I am Renee Kelly, County
23 Commissioner for the Oak Ridge part of Roane County.
24 And I'm wondering, as you went over the evaluations
25 that you did for the ecology, were there any sites that

1 you didn't mention where it would have a large impact?
2 Like in air and meteorology studies or anything like
3 that?
4 MR. CAMERON: Okay. Jessica, do you
5 understand the question?
6 DR. KRATCHMAN: Yes, you're asking if --
7 MR. CAMERON: Okay. Let's get you on the
8 record.
9 DR. KRATCHMAN: Oh, sorry. So, to make sure
10 I understand, your question is, of the sites that we
11 did review, outside of those, could there have been
12 other sites that have potentially larger impacts?
13 MS. KELLY: No.
14 DR. KRATCHMAN: Oh, okay.
15 MS. KELLY: No, do you have all the resources
16 listed --
17 MR. CAMERON: Okay, let me do this again.
18 All right.
19 MS. KELLY: On the slide previous to when
20 you stepped up, it had a list, it was a picture with
21 these --
22 DR. KRATCHMAN: Yes.
23 MS. KELLY: -- okay. On any of the other
24 sites that you didn't present, were there large impacts
25 on the environment?

1 MR. CAMERON: Do you --
2 DR. KRATCHMAN: Yes, so the slide with the
3 --
4 MR. CAMERON: And the reason we have this
5 turned off is because --
6 DR. KRATCHMAN: I know, the --
7 MR. CAMERON: -- there's feedback.
8 DR. KRATCHMAN: Yes.
9 MR. CAMERON: But I'll turn it on. I'll
10 turn this one on. Okay.
11 DR. KRATCHMAN: So, the way that we
12 generally do the selection of the alternative sites
13 is, the Environmental Report that TVA signed,
14 submitted, we used their report as a starting point.
15 And we use initial sites that are in the
16 TVA, and there were nine. And then, of those sites,
17 we -- those are called initial sites. And then, of
18 those sites, we narrowed it to four candidate sites.
19 And then, of the four candidate sites, we
20 chose the alternative sites that are a reasonable
21 estimate of what's around the area and what could give
22 us a hard look at what's going on in the area and how
23 to assess the impact.
24 So, we don't analyze every site in detail.
25 So, I don't know that we could say it could be large

1 impacts, but we picked them based on where the adequate
2 resources are and stuff of that nature. Does that help?
3 MS. KELLY: Yes. But let's --
4 DR. KRATCHMAN: So, would any of those sites
5 have had large impacts?
6 MS. KELLY: Flip back, like, another slide.
7 DR. KRATCHMAN: This one?
8 MS. KELLY: No.
9 DR. KRATCHMAN: One more.
10 MS. KELLY: Back.
11 DR. KRATCHMAN: The one with the picture
12 of the little --
13 MS. KELLY: The one with the picture.
14 DR. KRATCHMAN: Yes.
15 MS. KELLY: No, not that one.
16 DR. KRATCHMAN: Keep going, keep going, keep
17 going.
18 MS. KELLY: Back.
19 DR. KRATCHMAN: One more. That one.
20 MS. KELLY: That one.
21 DR. KRATCHMAN: Yes.
22 MS. KELLY: I'm wondering about this site,
23 you covered the archeological, you covered the
24 cultural, you covered the aquatic --
25 DR. KRATCHMAN: Oh, I see. Are there other

1 impact areas that were large? No. So, we went over
2 the ones that were -- the large or moderate impacts,
3 I included in the presentation. Does that --
4 MR. CAMERON: Okay. Okay, thank you.
5 DR. KRATCHMAN: Okay.
6 MR. CAMERON: Thank you for the questions.
7 And thank you, Jessica and -- okay, one more question
8 over here. And then, we're going to get on to public
9 comment, but go ahead, sir.
10 MR. NAEGELI: Thank you. Wolf Naegeli,
11 Foundation for Global Sustainability. I have a
12 question regarding this bounding reactor design and
13 how that equates to the NRC or the NEPA requirements
14 for cumulative impacts, in terms of future impacts.
15 MR. CAMERON: And let me -- I know that your
16 question concerns cumulative impacts, but when you
17 referred to the bounding reactor design, could you --
18 can we be a little bit clearer on that?
19 MR. NAEGELI: Well, that's what they say,
20 it's limited to, the site evaluation was limited to
21 a bounding reactor design for the Plant Parameter
22 Envelope technology, I guess, for this and it say 800
23 megawatt electric.
24 MR. CAMERON: Okay. Let's -- can we go back
25 to that slide? Beautiful, okay. Is this another Plant

1 Parameter Envelope question?

2 MS. DOZIER: Right. So, are you asking what

3 --

4 MR. NAEGELI: I'm not sure how the Plant

5 Parameter Envelope establish with regard to cumulative

6 impacts, particularly the future impacts.

7 MS. DOZIER: Right. So, there's no

8 difference between if it was an actual design or if

9 it was a Plant Parameter Envelope in terms of the

10 cumulative.

11 I mean, so, we took the project -- whether

12 it's a Plant Parameter Envelope or actually pointing

13 to an actual design that had been certified, in terms

14 of our environmental impacts, it doesn't matter.

15 This is what that particular design or

16 particular -- the only difference being, this is

17 something that doesn't exist yet. But in terms of our

18 environmental impacts, we do assume that it's going

19 to be built as described, it's going to be operated

20 as described, and then, with the cumulative impacts

21 would be the past, present, and the future activities

22 at the site independent of TVA's project.

23 So, there -- it doesn't matter. I guess

24 what I'm saying is, those are two different things.

25 Does that answer your question?

1 MR. CAMERON: Let's get some more
2 information too from Andy on this.
3 MR. KUGLER: Let me get back up to the front
4 again, because I don't want everybody craning their
5 necks. So, when we do cumulative impacts, what we're
6 looking at is, we've evaluated the impacts for the
7 project.
8 In this case, the project is based on a
9 Plant Parameter Envelope, but it -- so, that sets the
10 parameters for, say, the amount of heat that's going
11 to be rejected, air emissions, all that. So, it's just
12 like, as Tami was saying, it's like a real plant, just
13 based on this set of parameters.
14 So, we evaluate those impacts and we do
15 that in Chapters 4 and 5 and 6. Then, Chapter 7, we
16 say, okay, well, that's what the plant will do, what
17 about other projects in the area that may affect those
18 same resources, either in the past, the present, or
19 the future?
20 The process that we use is the same process
21 we use for any of our reviews for cumulative impact.
22 So, really, the Plant Parameter Envelope, per se,
23 doesn't make any difference in the way we do our review.
24 So, I guess, maybe, the real question is,
25 there's something about it that's bothering you, and

1 I'm not sure we fully understand what aspect is
2 bothering you. Can you help us understand that?
3 MR. NAEGELI: Yes. It looks like all of
4 these damages or these impacts were evaluated with
5 regard to the 800 megawatt electric as the maximum
6 output for the site. Is that correct?
7 MR. KUGLER: Yes, that's correct. So, they
8 can build up to 800 megawatts.
9 MR. NAEGELI: So, in terms of reasonably
10 foreseeable future, TVA at the meeting in Oak Ridge,
11 when they announce this project, they stated that in
12 that site, they could accommodate up to 12 reactors.
13 So, if each of these will be 300 megawatts, it could
14 be up to 3.6 gigawatts.
15 MR. KUGLER: That I can explain -- okay.
16 MR. NAEGELI: That will be more than four
17 times larger.
18 MR. KUGLER: Okay. But, no, actually, you
19 couldn't. And so -- okay, I understand. Now I
20 understand your question, so let me explain it. Under
21 the PPE, if they're going to stay within the PPE, the
22 most they could build would be 800 megawatts electric.
23 Nothing more than that, to be within the PPE.
24 So, what they're saying though is -- I know
25 it gets kind of confusing, because of the way we have

1 to explain it. So, if they're going to build 300
2 megawatt SMRs, the biggest SMRs, they can only build
3 two. That's 600, that's below 800.
4 If they build something like the -- the
5 one design that we're reviewing right now, NuScale,
6 they could built 12 of those, they're 50 megawatts
7 apiece, so that's about 600 megawatts. That's also
8 under 800. But they have to be within the 800.
9 If they were -- as I did mention earlier,
10 they could be outside the PPE value theoretically, come
11 -- if they were submitting Combined License, but then,
12 we would have to then reevaluate the impacts of being
13 outside of the bounds of what we have already evaluated.
14 But they cannot -- when they were talking
15 about 12, they were talking about these NuScale type,
16 which are very small. So, they were still talking about
17 being within the 800. I hope -- does that help?
18 MR. NAEGELI: Thank you.
19 MR. KUGLER: Okay.
20 MR. NAEGELI: Thank you.
21 MR. CAMERON: Andy, you may want to talk
22 to this gentleman after the meeting. Okay, thank you
23 for the question.
24 And we're going to move on to public comment
25 now. And we're going to go first to Rick, Rick Chinn.

1 Rick's here, and then we'll go to Sara Barczak and
2 Price Collins. And please come up here, Rick, and let's
3 make sure that this is on. Go ahead.
4 MR. CHINN: Thank you very much. My name
5 is Rick Chinn. I'm on the City Council and serve as
6 the Vice Mayor of the City of Oak Ridge.
7 Although I don't bring an official
8 correspondence from the City of Oak Ridge at this point
9 in time, I would like to convey the large scale support
10 on City Council, the present makeup of City Council,
11 of this project.
12 We are extremely interested in the economic
13 impact, the jobs, as well as the additional power supply
14 that would be provided for the Oak Ridge National
15 Laboratory and the other Department of Energy sites
16 here.
17 So, I would like to convey that support.
18 And we will submit an official correspondence to the
19 NRC prior to the July 13 deadline. But thank you.
20 MR. CAMERON: Okay, thank you. Thank you,
21 Rick. Let's go to Sara, Sara Barczak. And then, we're
22 going to go to Price Collins.
23 MS. BARCZAK: Good afternoon. My name is
24 Sara Barczak, Regional Advocacy Director with Southern
25 Alliance for Clean Energy, which has staff, board

1 members, and members of our organization across
2 Tennessee and the Southeast.
3 Southern Alliance for Clean Energy is a
4 nonprofit organization that promotes responsible
5 energy choices that work to address the impacts of
6 global climate change and ensure clean, safe, and
7 healthy communities throughout the Southeast.
8 We have had a long history, both
9 watch-dogging TVA and working with TVA to transform
10 the region's electricity production to be cleaner,
11 safer, and more affordable for Valley residents and
12 businesses.
13 Unfortunately, we are here today to again
14 voice our concerns about TVA's highly speculative and
15 risky proposal to pursue expensive, untested Small
16 Modular Reactor technology at the Clinch River Site.
17 Deficient draft Environmental Impact
18 Statement. We have a serious objection to the NRC's
19 draft Environmental Impact Statement that has led us
20 to seek an adjudicatory hearing before the NRC's Atomic
21 Safety and Licensing Board, I'll throw in a new acronym,
22 ASLB. I hope I have your permission, Chip.
23 On May 24, 2018, along with our
24 co-intervener, Tennessee Environmental Council, we
25 asked the ASLB to hold a hearing on two highly

1 significant issues related to the proposed SMRs.
2 First, whether the draft EIS contains an
3 adequate analysis of the risk of a severe fire in the
4 proposed SMRs' spent fuel storage pools, which I will
5 speak to this afternoon.
6 And second, whether the draft EIS makes
7 claims about the supposed benefits of the proposed SMRs
8 that are forbidden by NRC's regulations, and are also
9 completely unsupported. And I will speak to that
10 second issue tonight. So, if you're excited about
11 that, come back.
12 Inadequate discussion of the environmental
13 impacts of spent fuel pool fires. The nuclear industry
14 and its proponents claim that SMRs are smaller and,
15 hence, safer and use that as an excuse to reduce basic
16 safety requirements and protections.
17 This is reflected in TVA's efforts to get
18 rid of and/or significantly reduce the size of the
19 emergency planning zone for the Clinch River SMRs.
20 Is it really safer if the utility cuts back on safety
21 precautions?
22 TVA's proposed SMRs are based on a whole
23 new design, different from other larger light water
24 reactors now operating, that involves moving spent fuel
25 into the spent fuel storage pools much more frequently.

1 In comparison with a light water reactor,
2 whose spent fuel is moved to the pool every two years,
3 spent fuel from a 12-unit SMR will be moved to the pool
4 every two months.
5 That means the pool will constantly contain
6 spent fuel that is at the hottest temperature, which
7 makes it more susceptible to ignition and catastrophic
8 fires.
9 In violation of the National Environmental
10 Policy Act, the NRC has completely failed to address
11 this significant and dangerous design difference
12 between the proposed SMRs and light water reactors now
13 in use.
14 It is well established that the
15 radiological consequences of a spent fuel pool fire
16 are potentially catastrophic. For instance, according
17 to the commonly referred to spent fuel pool study,
18 radioactive fallout from a pool fire could displace
19 as many as four million people out to 500 miles.
20 In the 2013 License Renewal Generic
21 Environmental Impact Statement, the NRC also concluded
22 that the environmental impacts of a spent fuel pool
23 fire are, "comparable to those from the reactor
24 accidents at full power."
25 The potential for reactor accidents to have

1 significant adverse public health effects within at
2 least a 10-mile radius, including early and latent
3 fatalities, is discussed in NRC's emergency planning
4 guidance documents.
5 We are disturbed and offended by the NRC's
6 complicity with TVA in promoting the supposed
7 advantages of SMRs without questioning even one of TVA's
8 inflated claims.
9 In effect, the NRC has allowed its own NEPA
10 document to be used as a billboard by TVA and proponents
11 of SMRs. The NRC's lack of independence or care in
12 preparing the draft EIS completely undermines any basis
13 for public trust in the legitimacy and reliability of
14 the EIS as an independent government-sponsored study.
15 The NRC should be working for the public, not for TVA.
16 In conclusion, the NRC needs to serve the
17 public by correcting these errors in the draft EIS,
18 ending their cheerleading routine for the nuclear
19 industry, and showing the independence and integrity
20 required by NEPA of federal agencies. Thank you.
21 MR. CAMERON: Okay, thank you. Thank you,
22 Sara, and we're going to, we're going to go to Price
23 Collins next, and then to Sandra Kurtz and, Mr. Price.
24 MR. COLLINS: Thank you. Good afternoon.
25 My name is Price Collins. I'm here today, to express

1 voice on the early site permit for the proposed Clinch
2 River nuclear site.
3 Full disclosure, I do consider myself to
4 be an environmentalist and I do consider climate change
5 to be the most pressing challenge of our time.
6 Since TVA's beginnings, over 70 years ago,
7 the Valley Region has had a vast usage of coal fire
8 generation to power homes and industry, while continued
9 development and economic progress in the region had
10 continued in the decades following, the environmental
11 effects from coal have made their presence felt.
12 Oak Ridge National Laboratory, just a few
13 miles down the road, studies the effects of climate
14 change on their energy intensive super computers. When
15 they run simulations, coal and other fossil plants in
16 the region must ramp up to meet power demand. By
17 studying climate change, the Lab produces a noticeable
18 impact on it.
19 There has to be a better way to meet the
20 continuing power needs of the Valley region, while also
21 producing safe and emission-free electricity. This
22 is where nuclear power comes into the mix.
23 A standard nuclear power plant prevents
24 the emission of around seven to eight million tons of

1 carbon dioxide a year, if it is used instead of coal.
2 This is in addition to preventing production of sulfur
3 dioxides, nitrous oxides, and other fine particulates.
4 After construction of nuclear power
5 plants, the only emissions are water vapor and mining
6 for the fuels, of which, are comparable to mining
7 emissions of materials for solar panels and wind
8 turbines.
9 The advantage nuclear has over other energy
10 sources is it can run at a much higher capacity factor,
11 over 90 percent, compared with the intermittent
12 non-predictable nature of other renewables.
13 Families and business in Valley depend upon
14 reliable power around the clock. Hospitals must also
15 be able to count on power, at all times, to deliver
16 critical care to their patients.
17 And I'd also like to make a comment about
18 how small modular reactors haven't necessarily been
19 approved in this country. That's not quite true. The
20 early prototype reactors in the 1950s and '60s would
21 be classified as small modular reactors nowadays.
22 This is in addition to the over 50 years
23 of safe and event-free operation United States Naval
24 reactors have had on their dozens of submarines and

1 aircraft carriers over the years.

2 The addition of this proposed nuclear into

3 the TVA fleet will support their 2027 goal of over 60

4 percent of their electrical generation being emission

5 free. This is in contrast to, at the 2007 levels, of

6 about 60 percent of their generation being entirely

7 coal powered.

8 It is for these reasons and more, the early

9 site permit for the proposed Clinch River nuclear site

10 should be approved, without delay. Thank you for your

11 time today.

12 MR. CAMERON: Okay, thank you. Thank you,

13 Price. Sandra, Sandra Kurtz, and then we're going to

14 go to Don Russell and Laura Humphrey.

15 MS. KURTZ: Good afternoon. Is that

16 working? Can you hear me?

17 MR. CAMERON: Yes.

18 MS. KURTZ: I'll try to stand up tall.

19 I am Sandy Kurtz and I am with, representing the Blue

20 Ridge Environmental Defense League today. I'm an

21 environmental educator and I, the Blue Ridge

22 Environmental Defense League is a non-profit

23 organization, working in the grassroots level with

24 communities trying to improve their quality of life.

1 And I, I bring here today, a letter from
2 our Director, Lou Zeller, and he is, this is a comment
3 letter that I'll leave with you, but I just wanted to
4 go over some of the points that he has made in this,
5 in this letter.
6 But, first, just, just to preface, to say
7 that, that we do believe that the SMR plans are not
8 well thought through and, in fact, with climate change
9 coming, any building of, of such a reactor, these
10 reactors would be too late to really help with climate
11 change, even though they, admittedly, they do have less
12 carbon emissions and greenhouse gas emissions than,
13 than coal plants.
14 And, and in fact, we are moving away from
15 coal plants, so the reduction would be, would be
16 valuable and, and SMRs will not have any effect, because
17 they won't be built until 2026, even if things go forward
18 in a, in a straightforward manner and usually they
19 don't, so 2026 is the earliest.
20 In 2009 there was an Executive Order from
21 Federal Leadership and Environmental Energy and
22 Economic Performance directed all federal agencies to
23 reduce their greenhouse gas emissions by 28 percent
24 by 2020.

1 And, and they called for a further
2 reduction of federal facility greenhouse gas emissions
3 to 40 percent by 2025. And they did call the SMRs one
4 of the, one of the options that one could use. But
5 by, if this doesn't start until 2026, then, then it's
6 all too late to follow those, follow those orders.
7 They also, the federal, the federal people,
8 by the way, the largest uses of, of energy, of
9 electricity, so any changes, any reduction in
10 greenhouse gas emissions and for climate change is,
11 is really dependent on a lot of federal action.
12 The Executive Order by Federal Leadership
13 and Environment Energy and Economic Performance issued
14 on, in 2009, and said that, one, the federal agencies
15 are all to increase energy efficiency, manage and report
16 and introduce their greenhouse gas emissions.
17 And I notice in the, in the, this EEIS that
18 the, they talked about major greenhouse gas emissions
19 at the plant and, and yet there aren't supposed to be
20 any with, with SMR, so I, I was confused by that.
21 I don't know where the greenhouse gas
22 emissions are coming from, but that was saying it's,
23 as present in, in the chart in the environmental
24 impacts.

1 There's also no need for the plant, because
2 the demand for energy is going down, actually, and
3 efficiency is improving, alternative energies are
4 coming on, big time, and by the time you get this, this
5 built, or if it's 800 megawatts, then solar TVA's
6 already got 800 megawatts solar now, it's, surely, by
7 2025, '26, they could have plenty of, plenty of energy,
8 solar energy to make up, make up that difference and
9 that's not counting wind.
10 So for all those reasons, there really is
11 no need for, for this plant, at all, because we can
12 find other ways to do it. And so while the EIS here
13 does not address need for, whether it was needed, or
14 not, because TVA didn't seem to address that need
15 before, it seems to me that it's important to really
16 address the need.
17 NRC should've, should've done that,
18 whether TVA's application asked for it, or not. Do
19 we really need to bother with this, pouring taxpayer
20 money down, down this rabbit hole to, to build what
21 really isn't even needed? Thank you.
22 MR. CAMERON: Okay, thank you, Sandra.
23 And thank you for the food for us, too.
24 And we're going to go to Don Russell and

1 then we're going to go to Laura.

2 MR. RUSSELL: Good afternoon. My name is

3 Don Russell. I'm a 45-year citizen of Roane County.

4 I'm also the Business Manager of IBW, which stands

5 for International Brotherhood of Labor Workers.

6 I've got 400 people that work under, out

7 of my Local and most of them are working in the nuclear

8 field in different places all over the country.

9 We have an apprenticeship program. We've

10 got over 110 apprentices in there right now. They're

11 training to do the work and do it safely. That's what

12 we're here for.

13 We work construction-type work and we've

14 been there when the Manhattan project. This, this,

15 we've been Oak Ridge since 1960, '52, that's a year

16 older than me, so that's a long time.

17 So I wanted to take this opportunity to

18 tell you, we believe in it. It takes education. You

19 need to know a little bit about the nuclear field, if

20 you're going to work in it.

21 And, once you get educated, my guys are

22 safe, they feel safe, they do whatever they need to

23 do to make it safe. The NRC are the ones that make

24 sure that it's put in right.

1 So with that, I want to support this program
2 and this reactor. And I've even, I know we've talked
3 about not having any small reactors in the United
4 States.
5 I've got friends that's worked in the South
6 Africa and they've been put in there, so they're working
7 safely over there and this isn't something just came
8 out of the woodwork. So thank you very much.
9 MR. CAMERON: Okay, thank you. Thank you,
10 Don. And, Laura, Laura Humphrey.
11 MS. HUMPHREY: Good afternoon, everyone.
12 My name's Laura Humphrey. I'm speaking, both, today,
13 as a representative of the Southern Alliance for Clean
14 Energy and a South Knoxville resident.
15 There are three reasons motivating me to
16 speak today, first, TVA, admittedly, does not need new
17 energy production resources, without a need for energy
18 assessments, because of the declining flat energy
19 demands.
20 Second, are concern for my personal family
21 safety and the safety of the community, especially,
22 with reducing safety standards for SMRs. Finally,
23 there are concerns about nuclear waste storage issues,
24 which I will address in the evening session.

1 Because of the demand for electricity is
2 flat, or declining, the construction of a new nuclear
3 plant without, with its associated environmental and
4 safety risk, is not justified.
5 The NRC claims to compile a federal
6 regulation that prohibits the draft EIS from discussing
7 the need, or benefits, of building and operating an
8 SMR on the Clinch River site.
9 However, the purpose and need section of
10 the draft DES contains a discussion of why an SMR would
11 address critical energy security issues and provide
12 more reliable electric supply. Therefore, the NRC has
13 made fair game of the issue of whether an SMR is needed
14 for energy supply.
15 TVA recently planned on reducing its debt,
16 but the SMR proposal runs counter to the debt reduction
17 plan and, ultimately, would be similar to other nuclear
18 projects that went well-over budget, such as Watts Bar
19 2. The new Clinch River sites being experimental in
20 nature, is also extremely vulnerable to have large
21 budget overruns.
22 On the topic of safety, I'm concerned the
23 NRC plans to reduce safety regulations for TVA's SMR
24 technology to keep costs low. In particular, the NRC

1 plans to reduce the emergency planning zone for
2 evacuation from ten miles to as little as two miles,
3 or even the site boundary.
4 This issue is very personal to me. The
5 home of my two sons, when they're with their father,
6 every weekend, is within the ten mile zoning, zoning
7 area.
8 I would expect the highest safety standards
9 for my family and the communities within the ten-mile
10 radius, such as Kingston that already suffered from
11 an energy-related disaster, the TVA's Kingston coal
12 ash spill.
13 The NRC has no reason to deviate from
14 regulation standards, or abandon lessons learned from
15 Three Mile Islands that emergency planning is essential
16 to ensure protection of public health in a nuclear
17 reactor incident.
18 In conclusion, I ask today, of the NRC and
19 TVA would be, first, given the decreased energy demand
20 in the TVA region and, given TVA's need to avoid
21 activities that would unnecessarily increase its debt,
22 TVA should abandon its SMR proposal.
23 Instead, TVA should embark on a program
24 of conservation, demand management, and renewable

1 energy resource growth. The NRC should also evaluate
2 TVA's debt reduction plan, in relationship to the
3 proposed Clinch River SMR nuclear site.
4 In conducting this evaluation, the NRC
5 should look at the history of TVA's cost overruns and
6 general cost overruns in the nuclear industry. The
7 NRC must ensure that safety standards are not weakened,
8 but rather, the SMR technology should speak for itself
9 and be able to surpass any regulation set in place,
10 if it is sound and safe sites. Thank you.
11 MR. CAMERON: Okay, thank you very much.
12 Thanks, Laura. All right, Barbara Kelly and Jake,
13 then Jake Almond. Barbara. Barbara, do you want me
14 to bring this light back to you over there? Okay.
15 MS. KELLY: I'm Barbara Kelly and I'm here,
16 just, representing myself, the citizen. What I'm
17 concerned about -- and I, I do thank TVA and the NRC
18 for letting us come and hear our opinions and our
19 concerns.
20 The no action alternative, I don't think
21 this no action alternative has been explored
22 adequately. Number one, where is it shown that we
23 actually need more nuclear power, and number two, I
24 feel like I'm here saying, wear the Emperor's clothes,

1 why do we need this anyhow, and why do we need 12 of
2 them?
3 We know there are site problems, talking
4 about being built on limestone karst, supposedly, it's
5 all going to be contained in this nice little envelope.
6 I don't believe that.
7 The economics, I believe this is a big make
8 work boondoggle. Jobs, jobs, look at the all the jobs
9 already. I kind of wondered, if I dared ask people
10 to raise their hands, or anything, if you would, to
11 show how many people right here, now, already are here
12 from TVA, from the Federal Government?
13 Look at all the great paying federal jobs
14 that, that are coming, as a result of having to review
15 and study this whole proposal, not just at the federal
16 level, but at the TVA level, at the state level, at
17 all the regional different offices, and then, we're
18 talking about, oh, all the construction jobs that will
19 come from this.
20 Why, I know, down where I'm from, in
21 Chattanooga, with all that, all the construction people
22 and then we're talking, too, what about, oh this is
23 a great job, this is great to plan, because, look, all
24 the union electricians can have jobs, too.

1 I think it's double dipping. Building
2 this thing, oh, it's a grant, it's a grant from the
3 Federal Government, well where's the Federal Government
4 getting that money, from my pockets, and I just don't
5 have much.
6 And then, on top of that, it's coming from
7 my pockets, as a UTA, a TVA rate payer, and I already
8 know of the ton of poor people, who have a right to
9 over $800 in the -- that they can't pay on fixed incomes.
10 Tell me that this is going to help? It
11 talked about how, oh this would have a small positive
12 economic input, impact. I think it's going to have
13 a large economic negative impact, when you go into the
14 rate payers having to pay for this thing.
15 And somebody else mentioned all the debt
16 TVA's already got. Why not go to clean renewable energy
17 and ramp up energy efficiency? There have been studies
18 and studies out there that have shown, and TVA knows
19 this, that they can make a ton of improvements in energy
20 efficiency.
21 Put a fraction of the money that this thing,
22 project is going to cost into energy efficiency across
23 the Valley, and there wouldn't be any need for anymore
24 plants.

1 Somebody else mentioned that TVA's already
2 got, they're already producing 800 megawatts from solar
3 already. I saw on the news a couple of weeks ago that,
4 California, the State of California, by 2020, is going
5 to require, it's already on the books, it's requiring
6 all new homes, all new homes, I think, it was buildings,
7 maybe, to three stories, I don't remember all the exact
8 details, to have solar.
9 That's the whole State of California and
10 we're talking about 12 of these things sunk underground.
11 We don't need that. And then, it hasn't even been
12 designed, yet.
13 Now, several times throughout the thing
14 we've heard that it, supposedly, I wrote this down,
15 the risks of radiation exposure to the people, exposure
16 of radiation through ground water, oh that's been,
17 that's small to not at all, and I want to know, what
18 about adverse effects and -- no, adverse event, when
19 we have an adverse event?
20 As built and operated as described. The
21 lady talked about that. Oh there are going to -- or
22 the events that the impacts can be small, when built
23 and operated, as described.
24 What about Fukushima? What about

1 Chernobyl? What about Three Mile Island? What about
2 Browns Ferry and the candle? What about the wells up
3 there and several other of the tree, the TVA plants?
4 It's all as described, to me, let's save
5 a ton of money, go back and look at the no action
6 alternative. And another lady mentioned cost overruns
7 and all, all that kind of thing. Stop. Don't be
8 ridiculous and end this craziness. No build.
9 MR. CAMERON: Okay, thank you. Thank you,
10 Barbara. Is Jake, Jake Almond? Jake, you want to come
11 up and talk to us?
12 MR. ALMOND: I'm Jake Almond. I happen
13 to be, have a front row seat for this project. My house,
14 on my porch, I can look at the site, when the leaves
15 are off the trees. If it's built, it will be in my
16 view shed. Right now, with the leaves on the trees,
17 I can't see it. But I'm right there on top of it.
18 And, I'm, I'm for nuclear power, I just
19 don't like this site. If you look at the map, where
20 they're going to build it, there's a loop in the river
21 and the reservation is on that one closed end of that
22 loop.
23 All the whole rest of that loop is private
24 citizens that we're in a coliseum and we get to see

in the playing field is our small modular reactor. So for that reason, I'm against it. I just don't like the location.

I saw on the map there, there was two other sites further into the reservation. Why aren't they picked? If they put them inside the reservation, there is not the impacts on less citizens that are forced to have to live with it. That's all I have. Thanks.

MR. CAMERON: Okay, thank you. Thank you, Jake. And we're going to go to, to Brian Paddock, now, and then we're going to go to Donnie Safer. This is, this is Brian Paddock.

MR. PADDOCK: Thank you. My name is Brian Paddock and I'm an attorney. I have done various environmental law now, for about 15 to 20 years. I do wetlands and water protection cases for free for the Sierra Club, but I do not speak for them, tonight.

I'm considered to be somewhat rational about nuclear power, since TVA picked me to be on the Watts Bar 2 Citizen Action Committee that actually hears reports and has watched the development commissioning and initial operations of the Watts Bar 2 reactor.

I also am a TVA rate maker, rate payer, except I don't pay, because I have solar on my roof.

1 And, as the CEO of TVA was cited, recently, in a
2 newspaper report, said the future of TVA generation
3 will be less and less fossil.
4 He didn't mention solar, he said, we're
5 going to use, he didn't, didn't mention nuclear, he
6 said we're going to use solar supported by natural gas,
7 when, when solar can't quite meet the demand.
8 So this is a proposal for a project that,
9 quite frankly, is just an experiment and it's an
10 experiment being done at the expense of the ratepayers
11 and federal taxpayers.
12 Because I do wetlands cases, I first looked
13 at the issue of the 12 acres of wetland, 1.2 acres
14 rather, of wetland that are effected and talked with
15 a nice gentleman from the Army Corps of Engineers.
16 The Corps is using this as their EIS, also.
17 There's one difficulty about that, which
18 is, they don't have a permit application to, to disturb
19 this wetland, so it looks to me, since they have no
20 permit application, they really don't have the
21 information about what would happen to wetland, or why
22 it should happen.
23 And, ordinarily, an EIS requires a
24 statement of purpose and need and I don't believe we

1 have either in this case. We certainly haven't had
2 TVA explain why it needs this, other than to do a science
3 experiment. And I'll come back to that point and the
4 no action alternative in a moment.
5 We're also on shifting ground here. The
6 State of Tennessee requires an aquatic research
7 alteration permit to both effect streams and wetlands
8 and it's rewriting those regulations, even as we speak,
9 they're out for public comment.
10 And you may find a very different context
11 for even giving a state permit and, without a state
12 permit, to rely on why the Corps is really, I think,
13 going to be at, at sea about allowing an imposition
14 on both surface dunes and wetlands.
15 One of the differences, by the way, is that
16 the State expects that mitigation that replacement
17 activities to replace a lost water resource values,
18 when you disrupt a wetland, or destroy it, bury it,
19 dig it up, whatever. Part of the --
20 (Simultaneous speaking.)
21 MR. PADDOCK: -- on the other hand, the
22 State now, the State wants those to be close, as
23 possible, but the Corps has often said, look, just buy
24 some wetlands up someplace else.

1 And there's these banks all over and you
2 can actually get, so called, mitigation that is
3 replacement wetland value simply by the permit
4 protection of some piece of wetland far, far, far away.
5 And I think that's bad public policy.
6 It was two or three decades ago we realized
7 we'd lost 50 percent of the wetlands in the United States
8 and we are gradually going back from an effort to try
9 to correct that to an effort to let the rest of them
10 disappear.
11 I listened into an interesting
12 conversation with the Atomic Safety Licensing Board
13 and they were sitting around talking about SMRs and
14 there was some discussion among the members of the fact
15 that, that the assessment of these multiple small
16 modular reactors at, one site was, the idea was, well
17 take what, how one would work and just multiply it by
18 two, or 15, or 12, or whatever the number is, and some
19 of the members of the board said, you, you can't quite
20 do it that way.
21 If things go wrong in two or three places,
22 at once, that can be really different than going with
23 one place. You can't just, you can't just assume that,
24 that this will just work itself out.

1 And the nature of these multiple reactors
2 operated through a single control room with, I guess,
3 three consoles now, one for every four reactors, as
4 so far proposed, nobody's, I think, really thought that
5 through about what's going to happen there and I'm not
6 sure that's adequately addressed in the draft EIS.
7 The water impacts here are significant.
8 I was caught by the statement when the earlier
9 discussion occurred, the show and tell, that, that this
10 private plant would be use, under present design ideas,
11 would use less water than all the releases from melted
12 down.
13 Well, you know, if somebody says, oh, we
14 can use, we can use as much water as, or somewhat less
15 than a whole releases all the time, you've sort of said,
16 well, we can essentially, you know, do something that
17 comes close to drying up the river that's held up behind
18 that dam. It doesn't seem to me like a very good
19 starting point for your thinking about this.
20 You already had a problem in the river
21 system here, because, first of all, you measure the
22 impacts on the river from any activity, whether it's
23 another dam, or a power plant, you measure it against
24 the fact that we no longer have a free-flowing river.

1 We have a series of lakes and we create those as
2 reservoirs.
3 And we've greatly simplified the biology
4 already. The number and variety of species has dropped
5 from about 300 plus, and we're talking mostly about
6 fish, to about 30, or, between 30, or 60, depending
7 on whether you want to, you want to, how you do the
8 counting.
9 So you're saying, let's take this very
10 simplified system, already, and then let's see what
11 the degradation will be further. Well, there's,
12 there's a problem there.
13 The second problem, and it really effects
14 TVA and the wisdom of doing this, at all, is that,
15 downstream, we've had to de-rate that is cut back on
16 the power generation from the existing nuclear plants,
17 because the river gets so hot in the summer.
18 Mother Nature is doing that, climate change
19 is doing that, and the existing plants on the river
20 that needs cooling water, both, both, fossil plants
21 and nuclear plants do that.
22 The difficulty is that, if you, you've now
23 added another reactor. That occurred during summers
24 before the Watts Bar 2 reactor began operation. So

1 you had a greater risk all the time that the river's
2 already going to, the Tennessee River system is not
3 going to be able to support the cooling demands.
4 And there's been some debate about, for
5 example, are we going to have to put an evaporated
6 coolant, which is, which we don't have at all the plants,
7 and in order to, in order to try to deal with some of
8 that.
9 But that's very expensive to go back and
10 take a cooling system and change it into a system that
11 also have evaporated cooling and doesn't just stuff
12 hot water right back into the river.
13 So I think the wisdom of another reactor
14 of any size on the, on the upper area, should looked
15 at and, and the example of what has happened to the
16 river and existing hot summers.
17 Plus, the, you know, outputs from Watts
18 Bar 2, ought to be factored in. And, and the EIS should
19 really address the, the fact that, that, with this
20 heating, there may actually be, you might get a, you
21 might get an operating SMR, at the price of getting
22 less out of Sequoyah, or less out of Watts Bar. That's
23 not going to be a very good tradeoff.
24 The accumulative impacts of the aquatic

1 ecosystem, because of the way we simplified the river
2 and already dump a lot of hot water into it, and the
3 other thing that a cooling system does, for an SMR,
4 like any other system, is to suck a whole lot of aquatic
5 organisms and you suck in, not only fish, but you suck
6 in fish eggs and other small aquatics.
7 And there are federal standards going into
8 place about these cooling water intakes and trying to
9 minimize that, but nothing minimizes the fact, you can
10 try to reduce it, but basically, you're going to wind
11 up with a system where you have these devices, these
12 big catchments in the river.
13 And, you're going to put screens on them
14 and you're going to put mechanical devices to scrape
15 all the dead bodies off the screens and that, I think,
16 is one of the, one of the real disasters, because it
17 simply further destroys the ecological value of the,
18 of the river to aquatic species. Now, let me point
19 out one other thing.
20 MR. CAMERON: And, Brian, could you just
21 wrap up for me, sir, please?
22 MR. PADDOCK: Yes, sir, I will.
23 MR. CAMERON: Thank you.
24 MR. PADDOCK: We were told, from the

1 beginning of this that an SMR is a manufactured, in
2 a plant, and then the reactor is transported to the
3 site and installed.
4 There is no place in the world that
5 manufactures reactors, small module reactors. Even
6 the Navy builds them one at a time, by hand, just like
7 we build all the big plants, and there is no system
8 to transfer these things to a site and drop them into
9 holes in the ground. So you're talking about a vision
10 of a whole new way.
11 And, at least, one analysis has been done
12 about whether there's a supply chain for a factory that
13 would need all these pieces and parts to come in to
14 be assembled to make the reactor that could be taken
15 out somewhere and dropped in the ground. Well, it turns
16 out, there's no such supply chain.
17 And the British had a special project to
18 see if somebody could figure out how to have a supply
19 chain and there's a problem with that, because the stuff
20 comes from all over the world.
21 And some of it comes from Germany, which
22 the President has declared war on. And some of it comes
23 from Japan, which the President has said, we're going
24 to put a 25 percent tariff on all your steel and, by

1 the way, they make the only steel containment for
2 nuclear in the entire world, nobody else does it.
3 So I join with those, who call for the final
4 EIS to call for the no action alternative. TVA has
5 not declared that it needs any power. And, in fact,
6 in the last 12 months, it has refused to buy wind energy
7 that was available at $.03 to $0.35 cents a kilowatt
8 hour.
9 It has refused to build any energy storage,
10 like pump storage, to store wind that it already buys
11 from the Midwest. It has refused to encourage small
12 scale solar and to be very tight and restrictive about
13 large scale solar.
14 And it's refused to run any kind of
15 operating energy efficiency programs. An agency like
16 that should not be talking about generating more energy
17 from a highly speculative source. Thank you.
18 MR. CAMERON: Okay, thank you. Thank you,
19 Brian. We're going to go to Donnie Safer, right now.
20 MR. SAFER: Thanks, Chip. I'm Don, I'm
21 Donnie Safer. I live in Nashville, Tennessee. I'm
22 on the Board of the Tennessee Environmental Council
23 and we are one of the interveners against this project
24 in the legal action.

1 I want to thank the NRC for this opportunity
2 to speak and for the public to hear a little about this
3 project and, at the same time, I want to make note of
4 how equally flawed this process is and, pretty much,
5 just a rubber stamp. And those of us that have followed
6 these processes through the years, I've never seen one
7 be denied.
8 And to hear the NRC say, and I've heard
9 it many times that they are not cheerleaders for the
10 nuclear industry. Unfortunately, the reality is not
11 so and, and I think it's political.
12 A lot of people that work at the NRC are
13 good people and have our best interest at heart, but
14 the politics behind this is very powerful pushing
15 forward this industry, at the expense of all of mankind.
16 I, too, support the no action alternative.
17 The early site permit process is, in general, highly
18 questionable for nuclear power projects, and I believe
19 in this case, it's caused people to get, sort of, relaxed
20 about participating.
21 Because, well, TVA's not made a decision
22 and they've said publically that they have no real
23 commitment to fund this project, or to go forward with
24 it, and they're just going forward with it, utterly,

1 because the Department of Energy, the 900-pound gorilla
2 in this process, is pushing them to do it.
3 The only other utility that's even thinking
4 about small modular reactors, at this time, is Utah
5 Associated Municipal Power Systems and that's in Idaho
6 Falls, another DOE facility, and they're having
7 trouble.
8 There, they have real democracy at play
9 in getting towns and cities that are part of the UN
10 system to approve that project and those towns and
11 cities are pulling out, because the economics do not
12 work.
13 And also, a lot of those people in southern
14 Utah, St. George, Utah, they're downwind of this. They
15 suffer from the effects of the atmospheric testing of
16 nuclear bombs and they saw their family members and
17 their livestock be deeply sickened by the radiation
18 that came over their, their farms and their homes, and
19 the DOE is having to retrench that project and back
20 it up more with more money and more support, because
21 it's flailing and fall, failing.
22 There is no NRC-approved small modular
23 reactor designed and there are many unresolved safety
24 and engineering questions about the front running

1 Nuscale design.

2 The early site process, really, shouldn't

3 even be considered for a first of a kind project like

4 this. It is true that small reactors were made and

5 they were first made, they were all small and they

6 couldn't make money doing it, so they made them large.

7 Now they're realizing, they can't make

8 money with large ones and they want to make them small

9 again. And the whole modular idea, the AP1000s from

10 Westinghouse that are being built in Georgia still,

11 but stopped in South Carolina and caused Westinghouse

12 to go bankrupt, those were modular reactors.

13 If you look them up, they were pushing them,

14 as having modular components and how it was going to

15 be revolutionary and a lot of the same public relations

16 language was being used. Those projects are just

17 certain failures.

18 And I will add that, TVA is supposed to

19 be the first of, utility in the country to build those

20 AP1000 and they made the decision to pull out of that,

21 and that was the best decision they ever made around

22 nuclear.

23 TVA has 13 cancelled reactors in their

24 history, $25 Billion dollars of debt that, it may -- I

1 haven't kept up with it, lately, but 13 cancelled
2 reactor projects. So for TVA, it's a drop in the
3 bucket.
4 This another wasteful program, $72 Million
5 dollars is being spent on this early site permit and
6 TVA is saying, well, they don't really, necessarily,
7 think they're going to build these, but they're going
8 to move forward.
9 DOE has spent about, and will spend, about
10 $450 Million dollars on this project. They really want
11 to see it move forward, but it's not in the ratepayer's
12 best interest, it's in, it may be in the best interest
13 of the DOE, but they shouldn't put that on our shoulders,
14 here in the Tennessee Valley.
15 No SMR in the U.S. will produce power before
16 2026, and if recent experience is any guide, it'll be
17 way after that. It took 40 years for Watts Bar 2 to
18 develop, to generate a single kilowatt of electricity.
19 By 2026 renewable energy, energy storage
20 technology should and could be widely deployed at far
21 less cost than nuclear and TVA should be making those
22 a priority, instead of actively working to stop them.
23 The SMR electricity is even now, without
24 the cost overrun, projected to be a lot more expensive

1 than the renewables and the cost overruns are going
2 to make it worse and worse and make it a worse and worse
3 field for homeowners, renters, and small business.
4 Light water SMRs, like the ones that TVA
5 is proposing, produces the same dangerous problematic
6 radioactive waste that is building up at all its current
7 reactors and it's, and they're going to produce high
8 burn up fuel, and if you don't know what high burn up
9 fuel is, just look it up.
10 They're running this fuel in the reactors
11 much longer than they used to and it's getting to be
12 much more radioactive in the process. And it's
13 compromising the cladding and the structure of this,
14 of the fuel, so it makes storing and it, plus it's hotter
15 and more radioactive and hotter longer.
16 So that waste, fuel waste should be
17 considered in the scoping comments, in terms of how
18 it's going to be dealt with for the tens of thousands,
19 literally, millions of years that has to be kept out
20 of the environment and I don't know that it's adequately
21 being addressed in the, in the EIS. I have to admit,
22 I haven't read all 773 pages.
23 SMR has won the Golden Fleece Award in 2013,
24 as one of the most, the most wasteful Government project

1 in the United States. That's still true. And, again,
2 this is, it's been mentioned by others, but this is
3 a make work project for, I believe, for TVA's nuclear,
4 nuclear division, which should be significantly
5 downsized.
6 And the NRC and what the NRC does, with
7 all due respect, is they have meetings and the NRC has
8 a Billion-dollar budget. And so a lot of people that
9 have meetings and you can attend their meetings by phone
10 literally every day of the week. And, again, I
11 appreciate being here, but a lot of times it seems like
12 it's perfunctory and, and the difficult questions are
13 not really being asked.
14 This Environmental Impact Statement has
15 leaps of faith, in terms of logic and in terms of
16 conclusions. Look on Page 7-41. The DEIS concludes
17 that the consequences of a severe accident would be
18 small, compared to risk at current generation reactors.
19 And I'll remind you that small, in the
20 presentation that we just saw, is little or no impact.
21 And little or no impact that was 150,000 people that
22 were evacuated. It's hundreds of billions of dollars
23 of financial impact on Japan.
24 Chernobyl brought the Soviet Union down,

1 the effects of Chernobyl. Not only did it kill
2 thousands of people, which was denied for many years,
3 so to say that, in any way shape or form, a serious
4 accident, the impact could be small, is only, they're
5 only able to do it, because they say the risk of one
6 of these accidents is so small that we can say the effect
7 will be small, but the effect, if we ever have an
8 accident, will be huge, if it's serious. And it --
9 MR. CAMERON: And, Donnie, can I get you
10 to wrap up for us, please?
11 MR. SAFER: I'll wrap up. I have a couple
12 of other things. And so on the cumulative impact, at
13 Oak Ridge there already is, and this is not my
14 information, this is from the Oak Ridge Site Specific
15 Advisory Board, there's already two million pounds of
16 mercury, 40 million pounds of uranium.
17 This is stuff that is out there in the
18 environment, hazardous organics, technetium 99 and the
19 disposal methods were shallow land burial for low level
20 and uranium waste, engineered landfills, pits, trenches
21 for liquid waste, direct disposal of liquid waste into
22 the Clinch River, disposal of reactive metals and
23 flooded quarries, deep well injection, hydro fracture,
24 where now they're doing hydro fracture to get the gas

1 out, in some cases.

2 So the cumulative impact on this area of

3 the nuclear industry should be factored in to the

4 Environmental Impact Statement. When the ash spill

5 happened here in Kingston, the reason they couldn't

6 dredge all of it up out of the muck was, the muck was

7 so severely contaminated with heavy metals, uranium,

8 and, and mercury. So thank you.

9 MR. CAMERON: Thank you, Don. Thank you

10 very much. Don is the last person that we had to sign

11 up to speak this afternoon, and we usually go to the

12 Senior NRC Manager to close the meeting for us and we

13 will be here tonight for, for all of you. And I was

14 going to ask, Rob Taylor, to, to close the meeting out

15 for us, the Division Director.

16 MR. TAYLOR: Thanks, Chip. So first and

17 foremost, I want to thank everybody for coming out this

18 afternoon. This is a good opportunity to hear your

19 perspectives and your comments.

20 As we indicated at the beginning of the

21 meeting, we transcribe this meeting so that we can take

22 those comments back and consider them, as we work on

23 the Draft Environmental Impact Statement.

24 So we'll take those and transcribe those

1 into the final Environmental Impact Statement and we
2 will take into consideration the comments that were
3 made today.
4 If I remember correctly, the comment period
5 closes on the 13th of July, so you have some time, if
6 you want to submit written comments, via the mechanisms
7 that Tami provided on her slide, as well as, if you
8 want to come back this evening and provide any
9 additional comments that you may have. We will
10 certainly transcribe that meeting and take those into
11 consideration, as well.
12 So we want to thank everybody for taking
13 this opportunity. This is a very important meeting
14 and an important part of our regulatory process, so
15 you taking the time today to come talk to us and express
16 your perspectives and your views is very important to
17 us.
18 And so I want to thank you and with that,
19 I'm going to adjourn the meeting. So thank you and
20 have a wonderful day.
21 (Whereupon, the above-entitled matter was
22 concluded at 3:49 p.m.)
23