



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 7, 2011

APPLICANT: Tennessee Valley Authority

FACILITY: Watts Bar Nuclear Power Plant, Unit 2

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – COMPLETE LIST OF COMMENTS,
SUGGESTIONS, AND STAFF RESPONSES CONDENSED FROM THE
OCTOBER 6, 2009, PUBLIC SCOPING MEETING

On October 6, 2009, a Category 3 public meeting (two sessions) was held between the U.S. Nuclear Regulatory Commission (NRC) and interested public at the Magnuson Hotel, 1421 Murrays Chapel Road, Sweetwater, Tennessee 37874. The purpose of the meeting was to present an overview of the environmental review process for Watts Bar Unit 2 operating license application and to obtain public comments regarding the scope of the environmental review.

Scoping meeting attendees provided either written statements or oral comments that the NRC recorded and a certified court reporter transcribed. In addition, during the scoping period, the NRC received four letters and five emails providing comments on the proposed action. The meeting summary was issued on October 21, 2009, and is available electronically from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System under accession number ML092880764.

The attached enclosure provides a complete list of the scoping period comments and suggestions along with applicable staff responses.

Please direct any inquiries to me at 301-415-6715 or Bruce.Bavol@nrc.gov.

A handwritten signature in black ink, appearing to read "Bruce Bavol", is positioned above the typed name.

Bruce Bavol, Project Manager
Watts Bar Special Projects Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosure: Scoping Period Comments and Suggestions

cc w/encl: See next page
Additional Distribution via Listserv

Letter to Tennessee Valley Authority from Bruce Bavol dated September 7, 2011.

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**WATTS BAR NUCLEAR PLANT, UNIT 2 – COMPLETE LIST OF COMMENTS,
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PUBLIC SCOPING MEETING**

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Scoping meeting attendees provided either written statements or oral comments that the NRC recorded and a certified court reporter transcribed. In addition, during the scoping period, the NRC received four letters and five emails providing comments on the proposed action. The staff considered all comments and suggestions received.

The meeting summary was issued on October 21, 2009, and is available electronically from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS) under accession number ML092880764. ADAMS documents can be found at <https://www.nrc.gov/reading-rm/adams.html>.

The following selection of public comments has been broken down into two categories:

- 1) Public comments that are covered in the supplemental final environmental statement (SFES) (equivalent to an environmental impact statement [EIS])
- 2) Public comments concerning issues that are outside the scope of review

Table A-1 identifies the individuals providing comments in alphabetical order; their affiliation, if given; the ADAMS accession number that can be used to locate the correspondence; and the correspondence identification number (ID). Table A-2 identifies individual comments covered in the SFES and those comments outside the scope of review.

Table A-1. Individuals Providing Comments During the Comment Period

| Commenter | Affiliation (if stated) | Comment Source and ADAMS Accession # | Correspon- dence ID |
|--------------------|---|---|--------------------------------|
| Burris, Shane | Monroe County | Meeting Transcript (ML092870331) | 0003 |
| Cobb, Jim | Tennessee House District 31 | Meeting Transcript (ML092870331) | 0003 |
| Curran, Diane | Harmon, Curran, Spielberg & Eisenberg, LLP | Letter (ML093080581) | 0010 |
| Gottfried, Yolande | | Letter (ML093090656) | 0008 |
| Harris, Ann | | Meeting Transcript (ML092870331) | 0003 |
| Harris, Ann | | Meeting Transcript (ML092870338) | 0004 |
| Howe, Tyler | Eastern Band of Cherokee Indians | Letter (ML092860591) | 0006 |
| Jennings, Mary | U.S. Fish and Wildlife Service | Letter (ML092930182) | 0005 |
| Jones, Ken | Meigs County | Meeting Transcript (ML092870338) | 0004 |
| Kurtz, Sandy | | Meeting Transcript (ML092870338) | 0004 |
| Mastin, Mary | | Meeting Transcript (ML092870331) | 0003 |

| | | | |
|----------------|---|----------------------------------|------|
| McCluney, Ross | BREDL | Meeting Transcript (ML092870331) | 0003 |
| Paddock, Brian | Sierra Club, Tennessee Chapter | Meeting Transcript (ML092870331) | 0003 |
| Reynolds, Bill | | Meeting Transcript (ML092870331) | 0003 |
| Reynolds, Bill | | Meeting Transcript (ML092870338) | 0004 |
| Safer, Don | | Email (ML093060311) | 0013 |
| Safer, Don | | Meeting Transcript (ML092870331) | 0003 |
| Smith, Stewart | | Meeting Transcript (ML092870338) | 0004 |
| Yager, Ken | Tennessee Senatorial District 12 | Letter (ML093090655) | 0007 |
| Zeller, Lou | Blue Ridge Environmental Defense League | Letter (ML093080360) | 0015 |
| Zeller, Lou | Blue Ridge Environmental Defense League | Meeting Transcript (ML092870331) | 0003 |

Enclosure

Table A-2
Category No. 1
Public Comments that are Covered in the Supplemental Final Environmental Statement
(SFES) (Equivalent to an EIS)

Comment: The Organizations [Southern Alliance for Clean Energy, the Sierra Club, Blue Ridge Environmental Defense League, Tennessee Environmental Council, and We the People] respectfully submit that the EIS should consider, at a minimum, the environmental concerns raised in their hearing request to the NRC, which is now pending before the Atomic Safety and Licensing Board. (0010 [Curran, Diane])

Response: *When preparing the SFES, the NRC staff will consider concerns expressed by commenter's that are within the scope of the environmental review.*

Comment: Given all those concerns and the fact that things have certainly changed since 1978, when the first Environmental Impact Statement was done and those supplements in 1995, I think NRC should recommend to TVA that they start all over with a new, from ground zero, Environmental Impact Statement. (0004 [Kurtz, Sandy])

Comment: The National Environmental Policy Act requires that before undertaking a major federal action, an agency must take a "hard look" at the environmental consequences of the action (Baltimore Gas and Elec. Co. v. Natural Resources Defense Council, Inc., 462 U.S. 87, 97 (1983)). Where an agency has not yet taken the major federal action, it must consider "new and significant information" that bears on the environmental impacts of the proposed action [Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 371-72(1989)]. Also, federal regulations require supplementation where the proposed action has not been completed, if: "(1) there are substantial changes in the proposed action that are relevant to environmental concerns; or (2) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." [10 C.F.R. 51.92(a)] The environmental effects of the two side-by-side Watts Bar facilities raise the issues of segmentation and cumulative impacts. (0015 [Zeller, Lou])

Response: *The commission expects the staff to take the requisite "hard look" at new information on the need for power and alternative sources of energy and has authorized the staff to supplement the SFES if there is new and significant information relevant to these matters. The NRC staff will prepare the SFES in accordance with NEPA and 10 CFR Part 51. The analysis will address the environmental effects of operating the proposed WBN Unit 2.*

Comment: I am really concerned about the water quality in the Tennessee River, and I think that as TVA goes forward with this

Environmental Impact Statement, they are going to be required to take a hard look at the new information on water quality, discharges of heavy metals, and serious long-term consequences from the Kingston coal ash spill. (0003 [Mastin, Mary])

Comment: Please, as you go forward with the environmental work on this, consider the water quality and the new information -- I mean, not only is there -- are there sediments on the bottom where the Clinch River comes into TVA, coming down from Oak Ridge, there apparently is some other stuff from some old paper mill or lumbering operations; there has been a huge concern about doing that very carefully. (0003 [Mastin, Mary])

Response: *Operating a nuclear plant involves discharging some effluents to nearby water bodies. The Clean Water Act designated the U.S. Environmental Protection Agency (EPA) as the Federal agency responsible for regulating effluent discharges to the Nation's waters. Although the NRC does not regulate effluents, it is responsible under NEPA to assess and disclose the expected impacts of the proposed action on water quality throughout the plant's life. The staff will assess water quality issues related to operating the proposed WBN Unit 2. Chapter 4 of the SFES will present the NRC staff's assessment of the nonradiological impacts to water quality. Chapter 4 will also address any cumulative effects of the proposed action.*

Comment: There's a whole lot of assumptions about what's a normal condition in the river and what's a normal year, and I think if you've noticed, the last decade we've seen increasing changes, perhaps due to climate change, where the definition of what's normal needs to be re-examined. (0003 [Paddock, Brian])

Comment: Operating Watts Bar 1 nuclear plant requires 188.2 million gallons per day of water drawn from the river. Each day, of that amount, 14.3 million gallons is evaporated into the air, not returned to the river. Yet another reactor, a second reactor here, drawing out so much water causes me to ask how much can we draw out of the river on any given day in the same reservoir. (0004 [Kurtz, Sandy])

Comment: The Tennessee River is already overstressed and does not need additional warm water discharge and water lost from evaporative cooling. (0008 [Gottfried, Yolande])

Response: *Nuclear plants consume water due to the evaporation of some of the water used to cool plant components. The NRC staff will address the impact of consumptive water losses on the sustainability of local and regional water resources. Although the NRC does not regulate or manage water resources, it is responsible, under NEPA, to assess and disclose the impacts of the proposed action on water resources. Chapter 4 of the SFES will assess impacts on water resource sustainability related to operating the proposed WBN Unit 2*

Comment: The second point in the scope of the environmental assessment is that there's an interaction here, because the State of Tennessee has just released the draft NPDES, National Pollution Discharge Elimination System, permit for the Watts Bar nuclear

plant. That seems to be talking just about Unit 1, but in fact the way TDEC has written the draft permit, it's not clear if you could turn the switch on Watts Bar 2 if it were ready and use that same permit. And there are a number of defects and concerns specifically with that permit. We're going to talking with TDEC about this, and the time for public comment has been extended, so that permit is probably not going to be coming down the road until early next year, at the best, but here are some of the difficulties: And we're assuming -- and I think TVA asserts this in their comments on the NPDES -- that the phase 2 regulations don't apply here; that the content of this permit under Section 316 is remitted to TDEC in terms of its best professional judgment. That could change if EPA puts the phase 2 regulations back into effect following the most recent Supreme Court decision. But right now it's up to TDEC, and there are limitations in both the Clean Water Act and in the state regulations. One of the main problems is that most of the environmental information that TVA brought to TDEC for the renewal and extension of the NPDES for the nuclear plant basically was ten and twelve years old. (0003 [Paddock, Brian])

Response: *The NRC staff will discuss current surface water quality in Chapter 2 of the SFES and impacts from operating the proposed WBN Unit 2 in Chapter 4. TVA has indicated in its application that the discharge from WBN Units 1 and 2 will meet discharge limits stated in the current National Pollutant Discharge Elimination System (NPDES) permit. The NRC staff will consider discharge limits in its evaluation of impacts on the Tennessee River.*

Comment: There is, we think right now, a clear failure of TVA with respect to the NPDES, and we think if they were held to this in the EIS for the additional thermal impacts from Watts Bar 2, that they simply have not been able to show that they won't violate the water quality criteria. They don't provide data on the drift community, the spacial or temporal distribution of the plankton in the mixing zones. The mixing zones, by the way, according to the diagram, as I read it -- and I admittedly am no expert on this -- seem to be substantially larger. And by the way, the initial mixing zone in the renewed permit that's proposed actually goes border to border in the river. There is no way for aquatic life to go down the river without being in either what essentially is a dead zone immediately next to the discharges or on the cooler but active side of the river where they would have impacts. (0003 [Paddock, Brian])

Response: *The NRC staff will consider water quality impacts from operating the proposed WBN Unit 2 on the Tennessee River, including the effects of thermal discharge on aquatic life. Chapter 4 of the SFES will present results of this analysis.*

Comment: As was mentioned earlier, you now have operating six nuclear plants plus one thermal plant on the same river system, and you're now about to add a seventh, and the cumulative impacts of this amount of cooling water, cooling water loss from evaporation, thermal -- cumulative thermal effects and so forth, needs to be looked at. TVA has already experienced the situation where, during summer peaks, it had to derate downstream nuclear plants. Building another one toward the top of the river system, when it simply, as a consequence of the thermal discharge, will then have to shut down the plants lower on the river system during the hottest times of the peak loads, is not going to make any sense at all. So TVA may have run out of running room in terms of thermal discharges. Let's identify that now before we go ahead and license this plant. In fact, let's make sure that we do it in such a way that those of us who are ratepayers don't wind up for another white elephant that's never licensed to operate. (0003 [Paddock,

Brian])

Response: Chapter 4 of the SFES will address consumptive use and water quality impacts on the Tennessee River, including the thermal impacts of discharge to the Tennessee River, from operating the proposed WBN Unit 2. Chapter 4 also will present cumulative impacts to the Tennessee River from operating WBN Units 1 and 2 and other facilities.

Comment: The Tennessee River is stressed already -- the quality of the river. It has fish that are not safe to eat. There is the impact of the Kingston toxic fly ash spill which must be taken into consideration when assessing water quality, because we all live downstream. (0004 [Kurtz, Sandy])

Response: Chapter 4 of the SFES will address impacts on Tennessee River water quality from operating the proposed WBN Unit 2. Chapter 4 also will present cumulative impacts to the Tennessee River from operating WBN Units 1 and 2 and other facilities.

Comment: I am very afraid that we are killing the aquatic life in the Tennessee River and that the thermal discharges from Watts Bar 1, Watts Bar 2, then you go down to Nickajack or Sequoyah, and Nickajack, you start up there where Oak Ridge -- there are still sediments with radionuclides -- I don't know the technical language on this, but I know that TDEC and EPA and TVA have been very concerned about the dredging as they are trying to clean up the Kingston coal ash spill and not getting down to the bottom and stirring up all of this really terrible stuff that's there. (0003 [Mastin, Mary])

Comment: I'm working with scientists who have talked to us about the discharges from selenium; you got arsenic and mercury; you got heavy metals; you've got fragile fish; you've got mollusks. You have got a whole downstream river system and people who are dependent on your doing this with a great amount of care. (0003 [Mastin, Mary])

Response: The NRC staff will address the cumulative impact on the aquatic biota in the Tennessee River in Chapter 4 of the SFES. The staff will consider thermal discharges from facilities, including WBN Unit 1, Sequoyah Nuclear Plant, and Kingston Fossil Plant, as part of the cumulative impact analysis. The staff also will discuss water quality issues related to radionuclides and heavy metals that exist in river sediments as a result of past operations at Oak Ridge, and the Kingston coal ash spill and subsequent cleanup activities.

Comment: There are a lot of questions with respect to the mortality of mussels downstream, even though TVA has spent a good deal of effort over the years relocating mussels. I'm not sure when we started rebuilding natural populations in different places in order to allow this kind of project to go forward, but it seems to me that the impact on mussels and the impact of mussel relocation needs to be documented currently. (0003 [Paddock, Brian])

Response: *The NRC staff will assess the impacts of operating the proposed WBN Unit 2 on the aquatic biota in the Chickamauga Reservoir including any plans for future relocation of mussels and impacts from relocation. Chapter 4 of the SFES will address impacts on aquatic biota from operating the proposed WBN Unit 2.*

Comment: The temperature of the water returned is hotter, not good for aquatic life, and in droughts it can't be cooled enough and so has to be shut down, just as has happened summer before last, I think it was. (0004 [Kurtz, Sandy])

Response: *Chapter 4 of the SFES will address impacts on the aquatic biota in the Chickamauga Reservoir from thermal discharges from the proposed WBN Unit 2.*

Comment: So the point I'd like to make in response to my enormous sympathy to the economic problems of the area, and the mention of jobs in solid-state and other areas, is that renewable energy is a really labor-intensive operation, so that your intensive worker group that comes in to build the nuclear power plant, usually from outside the region, most of those leave when the plant is built, and a moderately small task force remains. Whereas if you instead focused on attracting some of this new technology development and factories, you could build up this region enormously, building and making environmentally benign technology to provide what electricity is needed. (0003 [McCluney, Ross])

Comment: Our unemployment rate in Monroe County right now is over 16 percent, so we would like to see jobs from that plant as it is being constructed and then once it's completed. (0003 [Burris, Shane])

Comment: Also, if they run out of money, there are provisions in the technical specifications to shut the plants down and put them in a safe condition so the public is not threatened. That being said, I really admire Mr. Burris for the comments he made about the economic impact this will have on our area, but I can tell you that the Nuclear Regulatory Commission does not have compassion at the level that they're really concerned about jobs. (0003 [Cobb, Jim])

Comment: So anyway, the green economy is how we're going to get back, and part of that green economy is to learn how to reintegrate our rural areas, our smaller towns with our urban centers and create the -- you know, in Nashville people are nuts about local produce. There's a whole industry of local growers that is growing up all around Nashville, and people are making a living at it. It's hard work; it's honest work. You get your fingernails dirty, but it's just an old-fashioned way to do it. And, you know, getting back to more locally based economies with an eye toward creating jobs in our rural counties is definitely something that we need to do, but these nuclear plants don't create very many jobs after construction. (0003 [Safer, Don])

Comment: The project will generate thousands of jobs during construction period and 250 permanent jobs in a region characterized by double digit unemployment. (0007 [Yager, Ken])

Response: Chapter 4 of the SFES will address regional socioeconomic impacts of the proposed action, including impacts to the local economy, employment, transportation, aesthetics and recreation, housing, education, community infrastructure, and social services.

Comment: [A]s an economic developer in the state of Tennessee, most economic developers know that the United States and the state of Tennessee's manufacturing base runs on cheap power. And if your cap and trade bill passes in Congress, the electric bill will go up about 300 percent, and also that will end manufacturing in this country as we know it, and we will only be one mass distribution center. (0003 [Burris, Shane])

Comment: Our community is suffering economically, and it's important for future economic development and the future health of our community that we have reliable -- cheap, reliable power so that we can continue to bring industry in to this community. (0004 [Smith, Stewart])

Response: The price of electricity is outside the regulatory scope of licensing actions; however, the NRC staff will evaluate the regional socioeconomic impacts of the proposed action in Chapter 4 of the SFES, including impacts to the local economy, transportation, aesthetics and recreation, housing, education, community infrastructure, and social services.

Comment: The Tribal Historic Preservation Office of the Eastern Band of Cherokee Indians is in receipt of the notification to act as a consulting party for the above-referenced project information and would like to thank you for the opportunity to comment on this proposed Section 106 activity. The EBCI THPO accepts the invitation to act as a consulting party on the above referenced Section 106 undertaking(s) as mandated under 36 C.F.R. 800. (0006 [Howe, Tyler])

Comment: The project's location is within the aboriginal territory of the Cherokee People. Potential cultural resources important to the Cherokee people may be threatened due to adverse effects expected from the level of ground disturbance required for this project. (0006 [Howe, Tyler])

Comment: Please send all related archaeological, cultural resource and historical investigatory materials, completed by the applicant to this office for review so we can make proper comments that pertain to accomplishing our NHPA requirements. (0006 [Howe, Tyler])

Response: As outlined in 36 CFR 800.8, "Coordination with the National Environmental Policy Act of 1969," and Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), the NRC will fulfill the requirements of NEPA and NHPA by consulting with and requesting input from the Eastern Band of Cherokee Indians. Chapters 2 and 4 of the SFES will provide historic and cultural resources information. The NRC will consult with the Eastern Band of Cherokee Indians to identify cultural resources

important to the Tribe to avoid or minimize any potential adverse effects to historic properties from this undertaking.

Comment: Talking about a community, I don't see you taking this up to Farragut and putting the nuclear plant in the middle of Farragut, where the houses all cost like \$750,000 or 2 or 3 million. (0004 [Harris, Ann])

Response: *Chapter 4 of the SFES will specifically address potential impacts of the proposed action on low income and minority populations.*

Comment: Nuclear plants do have radioactive leaks into the water, which they say is insignificant, but since radiation is cumulative, how much is too much for humans and other life to absorb without health impacts? (0004 [Kurtz, Sandy])

Comment: The sources of the contamination include leaks from pipes and vales and other water-bearing components and airborne discharges from cooling towers. These radioactive discharges are difficult to quantify and may be underestimated. (0015 [Zeller, Lou])

Response: *The NRC staff will evaluate the release of radioactive materials into the environment from WBN Units 1 and 2. Chapter 4 of the SFES will address the cumulative impacts from releases of radioactive effluents from WBN Units 1 and 2.*

Comment: I think as -- since this reactor was proposed in the '60s, designed in the -- or licensed in the '70s, we had a lot of opportunity to have all these nuclear plants that have been operating. And I haven't seen any public health studies about the communities that are downwind, you know, with the windrows of where the wind blows, and if it's true that nobody is getting sick, that their cancer rates and leukemia rates are not elevated, wonderful; I would love to see it. But I haven't seen it. I've looked for it. It's not easy to find. I think in this Environmental Impact Statement we need to have a clear study of Watts Bar 1; Sequoyah, the two units, and -- well, in particular those three, because they're the same design of reactor. (0003 [Safer, Don])

Comment: I read of a study completed in Germany. Since 1991 in fact they have done several studies in Europe regarding the health of children who live within ten miles of nuclear facilities, primarily in England and Wales. And what they found out was that there was a statistically significant increased incident rate -- I want to say that right, because these are studies -- significant increased incident rate for leukemia's among children within the five-kilometer zones around the sites. That is, the closer -- and it seemed that the closer you got to the plant, the more -- the higher the incidence. This is of great concern and I think should be looked into before we add another reactor. (0004 [Kurtz, Sandy])

Comment: I know that the lady before me made mention of a high incidence of leukemia within a close proximity of the plant. I'm somehow unaware of that. We have children in Meigs County -- I have a son that grew up in Meigs County, went to high school in

Meigs County, and I've never heard of a high incidence of leukemia; that's -- but I will investigate that to see if there are. (0004 [Jones, Ken])

Comment: I was born and raised in Meigs County, but I won't live there anymore. There's more to radiation exposure than cancer, and there's a lot of it. (0004 [Harris, Ann])

Response: *These comments refer to health effects to populations around nuclear power plants. The NRC's primary mission is to protect the public health and safety and the environment from the effects of radiation from nuclear reactors, materials, and waste facilities. The NRC's regulatory limits for radiation protection are set to protect workers and the public from the harmful health effects of radiation on humans. The limits are based on the recommendations of standards-setting organizations. Radiation standards reflect extensive scientific study by national and international organizations. The NRC has reviewed a number of studies that looked at the incidence of cancers in the vicinity of nuclear power plants in the United States. The studies did not observe a correlation between the radiation dose from nuclear power facilities and cancer incidence in the general public. Some studies the NRC recognized include those conducted by the following organizations: the National Cancer Institute, the University of Pittsburgh, the Illinois Public Health Department, the Connecticut Academy of Sciences and Engineering, the American Cancer Society, and the Florida Bureau of Environmental Epidemiology. Chapter 4 of the SFES will evaluate the impacts to human health from radioactive emissions.*

Comment: You don't have -- there's no water testing in this river of radionuclides by an outside source. That's according to TDEC's own mouth. That's not my opinion. They trust TVA. Well, we trusted TVA up at Kingston. There's tritium in the soil and the water, above legal limits. It's sitting there, and nobody's doing anything about it; you're just pumping more. And this idea that tritium won't hurt you -- why do we use it to make bombs go off faster than what they did when just a normal bomb? There's no wastewater program to stop the radionuclides going into the Chattanooga and others' drinking water. (0003 [Harris, Ann])

Comment: There is also -- there is radiation already in the river sediment, and another nuclear reactor will only add more. Nuclear plants put radionuclides in the water that no one tests for. (0004 [Kurtz, Sandy])

Comment: The NRC -- when you go to the website, look up the word tritium, and you go down through there, and you go and see what all the things are. There's a statement there -- it's very short; I think it's got -- I'll count them in a minute -- like a dozen words in the statement. The NRC does not believe that there's any safe level of exposure to radiation. (0004 [Harris, Ann])

Comment: We respectfully submit that the EIS should consider the issue of tritium releases into the Tennessee River by the proposed reactor. (0013 [Safer, Don])

Comment: Nuclear power plants generate tritium in the course of their operation and release it both to the atmosphere and to water bodies. Tritium releases have also occurred as a result of malfunctions. (0013 [Safer, Don])

Comment: Tritium, a radioactive form of hydrogen . . . combines with oxygen to make radioactive water. As radioactive water, tritium can cross the placenta, posing some risk of birth defects and early pregnancy failures. Ingestion of tritiated water also increases cancer risk. (0013 [Safer, Don])

Comment: Tritium releases generally constitute the largest routine releases from nuclear power plants and as such have caused widespread contamination of water bodies at low-levels. (0013 [Safer, Don])

Comment: All of this is particularly relevant to public health issues considering the widespread usage of the water from the Tennessee River especially as the municipal drinking water supply downstream in Chattanooga. (0013 [Safer, Don])

Comment: The NRC must include in its SEIS the impacts of tritium emissions from both Watts Bar Unit 1 and Unit 2 upon the environment and public health. (0015 [Zeller, Lou])

Comment: Tritium releases are the largest routine radioactive emissions from nuclear power plants. The chemical compound H₂O with a radioactive H₃ (Tritium) is virtually impossible to contain because nuclear plants are thermoelectric units which rely upon the heating of water to drive steam turbine-powered electric generators. (0013 [Safer, Don])

Comment: Nuclear power plants contaminate the water bodies used for cooling water. Watts Bar Unit 2, like Unit 1, would be cooled by cooling towers drawing makeup water from Chickamauga Reservoir. The contamination of the area surrounding Watts Bar is as follows [Annie Makhijani and Arjun Makhijani, Science for Democratic Action Vol. 16, No. 1, August 2009 (Sources by plant from Annual Radiological Environmental Operating Reports for 2006. Sourcelink at <http://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-info.html>):

| | Drinking water | Surface Water |
|----------------------|----------------|---------------|
| Picocuries per liter | 606 | 588 |

These levels of tritium contamination of drinking water and the river are found 24 and 9.9 miles from the Watts Bar reactor, respectively. They are excessive and harmful to human health. (0015 [Zeller, Lou])

Comment: That tritium emissions are released to the environment is well known and even acknowledged in NRC "lessons learned" documents. At minimum, the NRC must account for these releases in its EIS. Further, the agency should undertake a top to bottom review of its monitoring and control of tritium emissions. (0015 [Zeller, Lou])

Response: *The NRC staff will review and evaluate the monitoring for radionuclides in the environs around the WBN plant and the Tennessee River. Chapters 2 and 5 of the SFES will address radiological monitoring of all pathways, including water. Chapter 5 also will discuss tritium monitoring at the WBN site. Chapter 4 will present results from the radiological monitoring and any potential*

environmental impacts.

Comment: Tennessee Valley Authority is irradiating Tritium-Producing Burnable Absorber Rods (TPBARs) for the U.S. Department of Energy (DOE). The production of radioactive tritium for defense purposes is authorized by License Amendment No. 48 issued October 8, 2003. However, the tests conducted during the sixth cycle of irradiation revealed disturbingly high levels of tritium to the reactor coolant system outside of acceptable limits; in fact, the emissions were 9.6 times higher than predicted by TVA's analytical model. (0015 [Zeller, Lou])

Comment: The questions which NRC must address are: (1) How were predictions by TVA and DOE nearly an order of magnitude too low? (2) What was the impact upon the local environment caused by the unexpected excess before it was discovered? (3) What are the implications for Watts Bar Unit 2? (4) What evidence do we have that TVA's predictive analysis is now reliable? (0015 [Zeller, Lou])

Response: *This comment is related to tritium production from WBN Unit 1 and is not within the scope of the environmental review for the proposed WBN Unit 2. However, the cumulative impacts from the releases (including tritium) from WBN Unit 1 will be considered and addressed in Chapter 4 of the SFES.*

Comment: And the situation, as I understand it, in the environmental assessment that's being done right now is that indefinite on-site retention of spent fuel is proposed. So I hope you folks locally are prepared to take care of this stuff for at least a quarter of a million years, because with respect to spent fuel, it's pretty clear that Yucca Mountain is dead. I'm not sure exactly the state of the post mortem and rites, but it appears that the federal government is not going to invest more in the development of that site, and no other site has as yet been suggested even as a possible target. (0003 [Paddock, Brian])

Comment: TVA, of course, has no right, even if Yucca Mountain were to open, to send the waste from Watts Bar 2, as I understand it, to that repository, even if it were to open, and it simply has, as far as I can see, no real plan other than just keep stacking it up locally. (0003 [Paddock, Brian])

Comment: I'm going to start by going into the storage casks -- the spent-fuel storage casks that are being placed by the river right now. They're going to be placed there with greater frequency if this second plant goes on line. (0003 [Safer, Don])

Comment: I think it's important to know that inside of those casks the radiation is far worse than what went in. The radionuclides in there, there's plutonium, which didn't even exist on the face of the earth until we started fooling with the atom 60, 70 years ago, and that's one of the most awful substances on the face of the earth. It is bomb-making material, but one atom of that that gets into your lungs, if it gets airborne, will give you lung cancer; it will kill you. It burns on contact with the air, spontaneously. It's sitting in there. (0003 [Safer, Don])

Comment: It's not a whole big lot of plutonium in there; that's why reprocessing is such a nightmare, because to get enough plutonium to make it work, you've got to create a lot of other waste. But inside of there is just this cauldron of about 500 degrees -- it's too hot at the beginning, for the first five years, to put these fuels rods into these dry casks; they have to be put into the storage pools, which are overloaded currently and have had to be modified because of the lack of any real storage solution. And then after five years they go into these concrete-steel dry cask storage that are not hardened, and they are out -- I've seen them at Browns Ferry; they are just out in the open. (0003 [Safer, Don])

Comment: [I]n those casks, that cauldron of 500-degree Fahrenheit radioactive material that's 1000 or 100,000 times more radioactive than the original fuel rods is doing who knows what. I mean, I asked -- I've forgotten your name, but I asked three gentlemen from the NRC earlier today, in private, or in a conversation at the open house, What's going on inside of those casks? Has anybody taken one of those apart after ten years? To my knowledge, nobody has, and what I've heard is that it's all sort of, you know, just kind of decomposing. Nothing stays the same. You put it in there, and its 500 degrees of boiling radioactive science experiment. And they were supposed to last for about or 30 years at first; now they're saying, well, they'll go for 50 and probably a hundred. Well, it's your community here that is the guinea pig on this, as well as the community at every other nuclear reactor site, because that's what's happening with all of these; there's no plan at all to move them away from your community, and these things, as Mr. Paddock said, they remain toxic for literally several hundred thousand years. (0003 [Safer, Don])

Comment: [T]hey [nuclear plants] leave these legacy of these storage casks that our grandchildren, our great-grandchildren and those beyond that will not remember us will curse us for those storage casks.

Comment: [T]here is the storage of radioactive waste and the legacy it leaves for the future; there is no solution now, and we hear people say, We're going to figure it out. They've been working on it for a long time, and so far we actually seem to be going backwards. Yucca Mountain is closed and, in fact, if it were open, it would be immediately filled up, as I have heard, because we've already stored enough to fill it up. Where does our radioactive waste go? (0003 [Safer, Don])

Comment: Somehow somebody's got to start stopping and looking, because you haven't dealt with the waste. (0004 [Harris, Ann])

Comment: There is still no solution to the problem of storing nuclear waste. (0008 [Gottfried, Yolande])

Response: *The NRC evaluated the safety and environmental effects of long-term storage of spent fuel and, as set forth in the Waste Confidence Rule at 10 CFR 51.23 (available at <http://www.nrc.gov/reading-rm/doc-collections/cfr/part051/part051-0023.html>), the NRC generically determined that "if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century and sufficient repository capacity will be available within 30 years beyond*

the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in any such reactor and generated up to that time." On October 9, 2008, the NRC published for public comment a proposal to amend its generic determination of no significant environmental impact for the temporary storage of spent fuel after cessation of reactor operation codified at 10 CFR 51.23(a) (73 FR 59547) and a related update and proposed revision of its 1990 Waste Confidence Decision (73 FR 59551). Chapter 4 of the SFES will address the impact of the uranium fuel cycle, including disposal of low level radioactive waste and spent fuel.

Comment: And some people have said that the electricity you get from the nuclear reactor is not really the primary component or the primary outcome; it's really all this nuclear waste, because the electricity you generate, we use it or we don't, and it's gone. (0003 [Safer, Don])

Response: According to 10 CFR 51.95(b), the SFES, which is a supplement to the FES-OL, will only cover matters regarding radioactive waste material (low-level, high-level, and transuranic wastes) that differ from the FES-OL or provide significant new information concerning issues discussed in the FES-OL. Chapter 4 of the SFES will discuss issues related to radioactive waste management.

Comment: [T]he Watts Bar Lake area already is highly polluted, particularly at the junction with the Clinch River and is already a designated Superfund site. And I have not had a chance to review the documents, but it's not clear to me that the -- what happened - - if there's any mobilization of those upstream legacy sediments from that Superfund site and moving down into the cooling-water intakes for this plant. The same thing is true with respect to the coal ash spill, because we've already seen the coal ash migrate during high-water events. They now they're going to get it out of there by -- worst of it out of there by next year, but they also say there won't even be the phase 2's plan for getting some of the rest of it cleaned up until next year. To the extent that those heavy metals are in solution, are in compounds and can travel freely with the flow of the river, you essentially have a different condition in the river at the point that you hit the cooling-water intakes, and we're not sure that the environmental assessment at this point has recognized that condition and has looked at the consequences of having heavy metals in solution in larger proportions at the point of intake and discharge from the cooling water. (0003 [Paddock, Brian])

Comment: These proposed [tritium] releases should be considered as an addition to the existing releases from Watts Bar Unit 1 which have been increased by the production of weapons grade tritium for the DOE. (0013 [Safer, Don])

Comment: The requirements of NEPA may not be avoided by segmentation of a project [River v. Richmond Metropolitan Authority, 481 F.2d 1280 (4th Cir. 1973)]. Segmentation arises when the comprehensive environmental impact of a project is not given full consideration or that analysis of the impact is done after permitting agency decisions are made and the project is underway [Daniel R. Mandelker, NEPA Law and Litigation, 9-25 (2nd ed. 2004)]. The principal criteria for the determination segmentation are whether the parts of a project are interdependent, the original intent and whether the parts may be considered alone. Watts Bar Units 1 and 2

are co-located facilities. They share certain structures, systems and components. Cumulative actions are those which have significantly greater impacts when viewed with other actions or which have increasing effect caused by successive additions. Council of Environmental Quality Regulations Implementing NEPA [Sec. 1508.7 Cumulative impact. "Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time provided that reasonably foreseeable future actions are to be considered in a cumulative impact analysis. The consecutive licensing of Watts Bar Units 1 and 2 in close proximity are actions which are plainly foreseeable. Therefore, NRC must account for the combined impact of Watts Bar Units 1 and 2 in its EIS. (0015 [Zeller, Lou])

Response: *The NRC staff determines cumulative impacts by evaluating results from the proposed action in combination with other past, present and reasonably foreseeable actions, regardless of who takes the actions. The NRC staff will evaluate cumulative impacts associated with operating the proposed WBN Unit 2 for each affected resource. Chapter 4 of the SFES will present the results of cumulative impact analyses.*

Comment: So my concern is that there are lots of moves afoot to reduce our needs for electricity in the Tennessee Valley and around the country that aren't really addressed in TVA's Environmental Impact Statements, that I've been able to find. In particular, I'll refer to sections relating to alternatives, alternatives to building the plant. And sometimes TVA will put a little bit in about that, in other cases, so I searched the most recent Environmental Impact Statement prior to this meeting, and what I found was a statement that referred back to that 1995 -- December 1995 earlier Environmental Impact Statement for finding something about alternatives. (0003 [McCluney, Ross])

Comment: We don't know -- because I couldn't find that document -- whether those alternatives were just alternatives to the design of the plant, alternatives to mitigate environment impact, or whether it actually included alternative power sources or other options for reducing the need for the plant in the first place. So I believe TVA is fairly deficient in that area. Even if the 1995 report addresses the subject, a whole lot has happened since then, in 14 years. There's been an enormous amount of research, development, and promulgation of energy-efficient technology and renewable energy choices. It doesn't take a particularly astute observer to know about a lot of this. If you watch TV, and especially if you go to the science channels -- Discovery, National Geographic, and these channels -- if you read the paper, read magazines, you'll see about this, because everybody's excited about these relatively pollution-free or somewhat benign alternatives -- energy alternatives. (0003 [McCluney, Ross])

Comment: Millions and even billions of private money have been spent to explore, develop and actually commercialize an enormous variety of technologies we still don't know too much about unless you really dig in. A good -- some good searches on the internet will reveal a lot of this technology, a lot more about it, and yet we see nothing about this in TVA's reports. So the question is, Do they fail to include it because they've already decided, years ago, that solar can't work here, or whatever decision they make, and so because they made that decision -- and if we trace it back, we may have to go back to the original -- I fear we have to go back to

the original Environmental Impact Statement in 1978. So I glanced through this document to see if I could find a reference to that, and there was nothing there. So I fear that the really viable alternatives in renewable energy and energy efficiency have not been addressed and therefore the decision could be one based on inadequate information that will endanger the public. (0003 [McCluney, Ross])

Comment: But even if the demand is lower, that doesn't mean they won't have to build new plants, because hopefully they'll be taking out of operation all those dirty coal plants, and so they'll need to replace some of those, and I admit that. But I'd hate to see it with nuclear, when abundant natural energy is available from the sun and from other sources, outside this region, with long distance transport of energy as well as within this region, and yet TVA is silent on this. So what I urge the Nuclear Regulatory Commission to do is insist that, before they give any permit to this Unit 2, that TVA do a truly comprehensive study of these other alternatives: improved energy efficiency and renewable energy development. (0003 [McCluney, Ross])

Comment: They [TVA] can put the solar systems out and lease the rooftops of customers in a whole new mode of power plant production which is called distributed energy. The beauty of distributed energy is they're relatively small; they're distributed over the region. They're not terror-susceptible, because you want to take out the power in the region? How many rooftops do you have to go and knock out in order to have an event? So distributed power has an inherently higher security factor to it. And the utility can participate; in fact, it already is, in very tiny, little minuscule power programs, where the homeowner pays to put the solar power on their roof, and then the utility pays them a double price for the electricity that's generated. So I think if they could look at that model more, look at these new technologies, including battery storage -- battery storage is amazing; I thought it was the unsolvable problem, because solar power, we know, is intermittent, and therefore we need a way to store electricity or some other form that can be turned into electricity and then produce it where it's needed. TVA has a facility for that near my home in Chattanooga; it's pump storage on the top of a mountain, and then they pull the water down when they need the power at peak periods. So there are options available, and so I urge NRC to insist that TVA do this truly comprehensive study. If they do that, I suspect that what TVA will discover is they can withdraw their application for this new plant. (0003 [McCluney, Ross])

Comment: But one of the things I think TVA should be held to respond to in its environmental assessment is how poor its energy efficiency and conservation programs are. And I say that with respect to the staff who I've sat with a number of times and discussed with them the activities that they're rolling out, including the home energy audits and retrofits and so forth, and with respect to the State of Tennessee, which is going to I think not only get on board with solar generation but is going to join the national effort to invigorate the purchase of Energy Star appliances. Unfortunately, TVA, in its approach to energy efficiency and conservation, has made a number of missteps. If you'll remember the strategic plan, the first thing it did was to fail to have a target even for efficiency and conservation. After a good deal of public debate and lobbying, it put in, I believe, a 1400-megawatt cumulative demand reduction target, and as it has carried that out, by limiting its instructions to its consultants, the reports of which have not been released to the public on energy efficiency and conservation and the limited results that have probably come if you tell them only to look at a very narrow slice of the issue, is that you now have programs that really go to peak shaving only. There has been no effort really to engage with reducing baseload demand, and clearly the Watts Bar 2 plant is about baseload demand, not just about peaks. And it seems to me that as part of the environmental assessment, TVA should be made to explain why it does not expect the baseload

demand to continue to decline as efficiency and conservation roll out, and why it should not have efficiency and conservation that reduces baseload demand to the extent that this plant, with its outdated technology, is no longer required. (0003 [Paddock, Brian])

Comment: I think that the environmental impact assessment needs to look at the effects of an equal dollar investment in renewable energy. Nuclear is extremely expensive. We're talking about \$7 billion for these plants, \$8 billion, and it seems to me that that kind of money, put into efficiency, conservation, and renewables, might in fact go a long way to meeting what would be the reduced loads that you would have with good efficiency and conservation programs. (0003 [Paddock, Brian])

Comment: And currently, as has been mentioned, we're wasting a large percentage of what is being generated at these plants. People in California has easily as nice a lifestyle as we have, and they use about 50 percent of the electricity, per capita, that we use. So that's getting into the energy conservation side. (0003 [Safer, Don])

Comment: The era of cheap energy is over. We can't go back to it. We have got to get more efficient with the energy we use. I love electricity; I use it every day, and I'm not wanting to go into the dark either, but we can be a lot smarter, and we are -- the nuclear option is a false avenue to go down; it's a dead-end that takes a lot of money and is taking far too much of the research dollars that should be going into all the renewable possibilities. (0003 [Safer, Don])

Comment: I'm very sympathetic to the percent unemployment in this county. Green jobs, the green economy is really the way the new jobs are going to be. There's the solar industry. Admittedly, the current designs of solar take energy to create the solar panels. Thankfully we have hydro power in the Tennessee Valley that could be used for that. But the green economy is the economy of the future. The solar industry is booming in Tennessee; it works. One thing that people aren't even thinking about in terms of solar is solar hot-water heat. It's the most simple thing in the world. They do it in Israel; they do it all around the world. It doesn't involve, you know, polysilicon crystals; it just involves putting something black with the water in it where the sun hits it. You do have to figure out how to not make it freeze, but, hey, it's not rocket science. (0003 [Safer, Don])

Comment: There are safe and renewable alternatives to nuclear power and opportunities for green jobs for this community that are suitable for this new century. Money being spent for nuclear power could be diverted to providing energy through efficiency, conservation, and alternative energies. There are jobs in all of those places. This would be more economically beneficial in a shorter amount of time, long before a nuclear plant becomes operational. (0004 [Kurtz, Sandy])

Comment: I don't believe that we can rely on the coal-fired steam plants of yesterday. We have seen, and it has been spoken about here, the fly ash spill in Kingston, which has absolutely nothing to do with nuclear energy. (0004 [Jones, Ken])

Comment: I've heard a lot of talk by people who have dedicated their lives to involvement -- I'm not talking about just today. For years I've heard a lot of talk by people who have dedicated their lives to involvement in the nuclear power industry who say, flat out, renewable energy sources around the Tennessee River Valley cannot possibly meet the future energy needs of the valley. Heard it over and over and over again. It's easy to say, but there are quite a few highly qualified experts who started from a neutral and

objective point of view about nuclear energy and went through to the completion of entirely comprehensive studies and assessments and found the opposite to that claim to be true. The folks who have done these studies are high experts in the fields of energy production technologies and the economics of operating these technologies. They know what they're talking about, and their studies have been thorough. The Institute of Energy and Environmental Research is a primary and star example, and this book that they've produced contains excellent documentation of the massive data and analysis that supports the view that alternative sources to both coal-burning and nuclear power can meet our future energy needs. The scope of NRC's Environmental Impact Statement for Watts Bar 2 should therefore include full attention to and genuine consideration of what's in this report, and don't expect it to be an easy read; it's highly technical and deep; but also in addition to this report, the other comprehensive studies that have been done. (0004 [Reynolds, Bill])

Comment: In particular, in looking at these other studies that started out objective and neutral about nuclear energy, they should look at -- in the EIS process, they ought to look first at the real-world potential for renewals and implementation of more efficient end-use energy practices and conservation to displace the need for a Watts Bar 2. That would be component of a responsible and honest Environmental Impact Statement about the proposed licensing Watts Bar 2. (0004 [Reynolds, Bill])

Comment: Secondly, in particular this EIS should fully assess the comparative financial cost of Watts Bar 2 -- capital cost and operating cost over the life of the plant -- in contrast to those same costs from meeting future energy needs while protecting environmental health and climate stability through applications of renewable resources and proved efficiencies in end-use energy use and conservation. (0004 [Reynolds, Bill])

Comment: The money would be better spent on less dangerous alternative energy technologies and energy conservation. (0008 [Gottfried, Yolande])

Response: *The commission expects the staff to take the requisite "hard look" at new information on the need for power and alternative sources of energy and has authorized the staff to supplement the SFES if there is new and significant information relevant to these matters. Alternative energy sources, including energy-efficiency programs, conservation, and renewable energy sources, will be considered and discussed in the SFES.*

Comment: Information available to the Service does not indicate that wetlands exist in the vicinity of the proposed project. However, our wetland determination has been made in the absence of a field inspection and does not constitute a wetland delineation for the purposes of Section 404 of the Clean Water Act. The Corps of Engineers and Tennessee Department of Environment and Conservation should be contacted if other evidence, particularly that obtained during an on-site inspection, indicates the potential presence of wetlands. (0005 [Jennings, Mary])

Response: *The applicant is responsible for obtaining a Section 404 permit, and the U.S. Army Corps of Engineers is responsible for ensuring the applicant's compliance with its permit. Although Chapters 2 and 4 of the SFES will describe onsite habitats, including*

wetlands, this level of wetland information does not constitute a wetland delineation. If a Section 404 permit is needed, the U.S. Army Corps of Engineers will require a wetland delineation.

Category No. 2

Public Comments Concerning Issues that are Outside the Scope of Review

Comment: They don't want anybody there. I mean, this is quite obvious that the public -- this is another way to shut out the public, and it's a constant thing that we have going here. I mean, you're talking about computer usage. Does anybody see any big overwhelming public libraries over there in Spring City that people can go and pull up on -- the Federal Register? I mean, I get notices because I have hounded you people for years to stay on the mailing list, but not everybody knows to do that, or people suddenly find out things. (0004 [Harris, Ann])

Comment: And this visit by the ACRS in the Federal Register -- do you all not all work together? Is this another group of people that's got their own little fiefdoms hanging around through the agency? (0004 [Harris, Ann])

Response: *The NRC's mission is to regulate the safe uses of radioactive materials for civilian purposes to ensure the protection of public health and safety and the environment. As part of this mission, the NRC is responsible for reviewing and issuing licenses for nuclear power facilities. The Advisory Committee on Reactor Safeguards (ACRS) is an advisory committee mandated by the Atomic Energy Act of 1954, as amended, under the Federal Advisory Committee Act (FACA). The ACRS is independent of the NRC staff and reports directly to the Commission, which appoints its members. The provisions of the FACA govern ACRS operational practices. The ACRS comprises recognized technical experts in their fields. It is structured so that experts representing many technical perspectives can provide independent advice, which can be factored into the Commission's decision-making process. Most Committee meetings are open to the public, and any member of the public may request an opportunity to make an oral statement during a Committee meeting.*

Comment: We've paid billions of dollars out through DOE at these nuclear facilities to people that are really dying. We have two in our family that's already died from cancer that worked in Oak Ridge. One of them did not die from -- a third one did not die from cancer; he died from Parkinson's disease, and that was a miserable time to watch. (0004 [Harris, Ann])

Response: *The commenter is referring to the National Institute for Occupational Safety and Health's Dose Reconstruction Project for Department of Energy Sites. The NIOSH program is not related to any NRC-licensed activities. This comment will not be addressed in the SFES.*

Comment: And the final note is that the decommissioning funds that TVA already has set aside for its existing nuclear operations were badly depleted by the change in the economy and the stock market decline. TVA is already trying to figure out ways to steal money from within its operating budget and perhaps pass through charges to ratepayers to rebuild that decommissioning fund, along with the retirement funds for its employee retirees, and the whole issue of an adequate decommissioning fund and how that's to be accomplished and whether it's really adequate in an age when you don't have nearly the options for the disposal of high-level radioactive materials which come when you disassemble a plant -- unless they're planning to just, you know, build a mountain over the thing, which I guess is the other option. (0003 [Paddock, Brian])

Comment: But I would again ask that decommissioning -- both its costs and its practicability -- be listed as one of the environmental concerns that has to be addressed. (0003 [Paddock, Brian])

Comment: And they're in DC now, asking for more funds. That doesn't even address the issue of decommissioning funds, which they had a major start on back in 1995, but somehow those funds got -- nobody could ever tell me what they spent them on. So at that point they had \$257 million. The last time I asked, they had 42 million, so you -- I'll let you adjust your own mind as to where that money went. (0003 [Harris, Ann])

Response: *These comments concern decommissioning. Requirements for providing reasonable assurance that funds will be available for the decommissioning are provided in 10 CFR 50.75.*

Comment: I'm also concerned about the high cost and the delayed return on that investment of a nuclear power plant. It's required to go through a lot of work like this meeting in preparation, a lot of analysis, and even when you get close to construction, it takes quite a while to get the plant operating and then tested and presumed safe enough to turn it on and finally start generating revenue. Well, in this economic time it's rather risky, and I'm sure -- I believe not a very good idea to invest so much money in something that may not be needed. (0003 [McCluney, Ross])

Comment: I see this is quite a problem to accomplish, in other words, a gargantuan challenge, at the very least. And environmental protection plan that could be fail-safe for eons to come would obviously run into costs over much time adding up to multi-trillions of dollars, I would imagine. Part of the gargantuan challenge, then, is creating such a plan that it provides and requires a funding system that will never fail. It will cost lots of dollars. If the funding system fails, the regulation enforcement will not be done, and it will present an unacceptable risk to the public. The Environmental Impact Statement must contain assessment of how these funds will be guaranteed. To me it is obvious those funds will have to come out of the pockets of either the ratepayers who buy the power or the taxpayers who bail out when the funds aren't there, or both, which is the kind of situation we have now, those of us who are ratepayers, in particular, with -- dealing with the cleanup of the toxic ash spill. (0003 [Reynolds, Bill])

Comment: Couple of things that I want to address up front that Brian talked about earlier: TVA's debt that they admit to today is at

\$29.5 billion. That's not my assessment anymore; that's what they admit to, but it's more like 42 billion whenever you take all that other rinky-dink stuff they don't count in; it's called creative bookkeeping. (0003 [Harris, Ann])

Comment: Now they're asking us to believe -- or at least you to believe; they don't want to ask me -- that they can do Unit 2 at Watts Bar for less than \$4 billion or thereabouts. Well, they started out telling people that they -- that Watts Bar 1 was \$7 billion. That is not true. When you add in the interest, the amortized part of Unit 1 that you -- or Unit 2 that you already paid for, it comes up to closer to \$12-1/2 billion. So now you're going to ask to be paid for probably another 6 to \$8 billion on this one. (0003 [Harris, Ann])

Response: *The commission has authorized the staff to supplement the SFES if there is new and significant information relevant to these matters. In the SFES, the NRC staff will consider the cost of power produced by the proposed licensing action and the overall benefits and costs of operating the proposed WBN Unit 2. However, general issues related to the applicant's financial viability are outside of the NRC's regulatory scope, and the SFES will not consider them. The NRC has requirements for licensees at 10 CFR 50.75 to provide reasonable assurance that funds will be available for the decommissioning process.*

Comment: We fully support licensing Watts Bar Number 2. (0003 [Burris, Shane])

Comment: They [the NRC] are concerned about the health and safety of the public, the environmental impact, the physical security of the plants, and I firmly stand behind the continued construction and moving forward with Unit 2. (0003 [Cobb, Jim])

Comment: And my recommendation to you folks from NRC is that you give serious consideration to issuing license for Watts Bar Unit 2. (0004 [Jones, Ken])

Comment: As a member of this community or a member of the community that this plant serves, I would just like to speak out favorably for licensing of this plant. (0004 [Smith, Stewart])

Comment: I fully support the decision of the Tennessee Valley Authority to complete construction of Unit 2 at the Watts Bar Nuclear Reactor site and urge favorable consideration from the NRC. (0007 [Yager, Ken])

Comment: TVA's decision to complete construction of Unit 2 results from detailed studies of not only cost and energy needs, but environmental impacts as well. These studies satisfy me that the project is feasible and environmentally responsible. (0007 [Yager, Ken])

Response: *These comments provide general information in support of the application. They do not provide any specific information related to the environmental effects of the proposed action and will not be evaluated in the SFES.*

Comment: I think that internationally scientists have, for my mind, proven that carbon emissions do have an effect on the environment, and I think that nuclear energy should play an important role in providing the energy that this country and this world needs, particularly this country: clean energy that does not contribute to global warming. (0004 [Smith, Stewart])

Comment: I know that we have in this country had an incident that was certainly a serious incident. I'm getting on up there, a middle-age guy, and I can barely remember when that happened, and with the technology and as far as technology has come, I feel like this -- that we need to follow up with nuclear energy. (0004 [Smith, Stewart])

Response: *These comments provide general information in support of nuclear power. They do not provide any specific information related to the environmental effects of the proposed action and will not be evaluated in the SFES.*

Comment: I heard concerns about, you know, we need to keep a scorecard that accepts nothing less than 100 percent, and I agree with that. The fact is that the Nuclear Regulatory Commission and Tennessee Valley Authority have a standard that the average person's 100 percent is probably the TVA and NRC's 50 percent. So I think that they go above and beyond the call of duty to make sure that we have safe power. (0003 [Cobb, Jim])

Comment: I have lived with it for 35 years. I believe that TVA has proven to us that they can operate a nuclear plant in a safe, environmentally friendly manner. (0004 [Jones, Ken])

Comment: I'd just like to say that the history of the Tennessee Valley Authority in operating nuclear plants has been very successful. (0004 [Smith, Stewart])

Response: *These comments express support for the applicant. They do not provide any specific information related to the environmental effects of the proposed action and will not be evaluated in the SFES.*

Comment: I start from the national policy of the Sierra Club, which is that nuclear power plants should not be expanded as a source of energy in this country until we've solved the waste-disposal problem. (0003 [Paddock, Brian])

Comment: This reactor should not be built. (0003 [Zeller, Lou])

Comment: I have compiled a list of reasons, that I have just put together, as to why there should not be a second Watts Bar reactor. (0004 [Kurtz, Sandy])

Comment: I am a concerned citizen living in eastern Tennessee and I wish to register my opposition to building (or continuing to

build) the second reactor at Watts Bar. (0008 [Gottfried, Yolande])

Response: *These comments provide general information in opposition to the proposed action. They do not provide any specific information related to the environmental effects of the proposed action and will not be evaluated in the SFES.*

Comment: In addition to my general concerns about nuclear power -- I won't list all the concerns and fears; they're in the media. They've been examined quite a bit, and there's a lot of controversy about most of it, but I think the dangers are real; the potential environmental impact in the event of accidental releases of materials, either fuels or waste, are severe and consequential. What we're counting on is the probability, hopefully, of that happening being low, but as the number of these power plants and materials being transported across the country increase, the probability may change that something can happen, and if it does, it could spell serious consequences. (0003 [McCluney, Ross])

Comment: This spells danger to people in Rhea County, eastern Tennessee, if and when one of these reactors was to be breached. Combined with the fundamental problems of nuclear power, this presents an unacceptable risk in this case. (0003 [Zeller, Lou])

Response: *These comments provide general information in opposition to nuclear power. They do not provide any specific information related to the environmental effects of the proposed action and will not be evaluated in the SFES.*

Comment: TVA overall has a very mixed and, I think, unbalanced, poor environmental record, and I would invite the Commission to look at the inspector general's report on Kingston, which found a culture in TVA of dispersed responsibility, lack of accountability, lack of internal communication -- it was always somebody else's job. (0003 [Paddock, Brian])

Comment: I went to work for TVA at Watts Bar Nuclear Plant in nuclear construction in January 1982. They told me I'd be there nine months. It was nine years before I got a paycheck that did not have overtime on it. And I left under -- for me it was quite a -- I don't want to say victory, because I didn't really win anything; what I did is I turned some magnificently strong lights into some really dark areas of TVA's management, their money, their funding, how they spend that money, and how they abuse not only ratepayers, but they abuse each other, they abuse the public, they abuse their future, and they abuse my children and my grandchildren's future. (0003 [Harris, Ann])

Comment: Browns Ferry Nuclear Plant is listed by Region 2 as the worst nuclear plant program in America. Now, the same person that was over Browns Ferry's fiasco is heading up the Unit 2 fiasco at Watts Bar. The amount of money that was spent at Browns Ferry was two times the original designated amount, and longer term, so if -- TVA's habits have not changed in the past 25 years, the way I -- according to what TVA puts out. (0003 [Harris, Ann])

Comment: I mean, there were leaks; there were wet spots. There were studies that \$26 million could have saved that whole billion-dollar nightmare. One of the ten worst environmental disasters on the planet is what that was called by Newsweek, and it could have been saved with \$26 million worth of investment, and TVA would not spend it because of their slavish devotion to the bottom line and keeping our electric rates low, which I appreciate, but it's given everybody the wrong message. (0003 [Safer, Don])

Comment: There's other security guards at TVA that none of them knew anything about each other until they came to me; one from Browns Ferry, two from Sequoyah, one from Watts Bar, and then this woman out of corporate. This is the beginning of the same pattern that TVA went through back in the late '80s and the '90s, and I don't see why that we have to go over that same road and travel that same absolute harassing, demeaning, humiliating practice again, because the only people that come out on top of this is the media, and the only way that we can get anything done is through the media. NRC doesn't want to listen; TVA won't listen; the Inspector General won't listen, and the only people that we've got to go to is to the media and the Congress, and we're there. (0004 [Harris, Ann])

Response: *These comments express opposition to the applicant. They do not provide any specific information related to the environmental effects of the proposed action and will not be evaluated in the SFES.*

Comment: I'm told by inside sources that are working with the engineers that we have engineers on site that don't know the difference between a code plant and a noncode plant. Maybe the NRC can describe to the engineers that are working on Unit 2 at Watts Bar what the difference is and how they need to -- how they can see that what they're doing is not working. Browns Ferry is a noncode plant. Watts Bar Unit 2 is a code plant. And for those of you that don't know and didn't work at the plant, you'll just have to look it up and trust me on that one. I find that the evacuation plan -- and this is just kind of silly. I'm appalled that the NRC even lets this get put in print. But in the evacuation plan, that they're going to take the people that live north of the plant, in Spring City and ten miles on both sides of the river, and they're going to move them up the valley 20 miles downwind; that means north of -- the prevailing winds all move north in this valley. You can't -- it's just common sense -- and if you live here, you would know that and wouldn't question it. But to take people that would be evacuated from Watts Bar Nuclear Plant or the surrounding community and move them 20 miles up the valley to put them in storage in a gymnasium at the junior college -- I mean, I live there, in the connecting community. This is just beyond the pale. I mean, I just -- I don't know if the NRC -- if they just really and truly don't care anymore or if they're just too ignorant to ask anybody besides themselves, who don't trust each other. (0003 [Harris, Ann])

Comment: My mother lives in a direct line of eight miles from Watts Bar Nuclear Plant. She's blind. She's 86 years old, and she's in severe bad health. I take care of her. In fact, somebody's hired today so I could be here with y'all. I know that you're going to enjoy what I have to say, but this is the truth. My mother gets a calendar; it's this size (indicating). She didn't know what it was, because she couldn't read it. And then we put all of the announcements on Knoxville and Chattanooga radios. What's the problem with putting it out on the local radios? My mother doesn't listen to Chattanooga and Knoxville; she can't even get them. She listens to Athens; she listens to Dayton; she listens to Crossville. What is it with you guys? My mother cannot read this calendar, and I go into it, and I find

something that is so disgusting y'all all ought to get up and walk out; I think you ought to be fired now, because in this calendar it says, Take this calendar and keep it with you wherever you go, so that whenever the accident happens, you'll know which direction to go in. And part of the direction is to come back toward the area that will be so bad that it'll be blocked off. What is it with you people? Don't y'all read what you write? Don't you ever look at it? I mean, it's just really disgusting. This is what you're doing to my family. Think about -- there's other -- I'm not -- my mother's not the only elderly woman in these communities; she's not the only one. There's little children. I've got great-grandchildren that will be affected by this, sitting in close proximity to Watts Bar. (0003 [Harris, Ann])

Response: *These comments relate to the adequacy of emergency plans, which is a safety issue that is outside the scope of the environmental review. As part of its site safety review, the NRC staff will determine, after consultation with the Department of Homeland Security and the Federal Emergency Management Agency, whether the emergency plans submitted by the applicant are acceptable.*

Comment: I admit that TVA will need electricity, not necessarily because it expects a growth in demand -- I really don't think because of all this technology is getting out there that the demand will be as high as they think it's going to be; I think the lower growth in their Environmental Impact Statement, the one that's slightly negative, may be closer to the truth. (0003 [McCluney, Ross])

Comment: You know, the electric power that it will generate is very necessary. There's something that most people in this room may not know. They're going to build a company, Beikler, in Cleveland, Tennessee, that will build solar panels; they will also make semiconductors, but mostly solar panels. That build out, that plant will require a quarter to a third of a nuclear power plant to run its full operation. (0003 [Burris, Shane])

Comment: The second thing is basically the -- and this goes to the question of whether or not a license should be granted at all under NEPA standards, but also to the environment assessment, is options and alternatives, as Dr. McCluney addressed. Basically you have a situation where, according to the reports to the Tennessee Valley board of directors, power production and sales have dropped approximately 9 percent during the current economic downturn, the end of which one can debate if it's begun to happen, let alone any true date for that. In the past TVA, in its power projection demands, including those I assume that were used when the board decided to go ahead and restart construction on Watts Bar Unit 2, was that there would be an annual 2 percent increase in demand. That in fact hasn't happened; the reverse has happened. And if in fact we were to have effective conservation and efficiency programs, it would never happen. We would go into a flat or declining demand usage, and we would have reduced energy intensity on a per capita basis in the TVA service area. (0003 [Paddock, Brian])

Comment: [D]emand for electricity is down. (0004 [Kurtz, Sandy])

Comment: [S]outheast Tennessee probably is one of the fastest growing areas from a standpoint of population in this state. In the last five or six years, we have seen a tremendous spurt of growth. And certainly when we experience those things, then we're going

to see a higher demand for energy. (0004 [Jones, Ken])

Comment: completion of Unit 2 makes good sense, because it uses an existing asset to meet the growing power needs of the Tennessee Valley. (0007 [Yager, Ken])

Comment: There is no guarantee that the demand for power would justify the cost of this plant by the time it is completed. (0008 [Gottfried, Yolande])

Response: *In accordance with 10 CFR 51.95(b), unless otherwise determined by the Commission, this SFES will not include a discussion of need for power, or of alternative energy sources, or of alternative sites, or of any aspect of the storage of spent fuel for the nuclear power plant within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b), and will only be prepared in connection with the first licensing action authorizing full-power operation. Therefore, this issue is outside the scope of the environmental review and will not be analyzed in the SFES.*

Comment: One percent slackness on enforcement is a failing grade. Why? -- Because of what it can do to human beings and their lives and their health. People's lives and future genetic transmission, by the way, is on the line with radioactive pollution. Necessary ramifications, lesson learned, is the assertion that and Environmental Impact Statement that omits responsible, honest accounting for perpetual vigilance through the eons to come, continuously and consistently, is not worth the paper it's written on. So I'm here encouraging NRC to make sure they get all that covered, all that protection of human health and life in perpetuity, as long as the waste will last. (0003 [Reynolds, Bill])

Comment: I went there for an NRC hearing about the unscheduled shutdowns of that unit that they brought back on line, the five of them in the first five or six months. It caused a big, huge slap on the wrist by the NRC. I will have to support some of what Ann said about the NRC seems to be the enabler of the nuclear industry and not the watchdog, and that's not any news for people that have been following this issue for quite a while. (0003 [Safer, Don])

Response: *The NRC's mission is to regulate the safe uses of radioactive materials for civilian purposes to ensure the protection of public health and safety and the environment. The NRC has established an extensive regulatory process to ensure the integrity of each application review. The NRC can deny an application for an operating license based on the findings of its review. These comments do not provide specific information related to the environmental review and will not be addressed in the SFES.*

Comment: This bears saying in a scoping session for the environmental impact assessment of a new nuclear power plant here, because the most noble and honorable Union of Concerned Scientists, who are not antinuclear, by the way, but they do totally responsible scientific evaluation and assessment of the nuclear power industry and, upon close scrutiny of the Nuclear Regulatory Commission's track record and their oversight of nuclear power plant operation, concluded as follows: Nuclear power is riskier than it

should and could be. The United States has strong regulations on the books, but the Nuclear Regulatory Commission does not enforce them consistently. I agree with the implication in this statement that emphasizes the consistency. TVA has done a lot of good things; we all know that. We appreciate the great service they've done, but -- and it's not all their fault, because the regulations were not in place regarding the coal ash spill. Regulations are, according to the UCS, in place for strong management of nuclear power, so consistency is what's needed, unfailing consistency. NRC cannot be given a passing grade on their regulation enforcement for anything less than a perfect 100. (0003 [Reynolds, Bill])

Comment: How do you think this makes me feel, to know that I'm paying your salaries, and you're not doing your job. You're just accepting whatever TVA hands you, and TVA will hand you a bunch of garbage, because they will lie. Got it? I don't even want to have to say it anymore: You can't trust TVA. You can't trust TVA. How long do you have to have that said to you? And now you can't trust the NRC, because the NRC, they are so close in bed with TVA, that you're beginning to look a bit foolish, even from other people, not just me. Somehow or another this Environmental Impact Statement has to address these issues that concern and deal with people's lives on a day-to-day basis, and if these jobs are the best that TVA can provide, somebody else needs to be running TVA besides somebody that's running a bunch of serfdoms. (0003 [Harris, Ann])

Comment: I'm telling you, Region 2, we're asking for Congressional hearings on you and your inability to deal with TVA. This is a repeat of the 1985 and '86 hearings, and you can look for these to be just as disgusting whenever we uncover that pile of crap. (0003 [Harris, Ann])

Comment: We're not going to back down off of this, because the persecution of this -- she's a little, ol' grandmother; she's a clerk. She had a 18-year career in personnel, and nobody ever -- she never made a mistake. She had wonderful -- but the bottom line is that there's two women involved that come through the revolving door from the NRC, and they both lost their jobs and were removed from TVA, but then they went back to work for the NRC in in-house security. Now, what does that say about you, NRC? I can't trust you to do what you need to do, because you've still got the mentality that the workers don't know what we're doing, because management is always right. And what you found out after -- what was it? -- From 1984 to 1996 -- how many years is that? -- 12 years? You couldn't get it right, and TVA couldn't get it right, because everybody was talking about somebody; they wasn't talking to anybody, and nobody -- neither one of you were listening, and then the NRC -- I don't know what it's going to take. (0003 [Harris, Ann])

Response: *These comments are outside the scope of this review and do not provide specific information related to the environmental effects of the proposed action; therefore, they will not be evaluated further.*

Comment: I daresay I've learned a lot of valid lessons in my studies and private individual studies through the years, and I think I just recently, within the past year, less than a year, have learned a most important new lesson that I think a lot of folks, including TVA itself, probably has learned as a result of the horrible disaster of the Kingston ash spill, not far from here, that you all probably are very well informed with the great disaster, and I'm not going to go into details about it. I bring this up at this time because I think it's a lesson learned that should be known and paid attention to in the practice of producing nuclear power plants and managing nuclear

power plants and so on. (0003 [Reynolds, Bill])

Comment: I want to define a lesson learned that I think we should all apply, particularly to the scoping of building a new nuclear power plant here. And here's my definition: Regulations, monitoring inspection regimens, and compliance enforcement must absolutely be maintained and sustained with absolute unwavering consistency in perpetuity, as long as the waste remains. And we -- those who are informed about nuclear power waste products, some of those waste products remain lethal to human life and health for multiple centuries. There must never be a single occurrence of slacking in maintaining and sustaining protection of our supremely precious air, land, and water from exposure to the poisons contained in the waste produced by electrical power generation. Nothing akin to the Kingston coal ash spill should ever happen with nuclear power plants, whose waste is even more toxic than coal ash. (0003 [Reynolds, Bill])

Comment: And you cannot really think that you're going to have a safe 40- to 60-year operation of a nuclear plant in a culture where plant operations suffer from those same defects. Now, that was respect to a fossil plant, where, if something goes wrong, ordinarily you think it's not going to be a big deal. Of course, that was a miscalculation, because when you lose 5 million tons of coal ash, it is a big deal. In fact, it's probably one of the biggest environmental disasters on the North American continent in our lifetimes. But please do look at the inspector general's report on the culture in TVA and decide what you have to do in terms of building that into the evaluation of environmental impacts. (0003 [Paddock, Brian])

Comment: Watts Bar Unit 2, as its sister reactor, Number 1, would utilize an ice-condenser containment structure -- many people have referred to this as an eggshell-type containment -- in order to reduce costs of construction, concrete and steel, in the construction of the containment vessel, that large domed structure. Ice-condenser units employ baskets of ice. During an event inside of a nuclear reactor, excess heat and pressure are created. Ice-condenser reactors are designed to reduce that heat and pressure by using baskets of ice. There are relatively few of these reactors in operation, and they are fraught with fundamental engineering flaws and also real-world difficulties in keeping baskets of ice free, operating over a period of decades, which they are required to do. The ice-condenser system should not be constructed in the 21st century; it should not have been constructed at all. (0003 [Zeller, Lou])

Comment: I am told by workers -- this is not engineers; this is workers, from the inside -- that the 21 million that you paid Bechtel to go in and see if Unit 2 could be brought up to speed, they spent their \$21 million, walked around, and said, Yeah, we can do it; y'all have a good time. Then, guess what? Bechtel turned around and said, Okay; we're going to start letting them decide what all needs to be done. Bechtel's still looking at what needs to be done; they're still looking at it, because they're finding such massive amounts of rust and corrosion and equipment that cannot be used, won't be used, and cannot be replaced with what is there, because those people left and seen better days somewhere else that got the money, that took it and run. (0003 [Harris, Ann])

Comment: The cost-cutting measures designed to make construction cheaper result in some of the most dangerous reactors on the planet. A Sandia study which is memorialized in Nuclear Regulatory's own guidance documents, NUREG/CR-6427, in April 2000, states that ice-condenser plants are at least two orders of magnitude more vulnerable to early containment failure than other

types of pressurized water reactors. Two orders of magnitude: ten times ten, 100 times more vulnerable to a catastrophic disaster. Hydrogen buildup during an event inside of a nuclear reactor is one of the reasons for this vulnerability. Measures over the years, which have been added to or retrofitted to existing ice-condenser reactors have addressed part of the problem. Buildup of hydrogen is why the pressure gets so high and can cause a rupture in the containment structure. Backfitting of hydrogen igniters over the years have not addressed the full problem. Ice condenser reactors are still vulnerable to hydrogen ignition during a reactor event which would otherwise be contained inside a more robust containment structure. (0003 [Zeller, Lou])

Comment: So that's what going on inside those storage casks, which are going to be more and more along the river. They are not designed to be flooded. I don't know this particular site; I haven't seen it. I know at Browns Ferry they're not that high off of the river, and if they're flooded, then the cooling that is just a convection cooling with vents gets clogged with debris and what-not, and who knows what can happen. (0003 [Safer, Don])

Comment: Getting into that reactor design, that design dates from the 1960s. I was in high school when that thing was first proposed. I'm retired now. A lot of things have changed. You know, a lot of people in this room are not that much different in age from me; many are younger. But, my gosh, that design comes from the middle '60s; that was when the Mustang -- the first iteration of the Mustang was the hottest car going. You wouldn't buy the Mustang if it was in the showroom -- the 1965 -- well, you might buy it as an antique, but it's not going to perform up to environmental standards or whatever; the point being that this design was put together was an idea of cost containment and not safety. When it was originally designed and approved, there was -- Chernobyl had not happened. They thought an event like Chernobyl, an event like Three-Mile Island was not even possible; it was not in the design criteria for the original design, so that there -- and that's why they've had to go back with this hydrogen, you know, ignition system and how you take care of all that hydrogen. This was the cheapest reactor TVA could build at the time. It's a clear indication of the same culture that put that ash into the river. TVA was dumping that ash into that pile for 50 years. They had plenty of indications that the ash pile was suspect. (0003 [Safer, Don])

Comment: Back to that ice-condenser design, who can imagine putting 3 million pounds of ice in a nuclear reactor so that you can make the containment structure half as thick? My gosh, that's a fabulous idea. I applaud whoever came up with it. It's a wonderful idea. It's just like Rube Goldberg, though; it's stupid. You know, I mean, you have all that ice, which has problems with subsidence. I went on line, you know, last few days, and somebody patented an idea of what do you do with the ice that's compacted in there? The ice, from what I read, it's one-foot wide cylinders that are 50-feet tall, and they're wrapped with these steel containment things that are sort of straps. And so they can't get in there to replace the ice very easily, and somebody invented some sort of a -- I didn't look at the design, but some sort of a contraption to replace the ice, because they were having problems with the ice just melting away, which it does naturally, and not having the million pounds they needed to survive an incident, which is really a core meltdown, and to keep that containment structure, however fragile it is, from melting down. (0003 [Safer, Don])

Comment: For example, the most complete and recent probabilistic risk assessment suggests core melt frequencies in the range of 1 in 1000 per reactor year to 1 in 10,000 per reactor. A typical value is 3 in 10,000. I'm reading from David Lochbaum's monograph which quotes a Nuclear Regulatory Commission statement to US Congress, and that's what I am citing here. This is the NRC to the

Congress: Were this the industry average, then in a population of 100 reactors, which we have today, over a period of 20 years, the crude cumulative probability of a severe reactor accident would be 45 percent. That is for all reactors combined, including the more robust designs. The ice-condenser reactor can withstand half the pressure of the more robust old designs, not talking about the new AP-1000 and other designs which have not yet been built under CFR Part 52. (0003 [Zeller, Lou])

Comment: [T]his reactor plan relies on an outdated ice condenser plan that brings with it far more risk than is necessary. (0004 [Kurtz, Sandy])

Comment: That's not reliable power if you have to shut down the nuclear plants because of droughts and hot weather, an issue associated perhaps with climate change. (0004 [Kurtz, Sandy])

Comment: Most nuclear accidents happen due to human error. In the light of the Kingston fly ash spill, do you believe that TVA can avoid human error? And do you believe that TVA is choosing to use this old nuclear reactor design because it's the best technology available or because it's cheaper? (0004 [Kurtz, Sandy])

Comment: This reactor would use old technology, the ice condenser reactor, which is considered to have design flaws already. (0008 [Gottfried, Yolande])

Response: *The issues raised in these comments are safety issues, and as such, are outside the scope of the environmental review and will not be addressed in the SFES. TVA provided a safety assessment for the proposed licensing action as part of its application. The NRC is developing a Safety Evaluation Report that analyzes all aspects of reactor and operational safety.*

Comment: And in this letter it talks about this woman who worked at corporate security for TVA. She was drummed out because she asked too many questions, and she wanted to go by the rules. And the bottom line is that after a two year period, the young lady and TVA came to a mutually agreeable settlement, and then the NRC's Region 2 -- I don't know who they are; we keep getting all these different names of who they are, what they represent and what their agenda is. The bottom line is the NRC is going after this woman because they said that she was unauthorized to use documents when she was protesting her termination as retaliation against the issues that she had raised. TVA agreed, and they redacted the documents. Nobody was identified outside; no documents were taken off the jobsite. The bottom line is that the NRC's Office of Investigation, they're still pursuing this woman for criminal charges under federal -- they say federal laws; they can't tell us what they're looking for. I suspect that it's more of a fishing expedition than it is anything because somebody needs to keep a job, or they're doing something that they don't know what they're doing, or they're just totally incompetent and needed someplace to hide themselves. We went to the NRC's Office of Inspector General to try to stop it, and they told us that as long as there was an allegation against this woman by somebody at TVA, that they would pursue the issue, and they would not do any kind of investigation. Then, whenever we questioned that, TVA's Inspector General, they just didn't do anything. Of course, that's not unusual; that's their record of decision-making. And now we've been forced to file legal documents with the Commission over this issue. (0004 [Harris, Ann])

Comment: But the other thing is if I can't trust you to keep the security at these nuclear facilities and it's not even up and running, why should I trust you to do right whenever it's up and running? (0004 [Harris, Ann])

Response: *Comments related to security and terrorism are not within the scope of the environmental review. The NRC is devoting substantial time and attention to terrorism-related matters, including coordination with the Department of Homeland Security. While these are legitimate matters of concern, they will continue to be addressed through the ongoing regulatory process as a current and generic regulatory issue that affects all nuclear facilities and many of the activities conducted at nuclear facilities. The Commission has affirmed that the National Environmental Policy Act (NEPA) does not require the NRC to consider the environmental consequences of hypothetical terrorist attacks on NRC-licensed facilities.*

Comment: I would like to see more development in recycling of our nuclear waste so that we can use that to the best of its ability. (0004 [Smith, Stewart])

Response: *The recycling of nuclear waste is a national policy issue that is outside the scope of the environmental review of WBN Unit 2.*

September 7, 2011

APPLICANT: Tennessee Valley Authority

FACILITY: Watts Bar Nuclear Power Plant, Unit 2

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – COMPLETE LIST OF COMMENTS, SUGGESTIONS, AND STAFF RESPONSES CONDENSED FROM THE OCTOBER 6, 2009, PUBLIC SCOPING MEETING

On October 6, 2009, a Category 3 public meeting (two sessions) was held between the U.S. Nuclear Regulatory Commission (NRC) and interested public at the Magnuson Hotel, 1421 Murrays Chapel Road, Sweetwater, Tennessee 37874. The purpose of the meeting was to present an overview of the environmental review process for Watts Bar Unit 2 operating license application and to obtain public comments regarding the scope of the environmental review.

Scoping meeting attendees provided either written statements or oral comments that the NRC recorded and a certified court reporter transcribed. In addition, during the scoping period, the NRC received four letters and five emails providing comments on the proposed action. The meeting summary was issued on October 21, 2009, and is available electronically from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System under accession number ML092880764.

The attached enclosure provides a complete list of the scoping period comments and suggestions along with applicable staff responses.

Please direct any inquiries to me at 301-415-6715 or Bruce.Bavol@nrc.gov.

/RA/

Bruce Bavol, Project Manager
Watts Bar Special Projects Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosure: Scoping Period Comments and Suggestions

cc w/encl: See next page
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