

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

A PUBLIC MEETING  
TO COLLECT COMMENTS ON THE DRAFT ENVIRONMENTAL  
IMPACT STATEMENT FOR V.C. SUMMER NUCLEAR STATION  
LICENSE RENEWAL

FELLOWSHIP ROOM  
WHITEHALL A.M.E. CHURCH  
8594 State Highway 215 South  
Jenkinsville, South Carolina  
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1:30 p.m.

F. CAMERON, Facilitator

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P R O C E E D I N G S

MR. CAMERON:

Good afternoon, everyone. My name is Chip Cameron and I'm the Special Counsel for Public Liaison at the Nuclear Regulatory Commission in Washington, D.C. and I just want to welcome all of you to the NRC's public meeting.

Our meeting today is on the environmental evaluation that the NRC has prepared in the form of a Draft Environmental Impact Statement to help the NRC make a decision on whether to grant the application to renew the license for the V.C. Summer Nuclear Station, Unit 1.

And as the NRC staff will tell you, we received an application to renew the operating license for the plant from South Carolina Electric & Gas.

My job today is to serve as the facilitator for the meeting and to try to help all of you have a productive meeting today.

The format for the meeting is pretty simple. We're going to start out with some brief NRC presentations, to give you some background on, not only the license renewal process, but more importantly on the preliminary findings in the environmental impact statement. We want to answer any questions that you have about the process, about the findings in the Draft Environmental Impact Statement. We

1 also want to hear any comments that you might have on the  
2 Draft Environmental Impact Statement, any concerns that you  
3 might have about the license renewal process.

4 And I would just emphasize that the information  
5 portion of the meeting is important because the NRC is also  
6 asking for written comments on the Draft Environmental  
7 Impact Statement and I just want to say that any comments  
8 that you give to us today at the meeting will carry the same  
9 weight as a written comment. But you may hear some  
10 information, either from the NRC or from other people in the  
11 community that either prompts you to say I'm going to send  
12 in a written comment also or that helps you to prepare your  
13 written comments. So I just want to make sure that we give  
14 you as much information as possible and that we answer your  
15 questions clearly.

16 Ground rules also are simple. If you have a  
17 question, just signal me and I'll bring you this cordless  
18 microphone. Give us your name and affiliation, if  
19 appropriate. And we'll go on from there.

20 We're taking a transcript of the meeting and  
21 Peggy is our stenographer today. That will be available to  
22 people, anybody who wants a transcript, and that will be our  
23 record of the meeting today. I would just ask you to speak  
24 one at a time so that we can get a clean transcript, but

1 more importantly so that we can give our full attention to  
2 whomever has the floor at the moment.

3 The second part of the meeting, so to speak,  
4 will be to ask anybody who wants to, to make a formal  
5 comment to us about any concerns that they have.

6 I just want to go over the agenda and introduce  
7 you to the people who are talking to you, but before that,  
8 an important thank you from all of us at the NRC to Reverend  
9 Cannon and the congregation for allowing us to use this room  
10 for our meeting today.

11 We're going to go first to a welcome from the  
12 Section Leader of the Policy and Programs Section in our  
13 License Renewal and Environmental Impact Program, and that's  
14 Mr. Steve West, right over here.

15 Then we're going to go to two brief  
16 presentations on process; one is going to be from Mr. Raj  
17 Auluck, who is here. He's the Program Manager for the  
18 Safety Evaluation on the license renewal application for  
19 V.C. Summer.

20 I'm sure everybody knows Greg Suber, who is  
21 right here. He is the Project Manager for the Environmental  
22 Review on the license application.

23 They're going to give you a few words about  
24 process and then we'll go out to you for any questions about

1 process.

2           Then we're going to get into the heart of the  
3 matter, so to speak, and we're going to go to Mr. Ted Doerr,  
4 who's right here. Ted is the Team Leader for the team that  
5 assisted the NRC in preparing the Draft Environmental Impact  
6 Statement and he's going to tell you what the findings were  
7 in that statement.

8           We'll go out to you for questions and then we  
9 have a short subject, so to speak, which is part of the  
10 Environmental Impact Statement, and it's the severe accident  
11 mitigation analysis, and Greg Suber is going to do that for  
12 us. Go to you for questions and then Greg is going to do a  
13 summary for us.

14           In terms of background, to tell you about the  
15 credentials of the people that are here -- Mr. Steve West  
16 has been with the NRC for approximately 20 years and he's  
17 been involved in every aspect of nuclear power plant  
18 licensing and regulation, including inspection. He has a  
19 bachelor's degree in fire protection engineering from the  
20 University of Maryland.

21           Mr. Auluck, who is the Project Manager for the  
22 safety evaluation, has also been with the NRC for about 20  
23 years and he's been involved in rulemaking and licensing on  
24 reactor issues. He has a master's and a Ph.D. in mechanical

1 engineering from the University of Maryland.

2           Greg Suber is our youngster, I guess so to  
3 speak, he's been with the agency for about four years now,  
4 and before that, he was with the Bechtel Power Corporation.  
5 He has a master's in environmental science from Duke  
6 University and a bachelor's in mechanical engineering from  
7 Howard University.

8           Ted Doerr, who is the Team Leader, Ted is with  
9 Los Alamos National Lab and he's an ecologist by training.  
10 He has a bachelor's, a master's and a Ph.D. in ecology, not  
11 only vegetative but also animal ecology. He's been involved  
12 in projects all over the United States on evaluating  
13 environmental impacts of various projects, including  
14 projects in Mississippi and in Georgia.

15           With that, I would just thank you all for being  
16 here and we'll try to be as informal as we can be, so that  
17 we can have a comfortable and productive meeting, and I'm  
18 going to ask Steve West to give you the real welcome.

19           MR. WEST: Thank you, Chip, appreciate that.  
20 Can everybody hear me? Good.

21           Thank you for coming to the meeting today, we  
22 all appreciate your attendance and your interest in this  
23 important subject. It's nice to be in Jenkinsville for the  
24 first time.

1           Just to give you a little bit of background for  
2 the meeting today, the purpose of today's meeting is to  
3 discuss the environmental impacts evaluation for the V.C.  
4 Summer license renewal application for the period of an  
5 additional 20 years.

6           The Atomic Energy Act of 1954 and the NRC  
7 regulations limit nuclear plant licenses to 40 years of  
8 operation, but allow for license renewal for a period of 20  
9 years, an additional 20 years.

10           The expiration date of the V.C. Summer current  
11 operating license is June 30 of 2010. South Carolina  
12 Electric & Gas Company submitted an application for license  
13 renewal for an additional 20 years on July 16 of last year,  
14 2002.

15           The staff, some of which are here today for this  
16 meeting, are currently performing both safety and  
17 environmental reviews of the application for the renewed  
18 license.

19           This afternoon we'll describe the NRC's license  
20 renewal process for nuclear power plants with emphasis on  
21 the environmental review. Mr. Raj Auluck, as Chip  
22 mentioned, will provide a brief summary of the overall  
23 license renewal process and then Mr. Greg Suber will  
24 describe the environmental review process.



1           We will also provide the results of our review  
2 of the various environmental impacts, our preliminary  
3 recommendation and the remainder of our review schedule. So  
4 when you leave here this afternoon, you should know what is  
5 left for us to do and other opportunities for your  
6 involvement.

7           When we're finished with our presentations,  
8 we'll invite you to provide your comments and ask questions  
9 and also let you know how to submit questions outside of  
10 this meeting. We have various mechanisms for that which  
11 we'll describe to you.

12           Okay, that's it. Again, I want to welcome you  
13 all, appreciate your attendance at the meeting this  
14 afternoon. I hope you get what you came for. We're looking  
15 forward to your questions and your comments.

16           I'd like to turn it over to Raj for a discussion  
17 of the license renewal process. Thank you.

18           DR. AULUCK: Thank you, Steve.

19           Good afternoon. As Steve just mentioned, my  
20 name is Raj Auluck and I am the project manager for the  
21 safety review of the V.C. Summer Nuclear Station license  
22 renewal application.

23           Before discussing the license renewal process  
24 and staff's safety review, I would like to talk about the

1 Nuclear Regulatory Commission and its role in licensing and  
2 regulating nuclear power plants.

3 The Atomic Energy Act of 1954 authorizes the NRC  
4 to regulate civilian use of nuclear material. The NRC's  
5 mission is three-fold: to ensure adequate protection of  
6 public health and safety; to protect the environment; and to  
7 provide for common defense and security.

8 The NRC consists of five commissioners and one  
9 of the commissioners is the chairman, and the NRC staff.  
10 The regulations enforced by the NRC are issued under Title  
11 10 of the Code of Federal Regulations, commonly called 10  
12 CFR.

13 The Atomic Energy Act provided for a 40-year  
14 license term for power reactors, but it also allows for  
15 renewal of licenses. The 40-year term is based primarily on  
16 economic and antitrust considerations, rather than on safety  
17 limitations.

18 Major components of the power plant were  
19 initially expected to last up to 40 years. However,  
20 operating experience has demonstrated that some of the major  
21 components, such as steam generators, will not last that  
22 long.

23 For that reason, a number of utilities have  
24 replaced major components. Since components and structures

1 can be replaced or reconditioned, plant life is really  
2 determined primarily by economic factors.

3 License renewal applications are submitted years  
4 in advance for several reasons. If a utility decides to  
5 replace a nuclear power plant it can take up to 10 years to  
6 plan and construct the new generating capacity to replace  
7 that nuclear power plant.

8 In addition, decisions to replace or recondition  
9 major components can involve significant capital investment.  
10 As such, these decisions involve financial planning many  
11 years in advance of the extended period of operation.

12 As mentioned earlier, South Carolina Electric &  
13 Gas company has applied for license renewal under 10 CFR  
14 Part 54, and requests authorization to operate V.C. Summer  
15 up to an additional 20 years. The current operating license  
16 for V.C. Summer expires August 6, 2022.

17 Now I will talk a little bit about license  
18 renewal, which is governed by the requirements of 10 CFR  
19 Part 54, or the License Renewal Rule. This part of the Code  
20 of Federal Regulations defines the regulatory process by  
21 which a utility such as South Carolina Electric & Gas  
22 applies for license renewal.

23 The License Renewal Rule incorporates 10 CFR  
24 Part 51 by reference. This part provides for the

1 preparation of an environmental impact statement.

2           The license renewal process defined in Part 54  
3 is very similar to the original licensing process in that it  
4 involves a safety review, an environmental impact  
5 evaluation, plant inspections and review by the Advisory  
6 Committee on Reactor Safeguards, or the ACRS.

7           The ACRS is a group of scientists and nuclear  
8 industry experts who serve as a consulting body to the  
9 Commission. The ACRS performs an independent review of the  
10 license renewal application and staff's safety evaluation,  
11 and reports its findings and recommendations directly to the  
12 Commission.

13           The next slide illustrates two parallel  
14 processes. The two parallel process are the safety review  
15 process and the environmental review process. These  
16 processes are used by the NRC staff to evaluate two separate  
17 aspects of the license renewal application.

18           The safety review involves the staff's review of  
19 the technical information in the application for renewal to  
20 verify, with reasonable assurance, that the plant can  
21 continue to operate safely during the extended period of  
22 operation.

23           The staff assesses how the applicant proposes to  
24 monitor or manage the aging of certain components that are

1 within the scope of license renewal. The staff's review is  
2 documented in a safety evaluation report, which is provided  
3 to the ACRS. The ACRS reviews the safety evaluation report,  
4 holds public meetings and prepares a report to the  
5 Commission documenting its recommendations.

6 The safety review process involves two or three  
7 inspections which are documented in NRC inspection reports.  
8 In its decision to renew an operating license, the NRC  
9 considers the safety evaluation report, the ACRS report, the  
10 inspection reports and findings and the NRC Regional  
11 Administrator's recommendations.

12 At the bottom of the slide is the parallel  
13 process, the environmental review, which Gregory Suber will  
14 discuss shortly. The results of the environmental review  
15 also factor into the agency's decision on the application.

16 In the safety evaluation report, the staff  
17 documents its assessment of the effectiveness of the  
18 applicant's existing or proposed inspection and maintenance  
19 activities to manage aging effects applicable to passive  
20 long-lived structures and components.

21 Part 54 requires the application to re-evaluate  
22 those design analyses that assumed 40 years of plant  
23 operations. The re-evaluation extends the assumed operating  
24 period to 60 years. These required re-evaluations are

1 called time-limited aging analyses.

2 Current regulations are adequate for addressing  
3 active components, such as pumps and valves, which are  
4 continually challenged to reveal failures and degradation,  
5 such that corrective actions can be taken.

6 Current regulations also exist to address other  
7 aspects of the original license, such as security and  
8 emergency planning. These current regulations will also  
9 apply during the extended period of operation.

10 In October 2002, the NRC issued a Federal  
11 Register notice to announce its acceptance of the South  
12 Carolina Electric & Gas Company's application for renewal of  
13 the operating license for V.C. Summer. This notice also  
14 announced the opportunity for public participation in the  
15 process. No such requests were received.

16 This concludes my summary of the license renewal  
17 process and staff's safety review. We will now proceed with  
18 the environmental review process presentation and then we'll  
19 respond to any questions.

20 MR. SUBER: Once again, I'd like to thank you  
21 all for coming.

22 My name is Gregory Suber and I am the  
23 environmental project manager for the V.C. Summer license  
24 renewal project. I am responsible for coordinating the

1 efforts of the NRC staff and our contractor labs to conduct  
2 and document the environmental review associated with the  
3 application from SCE&G for license renewal at V.C. Summer.

4           The NRC has determined that it will prepare an  
5 environmental impact statement associated with the renewal  
6 of operating licenses for plants for an additional 20 years.  
7 Therefore, following the process required by NEPA, we have  
8 prepared a draft environmental impact statement that  
9 describes the environmental impacts associated with  
10 operation at V.C. Summer. That draft environmental impact  
11 statement was issued in July of this year and the meeting  
12 today is being held to receive your comments on that impact  
13 statement.

14           The National Environmental Policy Act, or NEPA,  
15 was enacted in 1969. It is one of the most significant  
16 pieces of environmental legislation passed in this country.  
17 It requires all federal agencies to use a systematic  
18 approach to consider the environmental impacts during  
19 certain decision-making proceedings regarding major federal  
20 actions.

21           NEPA requires that we examine the environmental  
22 impacts of a proposed action and consider mitigation  
23 measures. These mitigation measures are things that are  
24 done to reduce those impacts. NEPA also requires that we

1 consider alternatives to the proposal and that we also  
2 evaluate impacts from those alternatives. Finally, NEPA  
3 requires that we disclose all of this information and we  
4 invite the public to comment on it.

5           This slide describes our objective in the  
6 environmental review. Simply put, we are trying to  
7 determine whether renewal of the V.C. Summer license is  
8 acceptable from an environmental standpoint. Whether or not  
9 the plant actually operates for an additional 20 years will  
10 be decided by others, such as SCE&G, state regulators and it  
11 is also very much dependent on the conclusion of the safety  
12 review.

13           This slide shows in a little more detail the  
14 environmental review process that Dr. Auluck recently spoke  
15 of. We received the application on August 6 of 2002, we  
16 issued a Federal Register notice in October of 2002  
17 informing the public that we were going to prepare an  
18 environmental impact statement and to give the public an  
19 opportunity to comment on the scope of that review. On  
20 December 12 of 2002, during the scoping period, we held two  
21 meetings here in Jenkinsville to receive public comments  
22 about the scope of our review.

23           Also in December we went to the V.C. Summer site  
24 with a combined team of NRC staff and personnel from three



1 national laboratories that have backgrounds in the specific  
2 technical and scientific disciplines required to perform our  
3 environmental review. We familiarized ourself with the  
4 site, we met with staff from SCE&G to discuss the  
5 information that they had submitted in their application, we  
6 reviewed environmental documentation at the plant and we  
7 examined SCE&G's evaluation process.

8 In addition, we contacted state, federal and  
9 local governmental agencies as well as social services in  
10 the region to obtain information about the general area and  
11 also information on the V.C. Summer site.

12 At the close of the scoping period, we gathered  
13 and considered all of the information we had received from  
14 the public and from governmental agencies and, when  
15 appropriate, we incorporated the findings or the information  
16 that we received into the draft that we are discussing  
17 today.

18 In July of 2003, we issued the draft  
19 environmental impact statement for V.C. Summer and that  
20 statement is Supplement 15 to the GEIS, which is the Generic  
21 Environmental Impact Statement. The reason it's a  
22 supplement is because it relies on the finding of the GEIS  
23 in part for its conclusions. The report is a draft, not  
24 because it's incomplete, but because we are at an

1 intermediate point in our decision-making process.

2 We are in the middle of a public comment period  
3 and that's why we're here today to talk and see if you have  
4 any comments on our draft. We gather these comments and we  
5 will evaluate them and if the comments impact our  
6 evaluation, then we will make those comments part of the  
7 final draft which we plan to submit or issue, excuse me, in  
8 February of 2004.

9 That's the end of my introduction.

10 MR. CAMERON: Thank you very much, Greg; and  
11 thank you, Raj.

12 This is the time for questions about process,  
13 but we're going to do something a little different right  
14 now, because Councilman Marcharia has an unavoidable errand  
15 that he has to do, so he has to leave and I thought that we  
16 would give him an opportunity to speak to us now and of  
17 course we're going to be going to Councilwoman Robinson and  
18 Councilman Brown later on in the program, to see if they  
19 want to say anything to us.

20 But Councilman, do you want to say a few words  
21 to us?

22 COUNCILMAN MARCHARIA: Good afternoon, everyone.  
23 Welcome to Jenkinsville, South Carolina. To the NRC staff,  
24 I don't know everyone by name, but thank you very much for

1 being here today. And to my two distinguished colleagues,  
2 Vice President Brown and Councillady Robinson, thanks for  
3 coming. And those who live in the immediate area -- how  
4 many folks live right here in western Fairfield? Raise your  
5 hands. Three? We matched last year. Unfortunately, you  
6 know, at this time of day, a lot of our residents are  
7 working. I'm sure they would be here if they could.

8 Last year I was here and I shared some comments  
9 from the community and once again, I want to reiterate some  
10 of those comments and I want to thank Mr. Suber in  
11 particular. Since last year, the many phone calls that he  
12 tried to run me down, he said I want to make sure that  
13 people know it this time and he really stepped up. And all  
14 the times that I missed you, I apologize for that, but you  
15 worked hard to get this information out to the community.  
16 So thank you very much for that.

17 That being said, I wanted -- some of the things  
18 that the community had to ask that's on everyone's mind is  
19 in the event there was a terrorist act here, what do the  
20 citizens do, what's the plan? Because that has not been  
21 shared by the local emergency preparedness. For the  
22 citizens, senior citizens, what would be the route? I think  
23 the community wanted to know that and that might be a local  
24 issue that we have to address but I'll address it also to

1 you.

2 I think some of the health issues -- the last  
3 time we talked, we asked what would be the impact of health  
4 issues around the plant, given the perception -- not the  
5 perception, given the fact that a lot of our senior citizens  
6 are dying from unknown cancers. That's not a perception,  
7 that's a fact. But there is a perception that it might be  
8 related to the plant. That has not been proven and I think  
9 the question asked what steps do you take or methodology  
10 that you use to determine that this plant does not have a  
11 negative impact on the quality of life or health of the  
12 local residents -- was one of the questions.

13 The other thing I would like to ask for, the  
14 community asked for, which I hadn't read was could we -- I -  
15 - have a copy of the original agreement with V.C. Nuclear  
16 Power Plant with Jenkinsville or the county, whichever, what  
17 was written in that initial agreement. And I raise that  
18 question simply because I know it's mandatory in some  
19 readings that I had that we had to have the EMS station,  
20 which we have right there. We also have a fire station  
21 that's adjacent to the EMS station. Hopefully we can also  
22 put a substation in there at some point in time.

23 We are concerned because -- I'm asking for help  
24 of how we can upgrade our fire station. It's less than

1 three minute walking distance from here. Our fire trucks --  
2 I'm not a firefighter, but this community is in serious  
3 danger. There has been one incident we had several years  
4 ago, a truck took off and didn't have water to one of the  
5 fires. How that could possibly happen, I don't know, but  
6 the trucks are old and even if they did have water, I don't  
7 know if they can go 10 or 15 miles. That is a serious  
8 problem. If we have a relationship and something happens at  
9 the plant, how will we be able to help?

10 The other issue that we have, in terms of  
11 volunteer firefighters, it's my understanding that you would  
12 need somewhere in the proximity of at least 11 people  
13 trained to be able to do this. We fall far short of that  
14 right now and we're trying to encourage younger people male  
15 and female, to get involved locally and learn and train to  
16 be at the local fire station.

17 So we're asking is there any kind of way for you  
18 or the nuclear plant to help us get a fire truck. We  
19 haven't been successful with the local government and our  
20 fire trucks will not withstand a serious anything over at  
21 that plant. So if you could be helpful with that or  
22 instructive as what direction we can go to acquire funds or  
23 an avenue to make this community more secure.

24 If you have any ideas of how we can encourage

1 some of our younger people in the community to get this  
2 training and be available to help us in the event that  
3 something happened, it would be appreciated.

4 One other question was asked by the community --  
5 has this plant ever been in violation of anything, and what,  
6 and what was the nature of it, and when. I probably could  
7 have gotten that answer somewhere else, but that was asked  
8 of me yesterday and I just wrote it down.

9 The other thing is that technically I don't know  
10 if I know all the technical terms dealing with nuclear waste  
11 and nuclear energy and what you must do to provide safety or  
12 any other kinds of strategies around that. I'll confess my  
13 ignorance, I don't know all the technical terms. But we are  
14 concerned that it's in our community. It has been a  
15 tremendous economic benefit to our community and we are  
16 obviously enjoying the partnership that we have with you and  
17 we thank you for that.

18 Those were some of the questions that I had.  
19 I'm sure that other citizens are going to have questions and  
20 does anyone have a question of me?

21 (No response.)

22 COUNCILMAN MARCHARIA: Hearing none, I think  
23 I've said all I could say and I certainly wish all of you a  
24 safe journey back home and I thank you for the opportunity

1 for the dialogue. I think in the last year most -- if not  
2 you, most of the folks over at the plant have been very  
3 open. We have started a dialogue and I think that's going  
4 to get us over some of the humps and try to look at more  
5 strategically how do we make this community more safe.

6 Thank you very much for listening to me and I  
7 hope -- I wish us all luck in our endeavor to make this  
8 happen. Thank you very much.

9 MR. CAMERON: Thank you very much, Councilman,  
10 and thank you for those comments and concerns. We will be  
11 addressing those in the context of the preparation of the --  
12 either the final environmental impact statement or in terms  
13 of providing you information, for example, on questions of  
14 potential training of young people in the community,  
15 resources for emergency preparedness work. But we will note  
16 those and not lose track of those, and thank you again.

17 As I mentioned, we will be going to Vice  
18 President Brown and Councilwoman Robinson later on.

19 Are there any questions about the process at  
20 this point? You heard about the safety evaluation part of  
21 the process, the looks at aging, you heard about the  
22 environmental evaluation which is our primary focus today.  
23 Is there anything we can answer about that process before we  
24 go on to the preliminary findings?

1 (No response.)

2 MR. CAMERON: Okay, well, in that case -- and if  
3 you have questions later on, we'll come back to that, but  
4 let's go to Dr. Doerr to give us the review of the findings.  
5 Ted.

6 DR. DOERR: Good afternoon.

7 To do this review, we established a team made up  
8 of NRC staff supplemented by experts in various fields from  
9 the national laboratories. This slide gives you an idea of  
10 the areas these experts evaluated.

11 The GEIS, or generic environmental impact  
12 statement for license renewal, also known as NUREG 1437,  
13 identifies 92 issues that are evaluated for license renewal;  
14 69 of these issues are considered generic or Category 1,  
15 which means that the impacts are the same for all reactors  
16 with certain features, such as plants that have cooling  
17 ponds. For the other 23 issues, 21 are referred to as  
18 Category 2. The NRC found that the impacts were not the  
19 same at all sites and, therefore, a site-specific analysis  
20 was needed. In addition, two issues are referred to as not  
21 categorized and, therefore, a site-specific analysis also is  
22 needed.

23 Only certain issues addressed in the GEIS are  
24 applicable to V.C. Summer. For those generic issues that



1 are applicable to V.C. Summer, we assessed if there was any  
2 new information related to the issue that might affect the  
3 conclusions reached in the GEIS. If there is no new  
4 information, then the conclusions of the GEIS are adopted.  
5 If new information is identified and determined to be  
6 significant, then a site-specific analysis would be  
7 performed.

8 For the site-specific issues, Category 2,  
9 related to V.C. Summer, a site-specific analysis was  
10 performed.

11 Finally, during the scoping period, the public  
12 was invited to provide information on potential new issues  
13 and the team, during the review, looked to see if there were  
14 any new issues that needed evaluation.

15 For each issue identified in the GEIS, an impact  
16 level is assigned. These impact levels are consistent with  
17 the Council on Environmental Quality regulations. For a  
18 small impact, the effect is not detectable or is too small  
19 to destabilize or noticeably alter any important attribute  
20 of the resource. For example, the plant may cause the loss  
21 of adult and juvenile fish at the intake structure. If the  
22 loss of fish is so small that it cannot be detected in  
23 relation to the total population in the river, the impact  
24 would be small.

1           For a moderate impact, the effect is sufficient  
2 to noticeably alter, but not destabilize, important  
3 attributes of the resource. Using the fish example again,  
4 if losses at the intake cause the population to destabilize  
5 and decline, but is then able to stabilize at a lower level,  
6 the impact would be moderate.

7           And finally, for an impact to be considered  
8 large, the effect is clearly noticeable and sufficient to  
9 destabilize the important attributes of the resource. Again  
10 in the example of fish, if losses at the intake cause the  
11 population to decline to the point where it cannot be  
12 stabilized and continually declines, then the impact would  
13 be large.

14           In Chapter 2 of the draft supplemental  
15 environmental impact statement, or draft SEIS, we discuss  
16 the plant and the environment around the plant. In Chapter  
17 4, we then looked at the potential environmental impacts for  
18 an additional 20 years of operation for V.C. Summer. There  
19 are several areas the team reviewed and evaluated. I'll  
20 take just a few minutes to identify the highlights of our  
21 review for three areas. If you have any additional  
22 questions on our findings, I'll be glad to answer them or  
23 let one of the team members here with me today answer them.

24           Entrainment, impingement and heat shock are

1 Category 2 issues used to assess the impact of cooling  
2 systems to the aquatic community.

3           Entrainment is the process of aquatic organisms  
4 passing through the debris screens at the intake structure  
5 and traveling through the cooling system.

6           Impingement is the process of fish and shellfish  
7 being drawn into the intake, but are too large to pass  
8 through the debris screens and are, therefore, caught on the  
9 screens.

10           Heat shock is when aquatic organisms are exposed  
11 to very high water temperatures resulting from discharge of  
12 water from the cooling system back into the reservoir.

13           We found that entrainment, impingement and heat  
14 shock have only a small impact to populations of fish,  
15 shellfish and other aquatic organisms in Monticello  
16 Reservoir.

17           Radiological impacts to the public and workers  
18 are a Category 1 issue, but because it is often a concern of  
19 the public, we wanted to take just a few minutes to discuss  
20 it.

21           We looked at the effluent release and monitoring  
22 program during our site visit. We looked at how the gaseous  
23 and liquid effluents were treated and released as well as  
24 how the solid wastes were treated, packaged and shipped for

1 disposal. We also looked at how the applicant determines  
2 and demonstrates that they are in compliance with the  
3 regulations for release of radiological effluents.

4 Doses reported in the annual monitoring reports  
5 for V.C. Summer were less than one percent of the dose limit  
6 specified in the regulations. The releases from the plant  
7 are well within limits and the resulting off-site potential  
8 doses are not expected to increase on a year-to-year basis  
9 during the 20-year license renewal term.

10 Also, no new and significant information was  
11 identified during the staff's review. Therefore, the  
12 impacts are small.

13 Sixteen terrestrial plants and animal species  
14 that are federal or state-listed as threatened, endangered  
15 or candidates for listing are known to occur in the vicinity  
16 of V.C. Summer. Only the bald eagle is known to occur at  
17 V.C. Summer or along the transmission lines.

18 Two endangered aquatic species -- the Carolina  
19 heel splitter and the short-nosed sturgeon -- are known to  
20 occur in the vicinity of V.C. Summer; however, neither are  
21 known to occur in Monticello Reservoir, Parr Reservoir or  
22 the nearby reaches of the Broad River.

23 NRC's preliminary conclusion is that the impacts  
24 of license renewal would be small. Informal consultation

1 with the U.S. Fish & Wildlife Service has been initiated to  
2 receive concurrence on the NRC's determination that license  
3 renewal would either have no effect or is not likely to  
4 adversely affect these species.

5 SCE&G implemented a process to ensure that  
6 information not addressed in or available during the GEIS  
7 evaluation would be reviewed to ensure that such new and  
8 potentially significant information related to renewal of  
9 the license for V.C. Summer would be considered. As a part  
10 of the process, SCE&G reviewed each of the Category 1 issues  
11 to verify that the conclusions of the GEIS remained valid  
12 with respect to V.C. Summer. This review was performed by  
13 subject matter experts who are also familiar with NEPA  
14 issues.

15 The NRC staff also has a process for identifying  
16 new and significant information. The search for new  
17 information includes review of the applicant's environmental  
18 report and their process for discovering and evaluating the  
19 significance of new information; review of records of public  
20 comments; review of environmental quality standards and  
21 regulations; coordination with federal, state and local  
22 environmental protection and resource agencies; and review  
23 of the technical literature. New information discovered by  
24 the staff is evaluated for significance using criteria set

1     forth in the GEIS.

2                 For Category 1 issues, where new and significant  
3     information is identified, reconsideration of the  
4     conclusions for those issues is limited in scope to the  
5     assessment of the relevant new and significant information.  
6     The scope of the assessment does not include other facets of  
7     the issue that are not affected by the new information.  
8     Through this process, there was no new and significant  
9     information identified.

10                Environmental issues associated with the uranium  
11     fuel cycle, solid waste management and decommissioning are  
12     all Category 1 issues and addressed in the GEIS.

13                Off-site radiological impacts and non-  
14     radiological impacts are environmental issues related to  
15     uranium fuel cycle.

16                Environmental issues associated with solid waste  
17     management include storage and disposal of non-radiological  
18     waste, low-level radiological waste, mixed waste, on-site  
19     spent fuel storage and transportation of spent nuclear fuel  
20     and high level waste to a repository.

21                The environmental issues considered for  
22     decommissioning are similar to those from operations and  
23     include radiation doses, waste management, air quality,  
24     water quality, ecological resources and socio-economics.

1           During our review, there was no new and  
2 significant information identified and impacts are  
3 considered small.

4           We evaluated a number of alternatives to V.C.  
5 Summer. The no-action alternative is a scenario where the  
6 NRC would not renew the V.C. Summer operating license.  
7 SCE&G would then decommission V.C. Summer when plant  
8 operations cease. Also, no replacement power was considered  
9 under this alternative.

10           New generation alternatives considered included  
11 construction and operation of coal, natural gas and new  
12 nuclear power plants both at V.C. Summer and at an  
13 alternative greenfield or previously unused, undisturbed  
14 site.

15           Another alternative considered was purchasing  
16 power from other sources to replace the power from V.C.  
17 Summer if operations were to cease. This power could come  
18 from within the state, from other states or from Canada or  
19 Mexico.

20           Finally, alternative technologies considered  
21 included oil-fired plants, wind power, solar power, hydro  
22 power, geothermal energy, wood waste, municipal solid waste,  
23 other biomass derived fuel, hydrogen fuel cells, delayed  
24 retirement of other power generating units and utility-

1 sponsored conservation.

2           While there are many possible combinations of  
3 alternatives discussed to replace power, for purposes of  
4 analysis, we assumed a combination of alternatives  
5 consisting of one combined cycle natural gas-fired unit,  
6 either at V.C. Summer or at an alternative location in  
7 combination with purchase from other power generators and  
8 additional utility-sponsored conservation measures.

9           All of the alternatives have the potential to  
10 result in environmental impacts larger than would occur  
11 under the proposed action of license renewal. As an  
12 example, if an alternative were selected at a site outside  
13 of Fairfield County, then socio-economic impacts would be  
14 moderate to large as a result of lost tax revenue for  
15 Fairfield County and an increase in services required and a  
16 gain in tax revenues for the county where the new generation  
17 would occur. Similarly, impacts to land use and ecological  
18 resources would be moderate to large if a previously  
19 undisturbed site was selected for an alternative.

20           MR. CAMERON: Thank you very much, Ted.

21           Before we go to a discussion of severe  
22 accidents, let's see if anybody has questions for Ted about  
23 the preliminary findings. I think he presented them very  
24 clearly. Any questions about some of those findings, the



1 analysis of alternatives, anything like that?

2 (No response.)

3 MR. CAMERON: All right, we're going to go to  
4 our last substantive subject now, which is severe accident  
5 mitigation alternatives and if any questions occur to you  
6 about anything we've talked about after that, we can answer  
7 them then. And Greg Suber is going to do this presentation.

8 MR. SUBER: Thank you, Chip.

9 The next part of my presentation deals with the  
10 environmental impact of postulated accidents. Section 5 of  
11 the draft EIS is entitled "Environmental Impacts of  
12 Postulated Accidents." The DSEIS evaluates two classes --  
13 design-basis accidents and severe accidents.

14 First, we'll discuss design-basis accidents.  
15 Design-basis accidents are those accidents that both the  
16 licensee and the NRC staff evaluate to ensure that the plant  
17 can respond to a broad spectrum of postulated accidents  
18 without risk to the public. The environmental impact of  
19 design-basis accidents are evaluated in the initial  
20 licensing process, and the ability of the plant to withstand  
21 these accidents has been demonstrated before the plant has  
22 received its initial license. Most importantly, the  
23 licensee is required to maintain an acceptable design and  
24 performance capability throughout the life of the plant,

1    which includes any extended life operation.

2                   Since the licensee has to demonstrate acceptable  
3    plant performance for the design-basis accidents throughout  
4    the life of the plant, the Commission has decided that the  
5    environmental impact of the design-basis accidents are of  
6    small significance.  Neither the licensee nor the NRC is  
7    aware of any new and significant information on the  
8    capability of V.C. Summer to withstand design-basis  
9    accidents.  Therefore, the staff has concluded that there  
10   are no impacts related to design-basis accidents beyond  
11   those previously discussed in the GEIS.

12                  The second category is severe accidents and  
13   severe accidents are, by definition, more severe than  
14   design-basis accidents because they can result in  
15   substantial damage to the reactor core.  The Commission  
16   found in the GEIS that the risk of a severe accident in  
17   terms of atmospheric releases, fallout to bodies of water,  
18   releases to groundwater and societal impacts are small for  
19   all plants.  Nevertheless, the Commission has determined  
20   that alternatives to mitigate severe accidents must be  
21   considered for all plants that have not previously done so.  
22   We refer to these alternatives as severe accident mitigation  
23   alternatives or SAMA for short.

24                  The SAMA evaluation is a site-specific

1 assessment and is a Category 2 issue, as Mr. Doerr has  
2 explained earlier. The SAMA review for V.C. Summer is  
3 discussed in Section 5.2 and in Appendix G of the draft EIS.  
4 The purpose of performing a SAMA evaluation is to ensure  
5 that plant changes with the potential of improving severe  
6 accident performance are identified and evaluated.

7           The scope of plant improvements that were  
8 considered are hardware modifications, procedural changes,  
9 training program improvements and a basic full spectrum of  
10 changes. The scope includes SAMAs that would prevent core  
11 damage and SAMA that could improve containment performance,  
12 given that a core damage event occurs.

13           The SAMA evaluation consists of four steps. The  
14 first step is to characterize the overall plant risk and  
15 leading contributors to risk. This typically involves an  
16 extensive use of plant-specific probabilistic risk  
17 assessment, which is known as PRA. The PRA study identifies  
18 different combinations of system failures and human errors  
19 that would be required for an accident to progress either to  
20 core damage or to containment failure.

21           The second step in the evaluation process is to  
22 identify potential improvements that could further reduce  
23 risk. The information from the PRA, such as the dominant  
24 accident sequence, is used to help identify plant

1 improvements that would have the greatest impact on reducing  
2 risk. Improvements are identified in NRC and industry  
3 studies as well as SAMA analysis for other plants are used  
4 in this consideration.

5           The third step in the evaluation process is to  
6 quantify the risk reduction potential and implementation  
7 cost for each improvement. The risk reduction and  
8 implementation costs for each SAMA are estimated, using what  
9 we call a bounding analysis. The risk reduction is  
10 generally over-estimated by assuming that the plant  
11 improvement is completely effective in eliminating the  
12 accident sequence it is intended to address. The  
13 implementation costs are generally under-estimated by  
14 neglecting certain cost factors, such as maintenance costs  
15 and surveillance costs associated with the improvement.

16           Finally, the risk reduction and cost estimates  
17 are used in the last step, which is to determine whether  
18 implementation of any improvement can be justified. In  
19 determining whether an improvement is justified, the NRC  
20 staff looks at three factors. The first is whether the  
21 improvement is cost-beneficial. In other words is the  
22 estimated benefit greater than the estimated implementation  
23 costs of the SAMA. The second factor is whether the  
24 improvement provides a significant reduction in the total

1 risk. For example, does it eliminate a sequence or a  
2 containment failure mode that contributes to a large  
3 fraction of the plant risk. The third and final factor is  
4 whether the risk reduction is associated with aging effects  
5 during the period of extended operation. In this case, we  
6 would consider implementation of that SAMA as part of the  
7 license renewal process.

8           The preliminary results of the V.C. Summer SAMA  
9 evaluation are summarized on this slide. Over 200 candidate  
10 improvements were identified for V.C. Summer, based on a  
11 review of the plant-specific PRA, relevant industry and NRC  
12 studies and the SAMA analysis performed on other plants.  
13 SCE&G reduced this set to a subset of 12 potential SAMAs  
14 based on a multi-step screening process. Factors considered  
15 in the screening process include whether the SAMA was  
16 applicable to V.C. Summer due to design differences, whether  
17 the SAMA would involve major plant modifications that would  
18 clearly exceed the maximum attainable benefit and whether  
19 the SAMA would only provide minimal reduction of risk based  
20 on a review of the PRA.

21           A more detailed assessment of the conceptual  
22 design and cost was performed on each of those 12 SAMAs  
23 identified. And this detailed assessment is included in  
24 Appendix G of the draft.

1           None of these SAMAs were found to be cost-  
2 beneficial when evaluated in accordance with NRC guidelines  
3 for performing regulatory analysis. And based on the review  
4 of SCE&G's analysis, the NRC concludes that none of the  
5 SAMAs evaluated are cost-beneficial.

6           So to summarize, the NRC has made a preliminary  
7 conclusion that additional plant modifications to further  
8 mitigate severe accidents are not required at V.C. Summer as  
9 a part of license renewal.

10           MR. CAMERON: Okay, thank you, Greg. And like  
11 any other part of the draft environmental impact statement,  
12 those conclusions are --

13           MR. SUBER: Are preliminary.

14           MR. CAMERON: -- open for comment --

15           MR. SUBER: Yes, they are.

16           MR. CAMERON: -- before being finalized.

17           Do we have questions about the SAMA part of the  
18 evaluation?

19           Okay, let's go back to Don Moniak, and Don,  
20 could you just introduce yourself to us formally, please?

21           MR. MONIAK: Yes, my name is Don Moniak and I'm  
22 from Aiken, South Carolina, here to write an article about  
23 this process.

24           You mentioned on one of the slides about human

1 error being considered.

2 MR. SUBER: Yes.

3 MR. MONIAK: Is there a larger analysis of how  
4 well -- of how they're going to manage human reliability 20  
5 years from now? How are they going to maintain expertise  
6 and that kind of thing?

7 MR. SUBER: Okay, first, I'll state that the  
8 plants are safe and that the point that you're bringing up  
9 is an operating point and I would have to -- you want to  
10 know what training the operators undergo?

11 MR. MONIAK: No, no. I want to know what is  
12 going to be done during the relicensing period and in  
13 preparation for that to ensure that the current levels of  
14 human reliability are maintained or improved, so that -- to  
15 ensure that there will be ample amount of qualified people  
16 working there, because as you know, there's a war for talent  
17 in this country right now and it's difficult for a lot of  
18 industries to recruit exactly what they want.

19 MR. SUBER: Okay, I don't know what the precise  
20 steps are that are being taken, but I'll have to defer that  
21 to Mr. Zalcman.

22 MR. CAMERON: I think this is a safety side  
23 issue, which we'll answer, but I just wanted to make it  
24 clear that I think that this type of issue falls on the

1 safety side.

2 Raj, do you have something to say in response to  
3 that?

4 DR. AULUCK: Yes. As far as operations are  
5 concerned, there are certain qualifications to perform those  
6 duties and those duties or requirements will be carried  
7 over, whether it is inspection activities, engineering  
8 activities, operator training or any other work relative to  
9 performance under the regulations. So those regulations,  
10 the current regulations or current licensing basis, is  
11 carried over to the next 20 years. So they are under  
12 certain requirements, whether it's training or  
13 qualifications, it will be carried over.

14 As for your human reliability, as we go along,  
15 we get more educated and knowledgeable about it and we look  
16 at our regulations in those areas and we are constantly  
17 amending the regulations and that is also part of the public  
18 process. Before we amend the regulations, you know, they go  
19 through the process for public participation, before we  
20 amend any regulations.

21 MR. CAMERON: Just to make sure -- we'll go to  
22 Don for another question, but just to make sure that  
23 everybody understands -- Raj, are those types of concerns  
24 that Don raised about the operating staff, are they



1 considered in the typical license renewal evaluation?

2 DR. AULUCK: No, operator licensing is not  
3 considered because it is part of the current licensing  
4 basis.

5 MR. CAMERON: But I mean the human resource  
6 issue.

7 DR. AULUCK: Human resources is, yes.

8 MR. CAMERON: Okay, it is considered then.

9 DR. AULUCK: Not human resources, but whatever  
10 is currently required to operate the plant under the  
11 regulations, those are carried over for the extended period.

12 MR. CAMERON: Okay. Don, do you have another  
13 question?

14 MR. MONIAK: My next question is much simpler.  
15 You said that cost and risk analysis were the screening  
16 criteria for reducing the number of potential SAMAs, and  
17 what I was wondering is, is it cost and risk or is it cost  
18 and/or risk? Does cost by itself ever result in removing a  
19 possible improvement or does it also have to be a risk  
20 reduction?

21 MR. SUBER: That's what the program is --

22 MR. MONIAK: How are those two weighed, how are  
23 cost versus risk weighed?

24 MR. SUBER: Okay, the first thing we look at is

1 the reduction in risk, and I think you'll see that in the  
2 screening process. The first thing we have to realize is  
3 that the plants, as they are designed and as they are  
4 currently regulated by the NRC, are safe.

5 What the Commission did is the Commission said  
6 as we are going to extend these licenses, let's take a  
7 closer look to see if there are other things that we can do  
8 to mitigate severe accidents that are cost-effective.

9 So the first element of determining what we're  
10 going to look at is to see how much is this thing that we're  
11 going to do -- how much is this thing that we're proposing  
12 going to reduce the total plant risk. And if that is  
13 significant, then -- if that is significant that comes in  
14 one part.

15 The second part we do is say well, how much is  
16 this thing going to cost, because we already know that the  
17 plant is safe. And the second thought is how much is this  
18 thing going to cost, and there's a cost threshold. And if  
19 it exceeds that cost, then it does not have to be  
20 implemented as a part of license renewal. It has -- there  
21 are two things, as part of license renewal, it has to be  
22 related to aging effects. And so if we find a SAMA, which  
23 is an additional thing that we do, that would help us reduce  
24 risk, but it's extremely costly, then it does not have to be

1 implemented as a part of license renewal.

2 MR. MONIAK: Okay, and just one more. Is risk  
3 reduction based on the total population in the area and what  
4 the impacts on population and environment would be -- not  
5 the impacts, but what the effects would be, or is it based  
6 on what the actual impacts would be, say for radiation  
7 release in terms of curies?

8 MR. SUBER: Can you handle that, Raj?

9 MR. MONIAK: Curies versus millirems-- which is  
10 it based on.

11 DR. AULUCK: Could you repeat that question  
12 please?

13 MR. MONIAK: Yes. The risk reduction itself, is  
14 it based on the actual impact to the environment and,  
15 therefore, possibly to people like in terms of curies, which  
16 is concrete, or is it based upon the potential effect upon  
17 the environment, which is more of an abstraction?

18 MR. SUBER: Okay, the risk reduction is based on  
19 the core damage sequence, isn't that -- is that not correct?

20 MR. CAMERON: And just to make sure everybody  
21 understands this, when you look at risk reduction, do we  
22 look at potential off-site effects or do we look at the risk  
23 of the core being damaged.

24 Do you want to do this, Raj? And we'll go to

1 Greg for a supplement?

2 DR. AULUCK: Probably I think -- I'm not fully  
3 knowledgeable, but I think it is the impact on the public,  
4 you know, what is the total release and impact on the  
5 individuals at the site or at the location. But I think we  
6 can get the proper -- you know, correct answer to you as  
7 part of --

8 MR. MONIAK: I'll put it in a comment.

9 DR. AULUCK: Very good.

10 MR. CAMERON: Okay, and Greg, do you want to  
11 clarify anything on that? You know what the question is.

12 MR. SUBER: Right, right. As far as I  
13 understand your question, when we're talking about risk  
14 reduction, we're talking about reducing the risk that the  
15 core will be damaged. So when we talk about implementing  
16 these changes, we're talking about things that we can  
17 implement as a SAMA that would reduce what we call the core  
18 damage frequency, or CDF.

19 MR. CAMERON: Okay, let me just get one more  
20 piece here for Don and the rest of you. Barry Zalzman.

21 MR. ZALCMAN: Barry Zalzman, NRC staff.

22 The risk is actually a combination of the  
23 likelihood of an event occurring and the consequences of  
24 that event occurring. So to the degree that we're looking

1 at reduction in risk, we're looking at postulated events  
2 that may occur that could have some source characteristics  
3 attached to it, and distribute the material that may be  
4 available for release into the environment to population  
5 locations. So we're looking at properly weighted  
6 consequences, we're looking at population distribution,  
7 we're looking at the dispersion characteristics. So we're  
8 looking at the consequences of events moved out into the  
9 environment and looking at population doses as an indicator.  
10 So it's population doses as an indicator of risk.

11 And to the degree that we look at the reduction  
12 in risk, we're looking at what the resources would take to  
13 reduce either the likelihood of event or through other  
14 mitigation characteristics, the reduction in the exposures  
15 to individuals.

16 So if we reduce the material being released to  
17 the environment through a change in practice, process,  
18 training, hardware, software -- those are candidate SAMAs  
19 that we consider. And to the degree that the screening  
20 process actually identifies a maximum value that could be  
21 justified, there is some maximum cost that could be  
22 justified and, Gregory, I think if I'm not mistaken, I think  
23 it was \$1.2 million for this project?

24 MR. SUBER: Yes, it was.

1           MR. ZALCMAN: Okay, so any candidate SAMA that  
2 would exceed an implementation cost of \$1.2 million would be  
3 screened out as part of the screening process.

4           MR. SUBER: Right.

5           I'm not exactly sure on that number, but --

6           MR. CAMERON: Please everybody use the  
7 microphone so that we get it on the record.

8           I think if we need to go back and provide  
9 further information to Don, we can do that off line.

10          Barry, do you have some more?

11          MR. ZALCMAN: I think it was to wrap up, that in  
12 fact we are looking at consequences to populations unique to  
13 the site vicinity out to some distance of the order of 50  
14 miles, the dispersal characteristics associated with that  
15 that are unique to this facility and the plant design  
16 characteristics also unique to this facility.

17          So again, as Gregory indicated, it is a site-  
18 specific evaluation, looking at populations, looking at the  
19 consequence on the populations that may be affected.

20          MR. CAMERON: Okay, thank you.

21          Before we go to a summary and then we're going  
22 to get to comments from all of you, are there other  
23 questions about either the discussion you just heard on  
24 SAMAs or the other types of environmental effects process at

1 this point?

2 Let's get you on the record, Reverend.

3 REVEREND CANNON: As they were talking about the  
4 environmental impact, they kept saying that it's a small  
5 impact. I need to know or could you define small impact for  
6 me.

7 MR. CAMERON: Ted, can you clarify that for  
8 Reverend Cannon?

9 DR. DOERR: Again, small, moderate and large  
10 impacts were previously defined in the generic environmental  
11 impact statement for license renewal and so that's, if you  
12 will, the starting point. And that definition was based on  
13 guidance by the Council on Environmental Quality, which is,  
14 if you will, the ruling body for the federal government on  
15 how do you conduct and evaluate projects under the National  
16 Environmental Policy Act. So I'm just giving you the  
17 structure there to get to the definition.

18 For small, it means that it's so -- a small  
19 impact is an impact that you don't even notice or the impact  
20 itself is very short-lived and doesn't have any long-term,  
21 measurable impact to the larger attribute. I used  
22 previously the example of fish population. If you have a  
23 small impact, you're going to lose some fish, which we do  
24 here at V.C. Summer, but it doesn't change the population,

1 it doesn't change the number of fish that are out there in  
2 the lake, it doesn't change the population of fish in terms  
3 of the species abundance and it doesn't change the  
4 distribution of where the fish live, as an example. So  
5 that's a small impact.

6 Does that help?

7 MR. CAMERON: Do you want to ask anything more  
8 about that, Reverend?

9 REVEREND CANNON: No.

10 MR. CAMERON: Okay, thank you.

11 Ms. Pearson, why don't you use the microphone?

12 MS. PEARSON: I just wanted to ask a question  
13 about that last statement up there, "additional plant  
14 improvements to further mitigate severe accidents are not  
15 required at V.C. Summer as part of license renewal."

16 Are you saying that irrespective of how many  
17 accidents are going to be down there, it is not required, or  
18 what are you saying?

19 MR. CAMERON: That's a good question and, Greg,  
20 can you put that into perspective for us, so that people can  
21 understand what the SAMA evaluation is about, you know, in  
22 relationship to actual accidents, which I think Ms. Pearson  
23 was worried about.

24 MR. SUBER: Okay, as we talked about earlier,



1 what we looked at in this analysis are what we call severe  
2 accidents, and severe accidents are accidents that aren't  
3 likely to happen but they proceed to what we call core  
4 damage, so they're very important to look at.

5 Now as the plant is currently designed and as it  
6 is currently regulated by the NRC, we say that the plant is  
7 safe. What we did is we looked closer to see whether there  
8 are some cost-effective things that we could do to make it  
9 even safer. And our conclusion was that the plant as  
10 designed is safe, the plant as currently regulated is safe,  
11 and that we don't have the change anything in the plant to  
12 make it even safer. We are satisfied with the present  
13 design of V.C. Summer with regard to severe accidents.

14 Is that clear?

15 MR. CAMERON: And these are all hypothetical  
16 accidents that you're looking at.

17 MR. SUBER: Correct.

18 MR. CAMERON: Is that clear, Ms. Pearson?

19 MS. PEARSON: Yes.

20 MR. CAMERON: All right, thank you.

21 Anybody else before we go for a summary? Gregory  
22 is going to do that for us also.

23 (No response.)

24 MR. CAMERON: Okay, Greg, can you tell people

1 what the conclusion and how they submit comments and then  
2 we'll go to people for speaking. Thank you.

3 MR. SUBER: Okay, to summarize, as we stated  
4 before, the impacts of license renewal at V.C. Summer are  
5 all judged to be small. In comparison, the impacts of the  
6 alternatives to license renewal range from small to large.

7 Therefore, the preliminary conclusion of the  
8 staff is that the adverse impacts of license renewal at V.C.  
9 Summer are not so great that preserving the option of  
10 license renewal for energy planning decision-makers would be  
11 unreasonable.

12 To recap quickly, we issued the draft  
13 environmental impact statement for V.C. Summer this past  
14 July. We are in the middle of a public comment period that  
15 is scheduled to close on October 3 of 2003. We expect to  
16 address all public comments, including any necessary  
17 revisions to the draft and issue the final environmental  
18 impact statement near the end of February of 2004.

19 This slide provides information on how you can  
20 contact us and get a copy of the draft EIS if you don't have  
21 one. You can contact me directly at the phone number  
22 provided and I can mail you one. Or you can view the  
23 document at the library in Winnsboro or at the Thomas Cooper  
24 Library on the USC campus in Columbia. The document is also

1 available at the web address given and we have a number of  
2 copies available for you after this meeting, if you'd like  
3 to take one home with you.

4           This last slide gives you information on how you  
5 can submit your comments on the draft Summer EIS. We'll  
6 accept these comments up until October 3 of 2003, which is  
7 our deadline. You can submit comments either in writing, by  
8 e-mail or by regular mail at the address given on the slide.  
9 You can also drop your comments off at the NRC headquarters  
10 in Rockville, Maryland.

11           And that concludes the formal part of my  
12 presentation. Thank you, Chip.

13           MR. CAMERON: Okay, thanks, Greg.

14           Now we're going to go out to you and hear  
15 perhaps a little bit more formal comments or concerns about  
16 these issues. As I mentioned earlier, I was going to see  
17 first if Councilwoman Robinson and then Councilman Brown had  
18 anything to say.

19           Would you like me to bring you this or do you  
20 want to come up front? It's totally up to you, wherever you  
21 feel more comfortable.

22           COUNCILWOMAN ROBINSON: I just wanted to say  
23 thank you for coming and performing the environmental impact  
24 study for us.

1           We have felt all along, as council members, that  
2 this was a very safe agency for our county and as council  
3 members, we encourage you to give them the okay for  
4 relicensing because it is an enormous economic development  
5 for our county and we all as citizens who live here realize  
6 the various benefits from the taxes that are paid. We often  
7 talk about that, especially during the budget process, and  
8 what would happen if it should be closed.

9           I look forward to having it extended for 20  
10 additional years. Thank you.

11           COUNCILMAN BROWN: I'm David Brown.

12           I want to reiterate what Ms. Robinson said, but  
13 I want to go one step further and just thank SCE&G and SCANA  
14 and Santee-Cooper for doing such a good job over the past 20  
15 years as far as picking and choosing good people to run  
16 their plant and keep it safe. I want to thank NRC for being  
17 the watchdog to make sure they run it safe -- I want to  
18 thank y'all.

19           At the beginning we were talking about people  
20 with the NRC that have been with the NRC for 20 some odd  
21 years. Twenty years ago, I was on council when the hydro  
22 plant just came on line and saw the impact just the hydro  
23 made on Fairfield County. And then when the nuclear power  
24 plant tax base came on line, Fairfield County was able to go

1 from a farming community into the 20th century because of  
2 the tax base trickle down effect. School teachers were paid  
3 more money, I remember when Sheriff Gunby didn't have enough  
4 money to buy bullets for his officers and I think he had 10  
5 officers and now we've got 50.

6 But the impact that this plant has made on  
7 Fairfield County, you cannot really sum it all up other than  
8 it really has brought us into the 21st century and without  
9 it, Fairfield County would be in dire straits.

10 Thank y'all for being here.

11 MR. CAMERON: Thank you both.

12 Don Moniak, Mr. Don Moniak, do you want to come  
13 up here or do you want to speak from your seat?

14 MR. MONIAK: Who was the last speaker?

15 MR. CAMERON: That is Councilman George Brown --  
16 David Brown, sorry.

17 MR. MONIAK: Are there other speakers?

18 MR. CAMERON: We might. Do you want to wait  
19 until the end?

20 MR. MONIAK: Yes.

21 MR. CAMERON: All right. Ms. Pearson, do you  
22 want to say something?

23 MS. PEARSON: I just want to say a few words of  
24 thanks for you all coming out and giving us the information

1     that we do have.

2                 It is a privilege and opportunity to come and  
3     sit and listen. As I stand here, I have a son who is  
4     quality control manager at the V.C. Summer Nuclear Plant.  
5     The more I hear about safety, the sounder I sleep.

6                 We truly do want to thank you all for the  
7     information. We do know that it's your job to do this and  
8     it appears that you put a lot of time in it. Otherwise, it  
9     wouldn't be as informative as it is.

10                We do thank you and we're proud to have you in  
11     the community.

12                MR. CAMERON: Thank you, Ms. Pearson.

13                Do we have anybody else? Reverend, do you want  
14     to say anything at this point or did we answer all your  
15     questions?

16                REVEREND CANNON: I too want to reiterate the  
17     fact that we are happy to have good neighbors. The plant  
18     has done so much for the community and I can look right  
19     around and I see someone who is employed in taking care of  
20     the building for us and he works for the plant, so it has  
21     had a tremendous impact on the county and we get good  
22     reports that they are safe and therefore we can look across  
23     the lake and see the glory of God and the wonder of  
24     technology working hand in hand, and therefore, we are happy

1 and we praise God.

2 MR. CAMERON: Thank you, Reverend Cannon.

3 Anybody else have a statement that they want to  
4 make before we go to Mr. Moniak?

5 (No response.)

6 MR. CAMERON: Don, would you like to give us  
7 your comments?

8 MR. MONIAK: Sure.

9 Because you'd hate to have a meeting, Chip,  
10 right, where somebody doesn't speak from the podium -- isn't  
11 that true?

12 MR. CAMERON: I do like it when someone comes up  
13 and speaks from the podium.

14 MR. MONIAK: I'm glad I can oblige.

15 MR. CAMERON: Good.

16 MR. MONIAK: My name is Don Moniak, I live in  
17 Aiken, South Carolina, I'm a free lance writer and  
18 independent technical and environmental consultant. I used  
19 to work for the Blue Ridge Environmental Defense League and  
20 I wrote the only contention -- wrote and argued the only  
21 contention on reactor relicensing that is going to be argued  
22 before the Atomic Safety and Licensing Board panel.

23 I want to say that this relicensing process is  
24 so complex and so difficult for people to grasp exactly what

1 is being evaluated and what is being proposed, that it  
2 almost makes no sense to have public participation because  
3 everybody comes in confused and they leave confused.

4 Even the licensing board judges seem very  
5 frustrated by the rules and one of the NRC lawyers stated  
6 during a prehearing that the rules are perplexing, they're  
7 difficult to understand and at times they're confusing.  
8 This is NRC's own lawyers.

9 So the rules are written in a way that  
10 essentially excludes the public. And I know at the last  
11 meeting, I read the transcript from the meeting in December  
12 that was held here and Brett Bursey talked about how the  
13 adjudication process is an extra step towards -- you know,  
14 adding to that safety margin. And it's not just because  
15 people are -- the public is arguing it, but it's because  
16 also when you get the Atomic Safety and Licensing Board  
17 panel going, they're very sharp people and they really hold  
18 the NRC staff's feet to the fire and the licensee's feet to  
19 the fire. They are very difficult to pull one over on and  
20 they really are effective, they're a good third step to make  
21 sure that things are going to happen as SCANA and NRC say.

22 When you remove that third step, you're actually  
23 cheating the system, which nuclear power is a high  
24 consequence industry, which means it's a dangerous industry,



1 which means it has to be safer than other industries because  
2 the consequences of the accidents are so severe. If you  
3 don't believe me, Sandia National Laboratory and most other  
4 NRC contractors say this matter of factly.

5 So it's unfortunate that there is no -- not more  
6 questions, especially out of Columbia, because quite a few  
7 environmentalists from Columbia come down to Aiken, North  
8 Augusta, to discuss Savannah River Site issues -- they're 60  
9 miles from there, they're 28 miles from here.

10 At the last meeting, somebody asked how many  
11 people with NRC staff, how many are SCE&G, SCANA -- you  
12 know, how many people in here are not being paid to be here  
13 and are just members of the public. I was just curious.

14 (Show of hands.)

15 MR. MONIAK: Five.

16 There was also a discussion about public  
17 involvement and I'm not sure, there was an elected official  
18 who said that the notice was -- it was insufficient notice  
19 and Chip Cameron admitted that we can always improve on our  
20 notice. I'm not sure if there was any improvement here or  
21 not, somebody else can decide that.

22 But the timing was also raised, they said that  
23 it would be better to have this on a Saturday when more  
24 people are off than during the week, but it's not a

1 Wednesday now when more people go to church at night, they  
2 have moved it to Monday, so I don't know if that was done --  
3 today's Tuesday actually, right? Yes, Tuesday.

4           There was a third question that was asked, is  
5 what about health impacts in the area, because there were  
6 concerns over rising cancer rates and other illnesses which  
7 would be extremely difficult to trace back to Summer Nuclear  
8 Power Plant even if it was Summer Nuclear Power Plant  
9 causing these problems, because environmental epidemiology  
10 as a discipline is almost impossible. As a friend of mine  
11 once said to the Centers for Disease Control people who were  
12 conducting a community health assessment, he said you all  
13 couldn't find an exposure pathway if you had gone to Bhopal,  
14 India. And they just said well, we think we could have.  
15 You know, they weren't offended by this, they may have had  
16 some difficulties, believe it or not, in their mind.

17           So it would be very difficult to find this out,  
18 but nonetheless, it seems to be incumbent upon the NRC and  
19 SCE&G to at least address this issue and identify what  
20 sources of hazards, contaminants in general in this area  
21 there are. There's a very high frequency of electrical  
22 power lines here and radio frequency -- electromagnetic  
23 radiation from these is harmful. How much is harmful is  
24 under debate, but the former Soviet Union held that much,

1 much less -- their standards were well below ours. In fact,  
2 I read somewhere that their standard was anything above zero  
3 was an impact. And the former Soviet Union, now the  
4 Russians, they have a strange economy and it's a different  
5 place, but the one thing they do know is radio frequency and  
6 electromagnetic technology. They are way ahead of us in  
7 terms of developing electromagnetic bombs.

8           So I didn't see that anywhere, maybe I missed  
9 it. What other factors are there that could be causing  
10 health impacts in the area. It doesn't mean that you have  
11 to say whether Summer is or not, just say that these other  
12 things could be causing it. The National Academy of  
13 Sciences comes out and says that oh, power lines don't cause  
14 leukemia. Well, sure, maybe they don't, but there's a lot  
15 of other impacts, especially neurological, that it could be  
16 causing. If you've ever met anybody who lives next to a  
17 substation, listening to that drone all day long and it's in  
18 their house and it's in their mind and they can't get it out  
19 -- people who live next to substations are often times a  
20 different breed. I would never live that close to one.

21           So the second set of things I had was questions.  
22 What is the bottom line motivation for getting a relicensing  
23 20 years ahead of time? And I just want to know, does this  
24 improve the ledger, the books for SCANA and Santee-Cooper?

1 It's just a yes or no question. If it helps their financial  
2 situation by making their books look a little more  
3 presentable, having less liability, less capital investment  
4 per year; you know, just come out and say that because that  
5 may be a socio-economic impact, but I don't remember seeing  
6 it.

7 Does license renewal mean that the plant will  
8 operate another 20 years or that it will even operate up  
9 until the end of the 40 years?

10 And in all of these relicensings, there doesn't  
11 seem to be much analysis on what the impact would be of an  
12 operator suddenly closing a plant because the energy is not  
13 needed, it's too expensive, there's been new technology. In  
14 the next 20 years, who knows what's going to happen in terms  
15 of energy technology. Nuclear power could be obsolete in 20  
16 years, as we currently know it.

17 What would be that socio-economic impact? What  
18 would be the impact of early closure, especially if the  
19 governments plan on this operating another 20 years, local  
20 governments.

21 And I also read that inside of the 10-mile  
22 radius, I guess the evacuation area, the population has not  
23 enjoyed the same level of growth as the other parts of the  
24 county. This is not a county that experiences a lot of

1 growth, which can be a good thing too, but does this plant  
2 affect the ability of the county to bring in other  
3 industries, both this and Newberry? Are there industries  
4 that would think about moving here, smaller scale ones that  
5 will not because there's a nuclear power plant nearby? Are  
6 the people not moving to within the 10-mile radius because  
7 of the plant? What is the reason for the exodus of people  
8 from that 10-mile radius? And somewhere in there it said  
9 that it either decreased -- a lot of people have left,  
10 something like 220 people left in a 20-year period in an  
11 area where there's only 1000 to begin with.

12           So my point is because in the south, a lot of  
13 these power plants are located in very rural areas, they all  
14 seem to be put 25 to 30 miles away from a population center.  
15 I guess that was the siting criteria back in the '60s, '70s.  
16 And some of these places just have the worst poverty in the  
17 country, never mind in South Carolina. I'm speaking  
18 specifically about Plant Vogtle in Georgia, where the  
19 poverty rate is almost 30 percent in Burke County.

20           So South Carolina is dominated by nuclear power  
21 and yet its schools are behind and it has higher poverty  
22 rates than the rest of the country and essentially it's a  
23 state, unlike North Carolina, that went a separate way. It  
24 relied upon government subsidies and large corporations to

1 do its work rather than going after a high tech boom.

2 So anyway, I just would like to hear those  
3 questions kind of addressed in the EIS. Thank you.

4 MR. CAMERON: Thank you, Don, for those comments  
5 and the staff is going to have to consider those to see  
6 whether they're within scope and to see how to address them.

7 I guess just for the record, I just would add  
8 one thing -- and thanks for taking us back to scoping, it's  
9 always important to make that tie-in. And you raised the  
10 comment about the notice, and indeed, we realized that  
11 notice for this community had to be done in a different way  
12 and Councilman Marcharia, the person who raised that the  
13 last time, before he left today, he in fact gave the NRC  
14 staff compliments for how they did and particularly Mr. Greg  
15 Suber, the project manager, for how the notice was conducted  
16 for this particular meeting. So I just let the record note  
17 that.

18 Is there anybody else who wants to make a  
19 comment at this point?

20 (No response.)

21 MR. CAMERON: Okay, we're going to be back  
22 tonight at 6:00 for open house, 7:00 meeting for anybody who  
23 cares to join us again, but most importantly, I think that  
24 for all of you who are here, the NRC staff is here, our

1 expert consultants are here and I would just ask the NRC  
2 staff to talk to people who raised issues, to perhaps give  
3 them some more information.

4 And Steve, we traditionally go to the person who  
5 does the real welcome to just close the meeting out for us.  
6 So you're the section chief, why don't you do that.

7 MR. WEST: I just wanted to thank you, reiterate  
8 what Chip said and thank you again for taking the time out  
9 of your day to come to listen to what we had to say.

10 I appreciate the comments we got this afternoon.  
11 I hope if you do have comments but didn't choose to speak  
12 up, you will submit them, presumably -- I don't know if we  
13 handed out information with your address and phone number,  
14 Greg, but if you don't have that -- okay, well make sure you  
15 take that with you and submit the comments.

16 Thank you again.

17 (Whereupon, the meeting was adjourned at  
18 3:10 p.m.)

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