

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

PUBLIC MEETING ON DRAFT SUPPLEMENTAL
ENVIRONMENTAL IMPACT STATEMENT FOR OCONEE NUCLEAR
STATION LICENSE RENEWAL
(EVENING SESSION)

Ramada Inn
1810 Tiger Blvd.
Clemson, SC
Hwy 76 and 123

Thursday, July 8, 1999

The above-entitled meeting commenced, pursuant to notice, at 7:00 p.m.

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PROCEEDINGS

[7:00 p.m.]

FACILITATOR CAMERON: Good evening everybody and welcome to the Nuclear Regulatory Commission's Public Meeting on the draft environmental impact statement connected to the application for license renewal for the Oconee plant.

My name is Chip Cameron, I'm the Special Counsel for Public Liaison at the NRC. I'm going to serve as your facilitator this afternoon for the meeting.

Tonight you're going to have an opportunity to hear from the NRC staff on the contents of the draft environmental impact statement and also on the status of the license renewal application for Oconee. You're also going to have the opportunity to ask questions of the NRC staff on those issues and also to make comments on the draft environmental impact statement.

My role, as the facilitator, is to try to help you have a more effective meeting tonight and my goals, in terms of an effective meeting are to make sure that the information that the NRC Staff presents is clear and is understandable and we'll try to clarify anything that you don't understand.

Secondly, I want to make sure that everyone who has an opportunity or everyone who wants to speak has an opportunity to speak tonight. Finally, I think another goal would be to keep the discussion focused and relevant.

When you look at the agenda for tonight's meeting, which is available outside if you haven't gotten a copy. We have presentations on a number of topics. After each of those presentations we're going to go on to you for any questions or comments and I'd like to confine the questions and comments to the topic that was under discussion as much as we can. There will be a segment at the end of tonight's meeting where more general comments can be made or where something that we haven't addressed can be talked about.

The comments that you give to the NRC tonight are going to be treated just like the written comments that the NRC is soliciting on the draft environmental impact statement. The staff is going to evaluate them in the development of the final environmental impact statement but we're hear tonight to hear from you, personally, on these issues and, keep in mind as the NRC staff will remind you that this is a draft environmental impact statement and the reason that it's issued as a draft is to get your comment and to make sure that the information in the draft environmental impact statement is correct.

In terms of ground rules for talking tonight, if when we go on to you for discussion, if you have something to say just please raise your hand and I'll recognize you and you can use this talking stick to speak. If you want you could come up here and please state your name and affiliation, if appropriate, so that we know who you are. We're also keeping a transcript of tonight's meeting and that will help the Court Reporter to identify you with your remarks.

I don't think we're going to have any time problems, in terms of keeping on schedule, but I would just ask you to be as to the point as possible in your remarks and I know that some people who have signed up to make statements, if there's an appropriate time during the discussion to do that statement we'll have you do it. It may be that the most appropriate time for some of the general statements will be after the final presentation.

Please feel free to ask questions and make comments on the presentations that you hear tonight.

In terms of the agenda, in about a minute we're going to have Cindy Carpenter, who's the Chief of the Branch where this environmental work is being done. She's going to give you a brief overview of what's going to happen tonight and the purpose of the meeting and we're going into a presentation by Chris Grimes, who is the Branch Chief of the License Renewal and Standardization Branch at the Agency and Chris is going to give you the overview of license renewal, generally and what the status is on the Oconee license renewal application. As you'll see the environmental impact statement, the environmental work is one part of a larger context and Chris will be giving us that context.

We'll then go to you for questions and discussion and after that we're going to Jim Wilson who's an Environmental Project Manager in Cindy's Branch. Jim is going to give you the overview of what we call here the NEPA process. That's the National Environmental Policy Act. We'll go out to you for discussion and then we're going to get into the real meat, so to speak, of the draft environmental impact statement.

Eva Hickey, from Pacific Northwest Lab is going to summarize what her team, working for the Nuclear Regulatory Commission found, at least preliminarily, in terms of environmental impact statements on the Oconee license renewal application. We'll go to you again for questions and comments and then we're going to have Robert Palla, from the NRC staff who is going to talk about severe accident mitigation considerations, in terms of Oconee. Again we'll go out to you to see if you have any questions or comments.

Then we'll have a brief presentation by Jim Wilson, again, to talk about what the preliminary conclusions are and we can get your views on that and I think that probably, for most of the presentations that people have signed up for, might be the most appropriate time to do that. Cindy, are you ready to start us off?

MS. CARPENTER: I want to welcome you and I want to thank you for coming tonight.

My name is Cindy Carpenter and I am the Branch Chief for the Generic Issues, Environmental, Financial and Rulemaking Branch within the office of Nuclear Reactor Regulation of the NRC.

We're here today to discuss the results of the NRC's environmental review of the Oconee Nuclear Station, in support of Duke Energy's license renewal application for the plant. We'll talk a little bit about the statutory requirements for this action, the results of the NRC's review, the preliminary conclusions of the NRC resulting from this review, the schedule that we're working to and we'll provide you an opportunity to comment or ask questions on what it is in the NRC's environmental impact statement or on anything that you've heard today.

To provide you with some background. The operating licenses for the Oconee Nuclear Station, Units 1, 2 and 3 will currently expire in 2013, 2013 and 2014 respectively. As we'll discuss later, the Atomic Energy Act allows the utility such as Duke Energy to renew its license for up to twenty years.

Part of the license renewal process requires the NRC to systematically consider environmental impact during its decision making process on this matter.

The Oconee Nuclear Station submitted their license renewal application in July of 1998. We held a scoping meeting here in October of 1998 to identify issues that may have needed to be addressed during the staff's review. In May of this year the NRC issued a draft environmental impact statement describing the results of our review. We're currently in the middle of the comment period for that document during which we receive comments from members of the public on its contents.

These comments may help the staff evaluate the acceptability of the environmental aspects of the Oconee Nuclear Station license renewal.

Slide 5, please. The purpose of today's meeting is to present the results of the NRC's environmental review, to discuss what the NRC Staff considered in this review, to clarify any issues to members of the Public, to assist you in preparing comments, to identify whether or not environmental license renewal issue was inappropriately excluded during this review, accept any comments from members of the public and discuss the schedule for submitting comments and how you can submit comments to us.

Before we get into the details of the NRC's environmental review, Mr. Christopher Grimes, the Branch Chief of the License Renewal and Standardization Branch will provide an overview of the entire license renewal process.

MR. GRIMES: Thank you, Cindy.

As Chip mentioned and Cindy mentioned, and now I'll mention, my name is Chris Grimes. I'm the Chief of the License Renewal and Standardization Branch in the Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation.

I'd like to start off by first describing the NRC's mission and purpose. The NRC's mission is to regulate the nation's civilian use of nuclear materials, to ensure adequate protection of the Public health and safety, to promote the common defense and security and to protect the environment.

This mission, and the NRC's authority is derived from the Atomic Energy Act of 1954, the Energy Reorganization Act of 1974, as well as amendments to those Acts and other legislation involving security, waste and energy policies.

The NRC's regulations are issued under Title 10 of the United States Code of Federal Regulations which we will refer to, throughout these presentations, as 10-CFR.

For commercial power reactors, the NRC's regulatory functions include licensing. A nuclear power plant is licensed, based on a set of established regulatory requirements to ensure that the design and proposed operation are safe, based on radiological safety standards. NRC conducts routine inspections to ensure that the plant design and operation conform to the license requirements and enforcement actions are taken in the event that the license requirements are not being satisfied.

Slide 7 please: The Atomic Energy Act and the NRC regulations limit commercial power reactor licenses to forty years, but also permit the renewal of such licenses for a period of up to and additional twenty year period. The forty year term was originally selected on the basis of economic and anti-trust considerations, not technical limitations. But once selected, the design of several systems, structures and components were engineered on the basis of an expected forty year service life. The requirements for the initial forty year license are contained in 10-CFR, Part 50.

When the first reactors were constructed, major components were expected to last at least forty years. Operating experience has demonstrated that that expectation was unrealistic for some major plant components, such as the steam generator and pressurized water reactors.

However, research conducted over the past decade or more and operating experience have demonstrated that there are no technical limitations to a plant life, since major components and structures can be replaced or refurbished. Thus, the plant life is determined primarily on economic factors. As a result, the NRC established regulatory requirements in 10-CFR, Part 54, to provide for license renewal.

That rule, which was initially issued in 1991 and amended in 1995, provides that the basis upon which a plant that was originally licensed would remain valid after forty years and can be carried over into a twenty year period of extended operation. That rule requires that an applicant demonstrate that applicable aging effects will be adequately managed for a defined scope of passive, long lived system structures and components.

The Commission determined that aging for active components is adequately managed by existing maintenance and surveillance programs and other aspects of the existing license requirements can continue through the period of extended operation. The rule also requires that certain time dependent design analysis be identified and evaluated.

A new license can be granted upon a finding by the Commission that actions have been, or will be taken so that there is reasonable assurance that applicable aging effects will be adequately managed for the period of extended operation and whether or not adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decision makers would be unreasonable.

Could I have Slide 8 please: The United States currently receives about twenty percent of its electricity from the one hundred and three operating commercial nuclear power plants. The electricity sector is moving rapidly to a deregulated environment in which energy supply choices will be dictated by cost to the consumer. At the same time, there are growing pressures to limit fossil fuel emissions because of continuing concerns for cleaner air and potential global climate changes.

Deregulation and competition have raised the interest in license renewal to strategic importance because large generating plants become vital economic assets to the plant owners.

Operating nuclear power plants are expected to remain competitive after retail electricity restructuring provided that the costs associated with operating the plants safely, in the future, can be reasonably predicted. Some currently operating U.S. plants will not apply for license renewal for economic reasons.

The NRC established the license renewal requirements so that any plant that is financially and materially capable of operating safely, beyond on the current licensed term, should have that opportunity and clearly understand the requirements for such extended operation. This conclusion is described in the generic environmental impact statement for license renewal.

Calvert Cliffs in Maryland was the first plant to apply for license renewal in April of 1998. The renewal application for the Oconee was received in July of 1998. Although these licenses do not expire until 2013 or later, many utilities are interested in license renewal today to ensure that they can clearly understand what requirements will be necessary for an extended license for future financial planning.

Could I have Slide 9, please: The licensing process consists of parallel, technical and environmental reviews which will be documented and a safety evaluation report for the aging management aspects of a renewal application and a supplement to the generic environmental impact statement for the environmental impact review. The aging management findings in the NRC Staff Safety Evaluation will be verified through NRC inspections. The renewal application and safety evaluation will also be reviewed by the NRC advisory committee on reactor safeguards, in accordance with the usual practices for issuance of a license.

On June 16, 1999, the NRC issued the safety evaluation report for Oconee which addresses the scope of passive systems, structures and components, the applicable aging effects, the aging management programs that Duke will rely on to ensure that the plant is safely maintained for the period of extended operation.

That report identifies open items and confirmatory matters related to the safety review under Part 54 that must be resolved before the Commission can complete its decision on a renewed license. That report is available to the public.

Since the issuance of the safety evaluation report, Duke has submitted responses to some of the open items. The responses to all of the open items are scheduled to be completed before October 1999. Meetings will be held between the NRC and Duke in the future to discuss the resolution of the open and confirmatory items. The resolution of those issues will be reflected in a revised report that is currently scheduled to be completed by February 2000.

The NRC's licensing process includes a formal process for public involvement through Hearings, conducted by a panel of Administrative Law Judges who are called the Atomic Safety and Licensing Board. That process consists of a petition to hold Hearings on particular issues to be litigated by the Board.

Following the receipt of the license renewal application for Oconee, in July 1998, the NRC received a request for a Hearing on a license renewal application from the *Chattooga River Watershed Coalition. They petitioned for Hearings on issues related to the completeness of the renewal application, the adequacy of the safety basis for aging management, the fulfillment of NEPA and high level waste storage.

In December 1998, the Board concluded that the petition did not identify disputes of material issues of law or facts that would warrant resolution through litigation. The Chattooga River Watershed Coalition appealed the Board's decision to the Commission. On April 15, 1999, the Commission affirmed the Board's decision and denied that appeal. Although there will be no formal hearings on the Oconee renewal application it is clear that the Chattooga River Watershed Coalition and other interested members of the Public are concerned about nuclear safety issues, including issues that are both within and beyond the scope of the matters that the NRC will address specifically in the license renewal review. The NRC will continue to hold public meetings with Duke to discuss the open and confirmatory items in the safety evaluation report, as well as public meetings on other topics related to the ongoing licensing activities of the Oconee Plant.

Time is usually provided at the conclusion of each meeting, for Public comments and questions. It usually depends on whether or not there are any members of the Public who attend the meetings. Interested members of the Public can express concerns like those that were raised by the Chattooga River Watershed Coalition for the staff to address on an informal basis.

Meetings on particular technical issues are usually held in Rockville, Maryland. However, some technical meeting and meetings summarize the results of the NRC's inspection findings will be held at the Oconee plant, in a place that is accessible to the Public.

The safety evaluation report, meeting summaries and other related correspondence are available to the Public through the local Public document room. The local Public document room is in the Public Library, Walhalla, South Carolina. In addition, we are adding more of these materials to the NRC website.

I had hoped to be able to tell you tonight that we'd just revamped the website for license renewal activities. Unfortunately the NRC has got competing demands on its computer resources right now, we're trying to electrify the NRC staff and they're trying to teach us how to do all of our document management on an electronic basis. So, our website improvements will take another week or two. But, in the very near future I hope you'll be able to find more materials available on the NRC website about license renewal.

The advisory committee on reactor safeguards, which we refer to as the ACRS, performs an independent review of the renewal application and the safety evaluation and they report their findings and their recommendations directly to the Commission. The members of the ACRS consists of academicians and experts in particular technical fields that are selected specifically by the Commission to serve on the Advisory Committee.

They also holds public meetings which are transcribed. Oral and written statements can be provided during the ACRS meetings, in accordance with the instructions described in the

notice of their meetings in the Federal Register. A meeting of the ACRS sub-committee on plant license renewal was held in Rockville, Maryland on June 30th and July 1st to discuss the safety evaluation for the Oconee license renewal application. The ACRS full committee will discuss this topic in September 1999.

At the end of the process, the final safety evaluation report, the final supplement to the environmental impact statement, the results of all of the inspections and the ACRS recommendation will be submitted to the Commission with a staff recommendation. Those documents and the formal Commission meeting to discuss the staff's recommendations are also accessible to the Public.

After a Public Commission meeting, presently scheduled in August of 2000 for Oconee License Renewal application, each commissioner will vote on the proposed action and their decision is formally sent to the NRC staff for whatever action they conclude is appropriate for the renewal application.

Throughout the NRC's review of the license renewal application, the NRC Staff will continue to conduct regular inspections and amendments to the current license. The NRC's inspections and plant performance reviews are evolving with the NRC's initiatives to improve the reactor oversight process.

If you are interested in learning more about the new inspection and oversight process, there's information available on the NRC's webpage, and there is a report titled New Reg, or NUREG 1649, Revision 1.

The normal regulatory process and amendments to the existing license will continue and parallel with the renewal application and will address matters of interest such as operational events, spent fuel storage, security and emergency plans and other aspects of the current licensing basis which would carry over into the period of extended operation.

At this point I would like to ask if there are any questions about the overall licensing process or the safety review before Jim Wilson presents the results of the staff's environmental impact review.

FACILITATOR CAMERON: Thanks a lot. Are there any questions for Chris, at this point, on his presentation?

[No response.]

MS. HAYLOR: My name is Nicole Haylor, I'm with the group that was referred to earlier, the Chattooga River Watershed Coalition.

I've read in some of the literature that the final inspection will occur as close as thirty days before the final decision on the license renewal. Is that correct?

MR. GRIMES: That's correct. There's actually a set of three inspections that will be conducted. The first two inspections are the inspections of scoping and aging management

programs that correspond to particular parts of the renewal application that we want the inspectors to verify in order to develop their inspection finding.

But then we have a third close out inspection, the last inspection is the opportunity for the Regional Administrator, who has to form a separate recommendation for the Commission to confirm any of the resolution of open items or any particular items that the Region believes would be of interest to the Commission making their decision.

MS. HAYLOR: And if there were, some of the open items were say, possibly unresolved at this thirty day inspection period, how would this information be conveyed to the Public and how would that effect the schedule for the decision which, under my understanding, is on a very rigid time line.

MR. GRIMES: We are working to a very specific schedule and we intend that all of the open and confirmatory items would have to be resolved before we would take a recommendation to the Commission. In the event that any of the open items are unresolved then the schedule would have be slipped. But, at this point, we're working on a schedule with anticipation that we would have complete responses from Duke by October so that we could complete a safety evaluation in November in order to time a final inspection before a Commission decision.

MS. HAYLOR: I guess again, I'd like to ask, how would that information be conveyed to the Public, just thirty days before the final decision, if there were open items that were still unresolved?

MR. GRIMES: It would be conveyed - we would put the final inspection report, as well as the final safety evaluation and the final environmental impact statement would all be accessible to the Public. I would intend on putting those on the Web as well as in the Public document room before the Commission gets the recommendation from the staff and then the Public would have the same thirty days to review those materials that the Commission would have, plus the opportunity to hear the explanation of how the issues have been addressed at the Commission meeting.

MS. HAYLOR: Thank you.

FACILITATOR CAMERON: All right, this gentleman up here. Please state your name.

MR. SANDERS: My name is Don Sanders, I'm a resident of Oconee County and I belong to some of the conservation groups here in the area.

I was concerned about what the safety review, how it addresses the storage of the spent fuels and another point is, I've been reading and hearing about the MOX fuel, a mixture of uranium and plutonium. Is that a factor in the renewal of this license to be used here?

MR. GRIMES: No, sir, actually the MOX fuel is a concept that would be addressed by an amendment to the current license to permit the use of such fuel at any time. In fact, the issue concerning spent fuel storage and high level waste storage a national repository. All of the

waste issues are issues that apply to the current license, the existing license and they're being addressed through specific rule makings and activities associated with spent fuel storage.

The Oconee facility has a spent fuel storage facility that has been licensed and is part of the current licensing basis. If they chose to expand that spent fuel storage capacity that would be through an amendment to the existing license or the extended license, whichever - at whatever time that might occur.

In addition, the Department of Energy is pursuing its plans to develop an application to submit to the NRC to license a high level waste repository and that issue is also being addressed as a separate effort that is associated with what is referred to as the high level waste confidence pact.

So DOE's obligation to develop a national repository are being develop separate from this.

Did I answer your questions?

MR. SANDERS: The only part I was not clear about was these items that you mentioned. Will these be open to the public?

MR. GRIMES: Yes. All of those activities, amendments to the existing license, the DOE effort to develop a high level waste repository, we put all those materials out there as information available on the NRC webpage that addresses spent fuel storage, high level waste storage and the status of those activities and we hold meetings on the current license activities the same way we do for license renewal.

You just have to look at a different icon on the webpage to find some of those other matters.

FACILITATOR CAMERON: Yes, sir.

MR. MANGRUM: Dick Mangrum from WGOG, Walhalla. Did you say that the NRC will formally vote in August 2000 whether to renew the license?

MR. GRIMES: Yes, sir, that's the present schedule. The resolution of the open items by Duke is scheduled for October and I may have mis-spoke before because I've got two schedules in my head. The Staff's final safety evaluation and the final environmental impact statement are scheduled for February 2000 and our Commission decision by August.

As we approach those dates we would keep information about how we're progressing towards those milestones is also accessible on the web and in the Public document room.

The Commission meeting would be noticed at least thirty days in advance.

FACILITATOR CAMERON: Okay. Chris I think Nicole Haylor from *Chattooga is going to make a statement now that's mostly relevant to your topic. Nicole?

MS. HAYLOR: Once again my name is Nicole Haylor. The -Chattooga River Watershed Coalition is small, non-profit, conservation organization. Our office is based in Clayton, Georgia which is approximately thirty miles from the Oconee Nuclear Station. The entire Chattooga Watershed lies within the fifty mile evacuation zone from the Oconee Nuclear Station and as such would be greatly impacted if there were a major radiological accident there.

I personally am a resident of the State of South Carolina, I live in Oconee County, my residence is approximately twenty miles from the Oconee Nuclear Stations so you see I have various aspects, both personal and professional, as it were, in the safe operation and the relicensing decision of the Oconee Nuclear Station.

The Chattooga River Watershed Coalition as was noted before, has participated in the relicensing proceedings from the get go. We do have standing, as it were, in the proceedings although our concerns have not been recognized, have not been recognized for a Hearing by the Nuclear Regulatory Commission.

However, we do think that we have some important concerns and these concerns are being addressed somewhat through the relicensing process, however, a lot of these are simply unresolved at this point.

The whole relicensing technical issues are very involved and for the sake of streamlining some of our concerns or what I have to say now is it can be divided into basically three major categories.

No. 1 is the issue of the storage of high level waste. Everyone is probably aware that most of the high level waste for the Oconee Nuclear Station, or all of it as far as I know, is stored on site in spent fuel pools that are nearing capacity. Those who track what's going on in Congress are probably aware that the storage and management of high level waste is a very controversial issue that is currently - or has been the subject of on-going management strategies and what do we do with this very toxic waste that will remain toxic for approximately two hundred thousand years.

There are about forty thousand tons of this waste distributed around the United States at various nuclear power stations and there's basically nowhere to put it right now other than on-site in various storage mechanisms that sometimes work and sometimes don't work. I would say probably for the most part work at least for the time period that they've been used but for two hundred thousand years, it's simply an engineering problem that has not been solved yet.

It's relevant to note here also, and this is from the safety evaluation report, which is not necessarily the topic of conversation for this meeting, but it is very much a part of the relicensing process.

In the safety evaluation report the Nuclear Regulatory Commission offers the opinion or the judgement that regarding the actual spent fuel pool temperatures at Oconee Nuclear Station, the temperature limits do not guard against additional cracking of these spent fuel containment

facility. This, of course, is an obvious concern to everyone, I would think, that lives within Oconee County and nearby.

Obviously if there's leakage it gets into ground water and it's a very important concern.

Regarding the transportation of radiological waste, it's obvious that at some point this waste will need to be transferred away from the Oconee Nuclear Station possibly to the Yucca Mountain site if and when it's ever approved, which is also a very controversial subject right now.

Duke did not provide a site specific review of the environmental impacts from the transportation of high level waste. These words are the Nuclear Regulatory Commission's so there has been a void in the application regarding this subject.

Regarding the potential storage facility at Yucca Mountain, as I've said there seems to be - it's a very controversial subject. We don't know if this place will be approved and if it's appropriate it lies in a major earthquake zone and ground water - there have been studies by some individuals that show the ground water raises, periodically, through the mountain. It's against the law in the State of Nevada to pollute ground water so these are some major stumbling blocks that still have to be resolved regarding the Yucca Mountain site.

Regarding if that site is used the environmental impact there potential peak radiation, radioactive doses to individuals. Quoting the environmental impact statement, specific to the Oconee Nuclear Station, Nuclear Regulatory Commission Office:

"While the Commission has reasonable confidence that these assumptions will prove correct about the potential radioactive doses being okay, there is considerable uncertainty since the limits are yet to be developed. No repository application has been completed or reviewed and uncertainty is inherent in the models used to evaluate possible pathways to the human environment.

Estimating cumulative doses to populations over thousands of years is more problematic. Such estimates would involve very great uncertainty, especially with respect to cumulative doses to the population."

Moving on to some of our concerns regarding the safety evaluation report, this will be the last formal public meeting where the public is invited, at several occasions, to hear a presentation from the Nuclear Regulatory Commission. These other meetings that were referred to are not exactly the same format so I'd like to introduce some concerns about the safety evaluation point at this meeting here.

The safety evaluation report does contain a fair number of open items. These items are unresolved at this point. While the relicensing decision moves forward, there are a number of very important open items that are unresolved and I'll just mention a few of them. I have all the page numbers if interested in checking my citations here.

Basically questions and uncertainty remain about detecting thermal and neutron irradiation embrittlement of the reactor vessel internal components and aging management programs for these components.

Also questions and uncertainty remain about ways to detect loss of fracture toughness. One of our primary concerns, of course, is the actual integrity of the reactor vessel given the fact that it is - will be over forty years old if the license renewal is approved.

The issue of embrittlement is a very important issue regarding the renewal process and is, to date, largely unresolved.

Regarding the reactor building cooling unit, questions remain about determining the heat removal capacity given the degradation of the systems due to aging.

Regarding the reactor coolant system, "The NRC staff concludes that the applicant's time limited aging analysis of the reactor coolant system is not adequate to address the fatigue concerns for operation beyond the current design life of forty years."

Meanwhile, it's common knowledge that the Oconee Nuclear Station has been cited by the Nuclear Regulatory Commission, on more than one occasion, for problems and inadequacies in the operation of the reactor cooling systems. Of course if the cooling system doesn't work then the reactor could potentially melt down. That's, of course, a very extreme scenario there are mechanisms in place to shut down the operation supposedly under controlled methods but, nevertheless, that's sort of the end result if the cooling systems fail.

Briefly, those are some of our concerns. We are tracking some of the other issues and we intend to keep tracking the unfolding of the open items as well as all the other aspects having to do with the license renewal process for the Oconee Nuclear Station.

Thank you very much.

FACILITATOR CAMERON: Thank you, Nicole. There's just a couple of things that I wanted to give Chris Grimes, perhaps, the opportunity to comment on.

One was Nicole's comments in terms of the SER quote on spent fuel. A second is, maybe just elaborate on the waste transportation aspect or have someone do that which Nicole referred to, which I think is being handled by the NRC rather than the licensee.

Just to give people an idea again about how some of the open items that Nicole mentioned are going to be resolved.

MR. GRIMES: Thank you Chip. I'll cover the safety evaluation items. Actually I'd like to thank you - I'm glad somebody reads these things. We go to a lot of trouble to write them.

Nicole properly characterized some of the open items that are reflected in the safety evaluation. There was a question about the appropriate temperature assumptions for determining the extent of cracking in the spent fuel pool. That specifically gets to managing aging effects for the pool liner. The safety evaluation does not elaborate but we are, we do

things and those were fairly reasonable quotes of the safety evaluation and we need to have those issues resolved before we complete a renewal recommendation.

With respect to the high level waste issues, I'm going to let Cindy address those.

MS. CARPENTER: You're right, the disposition of high level waste is still an unresolved issue and correctly Oconee - Duke Energy did not address, in a site specific analysis, what to do with the transportation of high level waste. The reason for that is that the Agency has determined that the transportation of high level waste is really a generic issue that faces all of the nuclear power plants and therefore we're addressing that on a generic basis.

We're in the process right now of a rulemaking to look at the transportation of high level waste and at this moment in time the Public comment period has closed and we're in the process of reviewing the Public comments and resolving this.

FACILITATOR CAMERON: Can people get access to the proposed rule and the Public comments through the NRC website?

MS. CARPENTER: Yes.

FACILITATOR CAMERON: Okay, and that website is listed up there for people who don't know it but if you want to see what comments came in on that proposed rule, those comments are on the website.

Okay, thank you. I think we're going to move to the presentation by Jim Wilson on the national environmental policy act overview. Jim.

MR. WILSON: My name is Jim Wilson, I'm an environmental project manager at the NRC for the Oconee license renewal project. I work in the Generic Issues, Environmental, Financial, and Rulemaking Branch within the office of Nuclear Reactor Regulation at the NRC. Cynthia Carpenter is my boss.

I intend to briefly talk about the process required by the National Environmental Policy Act, the so called NEPA process, and then describe how that process translates into the regulations of the NRC and how those regulations are being applied to the Oconee license renewal application.

NEPA, the National Environmental Policy Act, was enacted in 1969. It requires that all Federal agencies use a systematic approach to consider environmental impacts during certain decision making proceedings. NEPA is a disclosure tool that involves the Public. It invokes a process whereby information is gathered to enable federal agencies to make better decisions and then documents that information, invites Public participation to evaluate it.

The NEPA process results in a number of different kinds of documents. Chief among them are environmental impact statements, also called EISs. These are rigorous, detailed reviews in which the staff evaluates the environmental impacts for proposed action that may significantly affect the quality of the human environment.

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The NEPA process results in a number of different kinds of documents. Chief among them are environmental impact statements, also called EISs. These are rigorous, detailed reviews in which the staff evaluates the environmental impacts for proposed action that may significantly affect the quality of the human environment.

There are a couple of variations in the types of environmental impact statements that can be prepared, depending on the nature of the proposed action. These include generic environmental impact statements, also called GEIS and these address generic impacts common to a number of similar proposed actions. Supplemental environmental impact statements, similar to the one that we issued back in May on Duke's licensing renewal application for Oconee, are where an environmental impact statement has already been prepared and issued and then additional information or issues arise that need to be considered and disclosed in a supplement.

So I'll discuss, shortly, the NRC use of such documents in its environmental reviews for license renewal applications.

The NRC has already determined that license renewal is a major federal action. Therefore we're going through the NEPA process for Oconee now and have prepared a draft Oconee specific supplement to the generic environmental impact statement for license renewal. That supplement discusses the plant specific results of the Oconee review.

As far as the NEPA process goes, there are certain steps that we, at the NRC, are required to follow. These steps are consistent for all environmental impact statements prepared by all federal agencies or any proposed major federal action.

The first step in the NEPA process is the Notice of Intent. This lets the Public know that we're going to prepare an environmental impact statement and for Oconee, the Notice of Intent was published in the Federal Register in September of 1998.

To prepare for the review, the staff assembled a team of NRC staff with backgrounds in the scientific and technical areas required to perform the environmental reviews. In addition, to supplement the technical expertise of the staff, we engaged the assistance of Pacific

those alternatives and it looks at mitigation measures which are things that can be done that would decrease the environmental impact of the license renewal.

It's important to note that during the scoping period for Oconee, a number of issues were raised to the NRC by the Public or identified by the staff during the course of its review that did not have a bearing on the decision to renew the license. However, a number of these issues were determined to be appropriate for consideration now, rather than waiting till license renewal, because they're relevant to the currently operating plant.

These have been referred to the appropriate NRC programs. For instance, to the allegation management program, the operating reactor project manager or other agencies that have a stake in these issues for disposition.

After an agency has conducted its environmental review, it issues what's called a draft environmental impact statement or draft EIS for public comment. They are drafts not because they are incomplete, but rather because the agency is at an indeterminate stage in the decision making process. In the case of Oconee we called this the draft Supplement 2 to the generic environmental impact statement for license renewal and I'll go on to this in a little bit.

The minimum public comment period mandated by NEPA for environmental impact statement in draft form is forty-five days. In the case of the staff's review for Oconee, Nuclear Regulatory Commission has elected to allot seventy-five days for the comment period providing an additional thirty days for comment.

Today we're holding two public meetings to describe the results of the NRC review in the environmental area and to answer questions related to our environmental review put to us by members of the public and help members of the public formulate their comments.

The formal comment period for the Oconee draft supplement to the GEIS ends on August 16, 1999.

After the agency gathers its comments and evaluates them it may decide to change portions of the EIS based on these comments. We will then issue a final environmental impact statement and for Oconee we're working to issue the final environmental impact statement in February of 2000.

This slide shows a flow diagram of the NEPA process and how it's being applied to nuclear power plants requesting review of their - renewal of their operating licenses. This is the process we're going through for the environmental portion of the Oconee license renewal application and we are at this stage here in the review. We've had the scoping meeting, had the site visit and now prepared our environmental statement in draft form and are receiving comments on it from the Public.

I'd like to spend a few moments describing how the staff incorporated the NEPA process into the regulatory framework of the NRC and how the staff performs its environmental assessments.

The NRC's implementing regulations for carrying out the NEPA process are located in Part 51 of Title 10 of the Code of Federal Regulations, what we call 10-CFR, Part 51. This regulation

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The NRC's implementing regulations for carrying out the NEPA process are located in Part 51 of Title 10 of the Code of Federal Regulations, what we call 10-CFR, Part 51. This regulation contains the requirements that determine how the NEPA process is implemented at NRC. It outlines the contents of the environmental impact statements and the process that the NRC will use in order to meet the requirements of NEPA.

Early on, in establishing the license renewal process, it was recognized that the original environmental impact statement that were written for the plants when they first received their operating licenses would need to be updated to address any refurbishment activities in the additional twenty years of operation.

So, the NRC undertook a rule making effort to modify Part 51 and to amend it to address license renewal and environmental impacts. This was done separately from the rule making efforts on Part 54 to address the safety issues involved with license renewal.

As part of the rule making effort on Part 51, the staff developed a generic environmental impact statement called the GEIS, which took a systematic look at the thousands of hours of operating experience at all the nuclear power plants in this country, to help us identify potential environmental impacts. In addition, the staff is finalizing an environmental standard review plan for license renewal, NUREG 1555, Supplement 1, to provide guidance to the staff on how to perform such a review. The staff used the information and guidance from these documents, and the public's input during the scoping process during our plant specific review of Oconee.

There are copies of the code of Federal Regulations, the GEIS, the environmental standard review plan outside in the lobby for your examination. These documents are also available at the NRC's public document rooms, and from the Government Printing Office.

The generic environmental impact statement was published as NUREG 1437, and issued as a final document in 1996. It formed the basis for the rule revisions in Part 51. The NRC worked

When the staff looked at the 92 issues identified in the GEIS, it found that some of those were generic. That is, they were common to all plants regardless of their design or where they were sited.

The NRC wanted to categorize them differently from those that needed to be evaluated on a plant-specific basis so we chose to designate the generic impacts as being in Category 1. Impacts that were plant specific were designated as being in Category 2.

Three criteria were developed to determine whether or not an impact should be in Category 1 or Category 2.

If an impact met all three of these criteria it's considered a Category 1 impact and it was addressed on a generic basis in the GEIS. The first criterion for an impact being a Category 1 was that the impact had to apply to all plants or, for some plants having a specific type of cooling system or other specific plant or site characteristic.

The second criterion was a single significance level. It could not be a small impact at one site and a large impact at another site. It had to be small or large impact at all of the sites.

The third criterion was that plant-specific mitigation measures, where adverse impacts occurred, had been considered in the analysis.

As part of the GEIS, the NRC looked at mitigation measures and if there were no other mitigation measures that could be taken on a plant specific basis that were sufficiently beneficial to warrant implementation, it would be considered as a Category 1 issue.

An example of the Category 1 issue is transmission line right-of-way impacts. NRC considered that those impacts applied to all plants, all plants have transmission line corridors and the significance level of the impact was the same at all plants, and there were no further mitigation measures that could be taken on a plant specific basis.

The GEIS identified sixty-eight Category 1 issues. Sixty-eight issues have been codified in 10-CFR, Part 51 as not requiring additional plant specific analysis by the licensees. However, applicants must inform the NRC in its license renewal application whether it is aware of any new and significant information regarding these Category 1 issues.

In addition, during the scoping phase of this review the NRC looked at comments from members of the public and from the federal, state and local authorities to determine whether or not there is any new and significant information regarding these issues.

If new and significant information would be revealed during the staff review that information would be included in the staff's review and provided to determine the environmental impact. If no new and significant information were identified, the staff would adopt the general conclusions from the GEIS.

Twenty-two of the remaining issues are considered Category 2 and must be addressed on a plant specific basis. Since the GEIS was issued in 1996, the Commission has directed that one of the Category 2 issues, transportation of high level waste, should be addressed on a generic basis. As Cindy indicated earlier, rule making efforts are currently underway to appropriately

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There are still two issues yet to be categorized. Because the Presidential Executive Order on Environmental Justice had just been issued at the time the GEIS was issued in 1996, the staff concluded that it did not have enough information to categorize this issue one way or the other.

However, the final rule determined that environmental justice must be addressed on a plant specific basis.

The final issue, which was un-categorized, concerns the possible chronic effects of electro-magnetic fields transmission line operation. Because conflicting research results existed and there were no clear conclusions regarding the impact, the Commission decided to wait until there was a clear scientific consensus on the issue before deciding whether it should fall in Category 1 or Category 2.

The final rule determined that the effects of electromagnetic fields would be addressed on a plant specific basis.

All ninety-two of the issues considered by the staff and the GEIS are codified in 10-CFR, Part 51. There's a table, Table B-1, at the end that addresses each of the ninety-two issues and designates whether they are Category 1 or Category 2 issues.

As mentioned before, the review process is designed to determine whether or not any new significant information is available. Applicants must inform the NRC whether or not they are aware of any significant new information. In addition, the staff does its own independent review to determine whether or not there is significant new information. Such information for Category 1 issues is included in the Staff's review to determine environmental impact. If no new and significant information is found, the staff will adopt the generic conclusions from the GEIS for a Category 1 issue.

If new and significant information is identified on an issue that was not considered in the GEIS, it's given the same plant specific treatment as if it were a Category 2 issue by the rule.

The purpose of this slide is to show how the GEIS and its Supplement 2 on Oconee are interrelated. On the left side you can see ninety-two issues identified in the GEIS and how they were categorized. The right side shows a breakdown of how the ninety-two issues were treated for Oconee.

It shows the sixty-eight Category 1 issues. Fifty of those were applicable to Oconee, eighteen were determined not to be applicable to the site or because of specific design considerations. Of the twenty-two Category 2 issues, thirteen were considered applicable for Oconee, nine were not.

Environmental impact of all the applicable issues was assessed. In addition, the staff assessed the impacts of the two issues that hadn't been categorized in the GEIS, the environmental justice issue and the chronic effects of electromagnetic fields.

During the course of the scoping process, no new or significant information on any of the issues were identified and no new or significant issues were identified.

That's a brief summary of the NEPA process and each role of the GEIS, and the role of the GEIS in the staff's review.

The ninety-two issues in the GEIS all have been addressed in the supplement for Oconee.

For the Category 1 issues, the staff confirmed that no new and significant information exists and adopted the conclusions from the GEIS.

For the Category 2 issues, the staff assessed the environmental impacts and the staff also addressed the human health effect of electromagnetic fields and environmental justice.

There were a few issues that were included in the scope of the original Oconee environmental statement at the time the license, the operating license was issued. A few of them are not addressed in our supplement to the GEIS. These include the need for power and cost of power, safety issues and spent fuel disposal except for high level waste transportation.

As we mentioned earlier, to supplement the technical expertise of the staff, personnel from the Pacific Northwest National Laboratories were engaged in a variety of technical and scientific disciplines in order to perform the environmental review.

Eva Hickey, the Staff Scientist at PNNL will present results of the staff's plant specific environmental review at Oconee.

Before we go on to the next presentation are there any questions on the material that I presented?

FACILITATOR CAMERON: In a minute you're going to hear from Eva Hickey and this is, I think, the heart of the plant specific EIS and Jim has done a pretty good comprehensive job of telling you what the NEPA framework is on this.

Are there any questions on Jim's presentation on how the National Environmental Policy Process works, what the NRC looks and Jay, could you put up the slide before this one. I did have one thing I just wanted Jim to -

Jim, I take it that we're looking for Public comment on any of these subjects, is that correct? Have you seen this slide before?

MR. WILSON: The answer is yes. We're trying to see if the public has any comments on the way we categorized issues or the way we address any of the issues, whether they're Category 1 or Category 2. Any of the ninety-two issues or if you think there's an issue out there that we did not address, it would be appropriate to do so for this environmental statement, bring it to our attention so we can address it.

FACILITATOR CAMERON: Okay, great. Questions out here from anybody before we go on to the site specific impact evaluation that Pacific Northwest did for us?

MR. SANDERS: Don Sanders again. I guess the environmental impact statement is just not the place for the safety issue but that's not clear here, to me, and it may not be to others. You might want to say where the safety issue and some of these others - unable to hear.

FACILITATOR CAMERON: Did you guys hear that question?

MR. GRIMES: I heard the question and you're correct. The environmental impact statement doesn't address the safety issues. The safety issues are addressed, as I explained in the introduction, either through a formal public participation process which involves Hearings and a petition to intervene, or informally by attending meetings or calling us. If you have a particular question about the staff safety evaluation.

I'll give you my name and address and if you've got any safety questions you want answered I'll answer them.

FACILITATOR CAMERON: Chris, I think maybe you should just repeat and Jim might talk about it a little bit later on, but could you just talk about how the - there's the environmental impact statement process, which is the main focus tonight. There's the safety evaluation process - how do those all come together again, just so that people understand.

MR. GRIMES: Upon receipt of a license renewal application the safety review is the review that is conducted in accordance with Part 54 and that results in a safety evaluation report. As shown on this slide, the opportunities for public involvement are informally participating in meetings, specifically the ACRS review is a transcribed meeting where the ACRS solicits Public comment.

There are also the formal adjudicatory hearings and a little note at the bottom is the key here and that is if a hearing request is granted, the environmental review that Jim just described is conducted in accordance with Part 51. We had our scoping meeting, we've got a supplement to environmental impact statement, we're at this little box right here, right now, conducting a Public meeting to discuss the comments on the supplement as it relates to the environmental impacts that are described in Part 51 and Jim outlined those.

The other opportunity for Public involvement is when the pieces come together, the inspection activities, we hold Public meetings to discuss the inspection results. We hold meetings throughout the safety evaluation process where interested members of the public can comment.

Finally, all of these pieces come together when they're presented to the Nuclear Regulatory Commission for a decision and that is a Public meeting. All the documents that are provided to the commission for their consideration, except for the staff's recommendation which is withheld until the commission makes its finding. The safety evaluation, the supplement to the GEIS, the inspection reports - all of those things are in the Public domain at the time the commission meets.

FACILITATOR CAMERON: Okay, thank you very much Chris.

Lets go to Eva Hickey from Pacific Northwest Lab. Eva?

MS. HICKEY: Good evening. My name is Eva Hickey, and I work for Pacific Northwest National Laboratory in Richland, Washington and I'm in the Environmental Technology Division.

Tonight, what I'd like to talk about is the process that we used for evaluating the environmental issues and then I'll talk a little bit about the report that came from that process.

The evaluation was conducted using the guidance in a document that's called The Environmental Standard Review Plan. This was written specifically for reviewing license renewal applications and there is a copy of it outside if you care to take a look at it.

To start our review we became familiar with the license renewal application that was submitted by Duke to the Nuclear Regulatory Commission. Part of this report is an environmental report which addresses the environmental issues that we looked at.

Next we reviewed the comments that were received from the public during the scoping process. These comments were received during the public scoping meeting held in October of last year also comments that were sent directly to NRC during the weeks preceding and

following the public meeting. We looked at all of these comments that were received and any the comments that were not related to license renewal were referred to the appropriate NRC programs.

Also, in October, we visited the Oconee site with a team. Finally, we had a site visit here at Oconee with the team of NRC and contractor scientists and researchers. While we were at the site we looked at how Duke used - what process Duke used for identifying new and significant information that related to the environmental impacts on license renewal.

To continue, as part of our review we visited county, regional and state government, environmental and resource regulators such as the South Carolina Department of Natural Resources, and the South Carolina Department of Health and Environmental Control. We talked to Federal regulating agencies, such as the U.S. Fish and Wildlife Service and the Federal Energy Regulatory Commission to discuss the potential impacts of license renewal.

We talked to information services, such as the Appalachian Council For Governments, economic development agencies and various appraisers and social service agencies.

We also reviewed environmental permits and requirements that would be imposed on the utility for continuing operations. All told, we talked to twenty-six city, regional and state organizations and these are listed in Appendix E of the supplement to the environmental impact statement.

Part of our review was to identify if there was any additional information on the sixty-eight Category 1 issues in order to determine whether we would accept the conclusions that were given in the generic environmental impact statement.

If we had identified that there were any new and significant information that would have indicated the need for further evaluation. However, we did not identify that there's any new and significant environmental information for the Category 1 issues and therefore the staff relies on the conclusions as amplified by supporting information and the generic environmental impact statement.

Considering the Category 2 issues, there are twenty-two issues that fall under this designation. These are issues that are evaluated specifically and in depth at each site, and we did this for Oconee. For the twenty-two issues there are five issues at Oconee that are not applicable because they are related to plant design features or site characterizations that are not found at Oconee.

There is four additional issues that are related to refurbishment but Duke has stated that there are no plans for major refurbishment activities, these issues are not relevant.

That leaves thirteen issues that we looked at specifically in the supplemental environmental impact statement and there are the two additional issues that were described earlier, or talked about as not categorized, and this is environmental justice and chronic exposure to Electromagnetic fields transmission lines.

Now I'd like to talk to you a little bit about the format of the draft supplemental environmental impact statement.

The organization of the Oconee supplement environmental impact statement follows the same organization as the generic environmental impact statement.

Chapter 1 is an introduction that it briefly describes the NEPA process.

Chapter 2 describes the Oconee site and the surrounding environment. I will be going back, in a few minutes, and talking about specific issues that we observed for Oconee related to the interaction with the environmental but for now I'd like you to look at the list that I have on the screen here and hopefully you will see that it's rather comprehensive in the areas that we looked at.

Chapter 3 of the SEIS discusses refurbishment. However, Duke has stated that any replacement of components related to extended operation of the facility and any additional inspection activities are within the bounds of the normal plant component replacement and inspections and therefore are not expected to effect the environmental other than what was originally given in the original environmental impact statement.

Chapter 4 addresses environmental impacts of operation during license renewal term. It specifically discusses the Category 1 and Category 2 issues that are relevant to the plant and the site. We looked at the impact of the cooling system, impacts from the transmission lines, radiological impacts, socioeconomic impacts, ground water use and quality and threatened and endangered species.

Chapter 5 discusses the postulated plant accidents and includes a review of severe accident mitigation which Mr. Robert Palla will describe in a few minutes.

Chapter 6 takes a complete review of the uranium fuel cycle and the solid waste management process and looks at the impacts to the environment from the uranium fuel cycle.

Chapter 7 looks at impacts of decommissioning a plant that has operated an additional twenty years.

Chapter 8 evaluates alternatives to license renewal. It describes the methods that could be used to obtain the same amount of power without having to renew the license at Oconee.

And finally, Chapter 9 is a summary and our conclusions.

Now I've given you an overview of the contents of the supplemental environmental impact statement, I'd like to spend the rest of my time going through some of the highlights of the review that are specific to Oconee. This includes the cooling system impacts, radiological impacts, socioeconomic impacts, water use and water quality and threatened and endangered species.

First I'd like to discuss the environmental effects of the cooling system used at Oconee Nuclear Station. In order to look at the effects from the continued operation, we looked back at what has happened over the past twenty-six years of operation.

The plant was designed to minimize the environmental effects that resulted from operation. Here, in this slide you can see that the nuclear plant is part of the Keowee Toxaway Project and included the impoundment of Lake Jocassee and Lake Keowee. One of the major design features was the placement of the facility between two different arms of Lake Keowee.

And there was a building of a skimmer wall that is used to ensure that the cooler water from the bottom of the lake enters the intake channel. Down here is the skimmer wall and this is the intake channel. Cool water from the Little River basin enters the plant and the warmer water is discharged to the upper levels of Lake Keowee arm of the lake, right above the Keowee Dam. So the discharge is right here.

The skimmer wall extends from the surface of the lake down about sixty-five feet and it ensures that the water is pulled from the bottom of the lake.

The skimmer wall is useful in reducing the number of fish that are impinged or entrained. Impingement is when a small fish or shell fish gets stuck against the screens that are located at the intake. These screens are meant to keep debris out of the cooling water but sometimes smaller fish are unable to prevent being smashed into the screen.

Studies of impingement show that the major species impinged at Oconee is the threadfin shad. I have a picture of this critter here. Threadfin shad are a non-sport fish and can get to be about ten inches long, but most of the ones that are impinged are usually less than two inches.

We found that eighty-eight percent of all the threadfin shad impinged appear to occur between January and March, when the water temperature is particularly cold and the fish are overly stressed and sometimes killed from this water temperature. So it appears that much of the mortality from impingement is not directly related to plant operation but rather a result of the winter water temperature.

Entrainment is when fish are actually smaller than the debris screen mesh are sucked into the plant. Mostly this effects larval and very young fish. Studies of the density of fish larvae entrained into Oconee shows that there's less than one percent of the density of the fish larvae in lake samples. The reason that more fish are not entrained is attributed to the lower temperature of the water at the intake. The fish larvae tend to stay in the warmer water higher up.

Next I'd like to talk about some of the other potential effects from the cooling system. The first is heat shock. This may potentially affect organisms that live near the discharge point for the cooling system because the water is discharged from thermal plants can considerably warmer than the water that is normally discharged. At Oconee, the temperature of the discharge is regulated by the National Pollutant Discharge Elimination System Permit, the NPDES permit, which is issued by the South Carolina Department of Health and Environmental Control. So there's limits on how warm the water can be that's released.

In addition, the effect of heat shock is minimized because of the design of the plant. I described that earlier.

Another potential effect from the cooling system is the potential enhancement of the presence of thermophilic micro-organisms. This means organisms which are heat loving. Some of these organisms, such as Naegleria and Legionnaire's Disease are detrimental to human health if they are breathed or ingested. There is no recorded cases of this occurring to the Public resulting from the cooling system of nuclear plants. However, it is still an issue that we look at.

Discussions with state toxicologists and the South Carolina Department of Health, as well as the physical location of the station and physical characteristics of the lake indicate that there is not a likely potential for adverse effects.

Next I'd like to talk about the radiological impacts. We looked at these impacts with relationship to the renewal at Oconee and it was determined that there would be no anticipated increase in either Public or occupational radiation dose during the license renewal term and the impacts, therefore, are discussed in terms of the generic environmental impact statement.

I'd like to point out that since this is an area of concern to many members of the Public, the impacts discussed in the generic environmental impact statement were made following a significant analysis and compilation of many years of monitoring data from one hundred and eighteen nuclear plants located in the United States.

The next area that we covered was socioeconomic impacts and there are a variety of these impacts that I'm going to discuss. The first is housing impacts that may result from additional staff moving into the area.

Oconee is located in a medium density area. However the utility does not anticipate increasing staffing levels and therefore there's no considered impact on housing. In addition, there's no change to public utilities because there will be no additional staff.

The off-site land use will not be affected since there are no plant related population driven changes to the land use. We'd like to point out, however, that the continued operation of the plant will provide a significant continuing tax revenue to the county with tax payments from the site representing about one third of the Oconee County budget.

Transportation in the areas around the site would not be expected to be impacted by renewal of the license since employment at the site would not contribute to anticipated population growth in the area.

Historic and archeological resources appear to be unaffected by the renewal of the license. An extension of the operating term since there are no plans for future land disturbance of structural modifications beyond routine maintenance.

We'd like to note that Duke does play a significant role in the conservation and security of the Old Pickens Church and Cemetery.

Finally, the socioeconomic impacts of environmental justice. Environmental justice refers to a Federal Policy in which Federal actions should not result in disproportionately high and adverse impacts on low income or minority populations. Although the impacts that are

identified for Oconee Nuclear Station license renewal were small, the staff examined the geographic distribution of minority and low income populations as recorded during the 1990 census and supplemented with inquiries to local planning departments of Oconee, Pickens and Anderson Counties. We also talked to social service agencies in these three counties.

It was found that in general, minority populations are small, they're dispersed and they're declining in this area. The minority populations were found to be located primarily in Greenville and Anderson Counties but there was a significant concentration of minorities in Seneca and Clemson.

Considering low income population, most of these were located in North Carolina, although there are some small groups scattered throughout the three county area. Concentrations of low income populations appear in Seneca, Easley and Clemson and the latter most likely was due to the large University student population.

No specific methods or pathways were found that would result in disproportionate, adverse impacts on these populations.

Next I'd like to talk about water use and quality. Oconee Nuclear Station uses surface water from Lake Keowee. The main use is for cooling water and they also have other domestic uses. The water quality is monitored by the South Carolina Department of Health and Environmental Control and regulations related to water quality of the plant effluent is also regulated by this organization through the NPDES permit.

Oconee uses only a small amount of ground water for irrigation and for facilities at the Station's baseball field. Ground water quality is also regulated by the South Carolina Department of Health and Environmental Control.

Threatened and endangered species. Duke initiated a consultation with the U.S. Fish and Wildlife Service regarding threatened and endangered species potentially occurring at Oconee. There were nine species identified known to occur in either Oconee or Pickens Counties and one species that could possibly occur in these counties. However, none of the species are known to inhabit the immediate vicinity of Oconee.

Subsequently, Duke conducted a field survey within a one mile radius of Oconee Nuclear Station. This was conducted by Dr. L. L. Gaddy and we reviewed this study. No federally listed species were identified but three state listed plant species were identified, the drooping sedge, Indian olive and a three parted violet. In addition, one species previously not known in South Carolina was identified and this is the loose flowered sedge.

In addition to surveying the plant site, an examination of the national heritage data bases from South Carolina and North Carolina was conducted to determine whether there were any endangered or threatened species that might occur within or near the transmission lines right-of-way, the three hundred thirty mile transmission lines that were given in the original environmental statement which was written back when the plant was first licensed.

There were three animal species that were a threatened status. These are the bald eagle, bog turtle and peregrine falcon. Two species with endangered status were identified, the red

cockaded woodpecker and the Indiana bat. There were nine plants identified as endangered and four as threatened.

The NRC has submitted a biological assessment of the potential impacts on these species from the continued operation of the transmission lines and corresponding maintenance of the rights-of-way.

The assessment concludes that there will be no adverse impact to these species. We are currently awaiting concurrence from North Carolina and South Carolina Fish and Wildlife Services.

Now, to change pace a little bit, I'd like to talk about the alternatives to license renewal. This is Chapter 8. This is another part of the NEPA process. Because there are many possible energy sources and mixes of energy sources, we limited the analysis to those with demonstrated capability and with sufficient generating capacity to replace the Oconee nuclear plant.

The alternatives also include a no action alternative which would simply mean that NRC would not renew the operating license and Duke would decommission the plant at the time of the ceasing of operations which we would expect to occur when the operating license expires in the year 2013 and 2014.

Two of the alternatives that we did consider that seemed to have the most promise for large scale replacement of power are coal fired power generation and gas fired power generation. We looked at the impacts of these alternatives and we discussed them in several different ways.

First, with plants located at the Oconee site, using once through cooling as Oconee does and secondly with plants located at the Oconee site but using cooling towers rather than once through cooling. We also looked at the potential for closing the Oconee site and building an alternative energy plant somewhere else on what was considered the Greenfield site. That's a natural site such as one that might currently be forested.

Again we looked at options of building a coal fired plant or a gas fired plant and the option of using once through cooling or with cooling towers.

On this slide you can see the other alternatives, including the ones that I've talked about, coal, gas and nuclear as Oconee is. These other alternatives were not evaluated in depth because it was either considered that they do not have the capability or the generating capacity to replace Oconee.

The alternative actions, including no action alternative, have environmental effects that at least in some impact categories reached moderate or large significance. As we discussed earlier, a moderate impact is one that's sufficient to alter noticeably but not de-stabilize important attributes of a resource. A large impact has an effect that is clearly noticeable and is sufficient to de-stabilize important attributes of resources.

Rather than going through the entire analysis, I'll give you a few examples. If you're interested in more detail, I refer you to Chapter 8 of the SEIS.

For the most part the impacts on land use and ecology range from moderate to large for coal fired generations and gas fired generations because additional land would be required for the facilities, land that is currently vegetated.

Depending on where the site is located, the impacts on water quality might increase to large, especially if it's located in an area which would require ground water for cooling.

Finally, to discuss our preliminary conclusions that are from our environmental review.

In contrast to the conclusions that were reached for the alternative actions, the preliminary conclusions for the proposed action of renewing the licenses for Oconee Nuclear Plants is that the environmental effect of license renewal are small for all impact categories.

Small means the effects are not detectable or are too small to de-stabilize or noticeably alter any important attributes of the resource.

We included the word preliminary because we are still involved in consultation with the U. S. Fish and Wildlife Service regarding the potential for endangered and threatened species under the transmission line corridors and because we are planning to use any additional information that we receive during the comment period before issuing the final report. Thank you very much.

FACILITATOR CAMERON: Thank you Eva for that presentation. Any questions or comments for Eva on these issues?

Let's go back here to Nicole.

MS. HAYLOR: I have a question regarding the examination of alternative energy sources. Was it considered to analysis a combination of alternative energy sources such as the one, on the slide that you showed briefly, a combination of all those together or was the analysis just all with one?

MS. HICKEY: I cannot answer that right now. I believe they were all looked at independently. That's correct, we did not look at them mixed. So they were all looked at individually.

MS. HAYLOR: My initial reaction would be that this would certainly prejudice the analysis because just basic common sense, as far as evolving technology, it seems to be going in a combination of various alternative energy sources would seem to be a more viable analysis than just saying we could generate all the energy that's produced by Oconee Nuclear Station from solar power.

So I think that the analysis is somewhat deficient there.

MR. WILSON: I think in the first part of Eva's description of what's in the alternative section, she pointed out that we were looking at placing an alternative - something that would replace a large baseload unit and we didn't look at two or three different small sources added together, we looked at something that would replace Oconee's nuclear generating capacity, directly.

MS. HAYLOR: Thanks, I think your answer was clear on that.

MS. HICKEY: Your comment is noted.

MS. HAYLOR: Also, just as an aside or also I'd like to mention were energy reduction measures, conservation measures factored into that analysis at all?

MS. HICKEY: No, that wasn't one of the considerations here, it was just a direct replacement of Oconee Nuclear Plant.

FACILITATOR CAMERON: Could you hold on just a minute, Mike so I can get you on here.

MR. SCOTT: I'm Mike Scott, partially responsible for that section of the report. Actually there are demand side measures that Duke, in its IRPs and its power planning have looked at in the past and are continuing to examine. That's on Page 827, if you want to look at that analysis.

Conservation, at least in part, was looked at as a possibility for replacement power.

FACILITATOR CAMERON: Okay, thank you. Those are the type of comments that the staff will be looking at as they develop the final environmental impact statement. In other words, looking at combinations of technologies and looking at conservation.

As Eva said, those are noted. Nicole, do you have any other comments on this part?

MS. HAYLOR: I had another question on an unrelated subject but one that you mentioned in your presentation about the cumulative - potential cumulative health impacts over the span of the operation of the nuclear power plant.

My question is, do you know if the Centers for Disease Control has ever done a nation-wide, systematic study of the potential health impacts from - obvious health repercussion, increased cancer rates or whatever, leukemia in, say a fifty mile radius or a twenty mile radius of the nuclear power stations operating in the United States?

MS. HICKEY: I know there are many studies that have been conducted. I don't know if there's one specifically along that line, there may be, I'm just not aware of it.

I know that there are continuing studies on the impacts from radiological -

FACILITATOR CAMERON: Anybody from the NRC that wants to offer any information on that, Chris?

MR. GRIMES: The only thing I can add to that is when we had our Public at Calvert Cliffs, Solomons, Maryland, the Maryland Public Health Officer reported that they had started a cancer register in Maryland which came as a bit of a surprise because we didn't know that anybody had developed a cancer register in the United States, let alone one right in my back yard.

At that time the question came up whether or not anyone was aware of a national register or any national studies and I didn't hear an answer to that so my suspicion is no, but we will contact the Centers for Disease Control and other health organizations and see if we can find out if there are any plans to develop any nationwide information concerning radiological impacts and cancer studies.

FACILITATOR CAMERON: Okay, thank you Chris.

Any more comments or questions. Margaret?

MS. THOMPSON: Thanks, I'm Margaret Thompson. I used to practice law as a Federal government lawyer for the EPA up in New York, Region 2, hazardous waste issues mostly under a couple of different federal - now I teach law classes on various subjects, sometimes at USC law school in Columbia and currently here at Clemson, Environmental Science, Law and Policy.

I wanted to raise two points, simply for the record. One of them I'll bring up first, water use and quality which I asked you about earlier and the subject passed by and I wanted to make sure the public attending only tonight realized that the information that should be there on your water discharge permit and its status is not in the report that the present NPDES permit, for both water discharge and land disposal permits are currently under review by --.

I've been planning to ask Mike Gandy, who is doing that review for -- what he could state in public, to date, this evening and he went back to Columbia before the evening meeting started so he's not here. So my question becomes, when will the public get this water pollution permit status information if it's not in this report now and it isn't ready yet and we don't have another formal public meeting officially scheduled?

MS. HICKEY: We hope that it will be complete and in the final report but I'm not sure that - I'm assuming that will happen but since we don't have that yet I don't want to say.

But hopefully, the permit will be in place -

MS. THOMPSON: So you're waiting on -- and you're dependent on their schedule.

MS. HICKEY: I don't know that we're dependent, that's dependent of the schedule but the hopes are that it will be in place by the time we do the final report.

MS. THOMPSON: And what if it's not?

MS. HICKEY: I don't know. They're expecting the decision in August so we're assuming that it will be complete and the permit will be complete.

MS. THOMPSON: So clean water questions are open?

FACILITATOR CAMERON: I would imagine that - the permit has a life of its own outside of the draft environmental impact statement process and the permit has to be issued and I think that's sort of the bottom line on that.

MR. GRIMES: I'm going to take a shot at it. We can't dictate to the state how they will implement their clean water provisions. It has a bearing and a relationship to this action and if the permit hasn't been resolved by the time that we present the final environmental impact statement to the Commission then we'll note that to the Commission, we'll note the status of it and the Commission will have to make its decision on that basis.

But I note that the threshold that the Nuclear Regulatory Commission will look at that issue - is predicated on whether or not the absence of the status is so compelling as to foreclose a decision on the license renewal.

It's a different standard than I imagine the state uses for issuance of the permit.

MS. THOMPSON: Okay, thanks.

FACILITATOR CAMERON: I'm going to come back to you if you have another question but let's go to Mike for clarification on that.

MR. TUCKMAN: This is Mike Tuckman from Duke Power. We have NPDEs permits, they are required to be renewed every four years and this is just the renewal process for that permit. It's not like we're operating without a permit.

FACILITATOR CAMERON: Okay, that's a helpful clarification.

Margaret, do you have another question on this segment?

MS. THOMPSON: Yes, a short one. I think on refurbishment, Chapter 3 states that Duke has reported that it doesn't plan on refurbishment activities so you didn't need to review those issues. Yet, there's a statement with information suggesting that component replacement, as a technical term, is anticipated as an on-going activity throughout the extent of the life of the plant.

I'm a lawyer, could you distinguish for me between component replacement and refurbishment so as to indicate whether the Public would have information in decisions respecting component replacement if it - if the Public should get information about refurbishment and isn't going to, would we get information about component replacement?

MR. GRIMES: We have a language barrier and it relates to - I used the term refurbishment earlier as well in talking about maintenance activities.

For the purpose of the environmental impact review, refurbishment is described to - it's intended to describe something that constitutes a site construction activity or change in a facility that is so great that it might have an effect on the local environment. For example, putting up a new building or putting a shield around the whole plant and that's refurbishment with a capital "R", for the purposes of an environmental review.

When I use the term refurbishment in aging management, it's refurbishment with a small "R" and I've been looking for a different term, maybe it would be maintenance and rebuilding but it refers to repairs and replacements of individual components, pipe segments, repairing of concrete walls, that's a refurbishment activity but not one that's going to have a substantial impact on the environment. It's part of normal plant maintenance.

So, when we speak about refurbishment at the component level, that's something that occurs day in and day out and it's a part of the processes that we're reviewing for aging management.

FACILITATOR CAMERON: I think we're ready to move on to severe accident mitigation and this is Bob Palla from the NRC staff. Thank you very much Eva.

This is in Chapter 5 of the draft environmental impact statement. Bob?

MR. PALLA: Good evening, my name is Bob Palla. I'm a Senior Reactor Engineer in the Probabilistic Safety Assessment Branch, Office of Nuclear Reactor Regulation. I'm the lead engineer for the review of the severe accident mitigation alternatives portion of the environmental impact statement.

I wanted to speak briefly about the treatment of postulated accidents in the generic environmental impact statement and then discuss the plant specific evaluation of severe accident mitigation alternatives for Oconee. That's plant specific evaluation is evaluation that is documented in Supplement 2 to the generic environmental impact statement.

Now, the generic environmental statement, referred to as GEIS, addressed the risk associated with a spectrum of postulated accidents for all reactor sites. The scope of accidents considered included the design basis accidents for the plant as well as severe accidents. Severe accidents is a class of accidents in which the reactor core is damaged. This generally would require multiple equipment failures in conjunction with some human errors. These go well beyond the design basis of the plant. These were considered in the generic environmental impact statement.

In assessing the impact of the postulated accidents, the GEIS considered the site specific population and meteorology for each site, estimated the severe accident releases in the off-site consequences based on the latest computer codes and looked at various release paths to the environment, including airborne releases and ground water releases.

The GEIS concluded that the probability weighted consequences of severe accidents are small for all plants. What that means is there could be some accidents that have severe consequences but the probability, when one considers it - in fact the net result, probability related consequences are small and the GEIS concluded that they were small for all plants.

But there was a question about whether each plant had adequately looked at the potential to further reduce risk at their plants. Because all plants had not yet performed a site specific analysis of measures that could further mitigate severe accidents, the issue severe accident mitigational alternatives, commonly referred to as SAMAS, was identified as a Category 2 issue. As such, Category 2 issues are looked at a plant specific level, rather than being assessed generically.

Part 51 of the regulations requires the staff to consider alternatives for mitigating severe accidents at the plant if the staff had not previously considered SAMAS in an environmental impact statement. And that is, in fact, the situation with Oconee. We had not looked at that before and so we looked at that as part of the license renewal review.

The purpose of the SAMA evaluation is to ensure that plant changes, with the potential for improving severe accident safety performance, are identified and evaluated. The scope of changes that we considered included changes to the plant design, hardware changes for example, as well as procedures. The scope also included changes that reduce radiological risk from severe accidents by either preventing the accident from occurring in the first place or in the event that the accident does occur, SAMAS that would limit the releases from the containment.

The SAMA evaluation is based heavily on the plant specific probabilistic safety assessment study and very briefly, what the probabilistic safety study, commonly called the PRA, what it tells you is - it reveals various ways in which the reactor core could be damaged or in which the containment function could be defeated.

Typically, in the case of a nuclear plant for example, if one system is needed to perform a function you'd typically find two or three trains of that system so there's a lot of diversity and there's a lot of redundancy so in order to result in a core damage event one would have to fail multiple systems. Just very simplistically thinking about what the PRA tells you, if you have three different systems that were independent from one another and any one of them could provide adequate core cooling, if each one had, for example a ten percent probability of failure, the probability that you fail the core cooling function would be one in a thousand. Basically it would be ten percent times ten percent times ten percent. You would have to fail all three systems to cause core damage. What the PRA would tell you is the various failures that would be needed to result in core damage or containment failure, as well as the probability of achieving these different combinations.

What was done in the SAMA evaluation was to rely very heavily on the use of PRA and the insights from those studies.

I think it's worth pointing out that Duke has been very pro-active in the area of PRA. Going back as far as the early 1980s, they performed one of the landmark PRAs that helped establish some of the methodologies that are used today. Duke continued to improve and update the PRA to reflect the changes to the plant configuration that were implemented since the original and the utility has made numerous plant improvements, based on insights from the PRA. These improvements reduce the current level of risk.

As a result, the level of risk is generally low and reasonably well understood. This level of risk really creates the starting point for this SAMA analysis.

What we do and what the objective of the SAMA review is basically to determine whether any additional changes to the plant would be justified.

I want to just very briefly outline the evaluation approach that we used.

The initial step is to characterize the overall plant risk and the leading contributors to risk. As I mentioned before, we use the plant specific risk study to identify leading contributors to risk and potential areas for improvement.

The risk study includes consideration of both internally initiated events, such as pipe break accidents as well as externally initiated events, such as earthquakes and tornadoes. What we did was review - and what these methods do, in general, they provide the various combinations of failures that can lead to core damage and then this information, when used properly, can point out and identify the most important contributors. Basically the first step of the process is to find out where the risk is coming from and, in doing that, it sets the stage for the next step which is to identify design improvements that can further reduce risk.

We considered the information from the PRAs and also considered some more generic information. For example, some of the insights from SAMA analysis that were done for previous studies, for example, Calvert Cliffs, the Wattsbar Plant, several advance reactor reviews that were completed in the last several years, each had a similar evaluation performed.

We looked at those studies for additional insights to supplement the information from the plant specific risk study. The net result is that it led to identification of sixteen potential SAMAS candidate improvements. Nine of these related to the prevention of core damage accidents, and the remaining seven related to improving container performance in those events in which the core damage would have occurred.

The next step is to quantify the risk reduction potential in the costs for each improvement and again, the risk reduction for the various candidate improvements was estimated using the plant specific risk study, which incorporates consideration of the site meteorology and populations so you get the best estimate that you can for a specific plant or specific site. The cost of each SAMA were estimated in approximate but a conservative manner.

The next step was to determine whether or not implementation of any of these candidate SAMAS is justified and in doing that we considered the extent to which the total risk would be reduced by each SAMA and also looked at whether the SAMA could be justified on a cost benefit basis.

Specifically, would it have a positive net value when the costs and the benefits are evaluated in accordance with the NRC's regulatory analysis guidelines. These guidelines that we use basically established the ground rules for doing the analysis. It includes costs - several of the costs included are not included, typically, in utility analyses but we did include them in our analysis. It tends to make - by including some of these additional costs, it tends to make some

of these options appear more cost beneficial. So we could say that we're being conservative by using those guidelines.

The results of the evaluation, I want to just summarize here. Basically we found that the costs of implementing any of the sixteen SAMAS would far exceed the estimated benefits by about - there's a margin of about a factor of five, so they weren't very close to being cost beneficial. That's one measure.

The second measure is risk reduction potential. The amount that risk could be reduced by any of the individual SAMAS was not significant. In terms of percentage, typically these SAMAS would be - any given one would result in less than a ten percent reduction in the total risk from the plant.

This is a result of the risk profile. Risk comes from many different types of sequences and typically a design alternative will eliminate the contribution from only certain sequences and would not impact other contributors so when you identify a potential improvement, you're really only working on one part of the risk picture and as a result those sequences that are not affected by that improvement have the same frequency and consequences.

What we found was that any one SAMA - any of them have, at the most, on the order of ten percent reduction.

This finding is consistent with the low level of risk at Oconee and the large cost of enhancements that would be needed to substantially impact risk. One would need to make substantial hardware and structural changes to really substantially reduce risk and these are very expensive so that kind of is consistent with the findings that we reached.

The bottom line is that we conclude that additional plant improvements to further mitigate severe accidents are not required at Oconee as a part of license renewal.

I'll take any questions.

FACILITATOR CAMERON: Thanks, Bob. Do you have questions on the severe accident portion of the draft environmental impact statement?

[No response.]

Okay, let's move on to a very short presentation by Jim Wilson on the conclusions and then let's go back out to you for comment. Jim?

MR. WILSON: Thanks, Chip. I'd like to briefly summarize... Supplement 2 to the GEIS contains a summary of the staff's review of the potential environmental impacts of the Oconee license renewal application, along with our preliminary conclusions.

If you need a copy of the supplement to the environmental impact statement for Oconee, there are extra copies of Supplement 2 out in the lobby. Supplement 2 can also be viewed at the NRC's public document room in Washington, D. C. and the local public document in Walhalla

that's in the public library. Additional copies can be obtained from the Government Printing Office and the document can also be downloaded from the internet at the web address on the information sheet out in the lobby.

As the last bullet on this slide indicates, we'd like to remind you that the overall decision of the Agency on whether to renew the Oconee license is going to be based, not only on results of this environmental review but on the results of the safety review as well.

In summary, the staff based its preliminary conclusions regarding the environmental review on the analyses and findings of the GEIS, on Duke's submittals, primarily the environmental report, on consultations with local, state and federal agencies and on its own independent review, including results of last year's scoping process and the site visit.

The staff has reached a preliminary conclusion that the adverse environmental impacts of license renewal for Oconee Nuclear Station, Units 1, 2 and 3 are not so great that preserving the option of license renewal for energy planning decision makers would be unreasonable. This is our preliminary conclusion and we're looking for input from the members of the Public on our review - comments.

The NEPA process has provided two opportunities for the Public to participate in the environmental review for the license renewal at Oconee. There was the comment period during the scoping process last fall and now there's a comment period that we're currently in to receive comments on the draft environmental impact statement for Oconee.

As mentioned earlier, the staff has extended the required forty-five day comment period, by an additional thirty days. The comment period for the Oconee EIS ends on August 16, 1999.

After the comment period ends, the staff will assess the comments to determine whether or not they're applicable to the environmental aspects of license renewal. And, as we did with the issues raised in the scoping phase of our review, issues that do not have a bearing on the decision to renew the license will be referred to the appropriate NRC programs.

A last note about our review schedule. As indicated earlier the comment period ends on August 16th, after that the staff will sort comments and evaluate them and, if appropriate, the comments may cause us to change portions of the supplement.

After the NRC finalizes its review, we will issue a final supplemental EIS for Oconee, currently scheduled to be issued in February of 2000.

This last slide provides you with my phone number, in case you have additional questions after you leave here today. I'm the designated point of contact within the NRC staff for the environmental portion of the license renewal review for Oconee.

All the documents that we have spoken about today are located in the PDR in Washington or in Walhalla. Comments may be submitted by mail, in person or by e-mail, and again, there's an information sheet in the lobby with details on how to submit comments or get additional information.

In summary, I'd like to thank you for attending today's meeting. This meeting is an important part of the overall license renewal process. It's important that you participate because it makes for a better process if you do participate.

Thank you for your attention. This ends our formal presentation. Do you have any additional questions?

FACILITATOR CAMERON: Before we go to some people who want to make comments tonight, let's clear up any questions that might be about the environmental impact statement.

Nicole?

MS. HAYLOR: I have one question. If the Public comments that come in, if they are not acknowledged or deemed worthy by the Nuclear Regulatory Commission, what avenue of recourse is available to the Public?

MR. WILSON: Let me see if I understand your question. Your comment will be a part of the environmental impact statement. It will be put in its entirety into Appendix A of the document and in that appendix, we'll indicate how we've addressed your comment. If we determine that it's appropriate, we'll change the document accordingly, so I guess you kind of have to wait until we issue the document in its final form to see if we appropriately addressed it.

I guess if you're unhappy with our treatment, you should let us know and I guess you could write a letter to the Commission and ask them to reconsider how your comment is being considered. It will be part of the document itself as well as our disposition of your comment.

MR. GRIMES: I'll add to that. The typical forms of appeal, if you're not satisfied with how the staff has executed its responsibilities are to formally complain to the Commission itself, you can tell your Congressman and then your Congressman calls me up and says, why didn't you do the job right or whatever.

There are a variety of different ways that members of the Public can appeal on how we execute our responsibility.

MS. HAYLOR: In your opinion, would the appeal even have a chance of being heard by the Commission if you didn't already have standing?

MR. GRIMES: The Commission takes its responsibilities to the Public very seriously and standing doesn't really have anything to do with it since there's not a Hearing pending on particular issues in litigation. Certainly, in any circumstance you can try to take a particular complaint to the Courts but in the absence of some kind of exchange and appeal to the Commission or appeal to some legislative body, the NRC has not properly executed its responsibility, the Courts are probably not going to entertain the issue.

FACILITATOR CAMERON: I think we'll probably see if there are any more questions on that and we may be able to provide some more clarification to you after the meeting on that, Nicole.

Let's go to Greg Robison for a comment and Greg you can - feel free to come up here.

MR. ROBISON: Good evening, I'm Greg Robison. I work for Duke Power. I'm the manager of the Oconee license renewal project and I just wanted to take just a moment to say thank you to several groups of individuals.

First I'd like to thank the NRC. I think their diligence and thoroughness in implementing the license renewal process is evident if you'll take a look at the supplemental environmental impact statement, you'll see the detail that they've really put into the work. They are to be commended for that work.

I'd also like to thank the Duke team, specifically I'd like to thank all the individuals at Duke who put all the hours and energy into producing our part of the license renewal application. There was a lot of interest and a lot of hard work, a lot of dedication. We were able to bring many, many work years of effort to that application and I'm glad that we had the strong team that we do have.

I'd also like to say thank you to the Oconee Staff extended, the strong environmental commitment that that staff has had in managing the environmental issues that's been there from day one, over twenty-six years now of operation. We bring that back to the table and I really appreciate that and I want to say thank you to them.

And importantly, tonight, I want to say thank you to the neighbors in the communities who are represented here with the Public. Thank you for your interest tonight but more importantly, thank you for your interest over the twenty-six years. We work hard, we want to be a neighbor and you can only be a neighbor if you're neighbors will accept you. We appreciate it, we plan to be here - license renewal is an effort that we want to undertake and as we look around us and it will continue to be important for us to be a part of the community.

We don't see our commitment changing. Renewal will give us an opportunity to continue to work hard, to stay focused and to run a safe and efficient power plant and for that we say thank you.

FACILITATOR CAMERON: Thank you very much, Greg. Mr. Castrill? Hi, did I get that right? Let me give you a mike so we can get you on the record for whatever you want to say.

MR. CASTRILL: I don't have a comment I came just to listen as a citizen [inaudible].

FACILITATOR CAMERON: Well, thank you. Let's go to the representative of the Nuclear Energy Institute, Doug Walters.

MR. WALTERS: Good evening. My name is Doug Walters. I'm with the Nuclear Energy Institute. The Nuclear Energy Institute is a Washington, D. C. based policy organization. We represent more than two hundred and seventy-five U. S. and International companies involved in nuclear energy. All the utilities in the United States that have nuclear power plants are members of NEI.

Most, if not all of our activities involve nuclear energy which you heard earlier this evening represents about twenty percent of America's electricity.

Of course we're here today to discuss the draft environmental impact statement for Oconee for license renewal and, as you hear, after the extensive review that was done no significant environmental impacts were identified as a result of extending the license on the Oconee Plant.

This review included the potential impacts from obviously continued operation, the plant's interaction with the land, water and air socio-economic factors, aquatic species, threatened and endangered species and many other issues were considered.

The NRC also examined the environmental impacts of alternative energy sources and I think - a view in response to the question that was asked about that, I think the standard there is that nuclear has to be shown to be within a range of alternatives. So, it's not necessarily - I think you could consider a mix or combination but the test is whether the nuclear plant is within the range, in terms of environmental impacts of other alternative energy sources.

Of course license renewal is important for the future of America. We need it to meet our future energy needs. You may be aware that the nation, right now, has difficulty meeting the clean air standards or requirements and that's with the nuclear plants already operating.

We should commend, by the way, the NRC for the very open and thorough public process that they exercised in developing this generic environmental impact statement. It certainly helps to ensure that the important issues are not overlooked or left unexplored and, at the same time, it makes the process more efficient and effective.

The NRC actually started this process some time ago and, as you saw, they concluded that there were a number of issues that could be addressed for all nuclear power plants and they did that in the generic environmental impact statement.

The remaining issues, again, as you heard this evening have to be addressed in the context of individual renewal application and that's what the purpose of this meeting is.

The NRC certainly plays a vital role in license renewal but it isn't the NRC that will decide whether the plant - nuclear energy, I should say, or the particular plant is the right generating source for a given area. The NRC's role is to determine, solely based on safety whether the plant may continue to operate under a renewed license.

I'd just like to briefly talk a little bit about what license renewal really means. Without renewal these plants will have to shut down. Oconee would have to shut down at the end of its forty year operating license. If the Region - if this area decides that they need emissions free generation that that plant provided then it would be too late if the plant shuts down. The time for making that decision will have passed.

With renewal, Oconee preserves the option to continue operating should that decision be made. That's a good option to have.

There are some other benefits of renewal and I'll just mention three.

One is - I touched on this earlier. It allows the U. S. to maintain a good energy mix. It allows us to maintain an economic generating capacity. Nuclear power does not generate green house gases or other pollutants such as sulphur dioxide, nitrogen oxide and particulates.

Second, renewal preserves jobs and there's a substantial tax revenue, as you heard, from the communities around these plants.

Third, renewal is much less cheaper than building a new capacity. Many people don't realize this but nuclear power is the largest source of emissions free generation. It's twenty percent of the overall generation of the country but it's about sixty-four and a half percent of the emissions free generation capacity in the United States. That compares to about thirty-five percent which we get from hydro which is the second highest source. Photovoltaic cells, windpower, they represent about .01 percent of emissions free capacity and geo-thermal is about .6.

Under the clean air act, States are increasingly - are under increasingly stringent controls on emissions, and again, as an emission free source nuclear power already helps limit the amount of greenhouse gases emitted through electricity generation.

So, in closing, I'd just say that nuclear power provides important benefits to the U. S. and the communities in which the plants are located. It provides vast amounts of electricity, on demand, to support continued economic growth and our high standard of living and it does all that without polluting the air.

Thank you very much.

FACILITATOR CAMERON: Okay, thank you very much Doug.

Let me sum up a little bit here.

The NRC staff was here to present the results of the draft environmental impact statement and to get your comments not only here tonight but written comments if you chose to submit them to the commission, based on the draft environmental impact statement and what you heard tonight.

The NRC staff is obligated to consider those comments and wants to consider those comments and not only to consider them but to explain how those comments were dispositioned in preparing the final environmental impact statement.

As Chris correctly pointed out, the concept of standing is no consideration, in terms of filing comments on the draft environmental impact statement or if you disagree with the staff's conclusions in the final environmental impact statement in writing a letter to the Commission saying that you disagree with something in the final environmental impact statement.

The Commission would then have those comments for its consideration when it makes the final decision on license renewal, when it has the results of the environmental study and also of the safety study.

As with any final environmental impact statement of any agency, if someone does not think that that's an adequate statement then the Agency's adequacy of that statement can always be challenged in Federal Court and, of course then standing does become important again because you're in an adjudicatory arena.

Any final comments before we adjourn tonight?

[No response.]

I'd just like to thank all of you for attending tonight and for your thoughtful comments.

Thank you very much.

Meeting is adjourned.

[Whereupon, the meeting was concluded.]