Corrected Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: H.B. Robinson Steam Electric Plant
Draft EIS Public Meeting - Afternoon Session

Docket Number: 50-261

Location: Hartsville, South Carolina

Date: Wednesday, June 25, 2003

Pages 1-37

U.S. NUCLEAR REGULATORY COMMISSION

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H.B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2

LICENSE RENEWAL DRAFT EIS

PUBLIC MEETING

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Wednesday, June 25, 2003

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The meeting was held at 1:30 p.m. at the Davidson Hall, CW Coker Auditorium, 300 E. College Avenue, Hartsville, South Carolina, Chip Cameron, Facilitator, presiding.

PRESENT:

CHIP CAMERON, FACILITATOR

S. K. MITRA

RICHARD EMCH

MARY ANN PARKHURST

BOB PALLA

BARRY ZALCMAN

DAN TANO

DUKE WHEELER

LANCE VAIL

SUE SARGEANT

SHELLY COLE

ALICIA WILLIAMSON

A-G-E-N-D-A

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

(1:30 p.m.)

FACILITATOR CAMERON: Good afternoon, everyone. My name is Chip Cameron, I'm the Special Counsel for Public Liaison at the Nuclear Regulatory Commission, and I want to welcome all of you to the NRC's public meeting this afternoon.

Our topic for today is going to be the draft environmental impact statement on an application that we received from Carolina Power & Light to renew the operating license for the H.B. Robinson Nuclear Plant.

And it is my pleasure to serve as your facilitator for the meeting this afternoon. And in that role I will try to help all of you have a productive meeting.

I just want to cover a few things about the meeting process before we get started with the substance of today's discussions. And the Staff is going to tell you a little bit more about why we are here.

But in simple terms it is to provide all of you with information, not only on the Nuclear Regulatory Commission's license renewal process, but also the findings in the draft environmental impact statement that have been prepared to help the NRC in its decision making on the request for a license renewal for Carolina Power & Light, give you information and, just as importantly, hear any concerns or recommendations that you have on the findings that are in the draft environmental impact statement.

In terms of our format for the meeting we are going to have some brief presentations by the NRC Staff, and also by our expert

consultants, and we are going to go to questions, for questions, to all of you after each of those presentations.

And then the second part of the meeting is to give any of you, who wish to, an opportunity to make some formal comments to the NRC on the draft environmental impact statement, or on NRC's license renewal process.

We are going to be taking written comments on the draft environmental impact statement, but we are here today to hear from you, in person, and you may hear things in a meeting today, information that will prompt you to file a written comment, or will help to inform your written comments.

But if you don't file a written comment, anything that you say today is going to have the same weight as a written comment.

And in terms of ground rules, if you wish to ask a question just signal me and I will bring you this cordless microphone, and please tell us your name and affiliation, if appropriate.

We have our stenographer with us today, Ed Johns, who is taking a transcript of the meeting, and that transcript will be available, from the NRC, if any of you wish to look at it.

And we will try to answer your questions, we will try to keep things fairly informal today, and when we get to the formal comment part of the meeting, I can bring you this cordless mike again, and you can speak from your seat, or you can come up to the podium here.

In terms of the agenda today, we are going to have a little formal welcome, for you. And I think if you look at your agenda for

the meeting it says that we were going to have P.T. Kuo with us to do that, and he is the branch chief of the license renewal branch at the NRC, where all of these decisions, and evaluations are done.

He, unfortunately, couldn't be with us so we are going to ask Rich Emch, who is the project manager of the environmental review on the Robinson license renewal application to do that for us.

Then we are going to go to S.K. Mitra, who is going to -- S.K. is right here, and I will introduce them a little bit more fully when we get to that.

But S.K. is going to give you an overview of the license renewal process, generally, what does NRC look at in considering requests, such as the one that we have from Carolina Power & Light, go out to you for any questions, and then we will go back to Rich Emch, again, to talk about the environmental review process, questions, that you might have.

And then we are going to go to the heart of the meeting, which is to have Mary Ann Parkhurst, who is a senior scientist at Pacific Northwest National Lab, she is the team leader for the scientists who have gathered and analyzed the environmental information for the draft environmental impact statement.

Mary Ann is going to talk to us about the draft findings. We also have a special section of the environmental impact statement that is called the severe accident mitigation alternatives section. We call these SAMAs, and we have Bob Palla here, from the NRC Staff, who will speak to that, go back out to you for questions, and then Rich is going to do a summary of how to submit comments to us.

And then we will see if anybody wants to make some formal comments for the record. And, with that, I would just thank all of you for being here, taking your time to come to the meeting today, and we hope that we will be able to answer all of your questions adequately. And I will ask Rich to give us a formal welcome.

MR. EMCH: Everybody welcome. My name is Richard Emch, I'm a senior environmental project manager with the Nuclear Regulatory Commission, I'm the lead project manager for the environmental review for the license renewal application by Carolina Power & Light for the H.B. Robinson Steam Electric Plant, Unit 2, that is the nuclear unit.

The purpose of our meeting today is to talk about, first we are going to go through a short description of the overall process that includes both the safety review, and the environmental reviews. S.K. Mitra is going to do that.

We are going to go through a little bit of a description of the environmental review process, I'm going to do that. And then Mary Ann Parkhurst is going to give us a presentation to talk about the results of our review.

Also Bob Palla will talk about the results of the SAMA review. Then I will come back up, we will kind of talk about where we are in the review schedule, and that will be the time when we can either accept any comments you have, or questions, or at least give you some information, description down there at the bottom, about how you can submit them later, if you are not prepared to give us any today.

The H.B. Robinson Plant was originally licensed for 40 years of operation under the Atomic Energy Act of 1954, and the Regulations. The Regulations also allow a power plant to apply for an extension, or renewal of their license, and that is why we are here today, because Carolina Power & Light has applied for a 20 year renewal for the H.B. Robinson Plant.

Their current license would expire in 2010. And their application, which we received in June of 2002, is under review and we are at that stage of the environmental review now, when it is time to talk to you folks about what we have found, and what our conclusions are, and to see if you folks have any comments.

So that is really the central purpose of the meeting today. We were here about nine months ago, in September, right here in this room. At that time we told you we were here to do the review, to start the review.

We were here to get information from you folks, the folks who live around this plant, who are the most knowledgeable about what the possible impacts might be, and we were here to get your input to see what sorts of things we should closely look at, and see if there is any information we needed to know about.

Now we've completed most of the review, and we have drawn some preliminary conclusions, and we have a lot of information that we want to talk to you about. We published the report, that we hope you will look at.

And, as you probably are our most informed critics since, again, you live in the area and you are familiar with the plant, so we look forward to whatever comments you have for us.

Thank you for being here, you are a very important part of this process. As a matter of fact a number of the comments that we received, in the scoping meeting, helped highlight areas that we needed to pay particular attention to in the review.

With that I will turn it over to S.K.

MR. MITRA: Thank you, Rich, good afternoon. My name is S.K. Mitra, and I am the project manager for the review of the H.B. Robinson Steam Electric Plant, Unit 2, license renewal application.

Before discussing the license renewal process, and the Staff's safety review, I would like to talk about Nuclear Regulatory Commission and its role in licensing, and regulating the nuclear power plants.

The Atomic Energy Act of 1954 authorizes the NRC to regulate the civilian use of nuclear material. The mission is three-fold, to ensure adequate protection of public health and safety, to protect the environment, and to provide for common defense and security.

The NRC consists of five commissioners, one of who is the NRC's chairman, and the NRC Staff. The regulations, enforced by NRC, are issued under Title 10 of Code of Federal Regulations, commonly called 10 CFR.

The Atomic Energy Act provided for a 40 year license term for power reactors, but also allows renewal of licenses. The 40

year term is based primarily on economic and/or antitrust considerations, rather than safety limitations.

Major components were initially expected to last for 40 years. However, operating experience has demonstrated that some major components, such as steam generators, will not last that long.

For that reason a number of utilities have replaced major components. Since components and structures can be replaced, or reconditioned, plant life is really determined, primarily, by economic factors.

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

In addition, the decision to replace, or recondition, major components can involve significant capital investment. As such, this decision involves financial planning many years in advance of the extended period of operation.

The Carolina Power & Light Company has applied for license renewal under 10 CFR Part 54, and requests authority to operate H.B. Robinson, Unit 2 for up to an additional 20 years.

The current operating license of H.B. Robinson Unit 2 expires July 31st, 2010. Now, I would like to talk about license renewal, which is governed by the requirement of 10 CFR Part 54 of the license renewal rule.

This part of the Code of Federal Regulations defines the regulatory process by which a nuclear utility, such as Carolina Power & Light, applies for license renewal.

The license renewal rule incorporates 10 CFR Part 51 by reference. This part provides for the preparation of the environmental impact statement.

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

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

This slide illustrates two parallel processes. You will see one at the top of the slide, and the other at the bottom the slide. The two parallel processes are the safety review process and the environmental review process.

These processes are used by NRC Staff to evaluate two separate aspects of the license renewal application. The safety review involves the Staff's review of technical information in the application of renewal to verify, with reasonable assurance, that the plant can continue to operate safely during extended period of operation.

The Staff assesses how the applicant proposes to monitor and manage the aging of certain components that are within the scope of license renewal.

This review is documented in a safety evaluation report, which is provided to the ACRS. The ACRS reviews the safety evaluation report then holds public meetings, and prepares a report to the Commission documenting its recommendations.

The safety review process also involves two or three inspections, which are documented in NRC inspection reports. In its decision to renew the operating license the NRC considers the safety evaluation report, the ACRS report, the NRC regional administrator's recommendation, and the inspection reports.

At the bottom of the slide is the other parallel process, the environmental review, which involves scoping activities, preparation of a draft supplement to the Generic environmental impact statement, solicitation of public comments on the draft supplement, which we will be doing now, and then the issuance of final supplement to the Generic environmental impact statement.

This document also factors into the agency's decision on the application. In the safety evaluation report the Staff's document is the assessment of the effectiveness of the application's existing, or proposed, inspection and maintenance activities to manage aging effects applicable to passive, long-lived structure and components.

Part 54 requires the application to reevaluate those design analyses that assume 40 years of plant operations. The

reevaluation extends the assumed operating period to 60 years. These requirements in the evaluation are called time limited aging analysis.

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

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

In August 2002 the NRC issued a Federal Register Notice to announce its acceptance of Carolina Power & Light Company's application for renewal of operating license for H.B. Robinson. The notice also announced the opportunity for public participation in the process. No petitions to intervene were received.

This concludes my summary of the license renewal process, and the Staff's safety review.

FACILITATOR CAMERON: Thanks, S. K. Is the process that S.K. talked about, is it clear, for example, on what is looked at in the safety evaluation review, and what is looked at in the environmental review, any questions, anybody?

MR. WILSON: Yes, Chuck Wilson, TVA. Just one thing on the diagram I don't understand, maybe everybody else does. What is that line there, what is that saying?

MR. MITRA: This line?

MR. WILSON: Yes, there is an input, the Draft Environmental Report will be input to the Hearings?

MR. MITRA: Well, there is a hearing process after final draft of the GEIS. That hearing process, am I saying it right?

FACILITATOR CAMERON: Let me get this on.

MR. EMCH: Yes, if we have a hearing, if somebody asks for a hearing, and a decision is made to have a hearing, then all the inputs from this whole process are fair game, basically, for use in that hearing.

And, in fact, recently actually there was an environmental issue that an intervenor asked for a Hearing on Catawba or McGuire, I believe it was. So that is what that line means.

MR. WILSON: Thank you.

FACILITATOR CAMERON: Okay, great. Thanks S.K., thanks Rich. Anybody else have a question on the overall process? We are going to get into the environmental review process in more detail. Any other questions?

(No response.)

FACILITATOR CAMERON: All right, thank you, S.K. We are going to go to Rich Emch now.

MR. EMCH: Thank you, Chip. We've got the first slide up. It is me, again, Rich Emch. The National Environmental Policy Act was put in place in 1969, it is probably the most, well I think it is the most significant piece of environmental legislation in U.S. history.

And, basically, it lays requirements on federal agencies about how we have to conduct our review of environmental issues. It says we have to use a systematic approach that looks at all possible impacts on the human environment.

We have to examine impacts, we have to look at possible ways to mitigate impacts that might be severe. We have to look at alternatives. We have to evaluate alternative sites, and just alternatives to the action that is being proposed.

And we have to describe and disclose, it is a disclosure process, we have to describe all the information we find, and we disclose it, as well as it also calls for us to have public participation, which is why we had the scoping meeting, and why we are having this meeting to get input from you, the public.

Basically NEPA says that we have to prepare and publish an environmental impact statement for any major federal action, one that might impact the human environment.

The NRC has decided, The Commission has decided that we will prepare an environmental impact statement for any license renewal, and that is what this process is about.

We issued the environmental statement in May, in draft form. That doesn't mean that it is incomplete, it just means that it is part of the process, and it will be finalized once we've had an opportunity to get and consider comments from the public.

What is this all about, what are we trying to do here? Our job, in the environmental review process, is to get to the point where we can make a review against this standard.

This is the legal language of the standard, it is to determine whether or not the adverse environmental impacts of license renewal for H.B. Robinson Unit 2, are so great that preserving the option of license renewal for energy planning decision makers would be unreasonable.

Well, I'm a health physicist, not a lawyer, so I want to state that slightly different. Basically the question is, would the environmental impact of 20 additional years of operation, by Robinson, be okay? That is what we are here about, is the environmental impact okay? So that is my version of what that standard says.

Even if -- the whole NRC review, this is the environmental part of the review, the NRC also does a safety review that S.K. talked about, and it all comes together at the end, and a decision, by the Commission, about whether or not we are willing, whether we are going to grant an additional license to H.B. Robinson.

Now, just because we decide, if a decision is made to grant it, that really -- all that does is preserve the option for 20 additional years of operation. That decision, as you know, their current license doesn't expire until 2010, so the decision to actually continue to operate for those additional 20 years would be made by the company, the utility, Carolina Power & Light, in conjunction with whatever regulators are in place, state regulation agencies, and things like that.

Probably the biggest factor about whether they will continue to operate those 20 years, is economic issues, and energy need issues.

This is a more detailed breakdown of the schedule and the process. This is the -- the bottom line of the slide that S.K. showed you a few moments ago. It starts right off, every presentation has to have a mistake, we've got it on this slide, we all missed it.

The application was actually submitted in June, not July, of 2002. We noticed, we put out a notice, in the Federal Register, what we call a Notice of Intent, that says we are going to be doing an environmental review, we are going to be doing scoping, holding scoping meetings. That notice was in August of 2002.

In September we came here, we met with you folks, here in this same room in September, and held the scoping meetings, and had participation by a number of people, and a number of issues were highlighted for us in that meeting.

Also, during that same week, we conducted a site audit. The members of the Nuclear Regulatory Commission, and various experts, technical experts from three national laboratories were here.

We toured the site, and the environs, and the plant. We reviewed documentation, we spoke with experts from the licensee, we spoke with public officials, state and local officials. We talked to local public service organizations, just gathering whatever information we could in the various areas that are important for the review.

And then, of course, we held the public scoping meeting that week. In August, or October of 2002, we published the request for additional information, to the licensee. All those questions were related to the SAMA review, that is the severe accident mitigation alternatives review.

We received the answers to those, put everything together, and published the draft statement in May, and that is what we are here for now, is to gather comments.

We are still in the comment period, the comment period won't end until the end of, I believe, the end of July. And once we've gotten those comments, dealt with them, considered them, made any changes we need to, to the document, based on the additional information we might get from you folks, then we plan to publish the final statement in December.

And, with that, I will -- I'm sorry. We refer to it as the draft GEIS on this drawing here. Basically what we do is, it is an environmental impact statement, but we rely heavily on something called the generic environmental impact statement, which was a study that was done some years ago, where they looked at the environmental impact of all the various aspects, for nuclear power plants, across the United States, all 100 and some plants, and made judgements about those impacts, and judgements about which ones were likely to be different from plant to plant, and which ones weren't.

And there were a number of statements, and conclusions, that were drawn in this generic environmental impact statement. And so what we do, to simplify the process, is we actually publish a, we refer to it as a DSEIS, it is a draft supplement, in this case supplement 13 to the generic environmental impact statement, but it is specific to the Robinson plant.

Any questions about that process?

(No response.)

MR. EMCH: Any questions about anything I said?

(No response.)

MR. EMCH: Okay. Mary Ann Parkhurst, are you ready?

FACILITATOR CAMERON: Thank you, Rich. And just to make sure that everybody knows the roles of the NRC staff, S.K. Mitra, project manager on the safety evaluation part; Richard Emch, project manager on the environmental review, and now Mary Ann Parkhurst, who is with Pacific Northwest Laboratory, in Washington state, who as I mentioned before, is the team leader of the group of scientists who have evaluated the environmental impacts associated with the license renewal for Robinson.

And, Mary Ann, I will just turn it over to you, and then we will go on for questions on any of the specific findings.

MS. PARKHURST: Thank you, Chip. I'd like to tell you, now, about our information gathering process, the composition of our review team, the process we use to review the applicant's environmental review report, and the results of our draft SEIS, the supplemental environmental impact statement.

While developing the draft environmental impact statement, we reviewed Carolina Power & Light's environmental report, which was part of their license application.

For their application, they had an environmental report as part of that, and we reviewed that. We visited the plant during the site audit. We talked to federal agencies, like Fish and Wildlife Service, with regard to some of the environmental species, especially the endangered and threatened species, aspects of the overall process.

We talked to state agencies, including state offices that handle water discharge permits, and cultural-historical resources, and local officials, as well.

We also contacted tribal representatives, and local social service agencies. So we talked to many people, and we had public comment, the public scoping meeting, to hear your comments.

For the license renewal review we established a team made up of NRC staff, supplemented by experts on various fields from the National Laboratories.

This slide gives you an idea of the types of expertise we needed for this project, and we specifically used those from environmental science, those experts in land use, aquatic and terrestrial ecology, radiation protection, hydrology and water quality, socioeconomics, and historic and cultural resources.

Next slide, please. Our analytical approach to the license renewal process is based in the guidance in the generic environmental impact statement that Rich just mentioned. We call it the GEIS, just because it is a mouthful to say it over and over, otherwise.

This document identifies 92, could we have the next one, this identifies 92 issues to be evaluated for the license renewal. Of these issues 69 are considered generic, or what we call category 1 issues.

So here we have the GEIS, and now we are going to talk about the category 1 issues, and this portion of this draft. The category 1 issues are those issues that where the impacts are essentially the

same for all plants, or for all plants with a certain type of design, for example, those with cooling towers would have similar issues.

For the other 23 issues, referred to as category 2 issues, the NRC found that the impacts were not the same at all sites and these, therefore, required a site-specific review.

Those are the category 2 issues here, and we will talk about this here in a second. Category 1 generic issues that are applicable to Robinson were addressed. We looked at them in terms of is there any new and significant information that pertains to these issues.

And so, for example, we looked at the many issues that fall into the category 1 heading, looked at is there any new information, and is that information, if there is any that exists, significant?

If we found anything that was new and significant, then we went on to perform a site-specific analysis. If not we went on to -- if there was no specific new and significant information, we went on to adopt the GEIS conclusion, so that we didn't additionally consider the site-specific information, like starting from scratch.

For the category 2 options we have to actually do a site-specific analysis for the many different impacts, different types of impacts that we look at in the environmental review process.

Finally, during the scoping period, the public then was invited to help us with this track, where we were looking for, is there any information out there we don't have, that you may have, that we need to analyze and determine whether it is significant or not.

So we went through this process looking for new issues, identifying whether any of them were significant, and if there was no

significant information that came out of there, then we do no further analysis on that particular issue.

Next one, please. For each issue, identified in the GEIS, an impact level is assigned. This is described in chapter 1 of our draft SEIS document. These impact levels are consistent with the Council of Environmental Quality Guidance for NEPA analysis.

To be categorized as a small impact the effect would not be detectable, or would be too small, to destabilize or noticeably alter any important attribute of the resource.

For example, the plant may cause the loss of adult or juvenile fish at the water intake structures. If the loss of fish is so small that it can't be detected in relation to the total population in the whole lake, the impact would be considered a small one.

To be categorized as moderate the effect must be sufficient to alter noticeably but not destabilize important attributes of the resource. Using the fish example, again, if losses at the intake cause the population to decline, and then stabilize at a lower level, the impact would be considered moderate.

And, finally, for an impact to be considered large, the effect must be clearly noticeable and sufficient to destabilize important attributes of the resource.

So if losses at the intake cause the fish population to decline, to the point where they cannot sustain their own population, and they essentially disappear from the vicinity, we consider that a large impact.

Next one, please. Regarding the organization of the draft SEIS, in chapter 2 we are looking at some general attributes about the nuclear plant, and the environment around the plant.

In chapter 3 we briefly discuss that the licensee has not identified any plant refurbishment activities that would be necessary for extended operations.

In chapter 4 we looked at the potential environmental impacts for an additional 20 years of operation at the H.B. Robinson Nuclear Plant, and the team evaluated the items specifically listed here.

We looked at the cooling system, transmission lines, radiological aspects, socioeconomics, which also includes historic and cultural resources, as well as environmental justice.

We looked at ground water use and quality, and threatened or endangered species. I will take a few minutes now to identify the results of our review. And at the end of my presentation, if you have any questions, please let me know, and I will try to answer them, or have those members of my team, that are here in the audience, try to answer them for you.

Next one, please. One of the issues we looked at, closely, is the cooling system for the Robinson nuclear plant. This view of H.B. Robinson shows the unit 2 here on the left, and it shows the coal plant on the right, that is unit 1, Robinson, of course, the water body just above it.

Lake Robinson was formed by impounding Black Creek, in 1958, to cool the unit 1 coal plant. The lake was constructed with

additional capacity for future power generation needs. And since 1970s it has been the cooling source for the Robinson nuclear plant.

Water from both units is discharged through a four mile cooling canal, and that cooling canal runs just this side of the lake shore. And it goes out four miles, and then enters the lake.

And in addition to functioning as a cooling pond, which this lake really was intended for, initially, this lake supports recreational use, and modest fishing.

During our site visit, last September, and during our review of the information we obtained, we specifically looked at both the category 2, the site-specific issues, as well as the category 1 generic issues, to get a better feel for the environmental aspects of this plant.

We listened to the scoping meeting comments, relating to the cooling system, and further evaluated some concerns regarding the temperature of the water in the warm season, in lake Robinson.

The water quality of the water entering the lake from the cooling canal is regulated by the South Carolina Department of Health and Environmental Control, through the national pollutant discharge elimination system, which is otherwise known as NPDES system.

Thermal limits are regulated through this permit, and the plant discharge is operated within these limits. We did not identify any new and significant information for any of the category 1 issues, during scoping process, by the applicant or through our review process.

Next one, please. The radiological impact is a category 1 issue, a generic issue. But because it is often a concern to the public, I want to take just a minute and discuss how we determine that there is

no new and significant information that was related to the radiological impacts for the plant.

We looked at the radiological effluent release and monitoring program during our site visit. We looked at how the gaseous and liquid effluents were treated, and released, as well as how the solid wastes were treated, packaged, and shipped for disposal. This information is found at chapter 2 in the draft SEIS document.

We also looked at how the applicant determines and demonstrates that they are in compliance with the regulations for release of these effluents. And the releases from the plants, and the resulting off-site potential doses are not expected to increase on a year to year basis during the 20 year renewal term. Therefore no new and significant information was identified during the Staff's review, or in the scoping process, or the evaluation of other available information.

Next one, please. The last issue I would like to discuss, of those evaluated in chapter 4, is that of threatened or endangered species. A description of the terrestrial and aquatic ecology area, and the potential for endangered and threatened species in a site is given in chapter 2.

There are no Federally listed aquatic species that currently occur at the Robinson site, or along the transmission rights of way. The only Federally, or state listed, threatened and endangered aquatic species with a potential to inhabit waters near Robinson, is the Carolina heelsplitter, a mussel, which is historically known in the PeeDee River system.

According to intensive Fish and Wildlife surveys, the population nearest the plant is found at the Lynches river, along the western boundary of Chesterfield county.

Short-nosed sturgeon are listed as endangered by the Fish and Wildlife Service, as well, and the Atlantic sturgeon is listed as a candidate species for Federal listing in South Carolina. However, neither sturgeon species is known to occur in Black Creek.

Bald eagles have been sighted near the Robinson site, or on the transmission line rights of way. Other Federally listed terrestrial species with potential habitat at the site included the red-cockaded woodpecker, and they have a picture of that up here, and Canby's dropwort.

None of these species is known to occur at the Robinson site, or along the associated transmission rights of way.

Next one, please. For all of these issues, that the team reviewed, we judged that the license renewal impacts are small. This is both for the category 1 and category 2 issues, and determined there was no new and significant information identified during the scoping, in which the public participated, by the licensee, or by the Staff.

Next one. And we also reviewed two other environmental impacts. All issues for the uranium fuel cycle, and solid waste management, as well as decommissioning, are considered category 1 issues and are discussed in chapter 6 and 7, respectively. No new and significant information was identified related to these issues.

Next one, please. As an important part of the EIS process we evaluated the potential environmental impacts associated

with Robinson, if it were to discontinue operation after its current license period. These, and other alternatives, are discussed in our chapter 8.

We looked at the no-action alternative. This is a scenario where the Robinson operating license is not renewed, and when the plant ceases its operation, Carolina Power & Light would decommission the facility.

We also looked at new power generation options, including coal fired plants, natural gas fired plants, coal fired, and new nuclear plants, and power through purchase power options.

We also evaluated alternative technologies such as wind, solar, hydropower, fuel cells, geothermal, wood waste, municipal solid waste, and other biomass derived fuels.

We looked at delayed retirement, utility-sponsored conservation, and then we looked at a combination of alternatives. For each alternative we evaluated whether the technology could replace the baseload capacity provided by Robinson, and whether it would be feasible, a feasible alternative to renewal.

If it appeared to have the same potential, we looked at the same types of environmental issues, as I've just described for Robinson, including land use, ecology, socioeconomics that we reviewed for the license renewal term.

Next one, please. What we found, in our preliminary conclusions of the alternatives, that are considered feasible, is that the alternatives, including the no-action alternative, may have environmental effects in at least some impact areas that reach moderate, or large

significance. For comparison the license renewal impacts were of small significance.

I will take questions, now, on any part of this, regarding the draft, our preliminary conclusions on the draft SEIS document.

FACILITATOR CAMERON: Any questions for Mary Ann? Anybody at all, questions on alternative generating technologies, anything?

(No response.)

FACILITATOR CAMERON: Okay. Thank you very much Mary Ann. Mary Ann mentioned the generic environmental impact statement, the so-called GEIS. And you all should be aware that the NRC is taking a periodic look at whether that generic environmental impact statement should be revised, at all, and there is going to be a meeting, public meeting, scoping meeting, on that potential revision, in Atlanta, on July 8th of this year, and Barry Zalcman is the project manager for that effort.

So if you want to know more about that please talk to Barry. Thank you very much, Mary Ann.

And now we have Bob Palla, who is going to talk about severe accident mitigation alternatives, which is also part of the draft environmental impact statement.

Bob does not work in the license renewal parts of the NRC organization, but works in the probabilistic risk assessment portion, and he is going to talk about that.

MR. PALLA: Hello, my name is Bob Palla, and I'm with the probabilistic safety assessment branch of NRC. I'm going to be discussing the environmental impacts of postulated accidents.

Section 5 of the generic environmental impact statement is entitled: Environmental Impacts of Postulated Accidents. The GEIS evaluates two classes of accidents, design basis accidents, and severe accidents.

Design basis accidents are those accidents that both the licensee and the NRC Staff evaluate to ensure that the plant can safely respond to a broad spectrum of postulated accidents without risk to the public.

The environmental aspects of design basis accidents are evaluated during the initial licensing process and the ability of the plant to withstand these accidents has to be demonstrated before the plant is granted a license.

Most importantly a licensee is required to maintain an acceptable design and performance capability throughout the life of the plant, including any extended life operation.

Since the licensee has to demonstrate acceptable performance throughout the life, the Commission has determined that the environmental impact of design basis accidents are of small significance.

Neither the licensee, nor the NRC, is aware of any new and significant information on the capability of the Robinson plant to withstand design basis accidents therefore the Staff concludes that there

are no environmental impacts related to design basis accidents, beyond those discussed in the generic environmental impact statement.

Now, with regard to severe accidents, the second category of accidents, these accidents are, by definition, more severe than design basis accidents, because they could result in substantial damage to the reactor core.

The Commission found, in the generic environmental impact statement, that the risk of a severe accident, on atmospheric releases falling onto open bodies of water, releases to groundwater, and societal impacts, are small for all plants.

Nevertheless the Commission determined that alternatives to mitigate severe accidents must be considered for all plants that have not done so. We refer to these alternatives as severe accident mitigation alternatives, or SAMA, for short.

The SAMA evaluation is a site-specific assessment, and it is a category 2 issue, as explained earlier by Mary Ann. The SAMA review for Robinson is described in section 5.2 of the GEIS supplement.

And let me just give some background on what we are doing in the SAMA review. The purpose of performing the SAMA evaluation is to ensure that the plant changes, with the potential for improving severe accident performance, are identified and evaluated.

The scope of potential improvements that are considered include hardware modifications, procedure changes, training program improvements, as well as other changes, basically a full spectrum of potential changes are considered.

The scope includes SAMAs that would prevent core damage, as well as SAMAs that improve containment performance, given that core damage were to occur.

Now, the evaluation process consists of four major steps. The first step is to characterize the overall plant risk, and the leading contributors to risk.

This, typically, involves the extensive use of the plant-specific probabilistic risk assessment study. The probabilistic risk assessment study is also known as the PRA. This PRA is a study that identifies the different combinations of system failures and human errors that are required in order for an accident to progress to either core damage, or to containment failure.

The second step in the evaluation is to identify potential improvements that could further reduce risk. The information from the PRAs, such as dominant accident sequences, is used to help identify plant improvements that would have the greatest impact in reducing risk.

Improvements identified in other NRC studies, as well as SAMA analyses performed for other plants, are also considered in this step.

The third step in the evaluation is to quantify the risk reduction potential in the implementation costs for each improvement. The risk reduction and implementation costs for each SAMA are typically estimated using a bounding approach.

The risk reduction is generally overestimated by assuming that the plant improvement is completely effective in eliminating the accident sequences it is intended to address.

And the implementation costs are generally underestimated by neglecting certain cost factors, such as maintenance costs, and surveillance costs, associated with the improvement.

The risk reduction and cost estimates are used in the final step to determine whether implementation of any of the improvements can be justified.

In determining whether an improvement is justified the NRC staff looks at three factors. The first is whether the improvement is cost beneficial. In other words, is the estimated benefit greater than the estimated implementation cost of the SAMA.

The second factor is whether the improvement provides a significant reduction in total risk. For example, does it eliminate a sequence, or a containment failure mode, that contributes a large fraction of the plant risk.

And the third factor is whether the risk reduction is associated with aging effects during a period of extended operation. In which case, if it was, we would be looking at implementation of the SAMA as part of the license renewal process.

The preliminary results of the Robinson SAMA evaluation are summarized on this slide. Two hundred and sixty six candidate improvements were identified for Robinson, based on review of the plant-specific PRA, relevant industry and NRC studies on severe accidents, and SAMA analysis performed for other plants.

Two hundred and eighteen of these SAMAs were eliminated during an initial qualitative screening, leaving 48 SAMAs for further evaluation. Factors considered during this initial screening

included whether the SAMA has already been implemented at Robinson, is not applicable to Robinson due to design differences, or addresses sequences, or failure modes, that are not risk significant at Robinson.

In the next phase of the evaluation a preliminary cost estimate was prepared for each of the 48 remaining SAMAs. The estimated costs were compared with the maximum attainable benefit for the plant.

This maximum attainable benefit is a calculated dollar amount associated with completely eliminating severe accidents at Robinson. All but 10 of the SAMAs were eliminated in this step because of their estimated costs exceeding the maximum attainable benefit.

A more detailed assessment of the conceptual design and cost estimate was developed for each of the remaining 10 SAMAs. None of these 10 SAMAs were found to be cost beneficial when evaluated in accordance with NRC guidance for performing regulatory analysis.

Now, although CP&L did not identify any cost beneficial, the NRC staff performed an independent review of the dominating contributors to risk, and identified two additional improvements that appeared to be cost beneficial.

The first cost beneficial SAMA involves modifying two valves in the residual heat removal system to increase their seismic capacity. Failure of these valves in a large seismic event could lead to core damage, and containment bypass.

This SAMA would increase the seismic capacity of the valves, and reduce their potential for failure in a large seismic event.

The second cost beneficial SAMA involves installing a radiant heat shield along the electrical conduit from the dedicated shutdown diesel. A transformer fire in the switchyard could damage this electrical conduit and lead to a station blackout.

This SAMA would protect the electrical cable and prevent the loss of electric power from the shutdown diesel. Neither of these SAMAs relate to adequately managing the effect of aging during the period of extended operation and, therefore, need not be implemented as part of license renewal pursuant to 10 CFR Part 54. However, CP&L is further evaluating potential implementation of these improvements.

To summarize, the NRC staff's preliminary conclusion is that additional plant improvements to further mitigate severe accidents are not required at Robinson as part of license renewal.

Potential improvements to RHR valves and electrical conduit heat shielding are being further evaluated as current operating license issues.

Any questions?

FACILITATOR CAMERON: Thank you, Bob. Questions on the SAMAs?

(No response.)

FACILITATOR CAMERON: Okay. Well, let's go to Rich Emch to wrap up this segment of the meeting. Rich?

MR. EMCH: Let's talk about what the preliminary conclusions out of this review are. First, all the impacts, the environmental impact of all the various aspects we looked at, the 92

something areas that Mary Ann talked about earlier, the conclusion was that all the impacts were small. Mary Ann's definition was not noticeable, doesn't destabilize.

We looked at the impacts from the alternatives. The impacts for the alternatives that Mary Ann described ranged from small to large. And so, basically, on a comparison, we compared those, and we come to -- this is the same sentence that we read earlier, basically our conclusion is that it is viable, that the adverse impacts, environmental impacts for license renewal at Robinson are not so great that preserving the option for license renewal for energy planning decision makers would be unreasonable.

In other words, simply put as I said earlier, the impact of an additional 20 years of operation would be okay.

Let's recap where we are. From the slide, earlier, we talked about all the various steps. Now the step we are in, we have issued the draft, and we are in the comment period. You see it extends until the end of July, so get those cards and letters in, folks.

Basically from there we will review any comments that we get, look over any additional information we've received, and make any changes that need to be made to the statement, and publish it in final form in December.

This is how to get in touch with us. My name, Richard L. Emch, Jr. This is the phone number that I can be reached at, toll free number. The documents, the environmental impact statement, the draft environmental impact statement, we have copies of it out here on the

table right outside this door, for anybody who hasn't received one, and would like to see one.

The documents are also available at the Hartsville Memorial Library, which is about 3 or 4 blocks straight back that way (pointing over back shoulder). The library agreed to keep those documents on file for us.

Also if you are into the internet, this long, long address here, will take you directly to a copy of the draft environmental impact statement. I've checked it, it works.

And the other advantage of that is that it has an online comment form in the web version of the draft statement, so you can make comments that way.

You can provide comments by mail to us at this address. You can, if you just happen to be in Rockville, for any reason, you can provide your comments to us directly, by coming to this address.

We have an email address set up, robinsoneis@nrc.gov, where you can send comments to us, that is probably the easiest, unless you are planning on making a statement here today. And, again, as I said, there is the online form.

With that we are finished. I want to thank everybody for coming to the meeting, and listening to our presentations, and for any of you who are getting ready to make any comments, thank you.

Any questions on anything I've said?

FACILITATOR CAMERON: Any questions on the summary, before we see if anybody has any formal comments for us?

Perhaps one thing that could be added, and maybe S.K. could add this, is that Rich was focusing on the -- when the environmental impact statement is going to be done. And as Rich, and I think S.K., pointed out earlier, there are a number of things that are considered before the license renewal decision is made.

And one of them is the safety evaluation report. When will that be done, S.K.?

MR. MITRA: That report will be done in January 2004, but the final licensing, if it is viable to license, it will be done in April of 2004.

FACILITATOR CAMERON: So December of this year the environmental impact statement, SER, in January, and then it will all come together to be considered.

We didn't have anybody that signed up, today, to make a more formal comment, or recommendation to us for the record. But, certainly, if there is anybody in the room now who would like to do that, we are more than amenable to hear from you.

Does anybody want to make a comment, or recommendation, on the draft environmental impact statement?

(No response.)

FACILITATOR CAMERON: Okay. Well, as Rich said, thank you all for being here. The Staff is here to talk informally. We do have, as Mary Ann said, there are members of her expert team here, so please avail yourselves of that.

We are going to be back for another meeting tonight at 7 o'clock, with an open house at 6 o'clock. So thank you, again, and maybe we will see some of you here tonight. And we are adjourned.

(Whereupon, at 2:40 p.m., the above-entitled matter was concluded.)