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License Renewal Draft Environmental
Impact Statement - Afternoon Session

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U.S. NUCLEAR REGULATORY COMMISSION

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NORTH ANNA POWER STATION, UNITS 1 AND 2

LICENSE RENEWAL

DRAFT ENVIRONMENTAL IMPACT STATEMENT

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PUBLIC MEETING

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TUESDAY,

JUNE 25, 2002

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LOUISA, VIRGINIA

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The meeting was held at 1:30 p.m. at the Public Meeting Room, Louisa County Government Building, 1 Woolfolk Avenue, Louisa, Virginia, Chip Cameron, Facilitator, presiding.

PRESENT:

CHIP CAMERON, FACILITATOR

JOHN TAPPERT

OMID TABATABAI

ANDY KUGLER

EVA HICKEY

ALSO PRESENT:

JACK WRIGHT

BILL MURPHEY

JERRY ROSENTHAL

MAJ. DONALD LOWE

DUFF GREEN

JACK DAVIS

JUD WHITE

JAMES KOGLE

PHIL GOODWIN

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 would like to welcome all of you to the Commission's public meeting this afternoon.

The subject of the meeting today is to talk about the draft environmental impact statement that was prepared by the Nuclear Regulatory Commission on the application by Virginia Power to renew the licenses for Units 1 and 2 at the North Anna Nuclear Station. And it is my pleasure to serve as your facilitator for this afternoon's meeting.

And, very simply, that just means that I'm going to try to help all of you to have a productive meeting today. And usually what I like to do at this point is just talk a little bit about meeting process, before we get to the substance of today's discussions.

I would like to just talk a little bit about the objectives of the meeting, and secondly the format and ground rules of the meeting. And third to just go over the agenda with you so that you know what to expect, and also to introduce some of the key NRC staff and expert consultant staff that we have working

with us on this project.

We are here today to discuss this document, which is the draft environmental impact statement on the license renewal application. We do have copies of this out in the foyer, for everyone.

We were here last year to get some information from all of you on how to develop, how to best develop this draft environmental impact statement. And now we are here this afternoon to, first of all, tell you what some of the preliminary findings are, in this draft environmental impact statement, and to answer your questions about that, and any questions you have about the license renewal process.

A second objective, is to listen to your comments, your concerns, that you might have on this environmental review that we are doing. And the ultimate goal would be to use your comments, today, to help us to finalize the draft environmental impact statement.

We are also asking for written comments on the draft environmental impact statement, but we wanted to be here today to talk to you in person about this. You may hear information from the NRC or our experts, that will stimulate you to send in a written

comment, or to help you prepare a written comment, if that is what you want to do.

But I do want to emphasize that anything you say here today is going to have the same weight as any written comments. And we are taking a transcript of the meeting, and that transcript will be available on the NRC website, for those of you who want to see it, and that will be our record of what you say here today.

In terms of meeting format it pretty much matches the two objectives that we have. We have a first segment where we are going to ask the NRC staff to give us some brief presentations on the license renewal process, and on the environmental review process.

Specifically after each of those presentations we will go out to you to see if there are any questions that we can answer about those presentations.

The second segment of the meeting is where we want to listen to you, to any of you who have a more formal statement for us on the license renewal issues, and we will ask you to come up here, if that is comfortable, for you to make the statements.

In terms of ground rules, they are pretty

simple. One, if you have a question during the first phase of the meeting just signal me and I will bring you this talking stick. And please just identify yourself, and affiliation if appropriate, for the stenographer.

There is a sign-up, there are sign-up cards for making a formal statement, but that is just to give us an idea of how many speakers we have. If the notion seizes you, during the meeting, that you want to come up and make a statement, just let me know, and we will gladly accommodate that.

I would just ask that one person at a time speak, so that we can not only get a clean transcript, but obviously we want to give our full attention to whomever has the floor at the time. So just one person speaking at a time.

And, finally, I don't think we are going to have time problems this afternoon, but I usually ask people to just try to be as concise as possible, which is difficult, I know, on complex issues such as this.

But to try to be concise. And I'm setting a five minute guideline for the prepared statements. And that is a fuzzy boundary there, there won't be a hook that comes out, except for the NRC Staff. But

there won't be a hook that comes out at five minutes.

But if you could just try to keep it down to five minutes, that will give us some assurance that we will hear from everybody who wants to talk today, and that we will get the information out to you that we need to.

In terms of agenda, and speakers, after I'm done I have asked John Tappert, who is right over here, from the NRC Staff to just give you a few words of welcome.

And John is the section leader, the supervisor of the environmental review branch in our Office of Nuclear Reactor Regulation. And John and his staff are responsible for developing all of the environmental reviews that are done for nuclear power plant license renewal applications.

We are going to start with John, and I wanted to tell you a little bit about the people who you are going to hear today. John has been with the agency for approximately 11 years. During those 11 years, before he became the environmental review section chief, he was a resident inspector of nuclear power plants for the NRC, of nuclear power plants up in the NRC's Region 1.

He has a bachelor's degree in aerospace

and ocean engineering, and he has a master's degree in environmental engineering.

After John's welcome we are going to get right into the substance of the discussion, and we are going to go to Omid Tabatabai, who is right here in the front row. He is the project manager for the safety evaluation on the North Anna license renewal applications. And he will explain what his responsibilities are, and what that safety review is all about.

And he has been with us for about three years, and before that he was with the Department of Energy, one, in the office of environmental safety and health there, and also he worked in DOE defense programs. And Omid has a bachelor's degree in applied math, and a master's degree, I believe, in nuclear engineering.

And he will give you an overview of the license renewal process, generally. Then we will go on to you for any questions that you have at that point. Then we are going to get more specific, and we are going to go to Mr. Andy Kugler, who is right here.

And he is the project manager for the environmental review part of the North Anna license renewal applications. And you are going to hear how

that safety review and environmental review come together to help the NRC make a decision on the license renewal applications.

But Andy is in John Tappert's section, again, Office of Nuclear Reactor Regulation. He has been with the NRC for 12 years. He has worked for a nuclear utility that operated a nuclear power plant. So he has been in the private sector.

And his background is in mechanical engineering, and again we will go out for questions on the environmental review process. Andy is going to cover the process for you.

Then we are going to get to the real substance of today's discussion, and Eva Hickey, who is right over here. And Eva is the project team leader, and she can correct me on that, if that is the wrong title, with Pacific Northwest National Lab. And the NRC has contracted with the lab, and other national labs, to help us do the environmental review. And I think that Eva will tell you about some of the expert disciplines that are involved in doing that review.

Eva has a master's in health physics, and she has over 20 years of experience with various aspects of nuclear reactors, including emergency

preparedness issues.

After Eva tells you about the preliminary findings in the draft environmental impact statement, we will go out to you, again, for questions. And then we have one short subject, so to speak, but important. Which is another aspect of the draft environmental impact statement, and that is a look at the possibility of severe accident and accident mitigation. That is in the draft environmental impact statement.

And Andy Kugler is going to do double duty for us on that today, and he will go through that, we will go to your for questions. And then we will get to the second part of the meeting, which is to hear from you.

And I would just thank you all for being here today. This is an important decision that we have to make, and we appreciate your assistance in making that decision.

And there is a sign-up sheet up front. If you haven't signed in, please do so, so that we can get you any material that is related to this meeting. And with that I think we are ready to hear from John Tappert. John?

MR. TAPPERT: So welcome. As Chip said,

my name is John Tappert, I'm chief of the environmental section in the Office of Nuclear Reactor Regulation. I would like to welcome you to this meeting, and thank you for participating in our process.

As Chip mentioned, said, there are several things we would like to accomplish today, and I would like to briefly reiterate the purposes of this meeting.

First we would like to give you a brief overview of the entire license renewal program, this includes both the safety review, as well as the environmental review, which is the principal focus of today's meeting.

Second we will give you the preliminary results of our environmental review, which assesses the environmental impacts associated with extending the operating license at the North Anna nuclear power plant, for an additional 20 years.

Then we will give you some additional information about how you can submit written comments on the draft environmental impact statement, and also information on the schedule for the balance of our review.

At the conclusion of the Staff's

presentation we will be happy to receive any questions or comments that you may have on the draft environmental impact statement.

But first let me provide some context for the license renewal program. The Atomic Energy Act gives the NRC the authority to issue operating licenses to commercial nuclear power plants for a period of 40 years.

For North Anna Units 1 and 2, these operating licenses will expire in 2018, and 2020, respectively. Our regulations also make provisions for extending these operating licenses for an additional 20 years as part of the license renewal program.

Dominion has requested license renewal for both of the North Anna plants. As part of the NRC's review of these license renewal applications, we conducted an environmental scoping meeting here last October.

At that meeting we provided information on the license renewal process, and also sought your input on issues to be included in the environmental impact statement.

As we promised at the scoping meeting, we return here today to provide the preliminary results

of our draft environmental impact statement. And, again, one of the principal purposes of this meeting today is to receive your questions and comments on that draft.

And with that I would like to ask Omid to give a brief overview of the safety review portion.

MR. TABATABAI: Thank you, John.

As Chip mentioned, my name is Omid Tabatabai, and I'm the NRC project manager for the safety review of the North Anna Units 1 and 2 license renewal application.

The purpose of this meeting is to describe the findings of the NRC's staff on environmental review of the application, and to present to you the preliminary results of that review.

I'm going to briefly describe the license renewal process, and what are the next steps that the NRC is going to take as far as this license renewal application.

On this slide we show the nature of the activities that the NRC staff is taking as far as the review of this license renewal application. Each license renewal application includes safety reviews, environmental reviews, plant inspections, and also an independent review of the application by the Advisory

Committee on Reactor Safeguards.

I will be talking, briefly, on each of these elements, and I will describe what are those elements. Of course the environmental review Mr. Kugler is the project manager, and he will go into detail of that element of the review process. I will be talking about the rest of those license renewal elements.

As the safety project manager my responsibilities are to coordinate all the evaluations and reviews of the application for safety related issues, for coordinating plant inspections, and also providing Advisory Committee on Reactor Safeguards with the Staff's evaluation on the safety review of the application.

The governing rule for the safety review is Part 54 of Title 10 of the Code of Federal Regulations. In that rule, the NRC describes what are the requirements of those license renewal application reviews, and also it describes that environmental review must be according to Part 51 of the Title 10 of Code of Federal Regulations.

As far as plant inspections, we have conducted two inspections at North Anna nuclear power plant, one in October 2001, and the other one in

February of 2002. The results of those inspections, and the Staff's review as far as safety aspect of those, we present all those results to the Advisory Committee on Reactor Safeguards, and they write a letter to the Commission, and they comment on what action the Commission should take as far as the renewed license goes.

This slide shows the license renewal process in a flow chart format. In addition to that there are opportunities for the members of the public to participate in this process.

We have safety reviews, we have environmental review, and also we have inspection. In addition to that, on this slide we show opportunity for the members of the public to participate in this process, on those funny blocks. The members of the public have opportunities to make comments and participate in different meetings that NRC conducts.

For example, this meeting, the lower, as you see, for the environmental review we have scoping activities. The NRC staff prepared a draft environmental impact statement, and the purpose of this meeting is for the public to present them the results of that review, and also get feedback from them.

And also, the public has the opportunity to participate in ACRS reviews. It is open to the public, you can come and make comments on that. And also if there is any hearing, as far as this license renewal application goes, there is a panel of administrative judges that are called Atomic Safety and Licensing Board, and there is a process for that in NRC, that you can make comments on that.

All these three, inspection, environmental safety, and ACRS, the results of all those, the outcome of all those reviews goes to the Commission, and they make the final decision as far as renewed license goes.

This is a brief overview of the license renewal process, and I'm here to answer, if there is any question regarding safety review of the application.

FACILITATOR CAMERON: Any questions for Omid on the license renewal process, generally, or the safety review? And if something occurs to you later on in the program, obviously we can come back and pick that up, too.

Omid, thank you very much, and let's go to Andy Kugler for the environmental review process.

MR. KUGLER: Thank you, Chip. Good

afternoon. Thank you for coming out this evening to our meeting.

My name is Andy Kugler, and I'm the environmental project manager for the environmental review for the license renewal for the North Anna application.

In that capacity, I'm leading a team of reviewers from both the NRC and from our National Labs, who are experts in various environmental areas.

The National Environmental Policy Act requires agencies to take a systematic approach to evaluating environmental impacts of any Federal action. In this regard we consider both the impacts of the action, and also any mitigation that might be used to reduce those impacts. In addition, we look at alternatives to the proposed action to determine whether the environmental impacts of an alternative might be lower.

The National Environmental Policy Act is basically a disclosure tool. The intent of this is to involve the public in our review process, and to gain input from the public.

The NRC regulations indicate or state that for license renewal we will prepare an environmental impact statement. There are other tools that can be

used under the National Environmental Policy Act.

And in that regard we are here to collect comments, both at the scoping phase, when we were here last October, and we also collect comments on the draft of that environmental impact statement, which is why we are here today.

In terms of how we make our decision, the basic question is, is license renewal for these units acceptable from an environmental perspective; should we keep the option of running these units open?

I want to emphasize that should we, at the end of this process, determine that we will renew the licenses for North Anna, we will not be the ones who decide whether or not the plants actually operate for another 20 years. That is going to be determined by the owners of the plant, and state, and other Federal agencies.

So basically, what we are doing is we are determining whether or not it is acceptable for them to continue to operate.

This slide gives a little bit more detail on the environmental review process. We were out here last October for public meetings during the scoping phase, when we were requesting input on what issues we should consider in our review.

After scoping, and after our review of the environmental aspects of license renewal, we issued the draft environmental impact statement which we issued in May. This meeting is one part of the comment period that is currently open on the draft. The comment period runs until August 1st of this year.

We can take comments a number of different ways, and this meeting is one method that we use. After the comment period ends we will evaluate the comments we receive, we will revise the draft as appropriate, and then we expect to issue the final environmental impact statement around December of this year.

In this slide we are trying to give you an idea of the different methods we used to collect information for our review. As I mentioned, we were here collecting public comments during the scoping period. We also went on-site, and in the vicinity, and looked at the environment around the plants, and how the plant interacted with the environment.

We gathered information from the licensee, from state, and other Federal agencies, and permitting authorities. And, of course, we reviewed the licensee's application.

In this slide I will try to give you an

idea of the various areas of expertise that we draw on in preparing the environmental impact statement. We look at ecology, aquatic ecology and terrestrial ecology. We look at water, air, and land use.

And some of those areas you might not necessarily think about, we look at socioeconomics, how the operation of the plant, or any of the alternatives would affect the area in terms of economics. And the area called environmental justice, which is we consider whether or not the action of license renewal would have a high adverse impact on minority or low income populations in the area.

At this point I'm going to turn things over to Eva Hickey. And what she is going to do is explain the approach that we use in our review, and the preliminary results that we documented in our environmental impact statement.

Are there any questions on the environmental review process?

FACILITATOR CAMERON: Questions for Andy before we go into findings?

(No response.)

MS. HICKEY: Good evening, everyone. My name is Eva Hickey, and I work with Pacific Northwest National Laboratory. And I'm the team lead for the

multi-disciplinary, multi-laboratory team, that has been looking at the potential environmental impacts for North Anna license renewal.

I have some of my team members here with me tonight. And they, along with myself, will try to answer any questions you have on our draft supplemental environmental impact statement.

First let me talk about how we quantified the impacts from the environmental issues that we looked at. These impacts are consistent with the Council on Environmental Quality. The first impact, impact level, is small.

And that is defined as an effect that is not detectable, or it is too small to destabilize, or noticeably alter an important attribute of a resource.

Let me give you an example. The plant may cause the loss of adult or juvenile fish in the intake structure. That is where they pull water into the plant for cooling. If the loss of fish is so small that it cannot be detected in the lake, in this instance, the impact would be considered small.

The next impact level is moderate. For this, the definition is the effect is sufficient to alter noticeably, but not destabilize important attributes of the resource.

So using our fish example, in this case, if the losses at the intake cause the population to decline, but then the population stabilizes, the impact level would be considered moderate.

And, finally, the third is large. And this effect is clearly noticeable and sufficient to destabilize important attributes of the resource. So in this case for our fish example, if the fish population declined, and it did not recover, or stabilize, the impact would be considered large.

Next let me take just a minute to explain the analysis approach that we used for looking at the environmental impacts. The Generic Environmental Impact Statement for License Renewal, NUREG 1437, identifies 92 environmental issues that are evaluated for license renewal.

Sixty-nine of these issues are considered generic, and these we call category 1, which means the impacts are the same for all plants, or all reactors, or for all reactors that have certain features, such as plants that would have cooling towers.

For the other 23 issues referred to as category 2, which we see here, these were not found to be the same across all the plants. And so they require a site specific analysis.

Only certain issues addressed in the Generic Environmental Impact Statement are applicable to North Anna. And those are the issues that we looked at during our review.

For the generic, or category 1 issues, we looked to see if there was any information that was considered new and significant. And if there was not any, then we adopted the conclusions that are in the Generic Environmental Impact Statement. For the site specific, or category 2 issues, we did a thorough site specific analysis.

To look for new and significant issues, the site, during our meeting in our site visit in October, we looked for new and significant issues. We asked the public, during the public scoping period, if they had any issues that they wanted us to look at, and the licensee was also requested to discuss and look for new and significant issues.

Now, I want to take just a few minutes to cover some of the issues, and some of the findings that we had from our analysis. In Chapter 2 of the draft supplemental environmental impact statement, we discussed the plant, and the environment around the plant.

And then in Chapter 4, we discussed the

environmental issues and what we found. Those issues that we looked at are the cooling system, transmission lines, radiological, socioeconomic, groundwater use and quality, and threatened and endangered species.

I'm not going to go over all of these in detail, I've tried to pick out just a few that I thought would be of interest to the public. But if there is any issues that I have not discussed, please feel free to ask questions.

Also, if you do not have a copy of the SEIS, we do have copies out in the hallway that you are welcome to take a look at.

One of the issues that we look at in great detail are the cooling system impacts. Here is a drawing of the North Anna cooling system. Lake Anna was actually created primarily to provide cooling water for North Anna. And here you can see the main body of the lake.

And then there are three dikes, and these legs of the lake, or arms. This is the cooling ponds, this is where the water is returned, and the water is cooled before it is returned to Lake Anna. And this is called the waste heat treatment facility.

In this diagram, you can see where the cooling water is taken in from Lake Anna, goes up to

the canal, and then it goes to the plant, and then it is returned, and goes through the waste heat treatment facility, before being returned to Lake Anna.

There are trash racks and traveling screens that are used to prevent debris and fish from entering the cooling system. There are a number of category 1 issues related to cooling systems, and we looked to see if there were any new and significant information related to these issues. However, we did not discover any.

The issues that the team looked at, on a site-specific basis, include entrainment and impingement of fish and shellfish, and heat shock. And from our evaluation we determined that the potential impacts were small, and additional mitigation was not warranted.

I would like to take just a moment to talk about radiological impacts. Now, radiological impacts for license renewal are all considered category 1, but I know a lot of times the public is interested and concerned about this, so I thought I would take just a minute to discuss it.

We looked at the effluent release and monitoring programs during our site visits. We looked at how the gaseous and liquid effluents are treated

and released, and we also looked at how solid wastes were treated, packaged, and shipped from North Anna Units 1 and 2.

We looked at how the Applicant determines and demonstrates that they are in compliance with the regulations for release of radiological effluents. And we determined that the releases are well within limits, and the resulting off-site potential doses are not expected to increase on a year to year basis during the 20 year license renewal period.

We found that there is no new and significant information related to radiological impacts. And, therefore, we have adopted the conclusions from the Generic Environmental Impact Statement, and determined that the potential radiological impacts are small.

Finally, I wanted to talk about the threatened and endangered species. Now, on the North Anna site there are no Federal or state listed threatened and endangered species of aquatic or terrestrial plants or animals.

However, there are a number of species that occur in habitats similar to those found at North Anna, and I have shown some of these here on this slide.

There is a mussel that could be found in the rivers and streams in the counties located near North Anna. Bald eagles have been seen in the area, but there are no nests on the site.

And there are a couple of plant species that are not found at North Anna, but live in the same habitat in the local area. We concluded that the impacts of continued operation on threatened and endangered species are small. The conclusion is preliminary pending the completion of our consultation with the Fish and Wildlife Service.

I will talk a little bit about the fact that we have looked, during our review, for potential new and significant information related to the generic issues. We did this during scoping, and we requested that the licensee look at this, and we discussed that during our site visit, and then the Staff also looked at it while we were on our site visit, and doing our other reviews.

Now, a couple of other issues that we've looked at, and these can be found in chapters 6 and 7 of the draft SEIS, are those impacts from the uranium fuel cycle and solid waste management, and the impacts from decommissioning.

These issues are all category 1, and we

did not find any new and significant information identified and, therefore, we've adopted the conclusions in the GEIS.

One of the other areas that we spent quite a bit of time looking at is alternatives to, if North Anna did not continue operation for an additional 20 years, what would the environmental impacts from the alternatives be.

We looked at no-action, which is simply that the power plant would cease to operate at the time its license expires, or perhaps before, and then be decommissioned.

We looked at impacts of new generation of power, from either coal-fired, gas-fired, or even potentially a new nuclear plant. We looked at the impacts from purchased electrical power, and alternative technologies, such as wind, solar, and hydropower.

And then we looked at a combination of all of these alternatives. For each of the alternatives that we looked at, we did the same environmental review using the same issues that we did for license renewal.

Our preliminary conclusions for alternatives is that the alternatives, including no-

action alternative, may have environmental effects in at least some impact categories, that reach either a moderate or large significance.

With that I'm going to turn my discussion back to Andy, unless anybody has any questions for me at this point.

FACILITATOR CAMERON: Let's take some questions on your presentation, Eva, before we go to Andy.

MS. HICKEY: Okay.

FACILITATOR CAMERON: And if you could just tell us your name, for the record, sir?

MR. GOODWIN: Phil Goodwin. You were talking about environments, and also environments that may not, for example bald eagles, you said there were some nesting areas that could be utilized by bald eagles, but there were no bald eagles there.

We've all heard about the project that was shut down. Is there a possibility that even though there are no endangered species here, that we may shut down a project just because there is an environment here that could be suitable, is that what we are saying?

MS. HICKEY: I think I'm going to ask my ecologist. Can you answer this question?

MS. CARLSEN: My name is Tina Carlsen, I'm an ecologist. How is that, is that better?

I think what Eva said, first of all, was that there were no nests at the site. So there is some potential habitat that bald eagles could go in and put in nests at some point in the future. Right now there are no nests.

And the fact that there is potential habitat, in my understanding, that would require consultation with Fish and Wildlife Service, and a lot of different aspects to actually close down a site, than just the fact that there is just potential habitat there.

So I don't think that is a potential problem down the road, but that would be something we would consult with the various resource agencies, with.

MR. GOODWIN: Well, it seems like we have two different --

FACILITATOR CAMERON: Let's get you on the record, sir.

MR. GOODWIN: It seems like we are hearing two different things. We are saying that there may be a potential site here, and that there is a concern, but it won't shut down --

MS. CARLSEN: Well, what we looked at was, and what we found, is that there are no Federally listed species on this site now. There are habitats there that are similar.

Now, if we had actually found species we would do an additional review to see if the additional 20 year license renewal would impact those species.

FACILITATOR CAMERON: And, Andy, did you want to add something on this, too? Let's see if we can get this perfectly clear.

MR. KUGLER: Well, what I was going to say is that the fact that endangered species could be in the area doesn't necessarily mean the project can't continue to operate.

There are eagles all around the Surry Power Station, which is another review we are doing. And the state, and the Federal agencies, have procedures for managing that resource so that you don't impact the eagles.

So just the fact that they were in the area, there are no known nests, but they pass through the area, I think is what we believe. But just that fact wouldn't necessarily mean the project can't continue to operate.

FACILITATOR CAMERON: So I guess to try to

summarize for you, is that even if there were endangered species on the site, first of all, that does not mean that would prohibit the facility from operating.

If there are no species at the site, but that there are habitats that could be used, perhaps, by endangered species, that just puts us on alert, basically, to be aware of that issue. I think that is the summary.

MR. KUGLER: One other thing is that I think there are certain cases where there are species whose habitat is so limited that we have to be extremely cautious. But the bald eagle has a very broad range of habitats that they can live in, so I don't think that would become an issue here.

FACILITATOR CAMERON: Okay, thanks, Tina and Eva, and Andy. Other questions on the environmental findings before we go to accident mitigation?

(No response.)

FACILITATOR CAMERON: Okay, great. Thank you Eva. And, Andy?

MR. KUGLER: One area of our review that is a little bit different is postulated accidents. And this is described in chapter 5 of the

environmental impact statement.

We look at two basic types of accidents in our review. The first type is called design basis accidents.

And these are a broad range of events that both the NRC staff, and the licensee, have evaluated during initial licensing, to determine whether or not the plant can withstand these events without undue hazard to the health and safety of the public.

Now, a number of these postulated accidents are never expected to occur at the plant, they are fairly far-fetched accidents. But we still evaluate them, because we use them to establish the design basis for the plant, so that the plant is built to withstand them.

The acceptance criteria for design basis accidents can be found in Title 10 of the Code of Federal Regulations, Part 50 and Part 100. And the licensee must maintain these analyses acceptable throughout the life of the plant, including any license renewal term.

Severe nuclear accidents are the second type of accident, and these are accidents that lead to significant core damage. Now, the event may or may not lead to releases off-site, but they all result in

damage to the core of the reactor.

In the Generic Environmental Impact Statement that Eva described earlier, we determined that the impacts of the accidents themselves are small at all sites. And the reason for this is because the probability of these events are extremely low, and that drives the overall risk down.

However, we also determined that we should review mitigation alternatives that might reduce the impacts of severe accidents if they have not previously been evaluated. In the case of North Anna we had not previously evaluated them, so we look at them here in the draft environmental impact statement.

In the licensee's environmental report, in developing it, they used various sources and identified 158 potential candidate improvements for mitigation alternatives.

Of these, 107 were eliminated either because they had already been implemented at the plant, or the licensee determined that they were not applicable to this design. And the reason why they would put them in the list, if they are not applicable, when they make the list they take a very broad look, they include a lot of things, and then they start whittling it down. This way they are less

likely to have an alternative that they wouldn't see.

Of the remaining 51, 42 were eliminated using a bounding analysis in which they, basically, did a rough estimate of how much it would cost, and balanced that against the most benefit you could possibly get from any improvement in determining that it was not cost beneficial.

For the remaining nine candidates that broad analysis, that rough analysis, didn't give a clear answer, so they did a much more detailed analysis, making a more detailed evaluation of the cost of the improvement, and also of how much benefit you would actually receive from it.

Using that analysis, the licensee determined that none of the remaining nine candidates were cost beneficial.

We reviewed the analysis that the licensee performed, and we performed some independent analysis of our own. We concluded that the methods and implementation used by the licensee, were sound, and that none of the candidate improvements were cost beneficial.

The result isn't really that surprising, because licensees have been implementing improvements at the plant to mitigate severe accidents for a number

of years. They were required, back in the early '90s, to perform an analysis, and take a look at severe accidents.

So it is not too big a surprise that we might not find any at this stage, because they have already implemented changes that would be cost beneficial.

So the overall conclusion is that no additional plant improvements are required at North Anna Units 1 and 2 for the license renewal term for severe accident mitigation alternatives.

And that concludes my discussion of postulated accidents. I can take any questions at this point. Yes?

FACILITATOR CAMERON: Let me get over there with the microphone for you. And just give us your name, sir.

MR. MURPHEY: Hi, my name is Bill Murphey, I'm a resident here in Louisa County. My question is a little bit complicated, and may go back to the safety analysis that was done originally.

What I would like to focus on is the accident at Davis Besse. And, in particular, the following questions. My understanding is that NRC was aware of this, people don't know, this is a question

of corrosion in the reactor pressure vessel head by boric acid.

Anyway, NRC was aware of the problem for the last 20 years, it is not a new problem. There is a man here who was a resident inspector. I would like to know why the NRC inspection process didn't pick up this corrosion problem years ago, that is the first one.

Second is my understanding is that how they did pick it up was with the filters in the pressure, in the containment area, when the filter change had to be increased from once a month to once every 48 hours, something like that.

So the question is, what was the response processed by the NRC given that information? How did the resident inspector get that information? And more importantly, when talking about accident mitigation, what has been done to change that circumstance to assure that it will not happen here?

MR. KUGLER: Well, I have some information on that, I'm not sure I can answer all of your questions entirely. Again, our review is, primarily, on the environmental side, but I'm going to tell you what I can, what I know.

The issue of us knowing about boric acid

corrosion for 20 years, we've known about potential for boric acid corrosion for many years. And there are programs that were established that were intended to prevent it from going very far. We were supposed to be able to detect it before it caused significant problems.

I'm not familiar with all the details of what happened at Davis Besse. I know they had a severe problem there, where corrosion went on for an extended period of time, and caused substantial damage on the reactor head.

Why their program didn't pick it up, I'm not sure, I don't have that information. What has been done since then, I know that we issued a bulletin to all the licensees requiring them to check and make sure that they didn't have a problem like this, and explain to us where they stood on this.

In the case of North Anna, for other reasons, they performed what is called a clean metal inspection of reactor heads last fall, where they had taken all the insulation off and looked at the vessel head. And so they knew, at that point, they had no problems with leakage and corrosion in that area.

The problem at Davis Besse had gone on for some period of time, I'm not sure how long, I don't

know if we have an idea at this point how long the leakage had been going on, but it wasn't a short period of time.

So the inspections are performed by the licensee here, and they continue monitoring, provide us with assurance that this vessel head is intact. I don't know if we have any more information?

FACILITATOR CAMERON: Perhaps there is also some information that we released on Davis Besse, generally, that we could provide Mr. Murphey, that tells him more about what happened at Davis Besse, that might be helpful for him.

MR. KUGLER: I know there is a section of our website that is specifically for that issue.

MR. TAPPERT: Right, that is just what I was going to say, there is a website. If you go to the NRC website, which is just www.nrc.gov, there is a section that addresses what is going on at Davis Besse. And that was a very serious event that happened there.

And we have convened a lessons learned task force to dig into the NRC's performance, and the licensee's performance that led up to that situation. The NRC is taking action. We found cracking on some CRDM, control rod drive mechanism, heads down at

Oconee last year.

And based on that we issued a bulletin, which is one of our strongest regulatory documents, to all PWR licensees to have them do inspections. And, in part, that is what led to the discovery of the condition at Davis Besse.

And we've also issued additional bulletins this year to follow up on that.

FACILITATOR CAMERON: Thanks, John. Let's go to -- Jerry, just give us your name.

MR. ROSENTHAL: It is Jerry Rosenthal, I'm also here in Louisa.

I would like to follow-up on that. My understanding is that the boric acid corrosion was found on the reactor vessel head here, there were 19 spots on North Anna 1 and 2 that were found with boric acid corrosion, that were addressed by Dominion.

And I would like to find out if that was true.

FACILITATOR CAMERON: Okay. That sounds like that would be a pretty important clarification to provide people.

MR. KUGLER: I do have their written response to our bulletin. It might take me a minute to find where they discuss the actual result.

FACILITATOR CAMERON: Can we -- Jerry, can we give Andy a chance to make sure that he gets the right information, and then we will go to the next segment of the meeting. But before we adjourn this afternoon, we will go back and discuss this. Is that okay?

All right, good. Any other questions? And we will go back to this. And, Mr. Murphey, do you have a follow-up here? We will get you on the transcript.

MR. MURPHEY: There are two parts to it. The discussion that is going on right now is more on the accident itself. What I would like to focus upon is the NRC credibility, and the NRC inspection process.

Remember in the beginning I said that we had a man here who was a resident inspector. And the question is, why didn't he pick it up, why didn't the resident inspector at Davis Besse pick it up?

FACILITATOR CAMERON: Let's and I think Mr. Murphey --

MR. KUGLER: That is part of the subject, what the team is looking at this event is looking at. They are not just looking at how did the licensee not find this sooner, but they are also looking at why

didn't we pick it up sooner. That is part of what is being investigated.

FACILITATOR CAMERON: Is there, I think maybe it would provide some more assurance to Mr. Murphey if we just described a little bit, if we could, what our typical inspection program is.

John already talked about the fact that we did find, through our inspection program, a problem with the so-called control rod drive mechanisms, and that is in part what led us to discover the problem at Davis Besse.

But, John, you've been out there. Can you just provide a little bit more gloss for us on the inspection program, with the idea, you've heard Mr. Murphey's concern, maybe you can give him a little bit more on that.

And after the meeting is over, too, if perhaps we could talk to him some more about that, to give him some assurance.

MR. TAPPERT: Yes, sure. The NRC inspection program is a sampling program, where we have basically -- we have two or three people on each site. And they inspect the licensees to make sure that they are following requirements.

Now, there's hundreds of employees, and

thousands of activities going on at the plants. So you can't possibly observe each one of these activities. But with a sampling process we can gain confidence of the ability of the licensee to do it.

Obviously this is one that we are looking into, to see how this got so far, without anyone picking up on it. We also rely on operational experience. Which means that if you see something at one plant, we go in and look at all the other plants.

And then that is very actively going on right now, based on what happened at Oconee, and based on what happened at Davis Besse, there is a very vigorous program right now to address this problem in the industry.

So you have a lot of things building together to give you that safety net. I'm not sure if that answers your question, but that is --

FACILITATOR CAMERON: And we will go back, I think, the information in response to Jerry Rosenthal's question may help along those lines.

And, Andy, if you could just look through the documentation, and then when you are ready, before we adjourn, we will go back and have a discussion on that.

John, do you want to add anything?

MR. TAPPERT: Yes, just that we did write a bulletin to every licensee, and they responded to that bulletin.

MR. KUGLER: Well, this is the first, this is the Oconee bulletin.

MR. TAPPERT: Okay. And those documents are all available, publicly, through the NRC website, as well. We will get you that information.

FACILITATOR CAMERON: Okay, thank you. Let's go to listening some more from all of you, on these issues. Oh, you have some important information.

MR. KUGLER: You have to let me finish.

FACILITATOR CAMERON: All right, sorry Andy.

MR. KUGLER: He is trying to get rid of me. Coming back to talk more of the environmental impact statement as a whole, what we found is that the impacts of license renewal for North Anna are small in all impact areas. And this conclusion is preliminary, as Eva mentioned, in the area of threatened and endangered species, pending the conclusion of our consultation with the Fish and Wildlife Service.

We also concluded that the alternatives to license renewal, in at least some impact areas, that

the impacts rose to the moderate and large significance, in at least some areas.

And based on these results our preliminary conclusion is that the adverse environmental impacts of license renewal are such that it is appropriate to maintain that option open, the option of license renewal.

So where do we go from here? As I indicated earlier, we issued the draft environmental impact statement in April, the comment period began on May 17th, and ends on August 1st, so we will accept comments throughout that period.

Obviously this meeting is just one way to submit comments, and I will talk a bit more about some other ways that you can submit. And then we will issue the final environmental impact statement by December of this year.

I am the Agency's point of contact for the environmental review, and here I've given you my phone number. If you have any questions related to the environmental review, please give me a call, I would be happy to help you out.

I've also provided some information, here, on where you can get access to related documents. We've put the documents related to the environmental

review in two libraries in this area. One is at the Public Library in Mineral, and the other one is in the Alderman Library, in the University of Virginia, in Charlottesville.

In addition, the documents are available on our website at www.nrc.gov. If you go to this particular page, that is the environmental impact statement itself. You can actually view the entire environmental impact statement on line.

We've tried to provide a number of different ways for you to give us comments. We've always got the old standby, mail. And I will give you the address here. You could also come by in person to Rockville Pike. If you want to provide comments by email, there is an email box that we've established, just for this review.

And in addition, if you go to the environmental impact statement on line, at the address I showed you on the previous page, there is actually an online comment form, you can submit comments that way, as well.

So we try to give you as many options as possible for submitting comments. And, of course, any comments we receive today are included as well.

And that concludes my presentation. I

want to thank you all for coming here this afternoon, and taking time out to listen to us, and I will turn things back over to Chip.

FACILITATOR CAMERON: I want to see if there are questions from any of you on this final piece. But, Andy, I think it might be helpful to give people, at least as far as we know about it, what happens after the final environmental impact statement, and what sort of time line are we looking at, there, for when a decision might be made?

MR. KUGLER: Actually there is probably a little more information on the time line. But as Omid explained earlier, there are multiple paths in this process. We expect to issue our final environmental impact statement by the end of the year. There will also be a safety evaluation report written by Omid and his colleagues, and there will be a letter of report from the Regions on the inspection results.

And the Advisory Committee on Reactor Safeguards will also prepare a report on their evaluation. They take an independent look at the work that was done to develop the safety evaluation report. And then all of those parts are combined and provided to the Commission.

I'm not sure, entirely sure of the

schedule for that latter part.

FACILITATOR CAMERON: Do you have any ideas on that, Omid?

MR. TABATABAI: Yes. Actually the schedule goes up to July of 2003, that is the decision the Commission will be making by then as to the renewed license.

MR. KUGLER: The safety evaluation report, can you give me a rough idea of the schedule on that?

MR. TABATABAI: The final safety evaluation report is scheduled to be issued in September of this year.

FACILITATOR CAMERON: Okay, let's go out to Jerry. This is Jerry Rosenthal, again.

MR. ROSENTHAL: I wanted to go back to postulated accidents for a quick question. I didn't see any comments in there about terrorism, or the use of, let's say, not going at the core, but using the storage as a dirty bomb, for instance, as a potential environmental impact on the lake, and downstream to the Chesapeake Bay.

FACILITATOR CAMERON: Andy, Omid, do you want to address that issue?

MR. KUGLER: Well, safeguard issues in general are handled under the safeguards program, and

this is an ongoing program that is not really included in the review for license renewal, because the licensee is required to maintain their safeguards controls, and the security of the plant at all times.

And, obviously, in light of September 11th, there are a lot of questions about whether or not we need to look again at how our security is handled.

And that is in process. The agency has established a new office that deals specifically with safeguards and security. And they are in the process of evaluating what changes will need to be made. But it is really not included within the scope of what we are doing.

MR. ROSENTHAL: My point, specifically, is that we are in the middle of this process, so we don't have the information. But it seems, if you are doing an environmental impact you would go to look to do an environmental impact were there an accident.

In other words, somebody sneaks by whatever safeguards have been put in place, and whatever safeguards are required by another agency. Your job should be to look at the environmental impact of a postulated accident.

And that is not included in this?

MR. KUGLER: I understand what you are saying. I guess what I'm saying is that what you are describing isn't an accident, what you are describing is an intentional act. And what we -- I understand they are very similar, and in fact the results, the analysis of accidents would be applicable to an event of that type.

But then you start dealing with the aspects of safeguards and security, and how is that handled. That is really what your question goes to, how they are handled. And that is not something that is within our purview, in this review.

MR. ROSENTHAL: I'm not interested in how the security is handled. I'm interested in what would happen if something happened.

MR. KUGLER: I understand.

MR. ROSENTHAL: So we can just make the assumption that you cannot predict everything that is possible to happen. And so you should be looking at consequences down the line. And especially severe consequences.

MR. KUGLER: Those are evaluated. But when we do our analysis, for instance, we are looking at severe accident mitigation alternatives, one of the things that comes into play is what is the likelihood

of the event.

And when we start talking in security space, we don't include that in this review. It is a separate program that is managed at this new office in the Agency. But we do evaluate what the consequences of severe accidents are.

We look at that for all accidents, because that is part of what we consider. I mean, when you start talking about cost benefit, the cost is what is going to happen if there is a severe event here; what is it going to do to the area, what is it going to do to economy? What is it going to do to the people around here?

And so that is considered, included in that that --

FACILITATOR CAMERON: Let's make sure this is clear to everyone, because I think it may be a little fuzzy. Based on what you said, it is my understanding that when we do this particular severe accident mitigation alternative analysis, for purposes of license renewal, we only look at -- we don't look at sequences that could be started by an intentional act. Is that correct?

MR. KUGLER: We don't include sabotage as an initiating event. What I'm saying is that the

consequences that follow would be essentially the same as other severe accidents.

FACILITATOR CAMERON: So, I mean, it has to be clear to people that in this analysis we didn't look at intentional acts. And I think that one of the things that we probably have to consider, as a comment, is the implication of what Mr. Rosenthal was saying, is that perhaps intentional acts, intentional initiating sequences should be looked at.

But the other thing that you are saying is that we are looking at intentional acts. And, maybe, John did you want to try to clarify this?

MR. TAPPERT: Yes. I don't know if we are just muddying the waters here, or not. But what we are here for today is we are assessing the impacts of license renewal, which is operating this facility for an additional 20 years.

Worrying about sabotage attacks, specially in post 9/11 world is a today problem. It is not something we are going to worry about in 2018, or 2020, it is something we need to address today.

And the Agency is addressing it today. We formed a new office, we've issued orders to the 103 operating nuclear power plants, to implement compensatory actions, to increase their security

posture.

And we are also doing a top to bottom review to find out what exactly is the threat in the modern world today. So these things are things that we are doing today, that aren't going to be tied to license renewal, and that is why you are not going to see those impacts in the document that we are sharing today.

So two things, it is not in the document, but we are addressing it.

FACILITATOR CAMERON: Okay.

MR. ROSENTHAL: Back to something that is -- I saw, it said, the risk of a tornado is something to ten to the minus fifth, the chance of it happening. However, there is a chance that a tornado could hit the North Anna Site, pick up a dry cask, hit the dry cask storage facility, pick them up, and throw them into the lake.

I assume that is --

MR. KUGLER: The casks are designed for -- I don't know -- a separate office handles the design of the cask, but I know that they are designed for events, I mean, they are not designed for transportation, at this point, the ones that are here.

But they are designed to be able to

withstand severe external events. I guess that would be the best way to put it. These are not just, you know, inside a can. But, yes, I mean when we considered in the analysis is the likelihood and the consequences.

FACILITATOR CAMERON: Just to be clear, again, on this for everybody, including Mr. Rosenthal, we said that intentional events, sabotage, for example, is not included in the so-called SAMAs analysis.

Are natural hazard events like tornadoes included?

MR. KUGLER: Yes.

FACILITATOR CAMERON: Okay. At least those are analyzed. All right, good. Any further questions before we go on? And I promise you, we will get back to a discussion on the issue that was raised before, that is of concern to both Mr. Murphey and Mr. Rosenthal.

Okay, let's go over to Mr. Murphey.

MR. MURPHEY: The last part of it. In your analysis of severe accidents, did you include an analysis of what would have happened at Davis Besse if the pressure vessel had been breached?

MR. KUGLER: I am not certain that it

includes specifically that item. What we do include are events that go beyond the design basis, and the need to evaluate the reactor vessel failure, to a failure of the containment. Events of that type are considered.

And, obviously, the consequences of an event of that nature are extremely severe, which is why we work so hard to make sure the likelihood is so small.

FACILITATOR CAMERON: And just to be clear on that, too, from my sense of the question, is when we do a severe accident mitigation alternatives analysis, and we are looking at initiating events, is an event like what happened at Davis Besse usually considered in the analysis as an initiating event?

I mean, I know it depends on the plant, but we would capture that, wouldn't we?

MR. KUGLER: I'm certain we included events that involve large breaks, which drained the vessel rapidly, failure of vessel that leads to a failure of the fuel, and considered some of the events that the containment fails as well.

I would have to go back and talk with our reviewers to find out specifically if they looked at a breach of the vessel head, if you want to be that

specific. But I'm certain breaches of the vessel, or the piping to the vessel is considered.

FACILITATOR CAMERON: Okay, all right. Thank you very much. Thank you for those questions, too, they were good questions.

Omid, do you have one other thing to say?

MR. TABATABAI: I just wanted to tell Mr. Murphey that there are several phases for accident management, there are in-vessel accident management, and they are all postulated in the risk assessment analysis that the NRC has actually reviewed.

And the utilities have done those kind of analysis. And there are engineering safety features to cope with all of those accidents.

FACILITATOR CAMERON: Okay, thank you, Omid, thank you Andy. Let's go to our speakers for this afternoon.

And first we are going to go to Mr. Jack Wright, who is a member of the Louisa County Board of Supervisors, Supervisor Wright, do you want to come up here?

MR. WRIGHT: I'm Jack Wright, I'm with the Board of Supervisors of the southeastern portion of the county. And to make sure that I'm concise, and I put all my points in, I will basically read, and make

sure I can see it.

First of all, North Anna is a good -- they are good corporate citizens of Louisa County. They are vital to the economic development of Louisa County for these reasons: Employment opportunity, recreation areas for many people and their families, development that has been, and continues to be built around the lake.

There are volunteer projects in which the employees have participated, and these are many things that they have done for the county, and assisted us with.

The voluntary contributions the corporation has made to many county projects, and not least of all the tax revenue source to the county, tremendous tax revenue.

It is a well managed corporation. They've shown signs of this in so many ways, in the nine years that I have lived here, which is a key to any kind of good operation.

They are very safety conscious, which is vital to our county of Louisa, and most of you have just discussed this in some detail, but very safety conscious.

We want them to continue as a part of

Louisa County for many years to come. Thank you.

FACILITATOR CAMERON: Thank you, very much, Mr. Wright. Next we are going to hear from two officials from the safety and emergency preparedness field. First of all we are going to go to Maj. Donald Lowe, who is with the Sheriff's office in Louisa County.

Please come up here.

MAJ. LOWE: Thank you, sir. Good evening, ladies and gentlemen. I'm Maj. Lowe, from the Louisa County Sheriff's office, and I'm just going to take a couple of minutes of your time, and talk a little bit about safety and security at North Anna.

I have been fortunate to have a professional working relationship with North Anna, off and on, probably for over the last 22 years, and also fortunate enough to be able to experience a lot of the programs that they have, in terms of security.

I have been through their security training, I've been through a lot of safety training, I've seen management's attitude, and commitment to excellence in this field.

And I have to say that I'm extremely impressed here, not only by the quality of people, and the quality of programs that they have, but the

attitude in general. I think that they are very concerned about this county, and the safety and welfare of this county.

And they are also good corporate neighbors for us. The things that they do for our county in terms of support to the county itself. And I know in law enforcement agencies, and emergency services, and other agencies, they have been tremendous in that area.

And I think you can look at that, over the last couple of weeks, it is just simply by the volunteers that were walking up and down the streets here, in the county, picking up bags and bags of litter, that were on the side of the road, these are volunteers. And that is all attitude.

The post 9/11 events naturally are a major concern for us here. And I can say, without getting into a grey area about safeguards stuff, that the protection of North Anna is of paramount importance to law enforcement agencies in this county, and surrounding counties, and the Federal government.

And that we are aggressively pursuing all our options, and anything that is available to us, to make sure that North Anna is a safe place here. That the security team down at North Anna is probably one

of the best I've seen. And the leadership there is excellent.

The training that they get in the security training down there, in some areas, probably exceeds what the normal law enforcement agency would probably receive in some of those areas.

Again, I feel very comfortable with North Anna being there. And I guess the only way I can kind of prove my assertions up here is just to let you know that over the last month or so, we finally finished building our house two miles from North Anna.

And I feel very safe, and very happy, and I tell you, it is a pleasure to not only work with these people, but associate with them, and have them be a part of the community here.

FACILITATOR CAMERON: Thank you very much, Maj. Lowe.

Next we are going to go to Duff Green, who is with the emergency operation center in Orange County.

MR. GREEN: My name is Duff Green, I'm the emergency management coordinator for Orange County, Virginia.

Others have given the background. I'm eighth generation native of Orange County. I'm a

graduate from the University of Virginia with a major in biology, and I appreciate the environmental concern that the NRC has for North Anna.

But being a native, here for 74 years, I have never seen a bald eagle. I served almost 20 years on the Orange County Board of Supervisors, the following four years as chairman of the board.

I'm not employed by Dominion/Virginia Power, I have no relatives who work there, and I do not own any stock in this electric company. On the other hand I've had an association with the North Anna Nuclear Power Station since the late 1970s, when I first went on the Orange County Board of Supervisors.

The reason for this being the fact that Orange is considered one of the five risk counties surrounding the power station, and the board of supervisor's chairman, by Virginia law, is the director of emergency management.

As the emergency management coordinator one of my jobs is to study, train, and maintain plans for a possible radiological accident that may occur at the North Anna plant.

We hold numerous drills of all kinds in cooperation with NAPS, and we make numerous visits to the plant for training, and information. As an

outsider I'm convinced that the North Anna Power Station is an excellently run plant with highly trained professionals in charge.

They keep my office informed on all activities, even the most unimportant occurrences. There are simulated drills by evaluators from the Federal Emergency Management Agency.

North Anna Power Station has been an outstanding neighbor in our community. It has been an economic boon to Orange County for more than 30 years, providing well paid jobs to many of our citizens.

My office is staffed by more than 30, all volunteer men and women, and all the basic office's expenses are paid by the County Board of Supervisors, the only funding we receive in my office comes from North Anna Power Station.

I have nothing but praise for this Dominion/Virginia Power operation. Its open communication, and its safety conscious employees. Thank you.

FACILITATOR CAMERON: Thank you very much, Mr. Green.

Before we go to some other members of the community, we are going to hear from some officials of Dominion/Virginia Power to talk, tell us a little bit

about their rationale for license renewal, their vision behind this.

And first we are going to go to Mr. Jack Davis, who is the director of nuclear safety and licensing at the North Anna station, and then he will be introducing you to Jud White, who is the environmental manager for Dominion. Jack?

MR. DAVIS: Thank you. Good afternoon, ladies and gentlemen. I'm Jack Davis, and I'm the director of nuclear station safety and licensing at North Anna Power Station.

I would like to take this opportunity to thank the Nuclear Regulatory Commission for holding this important meeting to receive public comment on the NRC's supplemental environmental impact statement that supports Dominion's application for license renewal for North Anna Power Station.

We welcome the public comment process, and we believe that Dominion, Louisa County, and other nearby communities all have a stake in the future of North Anna Power Station.

As an employee of Dominion I'm excited about the license renewal for North Anna. A renewed license would not only be important to Louisa County and Virginia, but also to me and 852 other North Anna

employees, whose livelihood depends upon providing safe and reliable electricity to the customers of this state.

That is not to mention the future employees that will be required to continue the safe operation of the plant well into this century.

Currently, North Anna provides about 17 percent of the electric power used in Virginia. A renewed license would ensure that we could continue to provide that safe, reliable power, to our customers.

Additionally, renewed licenses would assure the local community that it will continue to reap the benefit of having a large employer in the area, and Louisa County would continue to receive the tax revenue from the station's operation.

Just as an aside, North Anna Power Station has provided 170 million dollars in tax revenue to Louisa County since the station started building some 30 years ago.

I would like to digress for just a moment, and tell you a little bit about myself, and how I came to be associated with North Anna Power Station. I began my professional life in the nuclear Navy, during which time I had the pleasure of three tours as commanding officer -- first of the USS Baton Rouge, a

nuclear powered attack submarine, then the Navy's three reactor training facility, near Idaho Falls, Idaho. And last, the USS L.Y. Spear, which is a nuclear submarine repair ship.

I joined Dominion in the fall of 1997 as the assistant superintendent of outage and planning. And in the summer of 1999 I entered the senior reactor operator license class, and received my license from the Nuclear Regulatory Commission in October of 2000. In November of that same year I assumed my current duties at the station.

North Anna Power Station has a long history of safe, reliable, and efficient operation. Since the 1990s North Anna has consistently ranked as the most efficient producer of nuclear generated electricity in the United States, on a three year cost average.

The station has also achieved, and continues to achieve, high marks in safety and security performance from the Nuclear Regulatory Commission, and from the Institute of Nuclear Power Operations.

During the period 1993 through 1997, the Nuclear Regulatory Commission, in its oversight program, then known as the systematic assessment of

licensee performance report, graded North Anna as having superior safety performance in all station functional areas.

Under the NRC's new reactor oversight process the results of which are updated quarterly, on a quarterly basis, on the Commission's website, North Anna continues to fully meet the NRC safety cornerstone objectives.

Additionally, since 1991, the Institute of Nuclear Power Operations has also consistently awarded North Anna its highest marks for nuclear safety and operational excellence.

As to environmental performance, our commitment to environmental stewardship dates back to the construction days of the power station in '60s and '70s. North Anna Power Station was designed so that the water that is used to cool the steam that generates electricity, discharges into an innovative 3,400 acre system of lagoons that returns the water to Lake Anna at nearly normal temperatures.

We also have a conservation effort that focuses on protecting and enhancing fish populations in the lake. Special structures of brush and cinder blocks were constructed and sunk in the lake to improve the fish habitat.

Our biologists regularly sample, or monitor the health of the fish population. And that data is compared with data that was taken prior to our first day of operation.

These comparisons have consistently shown that North Anna Power Station is not harming the lake's fish population.

In preparing North Anna's relicensing application more than 50 individuals have spent, literally, thousands of hours reviewing all environmental aspects of continued plant operation.

The report concluded that continued operation of North Anna Power Station beyond 40 years will not negatively impact the environmental surrounding of the plant.

In a moment Dr. Jud White, Dominion's manager of environmental policy and compliance, will share with you more about our environmental programs, and review the findings of the NRC draft report.

Finally, I would like to thank you all on behalf of Dominion for allowing us to do business in Louisa County. We strive to be a good corporate citizen, and have enjoyed the professional supportive working relationship that we have with the county, and the other local communities surrounding the station.

As many of you know, Dominion has a long-standing tradition of investing in the communities it serves through volunteer and philanthropic activities. Many of our employees demonstrate their commitment to the community by participating in programs such as Adopt a Highway, Thanksgiving Baskets for the Needy, blood drives, supporting the area Boy Scouts, and many other community activities.

Our volunteer programs and civic participation are an essential element of Dominion's corporate philosophy. We will continue our commitment to our communities in the future.

Again, I appreciate the opportunity to speak to you about North Anna Power Station's license renewal. I would now like Jud White, if he would provide you some more details on the environmental aspects of our application. Jud?

DR. WHITE: Thank you, Jack. As Jack said, my name is Jud White, I'm the environmental manager at Dominion, with responsibilities for environmental compliance activities at all of our power stations in Virginia, as well as other states. But it also includes the North Anna Power Station.

I have over 25 years experience in the environmental field. My first ten years of my career

I spent at North Anna, with responsibilities for studies, environmental studies in the lake, as well as the downstream North Anna River.

I do have a master's degree in Biology, and a PhD in environmental policy. I was directly involved and helped in assisting the Dominion nuclear team, helping them prepare the license renewal application to NRC. And, in particular, I helped develop the environmental report to the NRC, and coordinated with Federal and state environmental agencies.

We commend the NRC in developing what is, in my opinion, a high quality and professional draft supplemental environmental impact statement. The impact statement is a thorough, in my opinion, and accurate scientific assessment of the potential environmental impacts associated with the proposed action.

We support and agree with the conclusions of the NRC Staff that renewing the North Anna Power Station operating license is a reasonable action that will not result in any noticeable impact to the environment.

Basically this means, as has been said several times already, that the license renewal option

is preserved, or remains acceptable for the power station to continue to provide safe and reliable, and clean electricity to the Commonwealth of Virginia.

We prepared, over a several year period, and submitted to the NRC an extensive environmental report for license renewal that was part of the information used by NRC in developing their supplemental environmental impact statement.

I say in part because it was just one area where the NRC relied on information. They had other sources including what was mentioned earlier, the Generic Environmental Impact Statement, the extensive consultation with Federal, state, and local authorities, and environmental agencies, independent review by the NRC Staff, National Laboratory consultants, and the consideration of the public comments during the scoping process, which was held last fall, here.

Of particular note, relative to information sources, Dominion proactively engaged in discussions and meetings with key state, Federal, and environmental agency staffs very early in the license renewal process.

This helped ensure that all issues were identified and appropriately addressed in the

environmental review submitted to NRC. Dominion also proactively communicated with environmental and other pertinent stakeholders about license renewal.

This helped considerably, in my opinion, in the development of a thorough and accurate report. The report speaks specifically, and it has been mentioned somewhat previously, about specific impacts to fish, various aquatic resources, and is listed in detail in the report.

The report goes back to studies that began in the early '70s, even before the plant went operational. The creation of Lake Anna, a key point for this area, it created by damming up the North Anna river, it created Lake Anna, which is a 9,600 acre impoundment.

It basically ameliorated the effects on the communities downstream from Contrary Creek, which is a known source of acid mine drainage in the area. And as a result of impounding the river, and creating the lake, that impact was greatly reduced.

Also many of you who are fishermen probably are well aware that Lake Anna continues to rank high in the state as a trophy bass lake in Virginia, which is a clear indication that the underlying food chain, on which it depends, is healthy

and stable.

Based on the review of all of the historical information, including the annual monitoring, which does continue today, the NRC concluded that potential impacts to aquatic organisms are small, and that additional mitigation is not warranted, and we do agree with that finding.

To work with the NRC in evaluating the current applicability of the Generic Environmental Impact Statement, that information in it, as it pertained to generic issues, requiring no further review, Dominion developed an internal procedure, and protocol, to identify any new and significant information related to those issues that NRC identified as generic.

As a result of that process no new information was identified, but we did go through the process, as it was important to do. This activity is considered very important, in my opinion, in all license renewal projects for verification of the findings in the Generic Environmental Impact Statement.

We also agree with the NRC findings that the potential impacts of license renewal for the remaining environmental issues evaluated separately in

the impact statement are small, and of noteworthiness is that a significant consideration is that there is no new major construction or land disturbing activity associated with this license renewal process.

As a result a lot of the impacts were considered small. In essence current measures to mitigate environmental impacts associated with operations were found to be adequate.

Dominion, and its entire staff, its entire environmental staff, takes pride in its environmental performance, and its positive relationships with environmental agency staffs, environmental organizations, the general public, and community neighbors.

It goes without saying that developing that relationship takes time to foster, as well as a major commitment by upper management for openness and candor, which I'm proud that we have.

Examples of these relationships that we have with the various groups and organizations, including the Department of Environmental Quality, the Virginia Department of Game and Inland Fisheries, Lake Anna Civic Association, as well as Lake Anna Advisory Committee, and the River Association.

In this license renewal process we want to

ensure that we continue on this path, and not do anything adversely impacting our future performance or relationships with these groups.

Dominion believes that our obligation to provide safe and reliable energy from nuclear power extends well beyond this license renewal milestone. Federal, state, and local oversight will continue to test and challenge, just as it does today, our standard of environmental excellence, and the conduct of our daily business.

We welcome all comments on the contents of this supplemental environmental impact statement, during the comment period, and we look forward to working positively and constructively with NRC staff. Thank you.

FACILITATOR CAMERON: Thank you, Jud. We are going to start with Mr. James Kogle, then we will go to William Murphey, and then to Jerry Rosenthal. Mr. Kogle?

MR. KOGLE: Good afternoon. I'm Jim Kogle, I'm vice president of the Windwood Coves Property Owners Association in Louisa County.

Windwood Coves represents a residential community of approximately 260 properties, which about 50 percent are currently built up. We are a mixture

of full time residents, and also some weekend people, that are certainly enjoying the lake.

We are located about a mile north, if you will, up lake from the plant. I have been associated with Virginia Power since I went on our first Board of Directors back in the mid-1960s, when Windwood Coves was developed.

And I must say our experience with Virginia Power has been nothing but absolutely terrific. They have been wonderful neighbors, very sensitive to the environment, sensitive to recreational issues. And we certainly support, very much, the relicensing effort of the power plant.

Thank you.

FACILITATOR CAMERON: Thank you Mr. Kogle. Next let's hear from Mr. Murphey.

MR. MURPHEY: Hi, my name is Bill Murphey, I'm a resident of Louisa County and, in fact, live right on the lake myself.

First thing is I'm in favor of renewing the license for North Anna. I think it is a safe operation, I think it is a benefit to the population as a whole, and Louisa County in particular.

Second is I would like to encourage NRC to very carefully consider the credibility situation

following the Davis Besse incident. And we ask, did you analyze so and so? You said, yes, we analyzed it. But it is your credibility that lets the public accept that statement of analysis.

Third is actually the plant is a benefit to the environment. Mr. Green hasn't seen any eagles, but we have certainly seen them. There are a couple that fish on Contrary creek, there is one that fishes right across from us at the state park.

And at one time we were sitting out, and there was one fishing right in front of our house. So we know there are eagles there, we've seen them.

The second part of the environment is the warm blooded part, and that is there is estimated that there are about 500 beavers around the lake. That population has remained constant over the past 20 years.

We have seen fresh water otters, muskrats there as well. And so I would go to the other side and say that the existence of the plant is actually a benefit to the habitat of the wildlife, and has increased the wildlife around in this area.

So the final close, we are in favor of renewing the license, and thanks for the statement.

FACILITATOR CAMERON: Thank you, very

much, Mr. Murphey. And let's go to Mr. Rosenthal.

MR. ROSENTHAL: I'm Jerry Rosenthal, I'm the president of Concerned Citizens of Louisa County. We have been an environmental organization dealing with North Anna for over 25 years.

Been involved with the Concerned Citizens since Virginia Power first proposed transshipping waste from Surry, to store up at North Anna, which they assured us if they did not get that waste moved from Surry to North Anna, they were going to close North Anna. Of course that never happened. We will deal with that.

A few other quick notes. I'm a fifth generation Virginian, I'm a stock owner on Dominion Power, and I have a list of comments, and I'm going to comment by the page number. And you can take it from there, out of the book.

On page 2-10 it says: There is not going to be increased liquid waste releases in the next 20 years. The question with all the releases, and the stuff, the gaseous, the liquid, or the solid waste, is we are talking about comparative versus cumulative?

There are going to be greater releases if the plant is extended for 20 years. That is logical. They are there, it is going to be operating. They may

not be releasing more five years from now, than they are releasing now, but cumulatively they will be releasing more.

On 2-12, the low level compact for radiological waste, is non-operational. Barnwell promises to close to outside, people from outside South Carolina. The low level waste is currently stored on-site, including two generators, with no plans to be cut and removed.

There are significant problems with storage, disposal, and accumulation of low level solid waste, radioactive.

I heard a person laugh about the chance of a tornado striking the plant. What are the chances that four airplanes would be simultaneously hijacked and flown into public buildings? These same people would have laughed a year ago if somebody had said this. But we have to deal with possibilities.

On 2-27, and following the pages there, they keep referring to Richmond County. Richmond County happens to be all the way on the eastern part of Virginia, not anywhere near here. All of the comments related to the sociological stuff that relate to Richmond County are ridiculous, they have nothing to do, and they should not belong in there at all.

On 2-41, Tradewinds they put in there as a major employer, they folded. Actually the major employment in the county, outside of Dominion Power, are the schools and the government, which were not mentioned at all.

In 4-4, they say thermal stratification to the lake is not a problem, but on 4-16 it is noted in the thing as pronounced in the lake. I'm not sure how you can either have it pronounced and not a problem, or maybe stratification is not a problem.

On 4-24, long term effects of exposure to low level radiation has not been studied, we don't have information. What are the effects for 30 years? So we are having a hard problem to know how these effects could be judged or estimated.

On 4-40 Virginia Dominion Power is building a new building at the plant site, which is going to affect water use and quality, as well as discharge. That information is not included in here. This new building was just announced this month.

On 5-5, the NRC and VEPCO's reports have been challenged by many people, their mathematical modeling. And I don't even need to go much further than just saying that all of those mathematical models are sort of bogus.

In 6-3 and following, let's get the figures right out there. How many tons of uranium are going to be mined, how many tons are going to be processed? What are the effects? They are saying, right in there, 12 additional cancer fatalities are going to be expected because of the renewal of this license.

Who, in Louisa County, wants a member of their family to be one of those 12? You live here in the county, do you want a friend or a member of your family, your grandchild, your child, to be one of these additional 12 cancer fatalities?

What kinds of cancer, how many additional cases of cancer? These are fatalities. They are saying there is no significant impact, and we are talking about 12 people who are going to die. That is no impact?

There is a financial impact, there is an emotional impact. Specifically, it is going to affect the people who live up at the lake. I think they should know that.

Go back to your association and tell them that 12 additional people, there are 12 additional cases of cancer, and see what type of support you get.

On 6-8, on-site spent fuel. The pool is

not designed to hold the waste for more than X number of years. And from its original design they've already crammed more fuel in there than was originally designed.

We need to have an analysis of what are the effects of a concrete pool with another 20 years, with all that radiation. The pads are limited. Louisa County has the right to limit storage of waste on those pads.

That was part of the conditional use permit. If the county limits the waste storage on the pads, what are the effects, where are they going to put the waste?

If we are opening for 20 more years, and the county doesn't allow it, where is that waste going to be? If they don't allow it there, they are going to have to have another one, and there is going to be an environmental impact.

When we start talking about the 8-23, natural gas, two new natural gas plants are already being built in this area. One in Gordonsville, and one in Fluvana. Another one is proposed in Gum Springs.

These plants already have natural gas, and transmission lines, and can produce up to 65 percent

of North Anna's annual net output. The whole discussion they had in there about putting a natural gas plant at North Anna, and having to bring natural gas lines from Gordonsville, and all this disruption, it was just a waste of time and energy.

That wasn't going to happen. Dominion already is one of the largest natural gas producers, and marketers in the country. They are putting up natural gas plants, they've cancelled, in the last year, they've canceled more plants than had the output of North Anna, that they had already announced.

There is a surplus of electricity right now, and a surplus of plants. The plants are being cancelled.

In 8-45 and following, again the discussion, no one source has to replace all of North Anna's production. Which was also noted earlier in there, by doing things like reduction on demand, or a combination. This entire section is fundamentally flawed, logically and realistically.

And that is even noted, later, on page 8-49. The Staff's conclusion that these things could happen is seriously flawed. Dominion itself is constructing new power plants.

And conservation and management demand

could, by itself, save if they close North Anna, could save all of the production that is going on right there.

On 8-15, DOE Secretary Abraham has already determined that Yucca does not have enough space for the current waste that is being produced at the nuclear power plants. They can't put the high level waste away. And now we are going to add 20 more years. Where is that going to go?

They don't have it, it is a fundamental flaw, you can't produce it if you don't have a place for it to go. Even with Yucca fully operational, they can't take the waste from the nuclear power plants. It is ridiculous to say we will do it, and then we will deal with it later.

On 8-15 and 16, with MOX, Virginia Power is not out of the contract, they have not signed out of the contract on MOX. They bring the letter saying they are not going to do it.

They flip flopped, lied, whatever you want to say, three or four times about their use of MOX. If MOX is used here, that changes the profile of the storage, waste, and all accidents. And significantly changes the environmental review.

Lastly, concerning security, I've been

around the world since 9/11, and I can tell you this. We are not prepared, we are not prepared for what is going to happen, and we are not prepared for the response.

It is a sad thing, America is a wonderful open society, and we are just not ready. So I encourage the NRC to take this very seriously, and look at it, and try to deal with the real reality of this new world since 9/11. Thank you.

FACILITATOR CAMERON: Thank you, Mr. Rosenthal for those detailed comments.

Before I ask Andy to address the question from before, we did get a letter from the Town Manager here in Louisa, Mr. Morrison, who couldn't be with us today, and we are going to attach that to the transcript.

But because it has been submitted I thought I would just read one main paragraph, for your information. It doesn't mean anything more than that. And this is from Mr. Morrison, Town Manager of the Town of Louisa.

North Anna Power Station’s commitment to the environment is above reproach. Nuclear energy itself does not produce any of the air emissions associated with fossil fuel generation plants. Thus

nuclear generation helps to protect the environment. The company's conservation efforts focus on protecting and enhancing fish populations, as well as migratory birds through policies, procedures, and permits obtained from the United States Fish and Wildlife Service.

As good stewards to the environment, Dominion biologists regularly monitor the health of fish populations with no harmful results found. As I perceive it, North Anna Nuclear Power Station is environmentally safe, environmentally sound, and environmentally responsible.

If you want to see the entire letter it is on the transcript. And, Andy, I will just ask you to make sure that we have a copy of this, also, to take back to Rockville with us.

Now, Andy, do you have -- are you ready to respond to the question that was asked previously?

MR. KUGLER: Jerry, you raised a question related to the inspections of the vessel heads, and results of that.

What I have here is a letter that Dominion wrote back to us. This is in response to bulletin 2002-01. And I believe that bulletin was as a result of -- that may be the result of the Davis Besse --

But, at any rate, they have inspected the vessel heads. And I think this may be what you were referring to. On North Anna Unit 1 they did find some boron deposits on the reactor vessel head.

And what I was saying was they didn't find any wastage. In other words, there was boron there, but it had not been corroded the metal. I guess I believe that -- I'm not an expert in this area, but I believe that they indicated that it had not been there very long, or at least it had not had an environment that encouraged the corrosion.

The boron deposits by themselves won't corrode it, you have to have moisture. And normally there is plenty of moisture in the containment, that is the nature of it.

I'm trying to see what else I've highlighted here. There it is, "Degradation (in other words, wastage of the reactor vessel head base metal) was not observed on the reactor vessel heads, including the area around the penetrations that required repair or evaluation after boric acid residue/deposits were removed" when visual inspections were performed.

I'm trying to see if there is anything else. "In the case of North Anna Unit 1, and Surry

Unit 1, even where leakage was suspected, no evidence of reactor vessel head degradation was found and the repairs that were completed should prevent future leakage at the affected locations."

So do you know, were you referring to the places where they found boron, is that what you were referring to?

MR. ROSENTHAL: I had read in the internet story, in response to Davis Besse, in which they listed the reactors which they had found -- I mean, it came from Reuter's, so it is hard to tell what they really were commenting on.

But they had mentioned different reactors around the country, and North Anna was in there, and it said, I think they said 17 or 19 spots of boron degradation. Now, I don't know if it is degradation, or --

MR. KUGLER: Right. This report doesn't list how many, but it does indicate there were places where there were boron deposits, but there wasn't any sign of where it actually corroded. That is the report that we received.

FACILITATOR CAMERON: And I think those are the facts in that report, and the term used was deposits. Okay, thank you.

Was there anybody else who wanted to make a statement before we adjourn?

(No response.)

FACILITATOR CAMERON: We are going to be here tonight at 7 o'clock for a meeting, open house at 6 o'clock, for those of you who might want to talk with us.

But thank you for concern, comments, detailed comments, your questions are always important for us to heed the admonitions about the credibility of our program. And so we thank you all. And we will be here at 7 o'clock. We are adjourned.

(Whereupon, at 3:25 p.m. the above-entitled matter was concluded.)

1