UNITED STATES OF AMERICA

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NUCLEAR REGULATORY COMMISSION

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DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

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LICENSE RENEWAL APPLICATION

THURSDAY

MARCH 3, 2005

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MISHICOT, WISCONSIN

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The Draft Environmental Impact Statement Session met at Fox Hills, 250 West Church St., Mishicot, Wisconsin at 7:00 p.m., Francis Cameron facilitating.

PRESENT:

FRANCIS CAMERON, Facilitator
ANDREW KUGLER, Section Chief
STACEY IMBODEN, Project Manager
PAUL SCHUMANN, Team Leader
RICHARD EMCH, Backup Project Manager

I N D E X

P R O C E E D I N G S

(7:00 P.M.)

MR. CAMERON: Good evening, everyone. My name is Chip Cameron, I'm the Special Counsel for Public Liaison at the Nuclear Regulatory Commission and it's my pleasure to welcome you to our public meeting. Tonight, our topic tonight is the Draft Environmental Impact Statement that the NRC has prepared to help and evaluate a license application that we received from the Nuclear Management Company to renew the licenses to operate Units 1 and 2 at Point Beach. And it will be my pleasure to serve as your facilitator tonight and to try to help all of you have a productive meeting.

I wanted to just quickly talk about meeting process for a minute here. In terms of format, it's going to be a two-part format to tonight's meeting. The first part is to have the NRC give you some information about not only the license renewal process, what do we look at when we are evaluating whether to grant a renewal for an operating power plant, but more importantly perhaps, we're going to hear what the information and the conclusions are in the Draft Environmental Impact Statement that we prepared. So, we have some brief NRC presentations for you. We'll go to you for any questions that you might have about the process or about the Draft EIS. And it is a draft. It won't be finalized until we evaluate the comments that we hear tonight and any written comments that we receive.

And that leads to the second part of the meeting which is an opportunity to hear from you in terms of any concerns, comments,

advice, recommendations you might have about the Draft Environmental Impact Statement or license renewal process. And there will be an opportunity to formally address us because those comments tonight, as I mentioned, we're going to be taking written comments and the NRC staff will tell you more about that. But anything you say tonight will carry the same weight as a written comment.

Ground rules are real simple. If you have a question, just signal me. I'll bring you this cordless microphone. Introduce yourself to us and we'll try to answer your questions. We are taking a transcript of the meeting. Mr. LeGrand is our transcriber/stenographer tonight. And that will be the NRC's record for the meeting and it will be your record. If anybody needs a copy of that transcript, we'll be glad to provide it to you.

And let me introduce the NRC staff that will be talking to you. First, Mr. Andy Kugler who is right here. Andy is the Chief of the Environmental Review Section in the License Renewal and Environmental Impacts Program at the NRC. And Andy and his staff have the responsibility of doing the environmental evaluations for any reactor licensing action: license renewal, early site permit, things like that. And Andy is going to give you an overview of the license renewal generally.

And in terms of his background, he's been with the Agency for 13-14 years at this point. He came to us from the Naval Nuclear Submarine Program. He also worked for a nuclear utility. And he has a Bachelor's in Mechanical Engineering from Cooper Union and a

Master's in Technical Management from Johns Hopkins University in Baltimore.

Then we're going to go to the environmental review specifically. We have Tracy Imboden with us tonight to give us the -- Stacey, I knew I was going to do that. We have Stacey Imboden with us who is the Project Manager on the environmental review and for this license renewal application. And she is going to tell you more about the environmental review process. And she has been with us three years, apparently not long enough for me to remember that her first name is Stacey but excuse me for that. But Stacey has a Bachelor's in Meteorology from Penn State University and a Master's in Environmental Engineering from Clemson University.

We'll then go out to you for questions on, any questions on process and then we're going to go to the heart of the discussion tonight which is the Draft Environmental Impact Statement. And we have Dr. Paul Schumann with us. Paul is the Team Leader for the NRC Environmental Review Team that prepared this Draft Environmental Impact Statement for the NRC. He is from Los Alamos National Lab. He is their regulatory compliance expert, environmental engineering expert there. And he has a Ph.D., his Doctorate is in Environmental Science and Engineering from UCLA.

And we do have one part of the Draft Environmental Impact Statement that discusses accidents. And Mr. Rich Emch from the NRC staff is going to talk about severe accident mitigation alternatives. And he'll explain that to you. He has been with us for

approximately 30 years in various positions. He has been a project manager on the environmental review for license renewal for specific nuclear power plants. He has been involved in emergency planning and preparedness, radiation health physics issues, and that is his background. He has a Bachelor's in Physics from Louisiana Tech and a Master's in Health Physics from Georgia Tech University.

And with that, I would just thank you all for being here tonight. We will be here after the meeting for informal discussion. So, anything that we can make clear for you or any information we can provide, we'll do that. And I'll turn it over to Andy.

MR. KUGLER: Thank you, Chip. And thank you all for coming out this evening for our meeting on the Draft Environmental Impact Statement for License Renewal for Point Beach Units 1 and 2. I hope the information that we provide you this evening helps you to understand the process that we're working through, where we are in the process, and the role you can play in helping to ensure that our Final Environmental Impact Statement is an accurate document.

I'd like to provide some general context for license renewal first. The Atomic Energy Act gives the NRC the authority to issue licenses for nuclear reactors for a period of 40 years. For Point Beach Units 1 and 2, these licenses expire in the years 2010 and 2013 respectively. Our regulations also allow for extending the operating licenses for an additional 20 years. And the Nuclear Management Company has applied to the NRC to extend the operating licenses for these two units.

Now, as part of the NRC's review for license renewal, we're going to evaluate the environmental impacts of operating the plants for an additional 20 years. We held a meeting here last June in which we asked for input on the scope of our review. And as we indicated at that meeting, now that we have issued the Draft Environmental Impact Statement for comment, we've returned to tell you about the results of our review, to answer any questions you may have and to collect comments. As Mr. Cameron mentioned, we do have several members of our staff here who can answer questions for you either during the meeting or after the meeting.

Before I get into the discussion of license renewal, I do want to give you a little bit of information on the NRC and our mission. As I said, the Atomic Energy Act is a legislation that authorizes the NRC to regulate the commercial use of nuclear materials here in the United States. In carrying out that authority, our mission is three-fold. We protect human health and safety. We protect the environment. And we provide for the common defense and security. We accomplish our mission through a combination of programs and processes including inspections, enforcement actions, reviewing operating experience from the plants around the country, and also assessing individual licensee performance.

Turning now to license renewal in particular, the process that we go through in license renewal is very similar to the original process we went through when licensing these plants. And it has two parts: the safety review and an environmental review.

The safety review itself has other sub-parts. There is a safety evaluation that will be prepared. We do plant inspections. And in addition, there is an independent review that is performed by the Advisory Committee on Reactor Safeguards.

This slide really gives you the big picture of the license renewal process as a whole. As I indicated, there are two parts to it: the safety review which is the upper part, and the environmental review which is the lower part of this flowchart.

The safety review involves the staff's review of the safety information that was included in the application from Nuclear Management Company. We have a team of about 30 people, NRC staff and contractors who are performing that review and is led by the Safety Project Manager, Mr. Mike Morgan. Now, Mr. Morgan couldn't be with us this evening but we do have Mr. Gregory Suber here this evening. He is working with Mr. Morgan on the safety review.

In our safety review, we focus on how the Nuclear Management Company is going to manage the effects of aging on certain structures, systems and components in the plant. Now, some of the programs for managing aging are already in place. Others would be put in place for license renewal.

The safety review process also involves audits and outside inspections. And the inspection teams are drawn from our headquarters office and also our Region III office. We do have representatives of the inspection program here this evening. We have Ms. Ann Marie Stone from Region III, and also Ms. Patricia Lougheed.

They are both from our Region III office in Chicago. In addition, we have onsite resident inspectors at each plant. And at this plant, the Senior Resident Inspector is Robert Krsek right here, and the Resident Inspector is Mr. Michael Morris.

Once we complete the inspections, the results will be documented in separate inspection reports. And then, the results of the safety review as well as the results of those inspections will be documented in our safety evaluation report. There are two mandatory onsite inspections, and both of those inspections are scheduled to be performed in the near future. And we're also currently in the process of developing the safety evaluation report itself.

After the safety evaluation report is completed, it will be reviewed by the Advisory Committee on Reactor Safeguards. Now, this committee is a group of independent technical experts in areas related to nuclear safety, and they act as a consulting body for the Commission. They take the license renewal application and they review that along with the safety evaluation report prepared by the staff. Then they develop their own conclusions and recommendations and report those directly to the Commission.

The second part of the review process as I mentioned is the environmental review. This started with scoping last year and led to the development of the Draft Environmental Impact Statement that we're here to talk about tonight. We will take all the comments we receive tonight as well as any written comments we receive by the end of the comment period and develop the Final Environmental Impact

Statement which we would expect to issue in September of this year.

So, as you can see from the slide, there are a number of things or a number of inputs to the decision that the Commission must make as to whether or not to renew these licenses. There is a safety evaluation report, the environmental impact statement, the results of the inspections, and also the input from the Advisory Committee on Reactor Safeguards.

I would also like to point out the hexagonal symbols on this slide. These indicate opportunities for public involvement in the process. The first opportunity to comment occurred during an information meeting that was held here last March by the safety side of the review. On the environmental review, the first opportunity was during scoping which was back in June of last year. We came out for meetings and also had a comment period at that time. And tonight, of course, we're back meeting on the Draft Environmental Impact Statement and there is an ongoing comment period so that's another opportunity.

The staff will be holding some public meetings on issues that may be raised, technical issues that we'll be discussing with the Applicant. There will also be public meetings at the completion of the onsite inspections. In addition, the meeting for the Advisory Committee on Reactor Safeguards is open to the public.

Finally, there was no petition to intervene in this action that was granted. Therefore, there is not going to be any hearing on this particular action. There is a block there for that but it's not a mandatory hearing. It's contingent on a petition for

hearing being granted.

And that completes my remarks on the overall license renewal process. I'd like to turn things over to Ms. Stacey Imboden now to talk about the environmental review in more detail.

MS. IMBODEN: Hi, I'm Stacey Imboden and I am the Environmental Project Manager for the Point Beach License Renewal Review. My responsibility is to coordinate the efforts of the NRC staff along with the team of experts from the national laboratories who have knowledge in various environmental disciplines and who help us in preparing the environmental impact statement.

The National Environmental Policy Act of 1969 requires a systematic approach in evaluating the impacts of proposed major federal actions. Consideration is to be given to the environmental impacts of the proposed action and mitigation for any impacts that are believed to be significant. Alternatives, including the no-action alternative, are also to be considered.

Our environmental impact statement is a disclosure tool and it involves public participation. NRC regulations require that an environmental impact statement be prepared for proposed license renewal activities. We are here today to collect public comments on the Draft Environmental Impact Statement, and these comments will be included in the Final Environmental Impact Statement.

This slide states our legal decision standard for the environmental review. Basically, it's asking the question: "Is license renewal acceptable from an environmental standpoint?" "Should

the option for license renewal be preserved?" Even if the licenses are renewed, the licensee could choose to shut the plant down before the end of the extended licenses if, for example, some other source of power was more economical.

On a previous slide, Andy described the overall safety and environmental review processes. And this slide is just an expansion of the lower portion of that slide and it focuses on the environmental review. Nuclear Management Company submitted their application for license renewal to the NRC on February 26th, 2004. We published a notice of intent in the Federal Register announcing that we would prepare an environmental impact statement associated with that application.

The Federal Register notice began the scoping process which invited public participation early in the process. We conducted a scoping meeting in June of last year to examine the bounds of our environmental review. We also conducted an environmental site audit during that same week in June. We brought our team of experts from the national labs to examine inside and outside of the power plant, review a substantial volume of documentation at the site, interview site personnel, and interview local and state officials.

After the site audit, we determined that we needed additional information to prepare our Draft Environmental Impact Statement. In August 2004, we prepared a formal request for additional information on remaining issues or concerns. After we received a response to the request for additional information and

reviewed all of the information that we had available to us from the scoping process, we prepared and issued a draft environmental impact statement. We issued the Draft EIS in January. And in a few minutes, we'll be hearing from Dr. Paul Schumann from Los Alamos National Laboratory who will show the results of our efforts.

As each plant comes in for license renewal, we publish a plant specific supplement to the generic environmental impact statement. And what we have published in January is the supplement for Point Beach Nuclear Plant Units 1 and 2, and that is Supplement No. 23 to the GEIS. This meeting is an opportunity for you to provide your comments on that Draft Environmental Impact Statement.

Presently, we are within the public comment period on the Draft Environmental Impact Statement, and that comment period expires April 13th. Once we receive all of the public comments including what we receive at this meeting, we will evaluate that information and publish a final environmental impact statement. And we expect to publish the final in September 2005.

And for the moment, that completes my remarks.

MR. CAMERON: Okay, great. Thank you, Stacey. Are there any questions on process? License renewal process at this point?

Okay, great. Thank you, Andy. Thank you, Stacey. And now, we'll go to Dr. Paul Schumann for the Draft Environmental Impact Statement.

MR. SCHUMANN: Thank you, Chip. Good evening,

everybody. Well, as you've heard, I work for the Los Alamos National Laboratory which is a Department of Energy National Laboratory located in New Mexico.

Some years ago, the Nuclear Regulatory Commission got into a contract with the Department of Energy national laboratories to provide the expertise that was needed to do a thorough environmental analysis of the environmental impacts related to license renewal at power plants like Point Beach. We have a team for this project that includes people not only from where I work, Los Alamos National Laboratory, but we also have some of our team members from Lawrence Livermore Laboratory which is located in California, and also Argonne National Laboratory which is in Illinois.

The team members that we have include people with expertise in the different disciplines that you see up there. All of these are important aspects that have to be looked at in order to perform a thorough environmental analysis. And they include looking at atmospheric science, issues related to atmospheric science, issues related to socio-economics and environmental justice, ecology, both terrestrial as well as aquatic, land use issues, archeological and cultural resource issues and historical issues, if there are such that are present at a power plant like this, nuclear safety issues, hydrology, water quality issues, and regulatory compliance. And these were all aspects and we had people on our team with expertise in all those disciplines.

A little bit of background on how we went about doing

our analysis. The approach that the Nuclear Regulatory Commission uses is based partly on what's called the Generic Environmental Impact Statement and that's something that was developed and published in 1996, and it's a generic environmental impact statement for license renewals. And one of the things that it did was it identified 92, a total of 92 different environmental issues that are looked at as part of the process of evaluating plants for renewal of their operating licenses.

69 of those issues are what are called Category 1 issues. If you look at the left-hand column of the flowchart up there, that's what we're talking about. And in the Generic Environmental Impact Statement, the idea was this: that there are certain issues like that for which the kinds of impacts are going to be the same at all nuclear power plants or they're going to be the same kinds of impacts at plants that have similar kinds of characteristics. For example, the same kind of cooling system. And so, for those, those were evaluated and conclusions were reached in the Generic Environmental Impact Statement.

The other 23 issues, 21 of those are in Category 2. So, that's the second column over there on the slide. And those are the kinds of issues that really require a site specific analysis. What's happening there may be different from one plant to another plant to another plant. So, all of those have to be looked at independently and looked at newly at each different plant that's examined that's going through the license renewal process.

There's two other issues that are, one is called environmental justice, you saw that mentioned on the other slide, and the effects of electromagnetic fields. And those are issues that were not categorized as being either Category 1 or 2. So, in those cases, definitely you have to do a site specific evaluation. So, we looked at all of those in our process.

Now, for the generic issues, the Category 1 issues, only certain ones of those are actually applicable to the situation that we have at Point Beach Power Plant. For those that were applicable, we looked for any new information that was related to the issue that might affect the conclusion that was reached by NRC when the generic environmental impact statement was published. If there's no new information, see this little box right here, the little octagonal box with the decision point there, if there is no new and significant information that's found, then we recommend to adopt the conclusion that was in the Generic Environmental Impact Statement. No reason to change it.

On the other hand, if there is new information, new and significant information that's been identified, we'd look at it with a site specific analysis. For the site specific issues, the Category 2 issues, we did a site specific analysis.

And finally, the other thing that we did was during the scoping period, the public was invited to provide information, again, on any potentially new issues, see that little box up there in the corner, and any information that might be new and significant

information on those other ones that we talked about. And our team, during our review, we looked at that to see if there were any new issues that were brought up that needed to be analyzed and needed the attention of the NRC staff.

How do we do it? For each of the environmental issues that are looked at, the Nuclear Regulatory Commission has defined a set of impact levels for those: small, moderate and large. And they're defined the way you see here.

So, for a small impact, that's something where the particular thing that you're looking at, the particular issue, the effect is it's not detectable, or it's so small that it does not destabilize or noticeably alter any of the important attributes of the resource. A moderate impact is one where the effect is sufficient to alter noticeably but still not to destabilize any important attribute of that resource that you're looking at. And finally, in the case of a large impact, for it to be considered large, the effect would clearly have to be noticeable and it would have to be sufficient to destabilize important attributes of what the resource is.

Let me give you an example: the fishery in Lake Michigan. Operating the Point Beach Nuclear Power Plant, as with any other power plant that uses cooling waters with a system like that may cause the loss of adult fish or juvenile fish at the intake structure. If the loss of fish is so small that it cannot be detected in relation to the total population in the lake, you'd consider it a small impact. If there is a loss that would cause the population of the species to

decline but then it might stabilize at a lower level, that might be classified as a moderate impact. To be a large impact, it would be a kind of a loss that would cause a fish population to decline to the point where it cannot be stabilized and it continually declines. That's an example of a large impact.

When our team looked at the impacts from continued operation of the Point Beach facility, we considered information from a wide variety of sources. We looked at what information the Applicant provided in their license renewal application. Part of that includes what's called an environmental report that has a significant amount of information in it. We also conducted a site audit as you heard earlier in the presentation where our team went out to the site, interviewed personnel working at the plant, reviewed documents for operating the plant and maintaining the plant and previous operating records and other documents, and we also talked to federal and state and local agency officials. We talked to authorities who issue permits and we also talked to people with social service agencies in the region.

And finally, we looked at the comments that were received during the scoping period. Those comments, by the way, are included in the Draft EIS that you've seen in Appendix A of that document along with NRC's responses to those comments. So, all of that body of information is what we used for our team to do the analysis.

The Supplemental Environmental Impact Statement looks at

the environmental impacts of continued operation of the plant units 1 and 2 during the 20-year license renewal term. The impacts of routine operations were looked at for things like you see on the list here: the cooling system, transmission lines into the plant, radiological impacts, socioeconomic, ground water impacts to threatened and endangered species in the area, and so on, cumulative impacts. And also, accidents, both postulated accidents and also severe accident mitigation alternatives. And you've heard Rich mentioned not a few minutes ago. Mr. Rich Emch is going to talk about those in a few minutes.

I'm going to give you the highlights of what we found and then when we get to the end of the presentation, please feel free to ask questions if you have other questions.

One area that we looked at closely as I just mentioned was the cooling system. Category 2 issues are the ones as I said that are the ones that require site specific analysis. There are three of those for a cooling system like this. The first is entrainment. What entrainment is, it's the process whereby smaller aquatic organisms may pass through the debris screens, there's debris screens located at the intake structures of the plant, but these are things that are small enough to get through that may actually pass all the way through the cooling system. Impingement is a term that's used to describe what happens when larger organisms like fish or shellfish for example, or even possibly water fowl may be drawn into the intake and they get pinned against those screens on the intake structure.

Now, both of those cases, generally what happens is they result in the mortality of the organisms that got pulled into the intake structures. There were some problems with impingement at Point Beach Plant several years ago, but the intake system has been modified in the last several years and there has also been a fish deterrent system that was installed. And both of those address those concerns. And as a result, what we have seen and what's been reported and what's been demonstrated is that impacts from impingement and entrainment at Point Beach are small according to those definitions that I just gave a few minutes ago.

In addition to that, Point Beach is regulated under Clean Water Act with a permit, and that permit is called a Wisconsin Pollutant Discharge Elimination System permit (WPDES). And that permit for Point Beach was just reissued this last summer. There's provisions in that permit addressing new requirements that EPA put into place under Section 316(b) of the Clean Water Act looking specifically at impingement and entrainment issues for once-through cooling systems at electric power plants like Point Beach. So, that's something that's addressed specifically in that permit.

There is one more category of site specific Category 2 issues for cooling system and that's heat shock. Heat shock is what happens when relatively warm water that's coming out of the plant is released into the cooler water of Lake Michigan. In that situation, aquatic organisms that are moving around in the lake that suddenly encounter the significantly hotter water may lose equilibrium or they

may die when they're exposed to the water. At Point Beach, because of the system that's in place, because of the operations and the way it works, those impacts in fact are small.

There is also a number of Category 1 issues that relate to cooling systems. Category 1, as I said, are the ones that are the generic issues that were considered in the Generic Environmental Impact Statement. Those include issues for example related to water use conflicts, accumulating contaminants, discharge of sanitary wastes, minor chemical spills, or metals and chlorine that may be in the cooling system. And in the Generic Environmental Impact Statement, the Nuclear Regulatory Commission determined that impacts associated with those issues would be small at all plants.

We performed the analysis I told you about before. We looked at all available information that there was to see if there was any new and significant information that would cause us to come to a conclusion different than what was found in the GEIS, the Generic Environmental Impact Statement. We didn't find any, so we recommended adopting the NRC generic conclusion, that these are small impacts.

Another area that includes Category 1 issues is radiological impacts. This is, so again, these are the generic issues in the Generic Environmental Impact Statement. The Nuclear Regulatory Commission made a generic determination that impacts of those releases during plant operations during the 20-year renewal period would be small. Because this is an issue that's often of interest to the public, I wanted to say a couple of words about them here. All

nuclear power plants will have some radiological effluent releases to the environment.

During our site visit, we looked at the monitoring program that's used, we looked at documentation of previous effluent releases. And these are things that are normally reported to regulatory agencies on a regular basis and in annual reports. And we looked at the radiological monitoring program around the facility. We looked at how gaseous and liquid effluents were treated and released. And we also looked at how solid wastes are treated, packaged and those are shipped offsite.

We also looked at how the Applicant analyzes and determines and demonstrates that they're in compliance with effluent release limits for radionuclides. We also looked at the data from the locations in the radiological monitoring program, both onsite and also areas near the site where there is monitoring for airborne releases, direct radiation, also other locations beyond the site boundary where water, milk, fish and food products are sampled. What we found was that the maximum calculated doses for a member of the public were well within annual limits that are considered protective for human health.

Since releases from the plant are not expected to increase during the 20-year license renewal term, and since again we found no new and significant information that would cause us to change or look differently at the conclusions that were adopted in the Generic Environmental Impact Statement, we recommended that they do be adopted, and our conclusion was that the radiological impact on human

health and the environment from the plant is small.

I want to take a minute to talk about threatened and endangered species. This is considered a Category 2 issue. So, this is one that does require a site specific review. Our team identified that there are not any federally listed species that occur on the site or in the nearby waters of Lake Michigan offshore from the site. There are four federally listed species that have been recorded as occurring in Manitowoc and Brown Counties, and they could potentially occur in the vicinity of the Point Beach Plant. They include two birds, the bald eagle and the piping plover which is the little guy you see on the right there, and two plants, one is called the dune or Pitcher's thistle and the other is the dwarf lake iris.

The Nuclear Regulatory Commission initiated an informal consultation with the US Fish and Wildlife Service, the agency that protects or provides protection for threatened and endangered species. Fish and Wildlife Service noted that beach habitat near Point Beach could potentially be suitable in the future for nesting of piping plovers. And they thought that Point Beach Plant ought to have measures in place to protect any birds that might be nesting in the future.

In response, the facility has initiated a program where they will be surveying annually for the presence of piping plovers. If any piping plovers should ever be discovered on site, they will take additional measures to protect those individuals. A biological assessment was put together by NRC and submitted to the Fish and

Wildlife Service in support of this and informal consultation with Fish and Wildlife Service is still going on at this time.

The staff believes no additional mitigation is required for protection of threatened or endangered species in the vicinity of the plant or the associated transmission line rights-of-way. And based on that information and our analysis and the informal consultation with Fish and Wildlife Service, the preliminary conclusion that we made was that continued operation of the plant during the license renewal period may affect but is not likely to adversely affect the bald eagle or the piping plover, and is likely to have no effect on the dune or Pitcher's thistle or the dwarf lake iris.

I want to take a moment also to talk about cumulative impacts. These are impacts that may be minor when they're considered individually. But when you consider them together with other past, present or reasonably foreseeable future actions, regardless of what other agency or person undertakes those other actions, they could cumulatively be significant. The team looked at cumulative impacts resulting from a number of different possible sources: operating the cooling water system, operating the transmission lines, releases of radiation or radiological material, socioeconomic impacts, and impacts related to groundwater use and groundwater quality.

We looked at those through the end of the 20-year license renewal term. One thing I want to point out is that the geographical boundary of the analysis may very well be different for

whatever resource it is and whatever impact it is you may be looking at. For example, the geographic area analyzed for transmission lines obviously is going to be different than the geographical area looked at for the cooling water system. So, it kind of makes sense. The preliminary determination of the staff was that any cumulative impacts resulting from operation of the Point Beach Nuclear Plant during the license renewal period would be small.

Our team also looked at impacts related to the uranium fuel cycle and solid waste management, and also the decommissioning, eventual decommissioning of Units 1 and 2 at Point Beach. In the Generic Environmental Impact Statement, the NRC considered impacts that were associated with these topics, and those were considered to be Category 1 issues or generic issues. Offsite radiological impacts and non-radiological impacts are environmental issues that are related to the uranium fuel cycle.

Environmental issues that are related to solid waste management include things like the storage and disposal of non-radiological waste, low-level waste, mixed waste, onsite storage of spent fuel, and transportation of spent nuclear fuel and high level waste to a repository. Environmental issues looked at for decommissioning are basically similar to those for normal plant operations, and those include things like radiation doses, waste management, air quality and water quality, ecological resources and socioeconomic impacts.

For these too, our team did the analysis as I talked

about earlier for Category 1 issues, we looked for any new and significant information that would cause the Nuclear Regulatory Commission to make a decision that might be different from that that was in the Generic Environmental Impact Statement. We didn't find any, so we recommended adopting the generic conclusion, that these impacts are small.

The Point Beach Nuclear Plant has two units. Units 1 and 2 combined have an electrical generating capacity of 1,036 megawatts electric. Our team looked at the potential environmental impacts that would be associated with Point Beach not continuing operation and the need for the state to somehow replace this generation capacity with alternative power sources. So, our team looked at several different alternatives.

We looked at a no-action alternative. We looked at developing new generation from a coal-fired plant, a gas-fired plant, a new nuclear power plant that would be built on the site, purchased power, and other technologies, alternative technologies including things like wind, solar power, hydro-power. And then we also looked at a combination of different alternatives. For each one of the alternatives, we looked at the same kind of issues that we did for operating the Point Beach Nuclear Plant during the license renewal term. The preliminary conclusion that our team came to was that environmental impacts of alternatives in some impact categories could reach moderate or large significance.

To summarize our preliminary conclusions, I mentioned

before that the Generic Environmental Impact Statement in 1996 identified generic conclusions for 69 issues that were Category 1 issues for operating nuclear power plants for another additional 20 years. For those Category 1 issues, our team looked to see if there was any information that was new and significant. Not finding any, we recommended preliminarily adopting the Generic Environmental Impact Statement conclusion that impacts associated with those issues for Point Beach are small.

For the 21 issues that are Category 2 issues requiring the site specific analysis, our team performed a site specific analysis and found that the environmental impacts resulting from those issues also were small for Point Beach. And finally, we looked at the environmental effects for alternatives to renewal of the Point Beach license. And at least in some impact categories, those impacts could potentially reach moderate or large significance.

And that's all I have to say for now.

MR. CAMERON: Okay. Great, Paul. Thank you. It's a very, very good overview of what's in the draft. Do we have any questions? Yes, sir. And please introduce yourself to us.

MR. CORELL: My name is Garry Corell, I work with -- responsible for environmental activities. I appreciate the discussion on small, moderate and large impacts as far as what the biological effects are. Can you expand upon the environmental effects of alternatives as far as moderate and large? What criteria are used to make that decision? Thank you.

MR. SCHUMANN: Sure, thank you. Yes, really what's being talked about there is we've essentially looked at scenarios where Point Beach would be shut down and would not be available, didn't get their license renewed. And in those kind of situations, what would have to be done obviously is the power source would have to be replaced with something else. With gas-fired, you know, coal-fired power plant, a combination, sort of the combination platter, the combo platter alternative that we looked at was one that had a combination where the generating capacity of Point Beach was replaced by a coal-fired plant plus a natural gas-fired plant plus purchasing some power from other sources and sort of combining all of those together.

And when you look at that and you think about situations where you now have a fossil fuel-fired plant located at Point Beach or somewhere else that might be impacted, then you start to have things like air quality impacts, for example, that you don't have at the Point Beach Plant. And so, in those kind of situations, those are, that's an example of one where that meets that category of a moderate impact or a large impact. And those are the ones where there may be an alteration of the resource for moderate, remember. And so, it may or may not be enough to actually destabilize the resource entirely.

Now, in certain situations, that could be the case. For example, if you think about air quality impacts located in the air shed south of where the plant is located here, down in the southeastern corner of the state, that's an area that EPA has found to be a non-attainment for certain of the primary pollutants for a number

of years. So, in that kind of situation, because of the constraints on providing new generation capacity, there would be significant impacts and those start to spill over. You can't make a more significant air quality deterioration in that case without either replacing that degradation somewhere else somehow and compensating for it, or doing something else and that also spills off into other sorts of impacts.

It can add socioeconomic impacts. The plant is shut down here. Jobs are lost. Effects to the local economy and infrastructure. So, it's those sorts of things that we were really talking about.

And if you look in the EIS, you'll see throughout Chapter 8, and there is also a little summary table at the end in Chapter 9 where you can kind of look across and you can see for the variety of different kinds of economic impacts, biological impacts, water quality, air quality, and you sort of go on down the list and you'll see a number of those where, because of the impact that it would have, it triggered that NRC definition of going up into the moderate or large category. So, it's really, that's what it is. It's the impacts of not renewing the license for the plant and having to do something else to create that power for the state of Wisconsin.

MR. CAMERON: Is that clear?

MR. CORELL: Yes, sir. Thank you. I appreciate it.

MR. CAMERON: Great. Other questions on the Draft Environmental Impact Statement?

Okay. Well, thank you very much, Paul. And let's go to Rich Emch to talk about the accident analysis.

MR. EMCH: Good evening. My name is Rich Emch. I am a member of the environmental evaluation group that Andy is responsible for and in charge of.

The Generic Environmental Impact Statement that you've heard earlier referred to as GEIS looks at two kinds of accidents. It looks at what we call design basis accidents, or sometimes we refer to them as postulated accidents. These are accidents that are evaluated at the licensing, original licensing of the plant. Basically, they are used to evaluate the overall robustness, the overall safety of the plant and to ensure that if any of these kinds of accidents occur, that the plant will survive them, run through them without release of activity, radioactive materials that would harm the public.

They were evaluated at the beginning of licensing when the plant was first licensed and the plant is continually evaluated to ensure that the plant still meets the safety criteria and the safety goals such that at any point during the life of the plant even into the extended period for license renewal, that the plant would still meet those criteria, and therefore, the significance from design basis accidents would be small. We did do an evaluation to look for new and significant information. None was found. Therefore, the conclusion from the GEIS stands that for design basis accidents the impact would be small.

The next kind of accident that we evaluated was severe

accidents. By their nature, they are beyond design basis accidents. They are accidents that could very well involve damage to the reactor core and loss of integrity, possible loss of integrity to the containment building. And therefore, they could result in significant releases of radioactive material. They could indeed endanger the public.

Okay. The analysis of severe accidents is usually based on something we call the probabilistic risk assessment. What we do is evaluate the risk of the plant. We look at the possibility, the kinds of equipment failure, system failures and possible human errors, the combination of these that could lead to a failure which could release radioactive material. Based on that analysis, the PRA analysis, we came up with probabilistic weighted consequences, and that was determined to be of small impact in the GEIS for all the plants. And again, we looked at new and significant information, found none, so we stayed with the conclusion that the impact from severe accidents would be small.

However, there is a need, the Commission decided that we needed to evaluate for any plant that goes through license renewal where they had not already had a SAMA analysis. This is a severe accident mitigation alternatives analysis. If one has not already been done when we go through the license renewal process, then one needs to be done. That was the case for Point Beach, so the Licensee developed a SAMA analysis, included it in their environmental report, and we did an evaluation or review of that. Because it is a Category

2 issue as Paul was talking about earlier so it does require site specific evaluation, this is discussed in Section 5.2, summarized there of the DSEIS and it's discussed in more detail in Appendix G of the DSEIS.

The basic concept is to identify and evaluate possible plant changes that could reduce the overall risk of operating the plant. These could be changes in the plant modifications. They could be changes in the procedures. They could be changes in training methods. And we looked for anything that could prevent or reduce the risk of core damage or could improve containment performance under accident situations.

It's a four-step process. The first part of the SAMA process is to characterize the risk and to identify those systems and processes in the plant that provide the most, that dominate the risk picture, that are the places that give you the most risk. That is done through the PRA that we've already talked about. Once that has been characterized, then the plant, the Licensee, goes about identifying possible improvements that could be used to reduce those risks. They start by looking at a number of NRC reports and SAMA analyses that have been done by other licensees. They also look at the plant specific PRA that's been performed for their plant. They use their knowledge of their plant to look for areas that are dominating the risk and say, can we make improvements that could further reduce the risk on these areas?

Now, let's, for a moment we need to step back. Remember

that we are talking about the plant is safe. It meets all the NRC safety criteria. It meets the performance goals. What we're talking about here is a situation where we're looking to see if there are small changes that could make the plant even safer that are cost- beneficial that would be worth the money to spend on those things.

Once those evaluations have been done and they have come up with that list of improvements, then they evaluate how much those improvements could reduce the risk of a plant. And they also do an evaluation to determine what the benefit of, well, the benefit is how much they've reduced, they also look at how much it would cost to implement those improvements. They use bounding analyses to evaluate the improvements, the benefits. Those bounding analyses usually assume that they can make whatever part of the risk assessment completely go away. That's not true. You can almost never do that, so it's a bounding analysis. And on the other hand, when you're evaluating cost, you're usually under-evaluating the cost because they don't include maintenance and surveillance costs and replacement power costs.

Once all that has been done, then you make a comparison between the costs. Everything is brought back to a present day cost using financial formulas. You compare the costs of implementation of the change to the cost of the benefits that would be incurred over 20 years. And it's very simple. Once you get to that point, it's very simple. If the cost of the benefits is greater than the cost of

putting the thing in place, then it's cost-beneficial. And if it's the other way, then it's not cost-beneficial.

Here, we look at whether or not it's cost-beneficial. We look at whether the kind of changes that are being proposed could give you a significant reduction in risk or core damage or could significantly improve containment performance. And we also look to see whether any of these SAMAs are in areas where they would be related to managing the effects of aging during the extended operating period.

At the beginning of the process, the Licensee identified 202 SAMAs. And from there, they did a multi-step screening process. They looked to see how many of those SAMAs were not applicable to the plant. They looked to see how many of those SAMAs had already been addressed by the plant in some fashion or form. And after they finished that part of the screening, they were down to 65 SAMAs.

At that point, they did a more detailed assessment of the cost of each SAMA and they looked more carefully at the design. In other words, what it would take to put that change into the plant. Once they completed that, they determined that none of the SAMAs were cost-beneficial.

During its review, the NRC looked at two areas where we believe there are SAMAs that could be potentially cost-beneficial. These were adjustments, if you will, to SAMAs that the Licensee had looked at. One of those is in the area, it's called the auto-pump trip, installing an auto-pump trip on low refueling water storage tank

level indication. This was an adjustment to a SAMA that the Licensee had proposed of automatic switchover.

And the staff has concluded that this possible option is cheaper but might provide some of the same benefits, and therefore, it is potentially cost-beneficial. The second one was to provide a portable generator to help power the auxiliary feedwater pump after the battery that normally would power it in an accident is depleted. Here, the staff concluded that if one looked at the uncertainties in the analysis and looked at the use of a more different kind of, a lower discount rate for the analysis, that one might conclude that this SAMA could be cost-beneficial as well.

These two SAMAs that we regard as being potentially cost-beneficial, neither one of them are related to adequately managing the effects of aging during the renewal period. Therefore, they are not required to be implemented as part of license renewal under 10 CFR Part 54 of our regulations. And our preliminary conclusion is that no additional plant improvements are needed to further mitigate severe accidents for license renewal at Point Beach.

The Licensee is evaluating the two SAMAs that the staff has proposed as potentially cost-beneficial. And at some point during the comment process or in additional information that we'll receive from the Licensee, they'll tell us what the results of their analysis is, what their plans are as far as those two cost-beneficial SAMAs.

I think I'm done. Any questions?

MR. CAMERON: Questions for Rich on the SAMA analysis --

anybody?

Okay, thank you very much, Rich. And Stacey is going to give us the conclusions and how you submit comments.

MS. IMBODEN: Okay. Turning now to our conclusions, we found that the impacts of license renewal are small in all areas. We also concluded that the alternative actions, including the no-action alternative, may have environmental effects in at least some impact categories that reach moderate or large significance.

Based on these results, our preliminary recommendation is that the adverse environmental impacts of license renewal for Point Beach Nuclear Plant are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

This slide highlights some of the milestones for the environmental review. As I mentioned earlier, we issued the Draft Environmental Impact Statement in January. The 75-day public comment period runs until April 13th. After that, we will review and disposition the comments that we receive, modify the environmental impact statement as appropriate and prepare the Final Environmental Impact Statement. And we expect to publish the Final Environmental Impact Statement in September 2005.

This slide identifies me as your primary point of contact for the Point Beach Environmental Impact Statement. It also identifies where documents related to our review can be found in the local area. The Lester Public Library has a copy of the Draft

Environmental Impact Statement available for public review in addition to any correspondence sent by NRC to NMC or other agencies regarding the Point Beach license renewal review. The Draft EIS is also available on the NRC website: www.nrc.gov, or the specific website link on the slide. And we also brought a few hard copies of the Draft EIS which are on the tables outside of this meeting.

Outside of this meeting, you have three other opportunities to comment. You can comment in writing by writing a letter to the address on the slide. You can comment in person if you happen to be at the NRC headquarters in Rockville, Maryland. And you can comment by email to pointbeacheis@nrc.gov. And I check that email inbox almost everyday.

All of the comments will be collected and considered. And that concludes my remarks.

MR. CAMERON: Okay. Is it clear what the opportunities for comment are? Are there any questions on that or the preliminary conclusions for Stacey?

Great. Thank you, Stacey. And this is usually the time in the meeting where we ask people for any comments that they might have on the Draft Environmental Impact Statement or on the license renewal process, advice, recommendations, anything like that. Is there anybody who wants to make a comment?

Okay. I would thank you, and I thank all of the speakers. And Andy?

MR. KUGLER: Well, I just want to thank you again for

coming out this evening for our meeting. If you do have any comments that you think of after the meeting, as Stacey indicated, there are a number of ways you can get those comments to us and we would welcome them.

We also, in the package that you received when you came in, there's a meeting feedback form at the back of that package. We'd certainly appreciate it if you would fill that form out. If you have any suggestions on how we can do things differently that maybe would serve you better, we would certainly appreciate those comments. You can either fill it out and leave it in the back or you can fill it in and mail it back to us. The postage is prepaid.

As we've indicated, the staff will remain after the meeting. If you have any additional questions or you just want to talk to us about some issues related to the license renewal, we can do that. And I thank you for your time. Good night.

(Whereupon, the meeting was adjourned.)