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PUBLIC MEETING TO DISCUSS

DRAFT ENVIRONMENTAL IMPACT STATEMENT

FOR

MONTICELLO NUCLEAR GENERATING PLANT

LICENSE RENEWAL APPLICATION

Held

Wednesday, March 22, 2006

1:30 p.m.

Monticello Community Center

505 Walnut Street

Monticello, Minnesota

Transcript of Proceedings

I N D E X

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

1:30 P.M.

CHIP CAMERON: If we could have everybody take their seats, we'll get started with this afternoon's meeting.

(Pause.)

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

And our subject today is the Environmental Review that the NRC is conducting as part of its evaluation of an application that we received from Nuclear Management Company to renew the operating license at the Monticello facility.

And I'm going to be your facilitator this afternoon, and my job generally is to try to help all of you to have a productive meeting today.

And I just wanted to talk a little bit about some meeting process items before we get to the substance of our discussions this afternoon. And I'd like to address the meeting format; secondly, some very simple ground rules; and, third, just to introduce you to the NRC staff and expert consultants

that are helping us on the Environmental Review.

In terms of the format, it is basically a two-part format. We're going to do some presentations by the NRC staff to begin with to give you some background not only on the process that the NRC goes through to evaluate an application like this to renew an operating license, but specifically we want to tell you about the findings and the conclusions that are in the Draft Environmental Impact Statement that we did on this application.

And after those presentations -- in fact, during the presentations we'll go on to see if there's any questions that you have on the process, any questions that you have about what's in the Draft Environmental Impact Statement.

The second part of the meeting is to give you an opportunity to give us any concerns, recommendations, advice on the Draft Environmental Impact Statement.

And often we hear concerns and advice about the license renewal process generally, but, as the staff will tell you, the NRC staff will tell you, we're taking written comments on these issues, but we wanted to be here this afternoon to talk to you personally, to hear from you personally, so there's

an opportunity to make comments; and those comments will, of course, carry the same weight as written comments.

We have Sheila Smith as our court reporter today, and she's taking a transcript of the meeting, so that will be our formal record of your comments, and that transcript will be available to anybody in the public who wants a copy of it.

In terms of ground rules, very simple:

If you have questions about the NRC presentations --

And usually we like to let the presenter finish their whole presentation before we go on to comments so that we can get it all in.

But if you have a question, if you could just signal me, and I'll bring this cordless microphone out to you and if you could just introduce yourself to us, and we'll try to answer your questions to the best of our ability today.

I would just ask that only one person speak at a time, most importantly so that we can all give our full attention to whomever has the floor at the moment but also so that Sheila can get a clean transcript so that she knows who is speaking.

And try to be to the point. Sometimes it's

hard to be concise on issues like this, but -- I don't think we're going to have any problem getting to hear from everybody who wants to speak today, but usually I like to remind people to try to be concise if we have a lot of people who want to talk; then that helps too to make sure that everybody has a chance to speak.

And then we'll go to the comment period. If you filled out a yellow card, we'll know that you want to talk.

If you decide that you want to speak after hearing the presentations, just tell me that and we'll get you up here to comment.

In terms of our speakers today, we're going to first go to Rani Franovich, who is right here (indicating), and she's going to do a welcome and an overview of license renewal. Rani is the Branch Chief for the Environmental Review and license renewal, and I'll tell you a little bit more about her in a minute.

We'll then go to questions.

Then we have Jennifer Davis, who is the Project Manager for the Environmental Review on this license application, a very important position because the Environmental Review is one of the

cornerstones of our evaluation, and she's going to tell you about the Environmental Review specifically.

We also have Crystal Quinly with us, and Crystal is one of our expert consultants that helps us with the Environmental Review. She's the team leader of some scientists who have looked at environmental aspects of the Monticello facility. She'll be talking to that.

And we have a very special part of the Environmental Impact Statements that's a Severe Accident Mitigation Analysis, I believe, and we have Mr. Bob Palla from the NRC staff, he'll talk to you about that.

Again, we'll have questions on all of this from you, and I would just thank all of you for being here to help us with this evaluation.

And let me just give you some background on Rani and our speakers.

Rani has been with the agency for about fifteen years now, and she's had a variety of responsibilities there. She's been a project manager on the safety aspects of license renewal, and that will become clearer to you as you hear the staff presentations; but she also was one of our resident inspectors, and you'll hear more about that also.

But Rani was a resident inspector at Catawba Nuclear Power Plant in South Carolina, and she has a Bachelors in psychology and also a Masters in industrial and systems engineering, both from that famous school, Virginia Tech. And that's the short name for it, Virginia Tech.

Jenny Davis, our Environmental Project Manager, has been with the agency for about four years, now doing Environmental Review projects on license renewal and other things.

She's an archaeologist by training; her major was in historic preservation. She has a Bachelors in historic preservation from Mary Washington College in Fredricksburg, Virginia.

Our team leader from the Lawrence Livermore National Lab, Crystal Quinly, has an environmental science degree from Cal State, California State, and she's been with the Lawrence Livermore National Lab for about seven years doing various Environmental Review projects.

And Bob Palla, our probabilistic risk analysis and severe accident analysis expert, is with the Probabilistic Risk Assessment Branch within our Office of Nuclear Reactor Regulation at NRC Headquarters in Rockville, Maryland. And Bob has --

he has a Bachelors and a Masters in mechanical engineering from the University of Maryland.

And with that, I'm going to turn it over to Rani at this point.

RANI FRANOVICH: Thank you, Chip.

And thank you all for taking the time --

Can you hear me?

Thank you all for taking the time to come to this meeting today. I hope the information we provide will help you to understand the process we're going through and what we've done so far and the role you can play in helping us make sure that the Final Environmental Impact Statement for Monticello license renewal is accurate.

I'd like to start off by saying -- or briefly going over the agenda the purposes of today's meeting.

First we'll explain the NRC's license renewal process for nuclear power plants with emphasis on the environmental review process.

Then we're going to present the preliminary findings of our environmental review, which assesses the impacts associated with extending the operation of Monticello Nuclear Generating Plant for an additional twenty years.

Then really the most important part of today's meeting is for us to receive any comments you may have on our Draft Environmental Impact Statement.

We also will give you some information about the schedule for the balance of the staff's review and let you know how you can submit comments to us in the future.

At the conclusion of the staff's presentation, we will be happy to answer any questions you might have. However, I must ask you to limit your participation to questions only and hold your comments until the appropriate time during today's meeting.

Once all the questions are answered, we can begin to receive any comments that you have on the Draft Environmental Impact Statement.

Before I get into a discussion of the license renewal process, I'd like to take a minute to talk about the NRC in terms of what we do and what our mission is.

The Atomic Energy Act is the legislation that authorizes the NRC to issue operating licenses. The Atomic Energy Acts provides for a 40-year license term for power reactors. This 40-year term is based primarily on economic considerations and antitrust

factors, not on safety limitations of the plant.

The Atomic Energy Act also authorizes the NRC to regulate the civilian use of nuclear materials in the United States.

In exercising that authority the NRC's mission is threefold: To protect health and safety; to promote the common defense and security; and to protect the environment.

The NRC accomplishes its mission through a combination of regulatory programs and processes such as conducting inspections, issuing enforcement actions, assessing licensee performance, and evaluating operating experience for nuclear power plants across the country and internationally.

The regulations that the NRC enforces are contained in Title 10 of the Code of Federal Regulations, which we commonly refer to as the "10 CFR."

As I've mentioned, the Atomic Energy Act provides for a 40-year license term for power reactors. Our regulations also include provisions for extending plant operation for up to an additional twenty years. For Monticello, the operating license will expire on September 8th, 2010.

Monticello is owned by Northern States

Power Company, a wholly-owned utility operating subsidiary of Xcel Energy, Inc., and is licensed to operate by Nuclear Management Company, LLC.

Nuclear Management Company has requested license renewal for Monticello. As part of the NRC's review of that license renewal application, we have performed the environmental review to look at the impacts of an additional twenty years of operation on the environment.

We held a meeting here in June of 2005 to seek your input regarding the issues we needed to evaluate.

We indicated at that earlier scoping meeting that we would return to Monticello to present the preliminary results documented in our Draft Environmental Impact Statement. That is the purpose of today's meeting.

The NRC's license renewal review is similar to the original licensing process in that it involves two parts, an environmental review and a safety review.

This slide gives a big picture overview of the license renewal process which involve those two parallel review paths.

I'm going to briefly describe these two review processes, starting with the safety review.

You might ask, "What does the safety review consider?"

For license renewal, safety review focuses on aging management on systems, structures, and components that are important to safety as defined by the license renewal scoping criteria contained in 10 CFR Part 54.

The license renewal safety review does not assess current operational issues such as security, emergency planning, and safety performance.

The NRC monitors and provides regulatory oversight of these issues on an ongoing basis under the current operating license. Because the NRC is addressing these current operating issues on a continuing basis, we do not re-evaluate them in license renewal.

As I have mentioned, the license renewal safety review focuses on plant aging and programs that the licensee has already implemented or will implement to manage the effects of aging.

Let me introduce Dan Merzke, the Safety Project Manager.

Dan, if you don't mind standing up.

Dan is in charge of the staff safety review. The safety review involves the NRC staff's evaluation of technical information that is contained in the license renewal application. This is referred to as the staff's safety evaluation.

The NRC staff also conducts audits as part of its safety evaluation. There is a team of about 30 NRC technical reviewers and contractors who are conducting the safety evaluation at this time.

The safety review also includes plant inspections. The inspections are conducted by a team of inspectors from both Headquarters and the NRC's Region 3 office near Chicago, Illinois.

A representative of our inspection program is here today. The Senior Resident Inspector is Scott Thomas.

Scott, if you don't mind standing up. Thank you.

The staff documents the results of its review in a Safety Evaluation Report. That report is then independently reviewed by the Advisory Committee on Reactor Safeguards, or the ACRS.

The ACRS is a group of nationally-recognized technical experts that serve as a consulting body to the Commission. They review each

license renewal application and the Safety Evaluation Report; they form their own conclusions and recommendations on the requested action, and they report those conclusions and recommendations directly to the Commission.

This slide illustrates how these various activities make up the safety review process. I would like to point out that these hexagons (indicating), these represent opportunities for public participation during our process.

Also, the staff will present the results of its safety review to the ACRS, and that presentation will be open to the public.

The second part of the review process involves an environmental review. The environmental Review, which Jennifer will discuss in more detail in a few minutes, evaluates the impacts of license renewal on a number of areas, including ecology, hydrology, cultural resources, and socioeconomic issues, among others.

The environmental review involves scoping activities and the development of a draft supplement to the Generic Environmental Impact Statement for license renewal of nuclear plants, also referred to as "the GEIS." The GEIS forms the basis for

plant-specific environmental reviews.

The Draft Environmental Impact Statement for Monticello has been published for comment, and we're here today to briefly discuss the results and receive your comments.

In September of this year we will be issuing the final version of this Environmental Impact Statement, which will document how the staff addresses the comments that we receive here today at this meeting or in writing.

So the final agency decision on whether or not to issue a renewed operating license depends on several inputs:

Inspection reports and a confirmatory letter from the Region 3 Administrator;

Conclusions and recommendation of the ACRS, which are documented in the letter to the Commission;

The Safety Evaluation Report, which documents the results of the staff safety review;

And the Final Environmental Impact Statement, which documents the results of the staff's environmental review.

Again, the hexagons on the slide indicate opportunities for public participation. The first opportunity was during the scoping period and the

meetings back in June of 2005. Many of you may have attended that meeting.

This meeting on the Draft Environmental Impact Statement is another opportunity for public participation.

No contentions were admitted to a hearing, so that is not applicable here.

That concludes my presentation of the NRC and general overview of the license renewal process.

And before I turn the mic over to Jennifer, are there any questions that I can answer at this time?

CHIP CAMERON: Anybody have a question on the NRC process, what we're looking at?

(No response.)

RANI FRANOVICH: Okay. Very good.

CHIP CAMERON: Great.

RANI FRANOVICH: Thanks again for coming to our public meeting. Your participation is very important to this process.

Jennifer?

JENNIFER DAVIS: One other thing I'd like to mention: If these slides that show the process portions are too small to read in your handouts, we do have enlarged printouts in the back if you just

stop by the registration desk.

Good afternoon. My name is Jennifer Davis, and I'm an Environmental Project Manager on the NRC staff. My responsibility is to coordinate the activities of the NRC staff and various environmental experts at National Laboratories to develop an Environmental Impact Statement, or EIS as we call it, associated with the license renewal of Monticello.

The National Environmental Policy Act of 1969 requires that federal agencies follow a systematic approach in evaluating environmental impacts associated with certain actions.

We're required to consider the impacts of the proposed action and also any mitigation for those impacts that we consider to be significant.

We're also required to consider alternatives to the proposed action, which in this case is license renewal, and that includes the no-action alternative.

The National Environmental Policy Act and our EIS are disclosure tools. They are specifically structured to involve public participation, and this meeting is part of facilitating our public process.

So today we are here to collect your comments on our Draft Environmental Impact Statement,

and these comments will be considered and included in our Final Environmental Impact Statement.

The NRC staff developed a Generic Environmental Impact Statement for the license renewal of nuclear plants, or the GEIS as we call it.

The GEIS addressed a number of issues that are common to all nuclear plants. The staff is supplementing the GEIS with a Monticello-specific supplement which addresses issues that are specific to this site.

The staff also evaluates the conclusions reached within the GEIS to determine if there is any new and significant information that would change any of those conclusions.

Now, I'd like to provide a little more information about the GEIS. In the mid 1990s the NRC was faced with the prospect of preparing site-specific EISs for a number of plants requesting license renewal.

After assessing the impacts associated with license renewal, the NRC decided to classify environmental impacts called "issues" that could possibly occur at a plant.

The staff then determined which of these issues were common to all plants and that had the

same impact level. The NRC calls these Category 1 issues and made the same or generic determination about their impact in the GEIS.

During the review of the 92 issues the staff identified 23 issues that a determination could not be made generically. Evaluation of these 23 issues would be done on a site-specific basis, and they are referred to as "Category 2 issues."

The staff prepares an EIS for each plant that requests license renewal. This impact statement takes the form of a supplement to the GEIS. This supplement evaluates all issues pertaining to a specific site and addresses all relevant Category 2 issues on a site-specific basis.

The NRC did not rule out the possibility that the generic conclusions in the GEIS may not apply to a specific plant. If new and significant information is found during the review that contradicts the conclusions within the GEIS, then staff will perform a site-specific analysis on that particular issue.

Back in June of 2005 the NRC review team conducted a site audit, gathered information from public, state, and local officials, public interest

groups, and other federal agencies in order to produce our draft supplement for Monticello, and today we are here to discuss this draft supplement.

I guess I'll give you a quick minute to read this slide. This slide shows our decision standard for the Environmental Review. Simply put, "Is license renewal acceptable from an environmental standpoint?"

(Pause.)

This slide shows important milestone dates in the Environmental Review. The highlighted dates indicate opportunities for public involvement during our Environmental Review.

We received NMC's application requesting license renewal of Monticello on March 24, 2005.

On June 2nd, 2005, the NRC issued a *Federal Register* notice of intent to prepare an environmental Impact statement and conduct scoping.

Two public meetings were held in the Monticello area on June 30th. Many of you may have attended those meetings and provided your comments to us at that date.

The scoping period ended on August 2nd, and a Scoping Summary Report was issued on October 7th. This report addressed all comments received from all

sources during the scoping period.

If you would like to review the Scoping Summary Report or take a copy home with you, we do have some available in the back of the room.

Comments received during the scoping period and that are within the scope of the environmental review are included in Appendix A of the Draft Supplemental Environmental Impact Statement.

The Draft EIS was published on January 23rd, 2006. We are currently accepting public comments on the draft until May 4th of this year.

Today's meeting is being transcribed, and comments here carry the same weight as written comments submitted to the NRC.

Once the comment period closes, we will issue a Final EIS, which we expect to publish in September of this year.

All comments received will be considered, and a response to each comment will be provided within the Final EIS.

And now I'd like to turn things over to Crystal to discuss the Lab's role in the environmental review.

Any questions?

CHIP CAMERON: Does anybody -- just before

we get to the substance which Crystal is going to discuss, does anybody have any questions on the process or schedule or anything?

(No Response.)

Okay. Great.

Crystal Quinly.

CRYSTAL QUINLY: Good afternoon. As Chip said, I'm Crystal Quinly. I work for the University of California at Lawrence Livermore National Laboratory.

The NRC contracted with us to provide the expertise necessary to evaluate the impacts of license renewal at Monticello.

The team consists of nine members from the Lawrence Livermore National Laboratory, Pacific Northwest National Laboratory in Washington, and the Argonne National Laboratory in Illinois.

The expertise we provide for the Monticello license renewal and for alternatives are shown on this slide: atmospheric science, socioeconomics, archaeology, terrestrial ecology, aquatic ecology, land use, radiation protection, nuclear safety, and regulatory compliance.

For each environmental issue identified an impact level is assigned.

For a small impact the effect is not detectable or too small to destabilize or noticeably alter any important attribute of the resource.

For example, the operation of the Monticello plant may cause the loss of adult and 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 river, the impact would be small.

For a moderate impact the effect is sufficient to alter noticeably but not destabilize important attributes of the resource.

Again, for example, if the losses cause the population to decline but then stabilize at a lower level, the impact would be moderate.

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

The final example is if losses at the intake structure cause the fish population to decline to the point where it cannot stabilize and continually declines, then the impact would be large.

When the team evaluated the impacts from continued operations at Monticello, we considered information from a wide variety of sources.

We considered what the licensee had to say in the environmental report.

In June we conducted a site audit during which we toured site, interviewed plant personnel, and reviewed documentation of plant operations.

We also talked to federal, state, and local officials as well as local service agencies.

Lastly, we considered all of the public comments we received in the Scoping Summary Report dated October 7th, 2005, and issued responses. These comments are listed in Appendix A along with the NRC's responses.

This body of information is the basis for the analysis and preliminary conclusions in this Monticello Supplement.

The central analyses in the Monticello Supplement are presented in Chapters 2, 4, 5, and 8.

In Chapter 2 we discuss the plant, its operation, and the environment around the plant.

In Chapter 4 we looked at the environmental impacts of routine operations during the 20-year license renewal term.

The team looked at issues related to the cooling system, transmission lines, radiological, socioeconomic, ground water use and quality,

threatened or endangered species, and accidents.

Chapter 5 contains the assessment of accidents.

And at this point I'd like to make a distinction: Environmental impacts from the routine day-to-day operation of the Monticello plant for another twenty years are considered separately from the impacts that could result from potential accidents during the license renewal term.

I will discuss impacts from routine operations, and Mr. Palla will discuss impacts from accidents in the next presentation.

Chapter 8 describes the alternatives to the proposed license renewal and their environmental impacts. Each of these issue areas are discussed in detail in the Monticello Supplement. I'm going to give you the highlights, but please feel free to ask me for more details if you have any questions.

One of the issues we looked at closely is the cooling system for the Monticello plant. This slide shows the layout of the cooling intake and discharge canal.

The issues that the team looked at on a site-specific basis include water use conflicts, entrainment and impingement of fish and shellfish,

heat shock, and microbiological organisms. We found that the potential impacts in these areas were small, and additional mitigation was not warranted.

There were also a number of Category 1 issues related to the cooling system. These included issues related to discharges of sanitary waste, minor chemical spills, metals and chlorine.

Now, recall that as Category 1 issues NRC has already determined that these impacts were small.

The team evaluated all information we had available to see if there was any that was both new and significant for these issues. We did not find any, and therefore we adopted NRC's generic conclusions that the impact to the cooling system is small.

Radiological impacts are a Category 1 issue, and the NRC has made a generic determination that the impact of radiological release during nuclear plant operations during the 20-year license are small; but because these releases are a concern, I want to discuss them in some detail.

All nuclear plants release small quantities of radioactive materials within strict regulations. During our site visit we walked down the systems and looked at the effluent release and monitoring program

documentation;

We looked at how the gaseous and liquid effluents were treated and released as well as how the solid wastes were treated, packaged, and shipped.

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

We also looked at data from on-site and near-site locations that the applicant monitors for airborne releases and direct radiation and other monitoring stations beyond the site boundary, including locations where water, milk, fish, and food products are sampled. We found that the maximum calculated doses for a member of the public are well within the annual limits.

Now, there is a near-unanimous consensus within the scientific community that these limits are protective of human health.

Since releases from the plant are not expected to increase on a year-to-year basis during the 20-year license renewal term and since we also found no new and significant information related to these issues, we adopted the generic conclusion that the radiological impact on human health and the environment are small.

There are two terrestrial species and one aquatic species listed as Federally threatened, endangered, or candidate species that have the potential to occur at Monticello or along its transmission lines.

A detailed biological assessment analyzing the effects of continuing operation and relicensing of Monticello was prepared and is included in Appendix E of the Monticello Supplement.

Based on this and additional independent analysis, the staff's preliminary determination is that the impact of operation of the Monticello plant during the license renewal period on threatened or endangered species would be small.

The last issue I'd like to talk about from Chapter 4 is cumulative impacts. These are impacts that are minor when considered individually but significant when considered with other past, present, or reasonably foreseeable future actions regardless of what agency or person undertakes these actions.

The staff considered cumulative impacts resulting from: Operation of the cooling water system; operation of the transmission lines; releases of radiation and radiological materials; sociological impacts; ground water use and quality impacts as well

as impacts to threatened and endangered species.

These impacts were evaluated to the end of the 20-year license renewal term; and I'd also like to note that the geographical boundary of the analysis was dependent upon the resource.

For instance, the area analyzing the transmission lines was different than the area analyzed for the cooling water system.

Our preliminary determination is that any cumulative impacts resulting from the operation of the Monticello plant during the license renewal period would be small.

The team also looked at these other environmental impacts (indicating). All issues for uranium fuel cycle and solid waste management as well as decommissioning are considered Category 1. For these issues no new and significant information was identified.

Between 2002 to 2003 Monticello generated about 4.8 million megawatt-hours of electricity. The team also evaluated the potential environmental impacts associated with the Monticello plant not continuing operation and replacing this generation with alternative power sources.

The team looked at the no-action

alternative -- that is, the unit is not relicensed. New generation coal-fired, gas-fired, coal gasification, new nuclear, purchased power, alternative technology such as wind, solar, and hydropower, and then a combination of alternatives.

For each alternative we looked at the same type of issues -- for example, water use, land use, ecology, and socioecomonics -- that we looked at for the operation of Monticello during the license renewal term.

For two alternatives, solar and wind, I'd like to describe the scale of the alternatives that we considered, because the scale is important in understanding our conclusions.

First solar: Based on the average solar energy available in Minnesota and the current conversion efficiencies of photovoltaic cells and solar thermal systems, between 8,000 to 21,000 acres would be required to replace the generation from the Monticello plant.

Regarding wind power, wind turbines have an average annual capacity factor of around 30 percent. As such as least 2000 megawatts of wind power would have to be developed to replace Monticello's 600 megawatts. This would require about 90,000 square

acres of turbines to replace the generation from Monticello.

Due to the scale of the reasonable alternatives, the team's preliminary conclusion is that the environmental effects in at least some impact categories reach moderate or large significance.

For the 69 Category 1 issues presented in the Generic EIS that relate to Monticello we found no information that was both new and significant. Therefore, we have preliminarily adopted the conclusion that the impact of these issues is small.

The team analyzed the remaining Category 2 issues in the Supplement, and we found the environmental effects resulting from these issues were also small.

During our review, the team found no new issues that were not already known.

Last, we found that the environmental effects of alternatives, at least in some impact categories, reached moderate or large significance.

Now I'd like to turn it back to Chip to see if there are any questions.

CHIP CAMERON: Thank you, Crystal.

Are there any questions about the findings

in the environmental review before we get to the --

Is this on?

(Off the record discussion.)

It's on. But it's not -- the mic's on, but for some reason it's not coming on.

At any rate, any questions for Crystal?

Yes, sir.

PURVES TODD: I'm just wondering --

CHIP CAMERON: And we need to get you, while we're fixing the mic --

Would you mind coming up here and just asking your question? I know it's inconvenient, but it will help us to get on the --

Is it working now, Mike?

All right. Well, you're here, so you might as well go ahead.

PURVES TODD: My question is would the statement have been changed at all if you hadn't used natural gas or oil in your analysis?

CHIP CAMERON: Sir, what was your -- your name is?

PURVES TODD: Purves Todd.

CHIP CAMERON: Purves -- this is Purves Todd. Thank you. Thank you very much, Mr. Todd.

Crystal?

CRYSTAL QUINLY: Actually, we did look -- in the alternatives --

PURVES TODD: Yes, I saw you had natural gas and oil in there.

CRYSTAL QUINLY: We did look at those, yes.

PURVES TODD: But if you hadn't used those --

CHIP CAMERON: We'll have to get you on the microphone, Mr. Todd.

PURVES TODD: Just basically if you hadn't used it, I think that the impact of this facility being shut down would have been much greater in your analysis if you couldn't use natural gas or oil.

You pretty well explained the wind and solar.

CRYSTAL QUINLY: Right.

CHIP CAMERON: Except we did look at natural gas and oil.

CRYSTAL QUINLY: Yeah, we did look at both of those and including coal gasification.

PURVES TODD: As alternatives.

CHIP CAMERON: And I think Mr. Todd's point -- he's making a point about --

CRYSTAL QUINLY: Okay.

PURVES TODD: I'll be talking later.

CHIP CAMERON: Yeah. Okay. Good.

All right. Anybody else?

(No response.)

And now we have Bob Palla, who's going to talk about something called "SAMAs," which are severe accident mitigation alternatives.

Bob Palla.

BOB PALLA: Yeah, good afternoon. My name is Bob Palla. I'm with the Division of Risk Assessment at NRC, and I'll be discussing the environmental impacts of postulated accidents.

These impacts are described in Section 5 of the Generic Environmental Impact Statement, or the GEIS as we call it.

The GEIS evaluates two classes of accidents. These are called design-basis accidents and severe accidents.

The design-basis accidents consist of a broad spectrum of postulated accidents that both the licensee and the NRC staff evaluate to ensure that the plant could respond to the events without undue risk to the public.

The ability of the plant to withstand these accidents has to be demonstrated before the plant's granted a license; and since the licensee has to

demonstrate acceptable plant performance for the design-basis accidents throughout the life of the plant, the Commission has determined that the environmental impact of design-basis accidents is of small significance.

Neither the licensee nor the NRC is aware of any new and significant information on the capability of the Monticello plant to withstand design-basis accidents; therefore, the staff concludes that there are no impacts related to design-basis accidents beyond those that are discussed in the GEIS.

The second category of accidents evaluated in the GEIS are the severe accidents. Severe accidents are by definition more severe than design-basis accidents because they can result in substantial damage to the reactor core.

The Commission found in the GEIS that the risk of a severe accident is small for all plants, and by this I mean the probabilistically-weighted consequences.

Nevertheless, the Commission determined that alternatives to mitigate severe accidents must be considered for all plants that have not done so.

The SAMA evaluation is a site-specific

assessment and is a Category 2 issue, as was explained earlier.

The SAMA review for Monticello is summarized in Section 5.2 of the GEIS Supplement, and it's described in more detail in Appendix G of the GEIS Supplement.

The purpose of the performing the SAMA evaluation is to ensure that plant changes with the potential for improving severe accident safety performance are identified and evaluated.

The scope of potential plant improvements that were considered included hardware modifications, procedure changes, training program improvements -- basically a full spectrum of potential changes.

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

The SAMA evaluation consists of a four-step process as listed on that slide.

The first step is to characterize overall plant risk and leading contributors to risk. This typically involves extensive use of the plant-specific probabilistic safety assessment study, which is also known as the PSA.

The PSA is a study that identifies different combinations of system and equipment failures and human errors that would be needed to occur together in order for an accident to progress to either core damage or containment failure.

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

Improvements identified in other NRC and industry studies as well as SAMA analyses for other plants are also considered.

The third step in the evaluation is to quantify the risk reduction potential and the implementation costs for each improvement.

The risk reduction and the implementation costs for each SAMA are typically estimated using a bounding analysis.

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

The implementation costs are generally

under-estimated by neglecting certain cost factors such as maintenance costs and surveillance costs associated with the improvement.

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

In determining whether an improvement is justified, the NRC staff looks at three factors:

The first is whether the improvement is cost beneficial. In other words, is the estimated benefit greater than the estimated implementation cost of the SAMA.

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

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

The preliminary results of the Monticello SAMA evaluation are summarized on this slide. Forty

candidate improvements were identified for Monticello based on review of the plant-specific PSA and dominant risk contributors at Monticello as well as SAMA analyses performed for other plants.

The licensee reduced the number of candidate SAMAs to 16 based on a multi-step screening process.

Factors considered during the screening included whether the SAMA is not applicable to Monticello due to design differences; whether it has already been implemented or addressed in the existing Monticello design, procedures, or training programs; and whether the SAMA would involve extensive plant changes that would clearly be in excess of the maximum benefit associated with completely eliminating all severe accident risk.

A more detailed assessment of the risk reduction potential and implementation costs was then performed for each of the 16 remaining SAMAs. This is described in detail in Appendix G of the GEIS Supplement.

The detailed cost-benefit analysis shows that ten of the SAMAs are potentially cost-beneficial when evaluated individually in accordance with NRC guidance for performing regulatory analysis.

Seven of these SAMAs were cost-beneficial in the baseline analysis; three additional SAMAs were potentially cost-beneficial when alternate discount rates or uncertainties in the analysis are considered.

Now, it's important to notice that some of the SAMAs address the same risk contributors but in a different way.

For example, if you look at the GEIS Supplement, you'll see a description of SAMA 4. Now, SAMA 4 involves installing a direct drive diesel injection pump as an additional high-pressure injection system. This pump would improve the ability to cope with station blackout type conditions.

Several other SAMAs also address station blackout events. For example, SAMA 37 involves developing guidance to allow local manual control of a steam-driven injection system that's already installed in the plant.

This change in procedural guidance would also, you know, ensure that high-pressure injection is available under station blackout conditions.

So both of these SAMAs are basically going after the same risk contributor. In such instances

implementation of one of these SAMAs could reduce the residual risk to a point that one or more of the related SAMAs would no longer be cost-beneficial.

And it's because of this inter-relationship between SAMAs that we would not expect that implementation of all ten of the potentially cost-beneficial SAMAs would be justified on a cost-benefit basis; rather, the implementation of a carefully-selected subset of the SAMAs could achieve much of the risk reduction and would be more cost-effective than implementing all of the SAMAs.

Subsequent to submitting the license renewal application NMC has implemented six of the cost-beneficial SAMAs and has assessed -- re-assessed the benefit of the remaining SAMAs.

Implementation of the six SAMAs reduces the benefit of the remaining SAMAs such that only one SAMA remains potentially cost-beneficial. This one SAMA involves modifications to the containment vent system such that operation of the vent system would not rely on support system availability.

This SAMA does not relate to managing the effects of plant aging during the period of extended operation. Accordingly, it would not be required to be implemented as part of license renewal pursuant to

Part 54 of the Code of Federal Regulations, which governs our license renewal process.

Notwithstanding this, NMC plans to further evaluate this potentially cost-beneficial SAMA for possible implementation under the current operating license.

That completes my presentation.

CHIP CAMERON: Okay. Thank you, Bob.

Any questions about the severe accident mitigation alternatives that Bob was talking about?

(No Response.)

Okay. Thanks, Bob.

And, finally, we're going to go Jennifer for -- Jennifer Davis for information on how comments can be submitted.

Jennifer?

JENNIFER DAVIS: Turning now to our preliminary conclusions, we found that the impacts of license renewal are small in all areas.

We have also preliminarily concluded that the impacts of alternatives, including the no-action alternative, may have moderate to large environmental effects in some impact categories.

Based on these results, it is the staff's preliminary recommendation that the adverse

environmental impacts of license renewal for Monticello are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

This slide is just a quick recap of some milestone dates.

We issued the Draft Environmental Impact Statement for Monticello on January 23rd, 2006.

We are currently in the middle of the public comment period, and that is scheduled to end on May 4th of this year.

We will address any public comments received and make any necessary revisions to the Draft Environmental Impact Statement and issue a Final Environmental Impact Statement in September of 2006.

This slide identifies me as your primary point of contact with the NRC for the Environmental Review. It also identifies what documents related to our review may be found in the local area.

The Monticello Draft EIS is available publicly at the Monticello Public Library and the Buffalo Public Library.

Additionally, documents related to the review are also available on NRC's website at

www.NRC.gov.

In addition, as you came in you were asked to fill out a registration card. If you have included your address on that card, we will mail a copy of the Final EIS to you.

If you did not receive a copy of the Draft Environmental Impact Statement, we have copies available in the back of the room.

If you did not fill out a card and you want a copy of the final EIS and have not yet filled in a card, please see Jason.

Jason, please raise your hand. Thank you.

Now, in addition to providing us comments at this meeting, there are other ways you can submit comments for our Environmental Review process.

You can provide written comments to the Chief of the Rules and Directives Branch at the address on the screen.

You can also make comments in person if you happen to be in the Rockville, Maryland, area.

Or we have established a specific e-mail address at the NRC for the purpose of receiving your comments on the Draft EIS, and that e-mail address is MonticelloEIS@NRC.gov.

All relevant addresses are listed in your

handout.

All of your comments will be collected and considered.

This concludes my remarks, and I'd like to thank each and every one of you for coming out today.

CHIP CAMERON: Great. Thanks, Jennifer.

Is it clear how to submit comments? Anybody have any questions on that?

(No response.)

Okay. Great.

And now we're going to go into listening to any comments that you have.

And our first speaker is Mr. Purves Todd, who we have heard from, and I think he's going to explain a little further the implications of his question on alternatives.

Mr. Todd, would you join us up here?

PURVES TODD: Thank you very much.

CHIP CAMERON: You're welcome.

PURVES TODD: I'm here today and I'm going to speak in favor of the Monticello Nuclear Plant being extended, because I believe that if the Monticello plant has to be shut down in 2010, it will have an adverse effect on central Minnesota.

And I think now I want to thank Kirstie

Marone for her article on the Monticello Nuclear Plant. It was very well explained in here (indicating) what the plant had done, and it's a very good article for this area.

The other thing I want to talk about is to be able to congratulate the people in Monticello that had the foresight to allow NSP to build this facility in the first place.

Because myself, I think I was probably a little bit critical at the time that it was being proposed -- we really didn't understand what nuclear energy was all about -- where today I'm almost on the other side that I think we have to expand nuclear energy all over the United States.

In fact, I'm thinking we probably will need at least 500 nuclear plants by this 2030 date, so I can see that you're going to be a very busy group here trying to get that accomplished.

And the reason that I say that is there is no reason -- no way that we can get from a 15-trillion- to 20-trillion-dollar economy in this country without nuclear power.

And then, finally, I think that I want to explain a little bit on the natural gas and oil question that I had, because I feel that with using

that in Minnesota, it puts us at a disadvantage, because this last winter our natural gas costs went up 30 percent -- and not necessarily because of the gas-fired plants that have already been built around the country, Katrina definitely caused some problems with it, but it's just not a good source for generating electricity in Minnesota.

Thank you very much.

CHIP CAMERON: Thank you, Mr. Todd.

And we're going to go Mr. Rick Jacobs at this point, and --

Mr. Jacobs is the Site Director at the Monticello facility.

(Off the record discussion.)

CHIP CAMERON: Okay. Let me find out: Does anybody else want to make a comment at this point?

(No Response.)

Okay. And Rick, it's totally up to you.

We're having another meeting tonight, and if there are some comments that the site wants to submit, we can do it at that time.

RICK JACOBS: Okay.

CHIP CAMERON: All right. Great.

Okay. Well, I would just thank all of you

for attending.

And I'm going to ask Rani if she wants to make any final comments, Rani Franovich.

(Response.)

Okay. She's fine.

And the staff, NRC staff will be here after the meeting for informal discussion, and including Ms. Quinly.

And we'll be here tonight if anybody wants to join us again.

And once again, we do have our Safety Project Manager here with us, so if there's any questions on the safety side or whatever, Dan is here.

And I would just thank you, and we're adjourned and we'll be back tonight.

Great.

(Whereupon, at 2:35 p.m. the proceedings were adjourned.)