Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

CORRECTED TRANSCRIPTS

Title: Monticello Nuclear Generating Plant License Renewal Public Meeting: Evening Session

Docket Number: 50-263

Location: Monticello, Minnesota

Date: Wednesday, March 22, 2006

Work Order No.: NRC-931 Pages 1-57

NEAL R. GROSS AND CO., INC.
Court Reporters and Transcribers
1323 Rhode Island Avenue, N.W.
Washington, D.C. 20005
(202) 234-4433

PUBLIC MEETING TO DISCUSS

DRAFT ENVIRONMENTAL IMPACT STATEMENT

FOR

MONTICELLO NUCLEAR GENERATING PLANT

LICENSE RENEWAL APPLICATION

Held

Wednesday, March 22, 2006

7:00 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

7:00 P.M.

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

Okay. Good evening, everyone. Thank you for coming out tonight. My name's Chip Cameron. I'm the Special Counsel for Public Liaison at the Nuclear Regulatory Commission, the NRC. And welcome to the NRC's public meeting tonight.

And what we're going to be talking about tonight is the NRC's Environmental Review 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 serve as your facilitator tonight, and my role generally will be to try to help all of you to have a productive meeting.

I just want to cover a few things about meeting process for you before we get into the substance of tonight's discussions, and I'd like to tell you a little bit about the format for the meeting, go over some simple ground rules with you, and just introduce the NRC staff and our expert consultants who are going to be talking to you

tonight. In terms of format, it's going to be a two-part format.

The first part there is going to be some NRC presentations where we're going to give you some information on the license renewal process generally and specifically on the findings that are in the Draft Environmental Impact Statement that the NRC prepared.

The second part of the meeting is an opportunity to listen to all of you, any comments, recommendations, concerns that you have about the Draft Environmental Impact Statement but also about license renewal in general.

The NRC staff will be telling you that there is an opportunity to submit written comment on these issues, but we wanted to be here tonight to meet with you in person, and anything that you offer tonight will carry as much weight as written comment.

We have Sheila Smith with us tonight, who is our court reporter, and she's taking a transcript of the meeting, and that will be our record and your record of what happened tonight, and it will be available to anybody who wants to have a copy of it.

Ground rules, very simple:

After the NRC presentations we'll go out to

you to see if you have any questions about what was said; and if you do, just give me a signal, I'll bring you this cordless microphone, introduce yourself to us, and we'll try to answer your question.

I would ask that only one person speak at a time, for the obvious reason that we want to give our full attention to whomever has the floor at the moment but also so that Sheila can get a clean transcript and so that she knows who is talking at the moment.

I would ask you to just try to be to the point, concise, so that we can make sure that everybody who wants to talk tonight has an opportunity to do that.

I don't think that we're going to be pressed for time, so we have a little bit more flexibility tonight than we do sometimes.

And when we get to the comment period, I also just would ask you to be to the point. But, again, we have flexibility there.

If you want to make a comment, we do have a yellow card back there to fill out, but if you didn't fill one out and you're listening to what is being said and you want to comment, just let me know when

we get there and you can make a comment.

In terms of who we have doing presentations for you, let me introduce them to you and give you a little bit of their background so that you can know what their expertise and qualifications are.

First of all we're going to go Rani Franovich, who is right here (indicating). And Rani is the Chief of the Environmental Branch for License renewal, and Rani and her staff do all of the Environmental Reviews on license renewal applications.

And Rani has been with the NRC for about fifteen years in various positions, as a Resident Inspector at the Catawba Nuclear Power Plant in North Carolina.

And the Resident Inspectors are our eyes and ears. They actually work at the plant, they're at the plant seeing that NRC regulations are being complied with, they live in the community surrounding the particular facility, and we have residents at every licensed reactor, including Monticello.

Rani got her Bachelors in psychology and also a Masters in industrial and systems engineering, both from Virginia Tech. Okay? And she's going to just tell you a little bit about the overall license

renewal process.

We'll then focus on the Environmental Review process, and we have Jennifer Davis with us tonight, and Jennifer is the Project Manager for the preparation of this Environmental Impact Statement and for the Environmental Review, and Jennifer works for Rani.

And Jennifer has been with us at the NRC for about four years now, and she's an archaeologist by training and her major was in historic preservation. And that was at -- the Bachelors degree from Mary Washington College in Fredricksburg, Virginia.

After that I think --

We'll go for questions after both of you are done, because it's on process.

So we'll have those two; then we'll go on to you for questions.

And then we're going to get to the substance of the Draft Environment Impact Statement, and we have Crystal Quinly, who's right here, who is the team leader for the preparation of the Environmental Impact Statement.

And Crystal works for Lawrence Livermore National Laboratory operated by the University of

California in Berkeley -- Livermore, Livermore, California, on the West -- still is on the West Coast, I guess.

But at any rate, Crystal has been with Lawrence Livermore more for seven years; she has a Bachelors degree in environmental science from Cal State, California State.

And then we go for questions on that.

And then we're going to go to Mr. Bob Palla. Mr. Robert Palla, who's right here, he is with the Division of Risk Assessment in our Office of Nuclear Reactor Regulation at our Headquarters in Rockville, Maryland.

Bob is a veteran at the NRC, 25 years, and he has both a Bachelors and a Masters in mechanical engineering from the University of Maryland, and he's going to talk about something we call severe Accidents mitigation alternatives, and he'll tell you about that.

And then we'll go on to you for questions.

And after that we'll hear from you on comments.

And with that I'm going to turn it over to Rani.

RANI FRANOVICH: Thank you, Chip.

And thank you all for being here. I know it's your time, but it's very important to have the public participate in our Environmental Review process, so we appreciate you being here.

I hope the information we provide tonight will help you understand the process we're going through and what we've done so far and the role you can play in helping us to ensure that the Final Environmental Impact Statement from Monticello license renewal is accurate.

I'd like to start off by briefly going over the agenda and the purpose of tonight's meeting.

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 Impact Statement, which assesses the impacts associated with extending operation of the Monticello Nuclear Generating Plant for an additional 20 years.

Really, the most part important of tonight's meeting is for us to receive any comments that you might have on our Draft Environment Impact Statement.

We also will give you some information

about the schedule for the balance of our review, and we'll let you know how you can submit comments on our Draft Environmental Impact Statement in the future.

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

Once all 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 to commercial power plants.

The Atomic Energy Act 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 ensure adequate protection of public 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 from nuclear power plants across the country and internationally.

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

As I 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 20 years.

For Monticello the operating license will expire September 8th, 2010.

Monticello is owned by Northern States Power Company, a wholly-owned 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 application we have performed and environmental review to look at the impacts of an additional 20 years of operation on the environment.

We held a meeting here in June of 2005 to seek your input regarding the issues that 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 tonight'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 really gives a big picture overview of the license renewal review process, which involves those two parallel paths.

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

You might ask what does the safety review consider?

For license renewal the safety review focuses on aging management of systems, structures,

and components that are important to safety as determined 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've mentioned, the license renewal safety review focuses on plant aging and the 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 wouldn't mind standing up.

Dan is in charge of the staff’s safety review.

Thank you, Dan.

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

to as the 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.

I believe a representative of our inspection program is here today.

Bob Orlikowski, are you here? Bob, stand up.

Bob is a Resident Inspector at Monticello.

Thank you, Bob.

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, 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 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 the yellow hexagons on this slide indicate opportunities for public participation.

Also, the staff will present the results of its safety review to the ACRS in a public meeting, so members of the public would be able to attend that.

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 involving 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 tonight to briefly discuss the results and receive your comments.

In September of this year we will be issuing a 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 later in writing.

So the final agency decision on whether 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 a letter to the Commission; the Safety Evaluation Report, which documents the results of the staff's safety review; and the Final Environmental Impact Statement, which documents the results of the environmental review.

Again, the yellow hexagons on the slide indicate opportunities for public participation. The first opportunity was during the scoping period and the meeting we had in Monticello back in June 2005. Many of you may have attended that meeting.

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

No contentions were admitted to a hearing,

so that is not applicable here. That concludes my presentation on the NRC and my general overview of the license renewal process.

Chip, you indicated you wanted to go on to Jennifer's presentation before we open the floor for questions?

CHIP CAMERON: Yeah, I think because it's process-related too, and I think that will be a good backdrop, too, for further questions.

RANI FRANOVICH: Okay. So with that, Jennifer?

JENNIFER DAVIS: Good evening. 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 from the National Laboratories to develop an Environment Impact Statement, or EIS as we call it, associated with the license renewal for Monticello.

The National Environmental Policy Act of 1969 requires that Federal agencies follow a systematic approach in evaluating potential 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 is license renewal here, and that also includes the no-action alternative.

The National Environmental Policy Act and the Environmental Impact Statement are disclosure tools. They are specifically structured to involve public participation, and this meeting tonight facilitates the public's role in our process.

So today, or tonight, we are here to collect your public comments on our Draft EIS.

The NRC staff developed a Generic Environmental Impact Statement, or GEIS, as Rani was discussing earlier, that address a number of issues common to all power plants.

The staff is supplementing that Generic EIS with Monticello-specific supplement which addresses issues that are specific to this site.

The staff also evaluates the conclusions reached in the GEIS to determine if there's 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 each nuclear power plant that requests license renewal.

After assessing the impacts associated with license renewal, the NRC decided to classify environmental impacts into two categories.

The staff identified 92 different 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 called these Category 1 issues and made the same or generic determination about their impact from the GEIS.

During the review of the 92 issues, the staff identified 23 issues for which it could not make a generic determination. Evaluation of these 23 issues would be done on a site-specific basis. These are referred to as Category 2 issues.

The staff prepares an EIS for each plant that requests license renewal, and that impact statement takes the form of a supplement to the General Environmental Impact Statement, or GEIS.

The supplement evaluates all issues pertaining to a specific site and addresses each relevant Category 2 issue on a site-specific basis.

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

Back in June of 2005 the NRC review team conducted a site audit, gathered information from the public, state, and local officials, public interest groups, and other federal agencies in order to produce our draft supplement for Monticello, and today we're here to discuss that Draft EIS.

I might give you a quick minute to read this slide. This slide shows our decision standard on the environmental review. Simply put, "Is license renewal acceptable from a environmental standpoint?"

This slide shows important milestone dates for the environmental review. The highlighted dates indicate opportunities for public involvement in the environmental review.

We received NMC's application requesting license renewal of Monticello on March 24th, 2005. On June 2nd, 2005, the NRC issued a *Federal Register* notice of intent to prepare and environmental impact statement and conduct scoping.

Two public meetings were held in the Monticello area, in fact in this room, on June 30th as part of the scoping process.

The scoping period ended on August 2nd, 2005, and a Scoping Summary Report was issued on October 7th. This report addressed all comments received from all sources during the scoping process.

If you would like to review the Scoping Summary Report, we have copies available at the back of the room on one of the back tables.

Comments received during the scoping period and that are within the scope of the environmental review are located in Appendix A of the Draft EIS.

The Draft EIS was published on January 23rd, 2006, and we are currently accepting public comments on the draft until May 4th.

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

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

All comments received will be considered, and a response to each of the comments 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.

But before that are there any questions on process, safety or environmental?

CHIP CAMERON: Questions on the process before we go into the actual findings in the Draft EIS? Anybody have a question about how this is all done?

(No Response.)

Okay. Crystal Quinly is going to tell us about the Draft Environmental Impact Statement.

CRYSTAL QUINLY: Good evening. As Chip said, 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 impact of license renewal at Monticello.

The team consists of nine members from Lawrence Livermore National Laboratory, Pacific Northwest National Laboratory in Washington, and 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 was 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 and 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 be stabilized 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 their Environmental Report.

In June, we conducted a site audit during which we toured the 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 received in the Scoping Summary Report dated October 7th, 2005, and issued responses. These comments are listed in Appendix A, along with NRC's responses.

This body of information is the basis for the analysis and preliminary conclusion 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 the routine operations; 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 for more detail 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 structure.

The issues that the team looked at on a site-specific basis include water use conflicts, entrainment and impingement of fish and shellfish, heat conflict -- I'm sorry, heat shock and microbiological organisms.

We found that the potential impacts in these area were small, and additional mitigation is not warranted.

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

Now, recall that as Category 1 issues the 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 of the cooling system is small.

Radiological impacts are a Category 1 issue, and the NRC has made a generic determination that the impact of radiologic release during nuclear plant operations during the 20-year license renewal period 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 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 20-year license renewal term and since we also found no new and significant information related to this issue, we adopted the generic conclusion that the radiological impact on human health and the environment is small.

There are two terrestrial species and one aquatic species listed as federally threatened, endangered, or candidate species that had 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 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.

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 the other past, present, or reasonably foreseeable future actions, regardless of what agency or person undertakes these actions.

The staff considered cumulative impacts resulting from the operation of the cooling water system, operation of the transmission lines, releases of radiation and radiological material, sociological impacts, ground water use and quality impacts as well as impacts to threatened and endangered species.

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

For instance, the area analyzed for 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. 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 and 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 from coal-fired, gas-fired, coal gasification, new nuclear, purchased power, alternative technology such as wind, solar, and hydro power, and then a combination of alternatives.

For each alternative we looked at the same types of issues -- for example, water use, land use, ecology, and socioeconomics -- 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 average annual capacity factors of around 30 percent. As such, at 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 their 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 this 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, reach moderate or large significance.

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

CHIP CAMERON: Okay. Crystal, let's see if there are questions for you on the findings in the Draft Environmental Impact Statement.

Any questions at this point?

And I think we will be hearing some comments about some of the findings.

(No response.)

Okay. Let's -- we're going to go a special category within the Draft --

Thank you very much, Crystal.

-- within the Draft Environment Impact Statement, and that is severe accident mitigation alternatives, and Mr. Bob Palla is going to talk to us about that.

Bob?

BOB PALLA: Yeah. Good evening. My name is Bob Palla. I'm with the Division of Risk Assessment at NRC.

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 know it.

The GEIS evaluates two classes of accidents, design-basis accidents and severe accidents.

Design-basis accidents consist of a spectrum of postulated accidents that both the licensee and the NRC staff evaluate to ensure that the plant can respond without undue risk to the public.

The ability of the plant to withstand these accidents has to be demonstrated before the plant is granted a license.

Since the licensee has to demonstrate acceptable plant performance for these 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 the design-basis accidents beyond those discussed in the GEIS.

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

The Commission found in the GEIS that the risk of a severe accidents 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. These alternatives are termed "SAMAs," meaning severe accident mitigation alternatives.

The SAMA evaluation is a site-specific assessment. It is a Category 2 issue, as explained earlier.

The SAMA review for Monticello is

summarized in Section 5.2 of the GEIS Supplement and is described in more detail in Appendix G of the GEIS Supplement.

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

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

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

The PSA is a study that identifies the different combinations of system failures and human errors that would be required for an accident to

progress to either core damage or containment failure.

The second step in the evaluation is to identify potential improvements that could further reduce risk. The 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-estimating by assuming that the plant improvement is completely effective in eliminating the accident sequences that it's 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 cost estimates are used in the final step to determine whether implementation of any of the improvements can be justified.

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

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

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

And the third factor is whether the risk reduction is associated with aging effects during the period of extended operation, in which case, if it was, we would consider implementation 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 applicable to Monticello due to design differences, whether it has already been addressed in the existing Monticello design procedures or training program, 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 in performing regulatory analysis; seven of these SAMAs were cost-beneficial in the baseline analysis; three of the SAMAs were cost-beneficial when alternate discount rates and analysis uncertainties are considered.

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

For example, one of the SAMAs considered involves installing a direct drive diesel injection pump as an additional high-pressure injection system. This would improve the ability to cope with station blackout sequences.

Several other sequences also address station blackout events.

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

Because of this inter-relationship between SAMAs, we would not expect that the implementation of all ten 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 candidate SAMAs and has re-assessed the benefits of the remaining SAMAs.

These SAMA were implemented based on the risk reduction potential and not because they are aging related, because they are not.

The 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 system will not rely on the availability of support systems.

This one SAMA does not relate to managing the effects of plant aging during the period of extended operation, and accordingly it's not required to be implemented as part of license renewal.

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

This completes my presentation, and I'll take any questions you might have.

CHIP CAMERON: Anybody, questions on the SAMA process?

(No response.)

Okay. Thank you very much, Bob.

And now Jennifer Davis is going to conclude

our presentations with a summary on how to submit comments and some other issues.

JENNIFER DAVIS: Thank you, Chip.

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 significant milestone dates.

We issued the Draft EIS for Monticello on January 23rd of this year. We're currently in the middle of our public comment period, which is scheduled to end on May 4th of this year.

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

This slide here identifies me as your primary point of contact with the NRC for this Environmental Review.

It also identifies where documents related to our review may be found in the local area. The Monticello Draft EIS is available at both the Monticello and Buffalo Public Libraries.

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

Additionally, as you came in you were asked to fill out a registration card at our reception table. If you've included your address on the card, we will be happy to send a copy of the Final EIS to you.

If you did not receive a copy of the Draft Environmental Impact Statement, we have copies in the back of the room. You're free to take them.

If you did not fill out a card and you want a copy of the Final Environmental Impact Statement, please see Jason, who is standing in the back of the room.

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

Review process.

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

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

Additionally, 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 of the relevant addresses are listed in your handout.

All of your comments will be collected and will be considered.

This concludes my remarks, and I want to thank you again for taking the time to attend our meeting.

CHIP CAMERON: Okay. Thank you. Thank you, Jennifer and Crystal, Bob, Rani.

I think we'll go on to the second part of the meeting at this point.

And this is the opportunity for the NRC staff to listen to any comments that you might have that they should consider and evaluate in finalizing the Draft Environmental Impact Statement.

And that's why it's called a "draft" is that it's not going to be finalized until we hear from the public and have a chance to evaluate the comments.

And we're going to go to our first speaker tonight, who is Mr. George Crocker, who is right here (indicating).

And George is the Director of an organization called the North American Water Office, which is based here in Minnesota, and we're going to have an opportunity to hear from him.

George, would you like to join us up here?

GEORGE CROCKER: Thank you, Chip.

In my experience environmental impact statements are usually decision-informing documents.

What I've reviewed is a rationalization for a decision that's already made.

I realize there's nothing I can do or say to make this better, because I don't think you care.

So this is sort of a fool's errand that I'm on; and not really liking being a fool, I'm going to make it short.

Your significance levels -- small, moderate, large -- appallingly subjective. Rational people looking at the same facts could come to

dramatically different conclusions about what's small, about what's moderate, about what's large.

Small means not detectable, not noticeable?

By whom? Using what?

Let's just look at how we monitor for radiation releases as an example.

Acknowledging that the radionuclides are released, where do they go?

You haven't a clue. Your monitoring doesn't tell you where they go. Your monitoring says where you don't find them, but you're not looking for where they are.

They're out there. You let them go.

And all you have to define what happens after you release them are some calculations and some modeling that tell us nothing about where they go.

Well, the Bier VII says that there's no such thing as a safe dose. You acknowledge that you're releasing radionuclides, and it is absolutely untenable to conclude, with no data and only calculations, that none of them are inhaled or ingested by humans.

You have no scientific basis, no factual basis, no data to support such a contention. You have calculations and dispersion models, and that's

all you have.

Where do they go?

So you don't look for where they are, you don't find them, and therefore it's not detectable, therefore it's small.

You see, quite arguably what this means is that while you're looking at this as a dispersion, dilution being a solution, what another I would say more rational person could argue is that what you've created is a very efficient distribution mechanism in which the maximum number of people can have the opportunity to get enough of it inside of them to cause the cancers.

And it turns out that we don't have the cancer registries on a county-by-county basis to really allow us to come to those conclusions because of the way they're compared.

But if you look at it the way it could be, you will see elevated concentrations of particulate cancers in communities that are in close proximity to the reactors.

But you don't look at that, so it's small.

Small compared to what? Small compared to background?

Well, you see some of us now finally

understand the difference between background radiation and the insult when the radiation is ingested or inhaled. Entirely different things.

Background is background. Why do you think your thigh bones are so big? It's to keep the background out.

But once it's inside of you each radionuclide becomes very, very efficient at causing the destruction that ultimately leads to the cancer.

Small. No facts. Conjecture. Subjective.

Wind, 30 percent capacity factor? I don't think so.

Go look at the Minnesota Department of Commerce website for their wind maps and see what kind of capacity factors they come up with.

When you have a decision-making process like this one in which there is no even attempt to make a reasonable simulation of 600 megawatts of baseload to compare it with and then come to the conclusion that alternatives such as wind have moderate to large impacts while a reactor that creates waste that must be managed for 240,000 plus years with routine emissions that aren't managed and that's small, you're sick. That is sickness.

That is also behavior, institutional

behavior that is typical of failing institutions.

And the real tragedy here is that the technology you are managing is so terribly unforgiving.

CHIP CAMERON: Thank you, Mr. Crocker, for taking the time to come down and talk to us tonight.

And we're going to go our next speaker, who is Mr. John Conway, who is the Vice President at Monticello Generating --

Yes, please.

JOHN CONWAY: Good evening. My name is John Conway. I work for the Nuclear Management Company. I am the site Vice President at the Monticello station here in Monticello.

And I'm here today to give Nuclear Management Company's position on the NRC's Draft Supplemental Environmental Impact Statement and provide a few additional comments regarding the Monticello Nuclear Generating Plant.

Nuclear Management Company supports the conclusions contained in the Draft Supplemental Environmental Impact Statement.

The rigorous audits and inspections conducted by the Nuclear Regulatory Commission have led to a report confirming our own conclusions that

continued operation of the plant will have minimal impact to the environment.

The Draft Impact Statement supports the key elements of our mission at the facility, namely, the safe, reliable, and economical operation in that order of priority, with safety of the public, our employees, and the environment being the top priority.

We value and expect our organization to be both a good neighbor and a responsible steward of the environment in which we operate.

Our 500 highly-experienced and well-trained employees take great care in their daily activities to ensure that the environment is well protected.

We feel fortunate that the location of the Monticello plant rests on the banks of the Mississippi River within close proximity of the Montissippi County Park and the Lake Mariah State Park.

The site is home to a wide variety of wildlife, aquatic species, and plant life. Our efforts have made the site a safe and sound habitat for many years, and it remains our commitment to maintaining that for the years to come.

The Monticello plant has been extremely

well maintained over it's lifetime, ensuring it can operate safely for at least an additional twenty years beyond the original operating license period.

Approximately every two years, we perform a refueling and major maintenance outage in which we typically carry out over 2500 individual maintenance and inspection activities. This is in addition to the ongoing maintenance, inspection, and rigorous testing activities that are performed routinely during the period of plant operation.

We have continued to invest in a wide range of equipment improvements to take advantage of technology and materials to ensure future reliable and safe operation, and this is relevant to the aging management aspects of the license renewal process.

As we move forward, we will continue to upgrade and improve the equipment, the technology, and the training to the employees of the station.

In conclusion, the Monticello plant has been a productive contributor to the energy needs of the State of Minnesota and a valuable asset and good neighbor to the surrounding communities and environment.

But we remain committed to operating safely, reliably, and economically, primarily being

focused on being a good neighbor and a good steward of the environment.

As I mentioned previously, it's the safety of the public, our employees, and the environment that remain our highest priority.

I and the rest of the employees at Monticello look forward to serving the community in that regard for many years to come.

That concludes my statement.

CHIP CAMERON: Okay. Thank you very much, Mr. Conway.

Is there anybody else that would like to make a statement tonight?

(No response.)

We do have some students here from St. Cloud State University, and we welcome you tonight.

Are there any questions that any of you have about the process, anything that you heard tonight?

And we'll be available after the meeting to talk informally if you want to do that, but I just thought if you had any questions that I think we have the time to entertain them.

CHIP CAMERON: Yes?

CHUCK HOSTOVSKY: I thought it was going to be a presentation on --

CHIP CAMERON: Let me get you on the mic so we can get you on the transcript.

CHUCK HOSTOVSKY: I thought there was going to be a presentation on the dry cask nuclear storage technology.

Or is that included in the SAMAs?

CHIP CAMERON: No --

Well, let me -- license renewal, as Rani Franovich talked about, looks at particular things, the passive -- aging of passive components, plus the Environmental Review covers a number of things.

But I think that because of the fact that the spent fuel storage situation is an every-day operational issue, it's considered another aspect.

So maybe we can at least tell you what the framework is for that.

Rani, can you talk to us a little bit about that?

RANI FRANOVICH: Actually, I'm not very well versed on what it takes to license one of the dry cask storage facilities, but I can tell you that the license renewal process focuses on aging management of the system structures and components of

the plant.

It's a separate process to license dry cask storage, so it's not part of tonight's meeting or the staff's review of the license renewal application.

CHIP CAMERON: And Mike, do you want to add something for perhaps the --

RANI FRANOVICH: Dr. Masnick is a member of my staff.

CHIP CAMERON: Okay. Dr. Mike Masnik.

DR. MIKE MASNIK: As Rani said, it's really not part of this process, but I do know a little bit about the dry cask storage.

Our regulations allow for two ways in which a licensee can effect dry cask storage on a site.

They can apply for a site-specific license under Part 72 of our regulations, which allows them to build a stand-alone facility on their site, and it's separately licensed from the nuclear power plant.

There is also another provision in the regulations that allows them to request a general license.

And you have to understand that under their current license, which is the Part 50 license, they already can store spent fuel on site.

So we have a provision under this general license in which if they use an approved cask design, then they can build a pad and basically put the fuel in the dry cask storage containers.

So our activities associated with the general license is primarily licensing the casks, and what we do is we have a very rigorous licensing procedure that looks at a number of accidents and whether or not the cask will retain its integrity through the period of time in which it's licensed.

The casks are licensed for a period of twenty years; at the end of the twenty-year period they would have to re-certify that the cask was safe to store any longer period of time.

CHIP CAMERON: And the other process is a specific license --

DR. MIKE MASNIK: That's correct.

CHIP CAMERON: -- that a particular facility can follow.

But in this case they're using the general license.

DR. MIKE MASNIK: Right. Right. In the case of Monticello they're pursuing the general license option.

CHIP CAMERON: Okay. And Mr. Conway I

think wants to add something here, and, again, he's the Site Vice President at Monticello.

JOHN CONWAY: Although dry fuel storage is outside the boundaries of the meeting, public meeting here tonight, we have members of the staff from the Nuclear Management Company that would be happy to, within certain constraints, answer any questions regarding the dry fuel storage campaign at Monticello after the meeting.

CHIP CAMERON: Okay. Thank you for that offer, Mr. Conway.

Are there other issues, other questions that any of you might have at this point?

(No response.)

Okay. And we're here after the meeting, so whatever you want to discuss ...

Okay. And we're going to go Rani.

Do you want to --

I think we're done with the formal part. Do you want to close this out and we can go to the informal discussion?

RANI FRANOVICH: Yeah.

CHIP CAMERON: Okay.

RANI FRANOVICH: In closing, I just wanted to take the opportunity to thank you all again for

being here. It really is important that the public participates in our review process, and it really enriches the quality of our product. So thank you for being here with us tonight.

Again, comments can be received until May 4th. That's the close of our comment period.

The point of contact is Jennifer Davis or the e-mail address that you saw on the slide.

And I also wanted to let everyone know that we have these NRC Public Meeting Feedback forms. You may have picked one up as you came into the meeting.

If you have any ideas or suggestions on how we can improve our public meetings, maybe the way we can present information a little bit better, please jot that down on this form. Postage is pre-paid, or if you'd like to just hand it to a member of the staff on your way out, that's fine, too.

And again, thank you very much for coming, and we really appreciate your input.

Good night.

CHIP CAMERON: Thank you.

(Whereupon, at 8:15 the proceedings were adjourned.)