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Fort Calhoun Station

Afternoon Public Meeting

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MR. CAMERON: Good afternoon
everyone. My name is Chip Cameron of the special
counsel for public liaison at the Nuclear
Regulatory Commission. And I'd like to welcome all

of you to our meeting this afternoon.

The topic of the meeting is the draft environmental impact statement that the NRC has prepared on the request of the Omaha Public Power District to renew the operating license at the Fort Calhoun Nuclear Power Station Unit 1.

And it's my pleasure to serve as your facilitator for today's meeting, and in that role I'm going to try help you to all have a productive meeting and to assist you in seeing if we can achieve the meeting objectives.

In terms of objectives, the staff of the Nuclear Regulatory Commission, the NRC, will be going into a little bit more detail on those objectives, but simply stated, it's to ensure that we clearly explain to all of you what the NRC's process is for evaluating an application for a license renewal and also to clearly explain what the findings are in the draft environmental impact statement that's been prepared on this license renewal application. And we also want to listen to

your recommendations, your advice, your concerns on these issues.

We are going to be taking written comments on this draft environmental impact statement, but we wanted to be here with you tonight to -- or this afternoon to listen to your comments. You may hear things that will help you to decide whether you want to submit a written comment, but if you don't submit a written comment, anything that you say this afternoon will carry the same weight as that written comment. And we are keeping a record today of the proceedings and Deanna is our stenographer. And I'll say a few more words when I get to ground rules about what we need to do to make sure that we have a clean transcript of the meeting.

In terms of the format for the meeting, it's basically going to be done in two segments. The first segment is to give all of you some background on the NRC process, and most importantly on the findings in the draft environmental impact statement. And we'll be hopefully having an interactive discussion with you and answer your questions on those background presentations.

After that's done, we're going to give you an opportunity to make a more formal comment to us

on any recommendations that you have in regard to the draft environmental impact statement.

In terms of ground rules, if you have something to say, just signal me and I'll bring you this microphone. Give us your name, please, and affiliation, if appropriate, and ask your question or make your comment. And I would ask that only one person at a time speak so that we can not only get a clean transcript -- so that Deanna knows who is speaking -- but so that we can give our full attention to whomever has the floor at the time.

I would also ask you to try to be concise in your comments. I don't think that we'll have any problem this afternoon with running over the 4:30 time, but if you do have a formal comment to make, please limit that to five minutes. That's not a hard and fast rule, it's guidance, but try to give us your comments in five, five minutes.

In terms of the agenda, in a minute I'm going to ask John Tappert, who's right here, to give you all a formal welcome and just a brief overview on the NRC's license renewal process.

And I wanted to introduce all of our speakers also and give you some idea of their background so that you know what types of expertise

we have involved on this project. Now, John is the chief of the environmental section and the license renewal and the environmental impacts program at the NRC. And John's staff are responsible for preparing the environmental impact statements, not only on a license renewal application, but on any project that our office of nuclear reactor regulation works on. And he's been with the agency for approximately 12 years. And he has been a resident inspector out at nuclear power plants for the NRC. He has a bachelor's in aerospace and oceanographic engineering from Virginia Tech and a master's degree in environmental engineering from Johns Hopkins University.

John will give us a welcome and then we're going to move to William, better known as Butch, Burton who is right over here. And Butch is the project manager for the safety evaluation on the Fort Calhoun license renewal application. And he is in the license renewal section, again in the license renewal and environmental impact program. He's been involved in other license renewal projects, the one for the Hatch plant down in Georgia. He's been involved in emergency operations work at the NRC developing performance

indicators to evaluate how nuclear reactors are meeting the regulations, and also on advanced -- review of advanced reactors that come in to the NRC. Has a bachelor's in nuclear engineering from Rensselaer Polytechnic Institute. Butch is going to tell you about license renewal, the overall process.

Then we're going to get more detailed and get to the subject that we're here to discuss with you tonight, which is the draft environmental impact statement. And we have Jack Cushing right here who is the project manager on the environmental review for the Fort Calhoun license renewal application, and he works for John Tappert. And Jack will give us an overview of the environmental review process. He's been with the agency for about five years. Before he joined the agency, he was a licensed reactor operator and that was at Maine Yankee, I believe. And he has a bachelor's in marine engineering from the Mass. Maritime Academy. And after each of the presentations by Butch and by Jack, we'll go out to you to see if there's any questions that we can answer.

Then we're going to get to the heart of the

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discussion today, and that's the findings and the draft environmental impact statements. And we have Dr. Ken Zahn right here from Lawrence Livermore Lab and they have been the lead in assisting the NRC to evaluate the environmental impacts that might occur from the license renewal application. And Dr. Zahn is the group leader of the environmental evaluations group at Lawrence Livermore Lab, which is in Livermore, California. And that group does NEPA review for the Department of Energy, National Environmental Policy Act review for the NRC as in this case, and he has a PhD in chemistry from the University of Illinois. So he'll talk about the findings; again we'll go out to you for questions.

There's one specific aspect of the environmental impact statement called severe accident mitigation alternatives, and after Dr. Zahn is done, we're going to ask Jack Cushing to talk about those. Those are known as SAMAs, I believe, and Jack will tell you about those and also what the process is for submitting comments on this.

And then we're going to go out to you for any final questions and then formal comments to the Agency. And I would just thank all of you for

being here this afternoon and I'm going to ask John Tappert to give us the Agency's official welcome.

MR. TAPPERT: Thank you, Chip. Good afternoon and welcome. As Chip said, my name is John Tappert, and I'm chief of the environmental section of the Office of Nuclear Regulatory Commission. On behalf of the Nuclear Regulatory Commission, I'd like to thank you for coming here to participate in our process.

As Chip said, there's several things we'd like to cover today. I'd like to briefly go over the purpose of today's meeting. First of all, we'd like to give you a brief overview of the entire license renewal process, this includes both the safety review as well as the environmental review, which is the principal purpose of today's meeting.

Next we're going to provide you the preliminary results of our review which assessed the environmental impacts associated with extending the operating license of Fort Calhoun Station for an additional 20 years. Then we'll give you some information about the schedule we're going to follow and additional opportunities you will have to participate in the process. At the conclusion of the staff's presentation, we'll be happy to

receive any questions or comments that you may have today.

First, let me provide some general context for the license renewal program. The Atomic Energy Act gives the NRC the authority to issue operating licenses to commercial power plants for a period of 40 years. That operating license for Fort Calhoun will expire in 2013. Our regulations also make provisions for extending those operating licenses for an additional 20 years as part of the license renewal program, and OPPD has requested license renewal for Fort Calhoun.

As part of the NRC's review of that application, we sent a team of environmental experts out to the site last summer. We also held a public meeting to receive your input early in our review process. As we indicated at that earlier scoping meeting, we've returned here now today to provide you the preliminary results in our environmental impact statement. Again, the principle reason of the meeting here today is to receive your questions and comments on that track.

With that short summary I'd like to have Butch give us a brief overview of the safety portion of license renewal.

MR. BURTON: Thank you, John. As Chip mentioned, my name is Butch Burton. I'm the project manager for the safety review for the application for license renewal for Fort Calhoun.

Before I talk about the license renewal process and the staff safety review, I'd like to talk a little bit about the Nuclear Regulatory Commission, which we generally call the NRC.

Atomic Energy Act of 1954 authorizes the NRC to regulate the civilian use of nuclear material. The NRC's mission is threefold: to insure adequate protection of public health and safety; to protect the environment; and to provide for the common defense and security. The Atomic Energy Act provides for a 40-year license term for power reactors, but it also allows for renewal. The 40-year term is based primarily on economic and anti-trust considerations, rather than safety limitations.

As Mr. Tappert indicated, OPPD has applied for a license renewal under 10 CFR PART 54 and requests authorization to operate Fort Calhoun for up to an additional 20 years. The current operating license for Fort Calhoun will expire in

2.0

the year 2013.

Now I'll talk a little bit about license renewal, which is governed by the requirements in PART 54, as I mentioned, which we generally call the license renewal rule. It defines the regulatory process by which a nuclear utility, such as OPPD, applies for a renewed operating license.

License renewal rule incorporates 10 CFR PART 51 the environmental portion by reference. 10 CFR PART 51 provides for the preparation of an environmental impact statement, or an EIS.

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

The ACRS is a group of scientists and nuclear industry experts who serve as a consulting body to the commission. The ACRS performs an independent review of the license renewal application and the staff safety evaluation and they report their findings and recommendations directly to the commission.

The next slide illustrates two parallel

processes. The safety review process, which you see at the top of the slide, and the environmental review process at the bottom of the slide. These processes are used by the staff to evaluate two separate areas of license renewal.

The safety review involves the staff's review of the technical information in the license renewal application to verify with reasonable assurance that the plant can continue to operate safely during the period of extended operation.

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

The staff's review is documented in a safety evaluation report, and the safety evaluation report is provided to the ACRS for review. The ACRS then generates the report of their own -- of its own to document their review of the staff's evaluation.

The safety review process involves two to three inspections which are documented in NRC inspection reports. These inspection reports are considered with the safety evaluation report and the ACRS report in the NRC's decision to renew nuclear units' operating licenses. If there is a

petition to intervene, sufficient standing could be demonstrated, and an aspect within the scope of license renewal has been identified, then hearings may also be involved in the renewal process. These hearings will play an important role in the NRC's decision of the renewal application as well.

At the bottom of the slide is the other parallel process, the environmental review, which involves scoping activities, preparation of the draft's supplemental -- draft supplement to the generic environmental impact statement, solicitation of public comments on the draft supplement, and then the issuance of a final supplement to the generic environmental impact statement. This document also factors into the Agency's decision on the application.

During the safety evaluation, the staff assesses the effectiveness of the existing or proposed inspection and maintenance activities to manage aging effects applicable to a defined scope of passive structures and components. PART 54 requires the application to also include evaluation of time-limited aging analyses, which are those design analyses that specifically include assumptions about plant life, usually 40 years.

1 Currently, regulations are adequate for 2 addressing active components, such as pumps and 3 valves, which are continuously challenged to reveal 4 failures and degradation such that corrective 5 actions can be taken. Current regulations also exist to address 6 7 other aspects of the original license, such as security and emergency planning. These current 8 regulations will also apply during the extended 9 period of operations. 10 11 At this time if there are any questions on 12 anything I've said, I'd be happy to take them. Turn it back over to Chip. 13 14 MR. CAMERON: Anybody have any 15 questions for Butch? And after you hear Jack Cushing -- you heard safety aspects, Jack is going 16 17 to talk about environmental aspects. If there are questions about the relationship between those two 18 19 evaluation processes, we can get to them after Jack 20 is done. Jack? 21 MR. CUSHING: Hello. Thank you, 22 I'd like to welcome everybody to the Chip. 23 meeting. My name is Jack Cushing, I'm the 24 environmental project manager for the Fort Calhoun

Station environmental review. I'm responsible for

coordinating the efforts of the NRC staff and our contractors in performing that review.

I'd like to discuss NEPA, and that's the National Environmental Policy Act. It's one of the most significant pieces of environmental legislation ever passed. It requires all federal agencies to use a systematic approach to consider environmental impacts during certain decisionmaking processes. It requires that we examine the environmental impacts of the proposed action and consider mitigation measures, which are things that could be done to decrease the environmental impact, when the impacts are severe, NEPA requires that we consider alternatives to the proposed action, and that the impacts of those alternatives also be evaluated. Finally, NEPA requires that we disclose all this information and we invite public participation to evaluate it.

The NRC has determined that it will prepare an environmental impact statement associated with the renewal of an operating license for an additional 20 years; therefore, following the process required by NEPA, we have prepared a draft environmental impact statement associated with the operation of Fort Calhoun during the period of

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extended operation. That draft environmental impact statement was issued last month, and the meetings today are being held to receive your comments on it.

environmental review. Simply put, we are trying to determine whether the renewal of the Fort Calhoun Station license is acceptable from an environmental standpoint. If license renewal is a viable option, whether or not that option is exercised or not. Whether the plant actually operates for an additional 20 years will be determined by others such as OPPD and state regulatory agencies and will also depend on the outcome of the safety review.

This slide shows in a little more detail the environmental review process associated with license renewal for Fort Calhoun Station Unit 1.

We received the application last January. The notice of the intent was published in The Federal Register in May of 2002 and informed the public that we were going to prepare an environmental impact statement and invited the public to provide comments on the scope of the review.

In June of 2002, during the scoping period, we held two public meetings here in Omaha to

receive the public comments on the scope of the issues that should be included in the environmental impact statement for the Fort Calhoun Station Unit 1 license renewal.

Also in June, we went to the Fort Calhoun
Station with a combined team of NRC staff and
personnel from the four national laboratories with
backgrounds in the specific technical and
scientific disciplines required to perform the
environmental review. We familiarized ourselves
with the site and the staff from OPPD to discuss
the information to submit it in the report and we
also examined OPDD's evaluation process.

In addition, we contacted federal, state, and local officials as well as local service agencies to receive their input on and obtain information on the Fort Calhoun Station.

At the close of the scoping comment period, we gathered up and considered all the comments that we had received from the public and from state and federal agencies. Many of these comments contributed significantly to the document that we are here today to discuss.

In July of last year we issued requests for additional information to ensure that any

information we relied on and that had not been included in the original application was submitted on the docket so that it would be publicly available.

A month ago we issued the draft environmental impact statement for public comment. This is Supplement 12 to the generic environmental impact statement, because we rely on findings in the generic environmental impact statement for part of our conclusions. The report is a draft, not because it's incomplete, but rather we are in the second period of a public comment to allow you and members of the public to take a look at the results, write any comments you may have on the report. After we gather these comments and evaluate them, we may decide to change portions of the environmental impact statement based on those comments. The NRC will then issue a final environmental impact statement related to license renewal for the Fort Calhoun Station Unit 1.

Are there any questions about what we're doing today and how we worked on the environmental impact statement?

MR. CAMERON: Anybody have a question? One question that might be helpful for

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1 understanding all of this is how does the generic -- how does the final environmental impact 2 3 statement on Fort Calhoun come together with the 4 safety review? Just in terms of timing, when can 5 the public expect a decision on this? MR. CUSHING: Okay. After we 6 7 receive the comments, we will issue the final environmental impact statement, and that would go 8 to the EPA and they will review it to see if 9 there's any problems with it. And we will also 10 11 give that -- mail the EIS to anybody that signs up 12 for a copy today. And the environmental impact 13 statement, along with the safety evaluation, the 14 inspection findings, and the ACRS report will go to 15 the commission to be used in their final decision 16 process. 17 MR. CAMERON: Okay. That's good. And time frame for when that might get to the 18 commission? 19 MR. CUSHING: The time frame we're 20 21 looking at, we will be issuing the draft 22 environmental -- the final environmental impact 23 statement on August 15th. And the license -- the 24 renewed license, if it does -- depending on the results of the safety review, it's due in November 25

1	of 2003.
2	MR. CAMERON: Okay. So November of
3	2003 is going to be the end of the process
4	basically, generally speaking.
5	MR. CUSHING: Generally speaking
6	that'll be when we finish the license renewal.
7	MR. CAMERON: Okay. Great. Thank
8	you very much, Jack.
9	And you've heard process and now we're
10	going to go to substance. And Ken Zahn is going to
11	talk about the findings in the draft environmental
12	impact statement.
13	DR. ZAHN: Thanks, Chip. As Chip
13 14	DR. ZAHN: Thanks, Chip. As Chip mentioned earlier, I led the technical team, the
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14 15	mentioned earlier, I led the technical team, the
14 15 16	mentioned earlier, I led the technical team, the contractor team. I work and supervise a group at
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14 15 16 17 18 19 20	mentioned earlier, I led the technical team, the contractor team. I work and supervise a group at Lawrence Livermore National Laboratory. We are intimately involved in the NEPA process there for D&E (phonetic) projects as well. I wanted to tell you a little bit about the information gathering process and the composition of the team, and then I'll talk a bit about the

supplemental environmental impact statement, we

reviewed the information in OPPD's license renewal application, then visited the site last summer. Besides reviewing onsite facilities and documents, we talked to federal, state, and local agencies including permitting authorities and social service agencies. We also discussed such matters as cultural and historic resources with the state historic preservation office or SHPA.

Following your submission of comments

during a public comment period last summer, the NRC

staff and the national laboratory team reviewed the

comments, considered the suggestions, and then

provided responses to the comments, which are

included in Appendix A in the draft report.

As noted earlier, to conduct the environmental review, we established a team made up of members of the NRC staff as well as experts in various fields from the national laboratory complex. These laboratory staff members who were involved included members from Pacific Northwest National Laboratory, Los Alamos National Laboratory, and Argonne National Laboratory.

This slide gives you an idea, a general idea, of some of the areas of technical information

that these experts evaluated. If you look far to the left you'll see socioeconomic, for example, and such issues here that were considered included public services, things like tourism, recreation, economy, aesthetics, housing, and public safety, as well as others.

Environmental justice is an area in which both low income or minority populations are considered and their impacts of -- impacts of the project within about a 50-mile radius of the site.

The atmospheric science at the top left of the slide implies that we did look at issues dealing with air quality and the relationship with the state regulatory agencies.

On radiation protection, here we looked at such issues as exposure to the public, potential exposure to the public, and potential occupational exposure to the workers at the plant.

In the middle of the slide you'll see a bullet -- or a note on terrestrial ecology and to the far right, aquatic ecology. In these areas we basically look at both the terrestrial species that are threatened and endangered, according to the federal system, and also to those species that inhabit the aquatic environment, primarily you

might expect the Missouri River.

Finally, we also looked at nuclear safety issues, which will be the subject of a later discussion, and land use issues. And under the land use issues we also looked at such things as the impacts of operations a transmission line complex.

Discussions on the site background and the potential impacts of these environmentally-related topics and potential or postulated accidents are also found -- or primarily found in Chapters 2 through 5 of the draft report.

Next I'd like to discuss the analysis approach used and the preliminary results of the review as reflected in the draft. The generic environmental impact statement for license renewal, new Reg. 1437, was mentioned earlier as the GEIS, G-E-I-S, that's a commonly used acronym. In that document 92 environmental issues are identified and these are evaluated for license renewal.

Sixty-nine of these issues are considered generic or Category 1, which means the impacts are common to all reactors or common to all reactors with certain features such as plants that have cooling towers. And you'll find the Category 1 designation

at the upper left-hand side of that top block.

For the other 23 issues, the noncategory 1 issues, they are referred to as Category 2. The NRC found that the impacts were not the same at all sites and therefore site-specific analysis was needed. Only certain issues addressed in the generic environmental impact statement are applicable to Fort Calhoun Station Unit 1 because of the design and the location of the plant. For these generic issues that are applicable to Fort Calhoun, we assessed if there was any new information related to the issue that might change the conclusion in the generic environmental impact statement, and this is what's implied by the block marked "New and Significant" on the slide on the lower left.

If there is no new information, then the conclusions of the generic environmental impact statement are adopted. If new information is identified and it's determined to be significant, then the site-specific analysis for that issue would be performed. For the site-specific issues that are related to Fort Calhoun, a site-specific analysis was indeed performed.

Finally, during the scoping period, the

public was invited to provide information on potential new issues, as shown on the upper right portion of the slide. And the team, during its review, also looked to see if there were any new issues that needed evaluation.

environmental impact statement, an impact level is assigned. These levels are described in Chapter 1 of the draft report and they are consistent with the guidelines of the Federal Executive branch's counsel on environmental quality, or CQ, which basically provides guidance to all federal agencies on the implementation of the National Environmental Policy Act, or NEPA.

Definitions that you see here include those for small impact. Here, small impact -- for a small impact the effect is not detectable or too small to destabilize or noticeably alter any important attribute of the resource. If one were to use an example, one might consider if the proportion of fish loss is so small that it cannot be detected in relation to the total population in a river as a result of use of our intake structure, then that impact would be small.

For a moderate impact, the effect is

sufficient to alter noticeably, but not destabilize important attributes of the resource. Using the fishery source example again. If, for example, losses at the intake would cause the population to decline and then stabilize at a lower level, the impact might be considered to be moderate.

Finally, for an impact to be considered large, the effect is clearly noticeable and sufficient to destabilize important attributes of the resource. So for example, if fish loss through the intake structure use caused the population to decline to a point where it can't be stabilized and it continues to decline, then the impact would be considered large.

Let me briefly address what is covered in several of the environmentally important chapters, especially Chapters 2 and 4. In Chapter 2, we describe the power plant's systems generally and discuss the general environmental setting around the plant, the environmental baseline, if you will.

In Chapter 3 you might note that the licensee has not identified any plant refurbishment activities that were necessary prior to the period of extended operations, so no analysis of potential environmental impacts of refurbishment needed to be

considered.

In Chapter 4 we looked at the potential environmental impacts for an additional 20 years of operation of the Fort Calhoun Station Unit 1. The site-specific issues the team discussed in detail in Chapter 4 include potential impacts of operating the cooling system, transmission lines, land use impacts, and radiological impacts of normal operations, impacts related to water use, water quality, and the potential impacts to sensitive aquatic and terrestrial resources, such as federally threatened or endangered species.

I'll take just a few moments to identify some of the highlights of review. And if you have additional questions on our draft results, we'd be glad to try to answer those or let one of the team members who might be with us here today answer them for you. Thanks a lot.

One of the topics we looked at closely and discussed in some depth in Chapter 4 are the potential -- is the potential impact of operating a cooling system for the Fort Calhoun Station Unit 1 reactor. Fort Calhoun Station has a once-through heat dissipation system which uses water from the Missouri River to condense the steam used to

produce the electricity, then releases the cooling water back to the river. We did not identify any new and significant information from any of the Category 1 issues related to either the cooling system -- I'm sorry, related to the cooling system, either through the scoping process, by analysis of information provided by the applicant, or on the part of the staff during its visit or information reviews of other documents.

With respect to those Category 2 environmental issues related to the cooling system, the staff found the potential impacts of heat shock or impingement or entrainment of fish or shellfish during the cooling water intake screen operation are small.

Radiological impacts are a Category 1 issue. Because it's often a concern to the public, I wanted to take just a few minutes to briefly discuss it here. During the site visit, we 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 solid wastes were treated, packaged, and shipped. This is information is found in Chapter 2 of the draft supplemental EIS.

We also looked at how the applicant determines and demonstrates that they are in compliance with regulations for release of radiological effluents. This slide shows you the near-site and on-site locations that the applicant has monitored for airborne releases and direct radiation. There are also other monitoring stations beyond the site boundary including locations where fish, milk, water, and food products are sampled. Releases from the plant and the results of off-site potential doses are not expected to increase on a year-to-year basis during the 20-year license renewal term. Additionally, no new or significant -- and significant information was identified during the staff's review, the public's input during the scoping process, or evaluation of other available information.

Last issue I'd like to discuss among those evaluated in Chapter 4 is that of the federally threatened endangered species. A description of the terrestrial and aquatic ecology of the area and the potential for endangered and threatened species at the site is given in Chapter 2.

Although the bald eagle was originally

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listed as federally endangered, its status was lowered to threatened status in 1995 and it's being considered by the U.S. Fish and Wildlife Service for complete delisting, due to its -- primarily due to its level of recovery in the U.S., which has been nothing short of spectacular, really. There are no known bald eagle nesting sites at the Fort Calhoun Station, although the birds may use the area for forging, most commonly along the Missouri River.

Other federally threatened and endangered terrestrial species, those that live on land, if you will, were considered -- that were considered included the least tern and piping plover, both bird species, which are not shown on the slide, and the western prairie fringed orchid, a flower These species have not been found at the species. Ford Calhoun Station and the potential for impact to them from license renewal is considered small. Based on the information available to the staff, it was concluded that the continued operation of the station may affect, but is not likely to adversely affect, the bald eagle and it would have no effect on the other three threatened or endangered terrestrial species.

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There is one federally endangered aquatic species, the pallid sturgeon, shown here on the left. This sturgeon is also discussed in the report. Occurrences of the sturgeon have been reported in the Missouri River, both upstream and downstream of Fort Calhoun Station, and extensive habitat restoration projects have been implemented in Missouri by the U.S. Fish and Wildlife Service, and these programs have been ongoing since the mid '70s. Based on the information available to the staff, it was concluded that continued operation of the station again may affect, but is not likely to adversely affect the pallid sturgeon.

Additionally, the NRC is presently in consultation with the Fish and Wildlife Service on the two endangered -- on the endangered and threatened species under the provisions of Section 7 of the Endangered Species Act.

For all the Fort Calhoun Station issues that the team reviewed, we found that there were no new and significant information that was identified either during the scoping process, by the licensee during their development of the environmental review documentation, or by the staff during our analysis.

We also looked at issues for the uranium fuel cycle and solid waste management and for decommissioning. These two topics are discussed separately in Chapters 6 and 7 of the report. Both of these issues are Category 1 issues and were evaluated generically in the generic environmental impact statement. We found in this case as well that there was no new and significant information that was identified for either of these issues.

This concludes my remarks. We entertain any questions. I'm sorry, let me, let me continue. I do want to talk about alternatives as well.

In Chapter 8 of the draft, we evaluated the potential environmental impacts associated with alternatives to continuing operation of Fort Calhoun Station. In Chapter 8 we evaluated the potential environmental impact associated with the Fort Calhoun Station not operating, this is the no-action alternative. This alternative is a scenario in which the NRC would not renew the operating license of the Fort Calhoun Station, and when the plant ceases operation, OPPD would decommission the facility. We also looked at other alternatives, new electrical power generation from coal-fired, gas-fired plants or a new nuclear

plant, a purchased-power alternative, the application of alternative technologies such as wind, solar, and hydropower, and then a combination of these alternatives.

For each of the alternatives we looked at same types of issues that we looked at earlier, such as land use, ecology, socioeconomics, et cetera, the use of the same issues that were looked at for the Fort Calhoun station's 20-year license renewal term. We also looked at delayed return of other existing facilities as well as utility-sponsored conservation. And then we looked at a combination of those alternatives. And for each alternative we looked at whether the technologies would replace the generating capacity or could replace the generating capacity of the Fort Calhoun Station Unit 1 and whether it would be a feasible alternative to renewal of the current plant's license.

The preliminary conclusions were that the alternatives, including the no-action alternative, that is the one in which the license would not be renewed, may have environmental effects, and in at least some of the impact categories, they may reach moderate or a large significance.

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1 This concludes my presentation. I'll be 2 willing to entertain questions. 3 MR. CAMERON: Thank you very much, 4 Ken. Are there any questions for Ken about the 5 findings in the draft report? Okay. Thank you, 6 Ken. 7 As promised, we're going to look at the, what we call SAMA, Significant Accident Mitigation 8 Alternatives, Jack Cushing, and he'll tell you a 9 little bit about the process for submitting 10 11 comment. 12 Chapter 5 of the MR. CUSHING: Yes. report is entitled "The Environmental Impacts of 13 14 Postulated Accidents." There are two class of 15 accidents, design-basis accidents and severe accidents. 16 17 Design-basis accidents are those accidents that both the licensee and the NRC evaluated to 18 ensure that the plant can withstand without undue 19 20 risk to the public. 21 The environmental impacts or design-basis 22 accidents are evaluated during the initial 23 licensing process. And the ability of the plant to 24 withstand these accidents has to be demonstrated

before the plant is granted a license.

importantly, the licensee is required to maintain an acceptable design and performance capability throughout the life of the plant, including any extended-life operation. Since the licensee has to demonstrate acceptable plant performance for design-basis accidents throughout the life of the plan, the commission, in the generic environmental impact statement, determined that the environmental impact design-basis are of all small significance because the plant was designed to withstand these accidents. Neither the licensee nor the NRC is aware of any new and significant information on the capability of the plant to withstand design-basis accidents associated with license renewal. Therefore, the staff concludes that there are no impacts related to design-basis accidents beyond those discussed in the generic environmental impact statement.

Second category of accidents evaluated in the GEIS are severe accidents. Severe accidents by definition are more severe than design-basis accidents because they could result in substantial damage to the reactor core. The commission found in the generic environmental impact statement that the consequences for severe accidents are small for

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

The SAMA review for Fort Calhoun Station is contained in Section 5.2 of the environmental impact statement. The purpose of doing a SAMA evaluation is to ensure that the plant changes with the potential for improving severe accidents safety performance are identified and evaluated. Scope of the potential improvements that were considered included hardware modification, procedure changes, training program improvements, basically a full spectrum of potential changes. The scope included SAMAs that would prevent core damage, as well as SAMAs that improve containment performance.

For the SAMA analysis we first quantify overall plant risk. Secondly, identify potential improvements, and then quantify the risk reduction potential in the implementation cause for each improvement, and finally determine if implementation is justified.

In determining whether an improvement is

justified, the NRC staff looks at three factors.

First is whether the improvement is cost

beneficial, in other words, is the estimated

benefit greater than the estimated implementation

costs of the SAMA. Second factor is whether the

improvement provides a significant reduction in

total risk. The third factor is whether the risk

reduction is associated with the aging effects

during the period of extended operation, if it was,

we would be looking at implementation as part of

the license renewal process.

The preliminary results of the Fort Calhoun Station SAMA evaluation are summarized in this slide. The end result of the evaluation was that seven SAMAs were found to be cost beneficial. The cost-beneficial SAMAs include procedural and training enhancement in the use of commercially available secondary potential transient.

The seven cost-beneficial SAMAs are not required to be implemented at Fort Calhoun Station as part of license renewal because they do not relate to managing the effects of aging. However, OPPD currently plans to implement the seven cost-beneficial SAMAs.

Turning now to our overall conclusions. We

found that the impacts of license renewal are small in all impact areas. We also concluded that the alternatives, including the no-action alternatives, may have environmental effects in at least some impact categories that reach moderate or large significance. Based on these results, our preliminary recommendation is that the adverse environmental impacts of license renewal for Fort Calhoun Station are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

A quick recap of our current status. We issued the draft environmental impact statement for the Fort Calhoun license renewal on January 6th.

We are currently in the middle of a public comment period that is scheduled to end on April 10th. We expect to address the public comments, including any necessary revisions, to the environmental impact statement and issue a final environmental impact statement in August.

This slide is to provide information on how to access the draft environmental impact statement. You can contact me directly at the phone number provided. There are a number of copies out in the lobby, and you can pick one up on

1 your way out. In addition, the Blair and the Clark 2 public libraries have copies for you to look at, 3 and the document is available on the Web at the 4 address given. 5 This slide gives details on how to submit comments on the draft. Comment period, as I said 6 7 before, goes until April 10th, 2003. You can submit comments by writing directly to the address 8 9 given and you can send them to the e-mail address here, Ft_Calhoun_EIS@nrc.gov, or can you bring them 10 11 in person to our headquarters in Rockville. Thank 12 you. Are there any comments? 13 14 MR. CAMERON: Any questions? Yes. 15 MR. MASNIK: Underline. MR. CUSHING: Oh, yes. 16 17 e-mail address there's an underscore between Fort Calhoun and -- between Fort and Calhoun and between 18 Calhoun and EIS. So when you're using the e-mail 19 20 address, be sure to use the underscore. 21 MR. CAMERON: And, Jack, one thing 22 people might be interested in, you can go onto the 23 NRC website to look at the draft environmental 24 impact statement, as I think you mentioned. Will

we also be putting comments that people submit on

1	the environmental impact statement? If someone
2	wants to see what someone else said or when we're
3	reviewing those comments, will those comments be on
4	the website?
5	MR. CUSHING: No, those comments
6	aren't on our website. Where we do collect the
7	comments is in the final environmental impact
8	statement and we do include them as an appendix to
9	the final environmental impact statement.
10	MR. CAMERON: Okay. Let's go to
11	Mike Masnik for clarification.
12	MR. MASNIK: Also, that all comments
13	are docketed, so they would be in ADAMS. So a
14	person could actually access those comments through
15	our ADAMS documents.
16	MR. CAMERON: Okay. Good. And if
17	anybody wants to know how to the process for
18	using ADAMS, they could contact Jack.
19	MR. CUSHING: Contact me, and our
20	website also has guidance on how to use ADAMS as
21	well.
22	DR. ZAHN: There's an instructional
23	sheet at the front table as well.
24	MR. CAMERON: And there's
25	information about that?

1 DR. ZAHN: On ADAMS. 2 MR. CAMERON: Okay. Thank you very 3 much. Now it's time to -- thank you, Jack. 4 MR. CUSHING: Thank you. 5 MR. CAMERON: Time to hear from anybody who wants to make a public comment. 6 7 only have one person signed up formally now. Ιf anybody else wants to make a public comment, please 8 feel free to do so. And we have Gary Gates, who is 9 the vice president for nuclear programs, I believe, 10 11 at Omaha Public Power District. 12 MR. GATES: As stated, my name is 13 I'm vice president that is responsible Gary Gates. 14 for the operation of Fort Calhoun Station. 15 also like to acknowledge many of the OPPD staff that are here today that have worked hard with the 16 17 NRC on providing information on our application. And a special acknowledgment to Director Anne 18 McGuire who is a member of our board of directors 19 20 and in particular is in charge of the, and chair of the Nuclear Oversight Committee of our board which 21 22 monitors our performance. 23 I spoke to you in June, at the June meeting 24 in Omaha concerning our license renewal application, I welcome the opportunity to do so 25

again today in support of the preliminary conclusions of the NRC staff that there are no environmental impacts to preclude renewal of the operating license for Fort Calhoun Station.

OPPD provides electricity to more than 300,000 customers in a 13-county area in southeast Nebraska. It must be noted that 30 percent of this generation for those customers is generated at the Fort Calhoun Station. Fort Calhoun's a single unit plant located between Blair and Fort Calhoun and was declared operational and commercial in 1973, and has been operating safely since then. I am proud to have been a part of that operation of Fort Calhoun since the initial construction.

We feel that over the last 30 years we have demonstrated a high level of safety and environmental stewardship with all of our programs and operations. In fact, the continued safe operation of Fort Calhoun Station remains the number one priority at OPPD. OPPD maintains its facilities and conducts its operation based on a strong commitment to environmental monitoring and management. Our policy is to conduct operations, not just in compliance with all applicable government laws and regulations, but over and

beyond minimum requirements for those regulations.

This ensures our ability to protect the environment and to serve in the best interest of our employees, our customers, and surrounding community.

We feel the NRC staff recommendation, which the subject of today's meetings, is a testament to the effectiveness of that approach. OPPD will continue what we believe is a comprehensive environmental monitoring program, hopefully for an additional 20 years of operation from 2013.

Furthermore, we will continue to develop and implement ways to further minimize the risks associated with operation of a nuclear plant. In other words, we are committed to conducting our operations in an environmentally responsible manner as we have done for the last 30 years.

Let me take a few minutes to say something about the employees who work at Fort Calhoun nuclear station. These men and women take pride in their ability to safely operate a clean, dependable source or power. They do so not only as workers, but as residents of the areas they serve. Besides having homes and families, they are valued members of the community, and they often serve as volunteers and social leaders in the community in

which we live. They also know that the effective 1 2 operation of Fort Calhoun Station for another 20 3 years will contribute to the continued economic 4 benefits to the area. That includes jobs not only for our plant employees, but for many of the area 5 businesses with whom we work. 6 7 The point is that we have a stake in continuing to operate the plant in a safe manner 8 and a strong environmental manner. 9 10 One other note, OPPD's concern for 11 environment goes beyond Fort Calhoun Station. We 12 have invested in other clean sources of power such as wind and biomass. 13 14 In closing, let me thank you for this 15 opportunity to speak on this very important issue in support of the staff's recommendation. 16 you for your time. 17 Thank you. Thank you, 18 MR. CAMERON: 19 Gary. 20 Is there anybody else who wants to make a 21 statement, provide a comment at this point or ask a 22 question? Okay. I think we probably could adjourn 23 at this point, and we're going to be back at seven 24 o'clock for another public meeting and an open

house at six o'clock before that meeting.