

November 22, 2002

Mr. Ross T. Ridenoure
Division Manager - Nuclear Operations
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 550
Fort Calhoun, NE 68023-0550

SUBJECT: ISSUANCE OF ENVIRONMENTAL SCOPING SUMMARY REPORT
ASSOCIATED WITH THE STAFF'S REVIEW OF THE APPLICATION FOR
RENEWAL OF THE OPERATING LICENSE FOR FORT CALHOUN STATION,
UNIT 1

Dear Mr. Ridenoure:

From May 10 to July 10, 2002, the Nuclear Regulatory Commission (NRC) conducted scoping meetings to determine the extent of the NRC staff's environmental review of the application for renewal of the license for Fort Calhoun Station, Unit 1. The application for renewal was submitted by Omaha Public Power District on January 9, 2002, and modified by letter dated January 18, 2002. As part of the scoping process, the NRC staff held two public environmental scoping meetings in Omaha, Nebraska, on June 18, 2002, to solicit public input regarding the scope of the review. The scoping process is the first step in the development of a plant-specific supplement to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS)," for Fort Calhoun Station, Unit 1.

The NRC staff has prepared the enclosed environmental scoping summary report identifying comments received at the June 18, 2002, license renewal environmental scoping meetings, and in writing during the scoping comment period. In accordance with 10 CFR 51.29(b), you are being provided a copy of the scoping summary report. The transcripts of the meetings can be found as an attachment to the July 12, 2002, meeting summary, which is available electronically for public inspection at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland, or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS), under Accession No. ML021960359. ADAMS is accessible at <http://www.nrc.gov/reading-rm/adams.html>, which provides access through the NRC's Public Electronic Reading Room (PERR) link. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR Reference staff at 1-800-397-4209, or 301-415-4737, or by e-mail to pdrr@nrc.gov. The comment letters and e-mail are also available through ADAMS.

R. T. Ridenoure

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The next step in the environmental review process is the issuance of a draft supplement to the GEIS scheduled for January 2003. Notice of the availability of the draft supplement to the GEIS and the procedures for providing comments will be published in an upcoming *Federal Register* notice. If you have any questions concerning this matter, you can call me at (301) 415-1424.

Sincerely,

/RA/

Jack Cushing, Project Manager
Environmental Section
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No. 50-285

Enclosure: As stated

cc w/encl: see next page

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OFFICIAL AGENCY RECORD

**Environmental Impact Statement
Scoping Process**

Summary Report

**Fort Calhoun Station, Unit 1
Blair, Nebraska**

November 2002



**U.S. Nuclear Regulatory Commission
Rockville Maryland**

Introduction

On January 11, 2002, the Nuclear Regulatory Commission (NRC) received an application from the Omaha Public Power District (OPPD) dated January 9, 2002, for renewal of the operating license of Fort Calhoun Station Unit 1. The application was subsequently revised on January 18, 2002. Fort Calhoun Unit 1 is located in Washington County, Nebraska. As part of the application, OPPD submitted an environmental report (ER) prepared in accordance with the requirements of 10 CFR Part 51. 10 CFR Part 51 contains the NRC requirements for implementing the National Environmental Policy Act (NEPA) of 1969. Section 51.53 outlines requirements for preparation and submittal of environmental reports to the NRC.

Section 51.53(c)(3) was based on the findings documented in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants," (GEIS), dated May 1996. The GEIS, in which the staff identified and evaluated the environmental impacts associated with license renewal, was first issued as a draft for public comment. The staff received input from Federal and State agencies, public organizations, and private citizens before developing the final document. As a result of the assessments in the GEIS, a number of impacts were determined to be generic to all nuclear power plants. These were designated as Category 1 impacts. An applicant for license renewal may adopt the conclusions contained in the GEIS for Category 1 impacts, absent new and significant information that may cause the conclusions to fall outside those of the GEIS. Category 2 impacts are those impacts that have been determined to be plant-specific and are required to be evaluated in the applicant's ER.

The Commission determined that the NRC does not have a role in energy planning decision-making for existing plants, which should be left to State regulators and utility officials. Therefore, an applicant for license renewal need not provide an analysis of the need for power, or the economic costs and economic benefits of the proposed action. Additionally, the Commission determined that the ER need not discuss any aspect of storage of spent fuel for the facility that is within the scope of the generic determination in 10 CFR 51.23(a) and in accordance with 10 CFR 51.23(b). This determination was based on the Nuclear Waste Policy Act of 1982 and the Commission's Waste Confidence Rule, 10 CFR 51.23.

On May 10, 2002, the NRC published a Notice of Intent in the *Federal Register* (67 FR 31847), to notify the public of the staff's intent to prepare a plant-specific supplement to the GEIS to support the renewal application for the Fort Calhoun Unit 1 operating license. The plant-specific supplement to the GEIS will be prepared in accordance with NEPA and 10 CFR Part 51. As described in 10 CFR Part 51, the NRC initiated the scoping process with the issuance of the *Federal Register* Notice. The NRC invited the applicant; Federal, State, and local government agencies; local organizations; and individuals to participate in the scoping process by providing oral comments at the scheduled public meetings and/or submitting written suggestions and comments no later than July 10, 2002. The scoping process included two public scoping meetings, which were held at the Days Hotel Carlisle in Omaha, Nebraska, on June 18, 2002. The NRC announced the meetings in local and area newspapers by advertisements and legal notices (Omaha World Herald [6/7/02], Blair-area Enterprise [6/7/02], and Pilot-Tribune [6/11/02]), issued press releases, and distributed and posted flyers locally. Approximately 80 people attended the meetings. Both sessions began with NRC staff members providing a brief overview of the license renewal process and the NEPA process. Following the NRC's prepared statements, the meetings were open for public comments. Twenty-one (21) attendees provided either oral comments or written statements that were recorded and transcribed by a certified court reporter. The transcripts of the meetings can be

found as an attachment to the meeting summary, which was issued on July 12, 2002. The meeting summary is available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS) under accession number ML021960359. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm.html> (the Public Electronic Reading Room) (Note that the URL is case-sensitive).

The scoping process provides an opportunity for public participation to identify issues to be addressed in the plant-specific supplement to the GEIS and highlight public concerns and issues. In the Notice of Intent, the staff identified the following objectives of the scoping process:

1. Define the proposed action
2. Determine the scope of the supplement to the GEIS and identify significant issues to be analyzed in depth
3. Identify and eliminate peripheral issues
4. Identify any environmental assessments and other environmental impact statements being prepared that are related to the supplement to the GEIS
5. Identify other environmental review and consultation requirements
6. Indicate the schedule for preparation of the supplement to the GEIS
7. Identify any cooperating agencies
8. Describe how the supplement to the GEIS will be prepared

At the conclusion of the scoping period, the NRC staff and its contractor reviewed the transcripts and all written material received, and identified individual comments. Six letters or e-mail documents containing comments were also received during the scoping period. All comments and suggestions received orally during the scoping meetings or in writing were considered. Each set of comments from a given commenter was given a unique alpha identifier (Commenter ID letter), allowing each set of comments from a commenter to be traced back to the transcript, letter, or e-mail in which the comments were submitted. Several commenters submitted comments through multiple sources (e.g., oral comments at scoping meetings with subsequent submittal of a letter or e-mail message).

Table 1 identifies the individuals providing comments and the Commenter ID letter associated with each person's set(s) of comments. The Commenter ID letter is preceded by FCS (short for Fort Calhoun Station). For oral comments, the individuals are listed in the order in which they spoke at the public meeting. Accession numbers indicate the location of the written comments in the ADAMS.

Comments were consolidated and categorized according to the topic within the proposed supplement to the GEIS or according to the general topic if outside the scope of the GEIS. Comments with similar specific objectives were combined to capture the common essential

issues that had been raised in the source comments. Once comments were grouped according to subject area, the staff and contractor determined the appropriate action for the comment. The staff made a determination on each comment that it was one of the following:

1. a comment that was actually a question and introduced no new information.
2. a comment that was either related to supporting or opposing license renewal in general (or specifically, Fort Calhoun) or that made a general statement about the licensing renewal process. The comment may only be a general statement regarding Category 1 and/or Category 2 issues. In addition, it provided no new information and did not pertain to 10 CFR Part 54.
3. a comment about a Category 1 issue that provided new information requiring evaluation during the review, or provided no new information.
4. a comment about a Category 2 issue that provided information requiring evaluation during the review, or provided no such information.
5. a comment regarding alternatives to the proposed action.
6. a comment that raised an environmental issue that was not addressed in the GEIS.
7. a comment outside the scope of license renewal (not related to 10 CFR Parts 51 or 54), that included comments regarding topics such as the need for power, current operational safety, emergency preparedness, site safeguards and security, and other topics.
8. a comment on safety issues pertaining to 10 CFR Part 54.

Each comment is summarized in the following pages. For reference, the unique identifier for each comment (Commenter ID letter listed in Table 1 plus the comment number) is provided. In those cases where no new information was provided by the commenter, no further evaluation will be performed.

The preparation of the plant-specific supplement to the GEIS (which is the Supplemental EIS, or SEIS) will take into account all the relevant issues raised during the scoping process. The SEIS will address both Category 1 and 2 issues, and any new information identified as a result of scoping. The SEIS will rely on conclusions supported by information in the GEIS for Category 1 issues, and will include the analysis of Category 2 issues and any new and significant information. The draft plant-specific supplement to the GEIS will be made available for public comment. The comment period will offer the next opportunity for the applicant; interested Federal, State, and local governmental agencies; local organizations; and members of the public to provide input to the NRC's environmental review process. The comments received on the draft SEIS will be considered in the preparation of the final SEIS. The final SEIS, along with the staff's Safety Evaluation Report (SER), will provide the basis for the NRC's decision on the FCS license renewal application.

TABLE 1 - Individuals Providing Comments During Scoping Comment Period

Commenter ID	Commenter	Affiliation (if stated)	Comment Source, with ADAMS accession no., where applicable^(a)
FCS-A	Mick Mines	Mayor, Blair, NE	Afternoon Scoping Mtg.
FCS-B	Larry Halford	Mayor, Ft. Calhoun, NE	Afternoon Scoping Mtg.
FCS-C	Gary Gates	OPPD	Afternoon Scoping Mtg.
FCS-D	Joe Gaspar	OPPD	Afternoon Scoping Mtg.
FCS-E	Lou Burgher	Greater Omaha Chamber of Commerce	Letter (see FCS-Z)
FCS-F	Cheryl Straub	Greater Omaha Chamber of Commerce	Afternoon Scoping Mtg.
FCS-G	Sam Augustine	University of Nebraska	Afternoon Scoping Mtg.
FCS-H	John Pollack	Private Citizen, Meteorologist	Afternoon Scoping Mtg.
FCS-I	Terry Moore	Omaha Federation of Labor	Afternoon Scoping Mtg.
FCS-J	Jonathan Schwartz	Nebraska Emergency Management Agency	Afternoon Scoping Mtg.
FCS-K	Al Berndt	Nebraska Emergency Management Agency	Letter (see FCS-Y)
FCS-L	Bill Pook	Region 56, NE, Emergency Management Agency	Afternoon Scoping Mtg.
FCS-M	Terry Hummel	Pottawattamie, Iowa Emergency Management Agency	Afternoon Scoping Mtg.
FCS-N	Alan Schlesinger	Private Citizen, Retired Biology Professor	Afternoon Scoping Mtg.
FCS-O	Toby Churchill	Sarpy County Economic Development Corporation	Evening Scoping Mtg.
FCS-P	Gary Gates	OPPD	Evening Scoping Mtg.
FCS-Q	Joe Gaspar	OPPD	Evening Scoping Mtg.
FCS-R	Carl Rennerfeldt	City of Blair, NE Fire Dept.	Evening Scoping Mtg.
FCS-S	Frances	Private Citizen, Dentist	Evening Scoping Mtg.

Commenter ID	Commenter	Affiliation (if stated)	Comment Source, with ADAMS accession no., where applicable^(a)
FCS-T	Jeffrey Pokorny	Private Citizen, Businessman	Evening Scoping Mtg.
FCS-U	Tom Foster	Private Citizen, Businessman	Evening Scoping Mtg.
FCS-V	Donna Lotwaitis	Private Citizen, Consultant	Evening Scoping Mtg.
FCS-W	Joe Pettit	Private Citizen, Green Party	Evening Scoping Mtg.
FCS-X	Bret Voorhees	Iowa Emergency Management Division	E-mail, June 18, 2002 (ML021860452)
FCS-Y	Al Berndt	Nebraska Emergency Management Agency	Letter, June 4, 2002 (ML021890064)
FCS-Z	Louis Burgher	Greater Omaha Chamber of Commerce	Letter, June 18, 2002 (ML021860437)
FCS-AA	Sam Augustine	University of Nebraska Medical Center	Letter, June 18, 2002 (ML021860433)
FCS-AB	John Pollack	Private Citizen, Meteorologist	E-mail, July 10, 2002 (ML021990682)
FCS-AC	Michael McLarney	United Way of the Midlands	Letter, July 9, 2002 (ML021970485)

^(a)The afternoon transcript can be found under accession number ML021970153, and the evening transcript can be found under accession number ML021970170.

**Fort Calhoun Station (FCS), Unit 1
Public Scoping Meeting
Comments and Responses**

The following pages summarize the comments and suggestions received as part of the scoping process, and discuss their disposition. Parenthetical numbers after each comment refer to the Commenter's ID letter and the comment number. Comments can be tracked to the commenter and the source document through the ID letter and comment number listed in Table 1. Comments are grouped by category. The categories are as follows:

1. General Comments in Support of Nuclear Power
2. General Comments in Opposition to Nuclear Power
3. General Comments in Opposition to License Renewal and its Processes
4. Comments in Support of License Renewal for Fort Calhoun Station Unit 1
5. Comments in Opposition to License Renewal for Fort Calhoun Station Unit 1
6. Comments Concerning Category 1 Water Quality Issues
7. Comments Concerning Category 1 Land Use Issues
8. Comments Concerning Category 1 Air Quality issues
9. Comments Concerning Human Health Issues
10. Comments Concerning Category 1 Socioeconomic Issues
11. Comments Concerning Category 2 Socioeconomic Issues
12. Comments Concerning Category 2 Threatened or Endangered Species, Aquatic Ecology, or Terrestrial Resources Issues
13. Comments Concerning Alternatives
14. Comments Concerning Category 1 Uranium Fuel Cycle and Waste Management Issues
15. Comments Concerning Postulated Accident Issues
16. Comments Concerning Issues Outside the Scope of License Renewal: Operational Safety, Emergency Preparedness, Safeguards and Security, Aging Management, Need for Power, and Other Issues.

Comments

1. General Comments in Support of Nuclear Power

Comment: Also, all of the individuals and organizations in our community benefit directly from the very affordable electric rates that result from the efficient management and operation of the power generating facilities. (FCS-AC-2)

Response: *The comment is noted. The comment is supportive of the nuclear power industry and is general in nature. The comment provides no new information and will not be evaluated further.*

2. General Comments in Opposition to Nuclear Power

Comment: The bottom line issue for me and other members of the Green Party is that we really don't think that a nuclear power plant can be safe. (FCS-S-2)

Comment: They don't understand the severity of power production by nuclear plants. It amazes me the more I learn. Even tonight when Dr. Mendenhall was testifying, she came up with some new information that I wasn't aware of.

I grew up in Schuyler, Nebraska, and lived through two generating plant explosions. To the best of my recollection, they were 20 or 30 years ago. No one died, and the injuries were very, very limited -- a couple of first-degree burns, minor burns. The plant was shut down for a month, and we started to crank up again.

By the way, Schuyler has got the oldest municipal generating facility in the State of Nebraska, or used to. We buy our power from Nebraska Public Power now.

Those explosions were so traumatic at the time. But looking back on them, they are just a tiny, tiny blip at what could happen today. (FCS-T-1)

Comment: Generating electricity with nuclear power is the most complicated, it's the most expensive, it's the most dangerous, Rube Goldberg devised method ever invented, and then implemented, to bring water from room temperature to boiling point.

When you think about it, a lot of people think that nuclear energy has something to do with the production of electricity. It's strictly to boil water. I don't think there's a person in this room, including the nuclear engineers, who would take that risk now today if the situation wasn't in place.

I think we started way back in 1960 or '65. People looked at the risks. There would just be -- no one would take it. The risk is just too immense.

Schuyler's plant blew up a couple of times, went back into operation, without any perceivable -- there is no record of it in the history of Schuyler today. If Fort Calhoun has an accident, it's got the possibility to poison everybody in this room and within a 50-mile radius of this room -- every person. It's that deadly.

How we can take that risk is beyond me. Now, my four-year grandson and my two-year old granddaughter are going to live with this. Their grandchildren will live with it. Their grandchildren will live with it. (FCS-T-2)

Comment: When my grandson is 25 years old -- and he's going to be an engineer like this father -- and he says, "What did you do to stop this grave risk?" I'll tell him I was here tonight

and did some other things. I hope that I can also tell him that we are not producing nuclear -- I hope that he sees that we're not producing electricity by nuclear means at that time. I hope. I can only hope. (FCS-T-6)

Response: *The comments are noted. The comments are generally in opposition to nuclear power and do not provide any new information. These comments are not within the scope of 10 CFR Part 51 for the environmental review associated with the application for license renewal at Fort Calhoun Station Unit 1. Therefore, these comments will not be evaluated further.*

3. General Comments in Opposition to License Renewal and its Processes

Comment: The risk is too great. I'll say it again, and I'll say it again. I'm here tonight to advocate the immediate closing of Fort Calhoun. We sell that 30 percent of the power to other places. We could close it today and not miss a beat. That's impractical, and I realize that as a business person. (FCS-T-8)

Comment: But we cannot relicense the plant. We've got enough time now to make the gradual transition to other means. And even if -- when we're twice as expensive, if solar were twice as expensive, my grandson I'm sure would say when he's an engineer in 20 years, "That was a good decision to make. I'll pay that cost."

My electric bill last year was \$1,000. If I had to pay \$2,000, I would gladly pay it -- gladly pay it -- if Fort Calhoun were shut down. (FCS-T-9)

Response: *The comments are noted. These comments oppose license renewal and speak to NRC's license renewal review process in general, but do not provide new information. The comments do not raise any issues within the scope of this license renewal review. Therefore, the comments will not be evaluated further.*

Comment: The last thing I want to leave you with -- last but not least -- is reactors kill. In a little noted correction published in the July 20th -- July 30th, excuse me, Federal Register, the NRC confirmed that relicensing aging U.S. reactors to operate for another 20 years would release 14,800 per person rems of radiation per plant. The NRC calculated this exposure could cause 12 cancer deaths per reactor. (FCS-U-9)

Response: *The comment is noted. There has been much concern and confusion regarding the statements in the Federal Register notice of July 30, 2001 (66 FR 39277) regarding potential long term health effects that may occur as a result of radiation doses from an additional 20 years of operation of nuclear power plants as a result of license renewal. According to 10 CFR Part 51, Subpart A, Appendix B, Table B-1, "the 100 year environmental dose commitment to the U.S. population from the fuel cycle, high level waste and spent fuel disposal excepted, is calculated to be about 14,800 person-rem or 12 cancer fatalities, for each additional 20 year power reactor operating term."*

This calculated value of 12 additional deaths from fatal cancer over the 20 years of additional operation of a nuclear power plant is the result of several conservative assumptions. This value is, in fact, a calculated upper bound value. It does not mean that 12 people will die from cancer as a direct result from an additional 20 years of continued routine operation of any nuclear power plant.

These calculations use the concept of collective dose. Collective dose estimates effects across a very large population, assuming that a small amount of radiation dose spread out among a large population would yield similar effects to a larger amount of radiation dose to a much smaller population. This is a very conservative assumption. The Health Physics Society, www.hps.org, states “[b]elow the dose of ten rem, estimations of adverse health effect is speculative. Collective dose remains a useful index for quantifying dose in large populations and in comparing the magnitude of exposure from different radiation sources, However, for a population in which all individuals receive lifetime doses of less than 10 rem above background, collective dose is a highly speculative and uncertain measure of risk and should not be quantified for the purposes of estimating population health risks.”

The cancer risk factors used in this calculation are also quite conservative. They are from the BEIR-V report , “Health Effects of Exposure to Low Levels of Ionizing Radiation.” In this report it is estimated that “if 100,000 persons of all ages received a whole body dose of 0.1 Gy (10 rad) of gamma radiation in a single brief exposure, about 800 extra cancer deaths would be expected to occur during their remaining lifetimes in addition to the nearly 20,000 cancer deaths that would occur in the absence of radiation. Because the extra cancer deaths would be indistinguishable from those that occurred naturally, even to obtain a measure of how many extra deaths occurred is a difficult statistical estimation problem.”

The radiation dose contribution to the population from current nuclear power plants is estimated to be 4.8 person-rem, while the contribution to the population from the complete uranium fuel cycle is 136 person-rem per year. The dose to an individual is only a very small fraction of these population doses. The contribution to the average dose received by an individual from fuel cycle-related radiation and other sources is listed in Table 2. The nuclear fuel-cycle contribution to an individual’s average radiation dose as shown in the table is extremely small (less than 1 millirem per year).

At the request of Congress, the National Cancer Institute (NCI) conducted a study in 1990, “Cancer in Populations Living Near Nuclear Facilities,” to look at cancer mortality rates around 52 nuclear power plants, including Ft. Calhoun, nine Department of Energy facilities, and one former commercial fuel reprocessing facility. The NCI study concluded “from the evidence available, this study has found no suggestion that nuclear facilities may be linked causally with excess deaths from leukemia or from other cancers in populations living nearby.” Additionally, the American Cancer Society has concluded that although reports about cancer case clusters in such communities have raised public concern, studies show that clusters do not occur more often near nuclear plants than they do by chance elsewhere in the population.

The Generic Environmental Impact Statement identified radiation exposures to the public during the license renewal term as a Category 1 issue. This comment is generic in nature and not within the scope of 10 CFR Part 51 for the environmental review associated with the application for license renewal at Fort Calhoun Station, Unit 1. In addition, the comment provides no new information; therefore, the comment will not be evaluated further in the SEIS.

Table 2 - Annual Effective Dose Equivalent

SOURCE	DOSE (mrem/yr)	PERCENT OF TOTAL
Natural		
Radon	200	55%
Cosmic	27	8%
Terrestrial	28	8%
Internal (body)	39	11%
<i>Total Estimated Natural</i>	<i>300</i>	<i>82%</i>
Artificial		
Medical X ray	39	11%
Nuclear medicine	14	4%
Consumer products	10	3%
Other		
Occupational	0.9	<0.3
<u>Nuclear Fuel Cycle</u>	<1	<0.03
Fallout	<1	<0.03
Miscellaneous	<1	<0.03
<i>Total Estimate Artificial</i>	<i>63</i>	<i>18%</i>
	----	----
<i>Total Estimated Artificial and Natural</i>	360	100%

**NCRP Report 93, "Public Radiation Exposure from Nuclear Power Generation in the United States" as abstracted by the University of Michigan (<http://www.umich.edu/~radinfo/>.)*

4. Comments in Support of License Renewal for Fort Calhoun Station Unit 1

Comment: I'm here to comment in support of extending the license for the Fort Calhoun nuclear power station. (FCS-A-1)

Comment: Basically, they have been -- OPPD has been good neighbors. Any time we've ever had any concerns, and we have, about the environmental impact on our community. For example, the City Council, everyone on the City Council has been, has lived in Fort Calhoun for at least 30 years. We all have families. We all have -- naturally living there 30 years, we have a lot of friends, so we're very concerned on what's going on up there, especially the safety issues that we've had.

The response that we get from OPPD has been exceptional. And I mean that. Any time we've had a concern or questions. We don't get a smokescreen. We get people to come to the meetings, explain to us in layman's terms of what's going on, what we need. If we need any support to help them, we work together good. So it has been a very good deal for the community as a whole. And I do mean that.

I want to thank the Nuclear Regulatory Commission. I hope they do get their license because we do support that very much. (FCS-B-1)

Comment: OPPD maintains a strong commitment to environmental management. Our operations are guided by our environmental protection policy which is a corporate level document that ensures all activities that OPPD undertakes are conducted in an environmentally responsible manner that protects the interests of our employees, our customer-owners, and the communities we serve. This ensures OPPD maintains its facilities and conducts its operations in compliance with the applicable government laws and regulations.

It is our policy to extend these efforts beyond compliance in important areas such as pollution prevention and natural resource stewardship. Pollution prevention programs emphasize reduction, reuse, and recycling in the management of the materials and products that we use to produce electricity. Natural resources stewardship ensures the protection of the sensitive natural systems and conservation of natural resources.

I'll share a few of these examples with you. OPPD has been recently awarded the distinguished Environmental Leadership Award by the Nebraska Industrial Council on the Environment and was named a Treeline USA utility by the National Arbor Day Foundation.

OPPD's Forestry Department conducts programs that have resulted in the planting of more than 100,000 trees and shrubs within the OPPD service territory. And finally, at the Fort Calhoun Station, our employees have established a prairie grass habitat area at the site, in addition to numerous nesting boxes for bluebirds, wood ducks, etcetera that share the resources on our site with us.

In keeping within the spirit of our environmental policy, we took a thorough approach to the license renewal environmental review. We established a review team that includes consultants who work closely with the environmental and engineering staff both there at the plant and our corporate environmental group. Members of these teams are recognized leaders in the industry and have extensive experience at Fort Calhoun Station. Many of the team members also in support of the environmental studies and monitoring are associated with the initial operation of the plant.

In order to ensure that all relevant issues were addressed, the team conducted extensive interviews to gain a thorough understanding of the operational environmental changes that occurred during the 30 years of operation of the station. This includes a review of our environmental baseline established during the initial licensing and operation; our operating history; the NRC's generic study; and current information from various external sources.

OPPD performed a considerable amount of work that characterized the environmental conditions in support of the initial licensing and operation of the plant. Pre-operational and post-operational studies started in the late 1960s and continued through the mid-1980s. The work on the Missouri River represents the most comprehensive characterization of the middle reaches of the river available today and OPPD continues to monitor these certain key areas.

As part of the review and assessment of current conditions, the OPPD environmental review team conducted site walkdowns, reviewed monitoring reports, current publications and studies, and interviewed a number of state and federal agencies, including the U.S. Fish and Wildlife Service, the U.S. Corps of Engineers, the Nebraska Department of Environmental Quality, the Natural Resources, Game and Parks Commission, and the Economic Development Commission.

Given that we are located on the Iowa border, we also interfaced with the Iowa Department of Natural Resources and the Iowa Department of Health.

As Tom Kenyon described, the NRC has prepared a generic environmental impact statement that identified and evaluated many environmental issues that may be associated with the operation of nuclear power plants beyond their current license period. NRC was able to generically resolve many of these issues and others are to be addressed on a site specific basis. The review team reviewed the generic environmental impact statement and findings and confirmed that there was no new information of significance that would alter the NRC's generic conclusions as they would apply to Fort Calhoun Station.

Site specific assessments were conducted by the review team and addressed 12 major environmental areas that I've grouped into 5 general areas. These are water, plants, animals, air, land use, and people. (FCS-D-1)

Comment: On behalf of the Greater Omaha Chamber of Commerce, I'm expressing full support for the Omaha Public Power District's application to relicense the Fort Calhoun Station. (FCS-E-1) (FCS-Z-1)

Comment: And again, we at the Chamber fully support OPPD's application for relicensing and we recommend approval of that. (FCS-F-2)

Comment: We feel that OPPD is an exemplary and committed member of our community and we support OPPD's application for relicensure. (FCS-G-3) (FCS-AA-3)

Comment: The Fort Calhoun Nuclear Station, with working partners such as they have with the State of Nebraska, is considered a Nebraska asset that must be retained. (FCS-K-3) (FCS-Y-3)

Comment: The OPPD Station at Fort Calhoun is a stellar example of what corporate citizenship should be in any civics book. We wholeheartedly endorse their renewal application and pray that the NRC grants this application request.

As a public citizen, I was involved in the pilot plant reactor oversight process and I also annually review the end of cycle plant performance reports on a very, very close basis. As a father in the community and an emergency responder, I am thoroughly satisfied with the safety measures that the NRC has in place at the Fort Calhoun Station, but I am also more impressed with the extra steps that Fort Calhoun Station has chosen to go above and beyond the minimum NRC standards. NRC and Fort Calhoun provide a very safe neighbor for me and my children. (FCS-L-2)

Comment: In short, they are fully integrated and a key member of our public safety team and in view of their professional performance and contributions to our community, I and we, support the OPPD's application to continue operating at Fort Calhoun Nuclear Station for another 20 years. (FCS-M-2)

Comment: OPPD maintains a strong commitment to environmental management. OPPD's operations are guided by our environmental protection policy that ensures all activities that OPPD undertakes are conducted in an environmentally responsible way, and that protects the interests of our employees, our customers, and the communities we serve.

It ensures that OPPD maintains its facilities and conducts its operations in compliance with applicable government laws and regulations. It's our policy to go beyond the minimum requirements of these rules and to implement both pollution prevention and natural resource

stewardship. Pollution prevention programs emphasize the reduction, reuse, and recycling in the management of the materials and products that are used in the production of electricity.

Our natural resource stewardship policies ensure the protection of sensitive natural systems and conservation of natural resources. I'd like to share a couple of examples of this with you. OPPD was recently awarded the Distinguished Environmental Leadership Award by the Nebraska Industrial Council on the Environment and was named a Treeline USA utility by the National Arbor Day Foundation.

OPPD's Forestry Department conducts a program that has resulted in the planting of approximately 100,000 trees and shrubs within our service area.

And, finally, at the Fort Calhoun site, our employees have established a number of environmental areas, including a prairie grass habitat area, and established a number of nesting boxes for bluebirds, wood ducks, and other animals that share the site with us.

In keeping with the spirit of environmental policy, we took a thorough approach to the license renewal environmental review. We established a review team that includes consultants that work closely with us in the environmental staff -- with our environmental staff and our engineering staff at both our plant and the corporate environmental group.

Members of this team are recognized leaders in the industry and have extensive experience at Fort Calhoun Station. Many of the team members also participated in the environmental studies and monitorings associated with the initial operation of the plant.

In order to ensure that all relevant issues were identified and addressed, the team conducted an extensive review to gain a thorough understanding of the operational and environmental changes over the last 30 years of operation of Fort Calhoun.

This included a review of the environmental baseline establishing both the initial licensing and operation requirements, a look at the plant's history, and the NRC generic environmental impact statement study that was used as the basis for the licensing of all -- or the renewal of all licenses, and current information from external sources.

We performed a considerable amount of work characterizing the environmental conditions in support of the initial licensing and plant operation. Pre-operational and post-operational studies were conducted in the late '60s, continuing through the mid 1980s.

The work on the Missouri River represents the most comprehensive characterization of the middle reaches of the Missouri River that is currently available, and OPPD continues to monitor key areas associated with the river.

As part of the review and assessment of the current conditions, the OPPD Environmental Review Team conducted site walkdowns, reviewed monitoring reports, current publications, studies, and interfaced with a number of state and federal agencies, including the U.S. Fish and Wildlife Service, the U.S. Corps of Engineers, the Nebraska Departments of Environmental Quality, Natural Resources, Games and Parks, Health, and Economic Development.

Given we are located on the Iowa border, we also interfaced with the Iowa Department of Natural Resources and the Iowa Department of Health.

As Tom Kenyon described, NRC prepared an environmental impact statement that identified and evaluated many of the environmental issues that may be associated with the operation of nuclear plants beyond their existing license period. NRC was able to generically resolve many of these issues, and others have to be addressed on a site-specific basis.

The review team reviewed the environmental impact statement and its findings and confirmed that there is no new information of significance that would alter the NRC's generic conclusions relative to Fort Calhoun Station.

The site-specific assessments conducted by the review team addressed 12 environmental issues that I have grouped into five general categories -- water, plants and animals, air, land use, and people. (FCS-Q-1)

Comment: I don't know what I can add, other than to say I sleep well at night. I feel great confidence in the education, in the detail that goes into the safety evaluations, into this license renewal project. I'm amazed at the detail and the searching and the answers and the people involved.

So we can all have fears, but I've seen -- I'm a registered radiation protection technician, so I've seen the radiological aspect. I'm a certified hazardous materials manager, so I've seen the environmental aspects. And now I'm working on license renewal, and I just feel confident that all of the questions are being asked. And, you know, comments are welcomed and answers will be given.

And I just feel from living across the street, working with these people, that we can rest assured that OPPD is being operated soundly and in accordance with regulations, and with people who are parents and have children and want the best things to happen.

And I just -- you know, I have no fear of the water I drink from the well. I have a natural well. The air that I breathe -- OPPD has provided electricity, and we take for granted the lives that are saved from having electricity every day and the options that are out there for electricity. I mean, I just think that nuclear power is safe and a wise option, and I'm happy to live there and hope to live there the rest of my life. (FCS-V-1)

Comment: We whole heartily support renewal of the plant's license. (FCS-X-2)

Comment: Your approval of the license renewal of the Fort Calhoun plant would ensure the continued presence of a great corporate citizen that provides value in so many ways to our entire community. (FCS-AC-3)

Response: *The comments are noted. The comments are supportive of license renewal at Fort Calhoun Station Unit 1, and are general in nature. The comments provide no new information, and therefore, will not be evaluated further.*

5. Comments in Opposition to License Renewal for Fort Calhoun Station Unit 1

Comment: The risk is too great. I'll say it again, and I'll say it again. I'm here tonight to advocate the immediate closing of Fort Calhoun. We sell that 30 percent of the power to other places. We could close it today and not miss a beat. That's impractical, and I realize that as a business person. (FCS-T-9)

Comment: But we cannot relicense the plant. We've got enough time now to make the gradual transition to other means. And even if -- when we're twice as expensive, if solar were twice as expensive, my grandson I'm sure would say when he's an engineer in 20 years, "That was a good decision to make. I'll pay that cost."

My electric bill last year was \$1,000. If I had to pay \$2,000, I would gladly pay it -- gladly pay it -- if Fort Calhoun were shut down. (FCS-T-10)

Comment: And another reason not to relicense this nuclear power plant is the nuclear waste issue has not been solved. (FCS-U-5)

Response: *The comments are noted. The comments oppose license renewal for Fort Calhoun Station Unit 1, and do not provide new information. These comments are not within the scope of 10 CFR Part 51 for the environmental review associated with the application for license renewal for Fort Calhoun Station Unit 1. Therefore, these comments will not be evaluated further.*

6. Comments Concerning Category 1 Water Quality Issues

As stated in 10 CFR Part 51, Table B-1, Category 1 water quality issues include such issues as:

- Altered current patterns at intake and discharge structures
- Scouring caused by discharged cooling water
- Altered thermal stratification of lakes

Comment: In the area of water, OPPD looked at the water quality, water flow associated with the intake and discharge and the aquatic ecology. Our review of historical data, current conditions and operations indicated that the continued operation beyond 2013 will not adversely impact the Missouri River flow, water quality, or aquatic ecology. (FCS-D-2)

Comment: In the area of water, OPPD looked at the water quality, the water flow associated with the intake and discharge, and the aquatic ecology. Our review of historical data, current conditions, and operations indicated that the continued operation beyond 2013 will not adversely impact the Missouri River flow, water quality, or aquatic ecology. (FCS-Q-2)

Response: *The comments are noted. Altered current patterns at intake and discharge structures were evaluated in the GEIS and determined to be a Category 1 issue. The comments provide no new information on water quality and will, therefore, not be evaluated further. Water quality will be discussed in Chapters 2 and 4 of the SEIS.*

7. Comments Concerning Category 1 Land Use Issues

As stated in 10 CFR Part 51, Table B-1, Category 1 land use issues include:

- Onsite land use
- Power line right of way

Comment: Relative to land use, land use at the OPPD site prior to construction was agricultural and the balance of the property not supporting generation has been maintained in agricultural uses through lease arrangements with local farmers. (FCS-D-5)

Comment: Relative to land use, the land used at OPPD at the Fort Calhoun site prior to construction was agricultural, and the balance of the property not supporting generation has been maintained in agricultural uses through leases with local farmers. (FCS-Q-5)

Response: *The comments are noted. Onsite land use during the renewal period was evaluated in the GEIS and determined to be a Category 1 issue. The comments provide no new information on onsite land use and therefore, will not be evaluated further. Land use will be discussed in Chapter 2 of the SEIS.*

8. Comments Concerning Category 1 Air Quality Issues

As stated in 10 CFR Part 51, Table B-1, Category 1 air quality issues include air quality effects of transmission lines.

Comment: In the area of air quality, nuclear power represents about 30 percent of the generation utilized by OPPD customers. This makes a significant contribution to maintaining the air quality of the area and there are no planned changes in the operations that will alter the air quality in any way. (FCS-D-4)

Comment: Relative to air quality, nuclear power represents about 30 percent of the generation utilized by our customers. This makes a significant contribution in maintaining the air quality of the area, and there are no planned changes in the operation that will alter the air quality in any way. (FCS-Q-4)

Response: *The comments are noted. Air quality impacts from plant operations were evaluated in the GEIS and found to be minimal. These emissions are regulated through permits issued by the U.S. Environmental Protection Agency and the States. The comments provide no new information and, therefore, will not be evaluated further. Air quality will be discussed in Chapter 2 of the SEIS.*

9. Comments Concerning Human Health Issues

As stated in 10 CFR Part 51, Table B-1, Category 1 human health issues include:

- Radiation exposure to the public during refurbishment
- Occupational radiation exposure during refurbishment
- Microbiological organisms (occupational health)
- Noise
- Radiation exposures to public (license renewal term)
- Occupational radiation exposures (license renewal term)

Comment: Finally, in the area of people, OPPD is committed to protecting the health and safety of its employees and the people who live within the communities around the plant. (FCS-D-7)

Comment: Finally, in the area of people, OPPD is committed to protecting the health and safety of its employees and the people who live in the communities around the plant. (FCS-Q-7)

Comment: But I want to get to another point that concerns me as a health professional, and that is the -- what's happening to the radioactive isotopes that were proliferated all over the Northern Hemisphere after Chernobyl that everyone measured with great caution and concern and asked themselves, what will happen here? What will the increases be in rates of cancer and birth defects and even deaths?

I'm talking about strontium-90 and cesium-137. I did a little asking around, phone calling, and personal research, and I found that the U.S. Government measured human tissue samples up until 1982 of strontium-90, and then they quit doing it.

I found out that the Nebraska Department of Environmental Quality, which until 1998 was -- it's not the DEQ, it's the Nebraska Department of Health, until 1998, was conscientiously sampling a lot of different things and measuring for the radioactive -- various radioactive isotopes, including those two. But they never measured human tissue, and, in fact, they quit measuring anything at all in 1998. (FCS-S-6)

Comment: I submit to the NRC and OPPD that it would -- it has become more important, not less important, to sample human tissue and to find out, you know, where the strontium-90 is and where the cesium-137 is.

This is--the story of the monitoring of strontium-90 is of particular interest to dentists because some of the best research that I know about was done on deciduous teeth that people turned in, and they could keep pretty good track of where the person had lived and, you know, what kind of exposure this person had.

And what happened when they started doing this was they noticed that after the atmospheric nuclear testing stopped, they saw a drop in the amount of strontium-90 in the baby teeth that were turned in. But then, after a few years, when nuclear power plants began to be more common and the rate -- you know, the amount of high level waste, too, that was being produced, that rate of decline became less.

And I want to share with you one recent study that I think is germane here, and that I think should be considered in an environmental impact statement. And people, if they want to argue about the validity of the study, well, I'm waiting to hear. But here's what the study is and what it said.

Infant deaths and childhood cancers drop dramatically after nuclear plants close, and this was published April -- last April 30th in the Radiation and Public Health Journal. And I'll just read you some data real quick here.

The reactor in LaCrosse, Wisconsin, closed in '87. The percent drop in juvenile cancer was 15.4. In Rancho Seco, California, it closed in '89. The percent drop was 16. In Fort St. Vrain, Colorado, the reactor closed in 1989. The percent drop was 15.4. In Trojan, Oregon, the reactor closed in 1992. The percent drop was 17.9. In Big Rock Point, Michigan, the reactor closed in 1997. The percent drop was 42.4. And when Maine Yankee, Maine, closed in 1997, the percent drop was 9.7.

There were also similar drops in temporary closed reactors in Pilgrim, Massachusetts, and Millstone, Connecticut. (FCS-S-8)

Comment: I'd like to close with some really hard core information out of another article called "Strontium-90 in Baby Teeth as a Factor in Early Childhood Cancer." And let me underscore that there is a demonstrated correlation in the presence of strontium-90 in baby teeth and childhood cancers of various kinds.

From 1982 to 1991, the number of operating U.S. reactors increased from 72 to 111, providing power in 32 of 50 states, in which 85 percent of the 1990 U.S. population resides. And electricity generation by these plants increased from 278,000 to 613,000 gigawatt hours -- it looks like a little over doubling -- before leveling off in the 1990s.

During this period, cancer incidence in 11 U.S. states and cities rose 40.4 percent for children age zero to four and 53.7 percent for those under one year. I'm not -- I don't think they are suggesting causality, but it's a connection. So listen to the end of this. A time when average levels of cesium-137 and I-131 doubled. Okay?

Now, here's the point. We don't know where these isotopes are going. Without a system of monitoring the presence of key radioactive isotopes, such as strontium-90 in the

human body, no definitive assessment of health effects of exposure to human-made radioactivity can be made.

Isn't that obvious? The average annual decline in adult strontium-90 uptake after 1970 was only about five percent. Okay. That would be after above-ground testing ended. Okay? As compared with 15.7 percent annual decline in strontium-90 uptake levels in adults from 64 -- 64 to 70. Okay. So it declined a whole lot after the -- after above-ground testing ended.

But then, when nuclear power plants came on the rise again, it stopped declining so much, reflecting perhaps the proliferation of large nuclear power reactors in the '70s and emissions from flawed underground tests.

Cancer incidence, age zero to four, in Connecticut, a small state with four operating nuclear reactors, which was as low as 14.42 per 100,000 in the late '60s, had reached 21.95 per 100,000 in the late '80s, a jump of over 52 percent.

This trend suggests that additional recent data on in vivo radioactivity in the U.S. are needed, particularly in the light of the puzzling decision of the DOE to terminate measures of strontium-90 in adults in 1982. In that year, dietary levels of strontium-90 uptake remained at the same level of -- this is -- the unit is picocuries per gram of calcium, and the number is 5.6.

Okay. It was 5.6 of this picocuries per gram of calcium in '81, comparable to the late '50s.

The last DOE report observed there has been some indication of slightly higher values for young adults during the last several years. These individuals were children during the period of greatest strontium-90 deposition.

One might presume from this statement that adult strontium-90 levels would rise in the '80s and '90s as baby boomers account for increasing proportions of the adult population, and as an increasing number of nuclear power plants came on line.

So that's my main concern is nobody is measuring this in human tissue. And that seems like a pretty serious environmental concern to me. (FCS-S-10)

Response: *The comments are noted. The NRC staff has provided a separate letter to the commenter (July 15, 2002; accession number ML021970486) on the general issues raised by the commenter at the Fort Calhoun Station Unit 1 scoping meeting. In summary, the letter response outlines the results of the staff's analysis of similar claims of adverse health effects (claims of elevated levels of childhood cancer) brought up in conjunction with public participation in the NEPA review process applicable to the request for license renewal for Turkey Point Units 3 and 4 (NUREG-1437 Supplement 5 [January 2002]). The staff concluded that it is unlikely that strontium-90 found in deciduous teeth would be derived from U.S. nuclear power plant operations because of the extremely small amount of strontium-90 released in effluents from operating U.S. plants. Furthermore, no causal relationship has been established between the levels of strontium-90 being reported in deciduous teeth and childhood cancer.*

NRC regulatory limits for operating-plant effluent releases (and, therefore, the subsequent limits on dose to the public) are based on the radiation protection recommendations of international and national organizations such as the International Commission on Radiological Protection (ICRP) and the National Council on Radiation Protection and Measurements (NCRP), which provide consensus standards developed from recent and ongoing research. The NRC ensures that effluents from operating plants under its oversight are within the established limits. The regulations related to radiological effluents and dose to the public can be found in 10 CFR Part 20 and 10 CFR Part 50, Appendix I. There is almost unanimous consensus among the scientific community on the adequacy of current radiation protection standards.

As evaluated in the GEIS, radiation exposures to the public during the license renewal term has been determined to be a Category 1 issue. Based on the continued adequacy of the internationally accepted standards, NRC's experience in reviewing effluent monitoring data from operating plants in the U.S., the staff's review and evaluation of the claims and diverse information brought up during recent NRC NEPA process-related public comment periods, the results of ongoing research reflected in the scientific literature, and the absence of new information in these comments, the staff concludes that the topic of radiation dose to the public from operating plants is still properly characterized as a Category 1 license-renewal issue. The comments provide no new information on human health issues, and therefore, will not be evaluated further.

10. Comments Concerning Category 1 Socioeconomic Issues

As stated in 10 CFR Part 51, Table B-1, Category 1 socioeconomic issues include:

- Public services: public safety, social services, and tourism and recreation
- Public services: education (license renewal term)
- Aesthetics impacts (refurbishment)
- Aesthetics impacts (license renewal)
- Aesthetics impacts of transmission lines (license renewal term).

Comment: I'll speak just a little bit about the socioeconomic impact on my city, in particular. From a practical standpoint, I'm not sure it makes sense to discard a proven and effective method of power generation, especially when it has served Washington County, eastern Nebraska, and OPPD for so many years. The Fort Calhoun Nuclear Station is an economic stimulus to Blair and the Washington County area.

Their footprint is a stabilizing factor in Washington County's economy. As an example, they employ 645 people; 135 of those live in Washington County, specifically 110 live in the community of Blair. Their annual payroll is \$43 million and of that, \$6.2 million is the payroll for those employees that live in Blair and with just a very little bit of math that shows that the annual income per employee living in Blair is \$66,700. By any measure, that's a quality job. And those kinds of jobs attract and keep quality individuals, quality families in our community. Now these people are our friends. They're our neighbors. Their kids go to school with my kids. They go to church. They volunteer their time to make Blair and Nebraska a better place to live.

In 2001, Fort Calhoun Station purchased almost \$23 million of goods and services. Now I'm clearly not an economic developer and I don't know the multiplier effect when you've purchased goods and you have sales and incoming property tax within the State of Nebraska. On the other hand, I do understand the positive impact that the Fort Calhoun Nuclear Station has on the quality of life and the quality of life of the 8,000 people living in my city. Indeed, all Nebraskans benefit from the operation of the Fort Calhoun Nuclear Station.

OPPD is an outstanding community citizen. They're always there when we need them. They deliver prompt response to community requests. Their employees are involved in our local organizations and programs. And their service is nothing less than outstanding. As a Mayor, I'm confident in the ability of OPPD to deliver reliable power throughout my community. The rates are competitive and because of that they've been effective in recruiting new business and I would point to Nebraska's single largest economic development investment, Cargill, which is just outside our city.

We'll hear from, I'm sure, people that are concerned about safety issues and so am I. My family and I wake up every morning and we can see the plant from our living room window. Throughout the years though, I've come to know the people at OPPD and I have confidence that they understand the risks associated with nuclear power generation and that they've been and continue to do everything in their power to ensure my safety. You see, at the same time they're ensuring the safety of their families because they live in Blair too. (FCS-A-2)

Comment: That's not surprising when you consider our homes and our families are in the area. We contribute to the communities in volunteer work, and in our social leadership. It's also not surprising that we do that and the fact that we are owned by the people of our community who buy power from us. As you might know, Nebraska is unique among the 50 states in that all the electricity produced here is produced in a municipal or public manner. It is a public power state.

Nebraskans take a great deal of pride in this uniqueness and in the fact that they own the organizations that provide the power. Our customers elect our Board of Directors; one of whom is with us today, Anne McGuire, who is chairman of our Nuclear Oversight Committee and Member of our Board.

In addition, the nuclear operations group at OPPD gets outstanding support from the rest of our company. Two other vice presidents are with me here today, Chuck Eldred, our Chief Financial Officer; and Tim Burke, who's responsible for retail and all the electric operations, the wires and transmission part of our company. (FCS-C-2)

Comment: We also know that to successfully operate our power plant, we must do it economically. Fort Calhoun Station is an economical source of electricity for our customers and its cost effectiveness continues to improve. We recently completed one of the most efficient refueling outages in the history of the plant and it's a tribute to the workers at the plant and at OPPD and all the skilled labor that we have in the Omaha area that this outage was completed in a record fashion.

Looking ahead, we see continuing improvement in all areas of operation at Fort Calhoun. (FCS-C-4)

Comment: In addition to being a safely operating facility, Fort Calhoun operations have benefitted the community in the form of jobs, payments in lieu of taxes, and community service. Continued operation would support the continuation of these benefits. (FCS-D-8)

Comment: OPPD has also been an excellent partner in our community's economic development efforts, with a proven record in planning for and meeting the area energy needs.

OPPD has always been accessible and responsive to the public and its proactive planning for future growth and demand has played a crucial role in the success that the Omaha area has enjoyed in accommodating a growing population and industrial base. We believe that Fort Calhoun will continue to provide essential electricity supplies for the growing metropolitan area and have full confidence in OPPD's operation of the facility. Thanks for your time and consideration. Louis W. Burgher, M.D., Ph.D., President." (FCS-E-3) (FCS-Z-3)

And I might add from his personal standpoint that he does live within just a few miles of the plant up in Fort Calhoun. (FCS-E-3)

Comment: I've been with the Chamber for 16 years now and I have found that OPPD has been a wonderful corporate citizen. We have found that they are just extremely responsive to the needs of the community and particularly the business community that I represent.

OPPD has also been key to our area's economic development efforts and this is one area that I can certainly speak to since the Omaha Chamber is one of the lead entities in the economic development arena for our community.

OPPD's competitive electric rates have been extremely important in the attraction and retention of new and existing industry and the relicensing of the Fort Calhoun plant is an extremely important factor in keeping our local electrical rates competitive with other metropolitan areas as well as providing the reliability and dependability of electrical service that businesses today require. (FCS-F-1)

Comment: For over 30 years, the Omaha Public Power District has proven to be a very good corporate partner with UNMC [University of Nebraska Medical Center]. OPPD has supported and co-funded the regional Radiation Health Center at UNMC. The purpose of the Radiation Health Center is to provide specialized medical services related to the evaluation, treatment and management of individuals exposed to radioactive materials.

Through OPPD support of our health center, UNMC has been able to obtain state of the art radiation detection equipment and instrumentation. The Radiation Health Center and the Nuclear Medical Division of the Nebraska Health System [NHS] and UNMC's College of Pharmacy and College of Medicine are able to utilize this equipment for routine patient care and medical research whenever the facility and instrumentation are not being utilized for radiation accident patients.

In fact, the routine use of instrumentation by UNMC and NHS is primarily how it is utilized. Among the list of instrumentation that OPPD support has contributed to includes a gamma camera which has been for nuclear medicine imaging of patients, high purity germanium lithium detector used in research for analysis of radiative samples and various computers, radiation survey meters and personnel monitoring devices used in monitoring patients and equipment. (FCS-G-1) (FCS-AA-1)

Comment: The Fort Calhoun Nuclear Power Station employs 651 residents as part of its regular remanding table. As the regular remanding payroll, \$46.1 million, Fort Calhoun payroll has the potential to generate \$3 million in tax revenue. In addition to Fort Calhoun's regular remanding table, the last refueling outage resulted in an additional 592 jobs that produced \$13.8 million in wages and tax revenue potential of \$897,000. That would be a grand total of \$4 million in potential tax revenue in our area. (FCS-I-1)

Comment: Fort Calhoun also contributes to the social fiber of our community. The Salvation Army, the Boy Scouts, the Girl Scouts and other charitable organizations as well as houses of worship are able to provide programs that benefit our community, thanks in part, to Fort Calhoun's continued ability to provide good jobs.

Local public schools, as well as the Nebraska University system, the Metro Community College benefits from Fort Calhoun's continued operation. As a part of the OPPD, Fort Calhoun played a key role in raising \$250,000 in last year's United Way Midland's drive which is extremely important to our community in raising dollars for charitable organizations in our community.

Over the last year, the Omaha labor movement and Fort Calhoun have played and developed a spirit of cooperation on a series of levels in order to operate more safely and

proficiently during the fueling outages at Fort Calhoun. Labor and management have taken new innovative approaches to reduce the redundant fees spent on background investigations. In addition, labor and management are working together to provide training off-site. Off-site training reduces the need of additional badging which creates a more secure work environment and also reduces man-hours. In an effort to make refueling outages shorter, safer and more proficient, Fort Calhoun and local labor leader organizations have taken steps to ensure that there will be a trained and ready workforce to assist Fort Calhoun with refueling outages.

I have had the opportunity to work with the Fort Calhoun employees as a part of my responsibilities as a labor leader. I have found each of them take pride in everything they do, each are extremely knowledgeable in their job, and each acknowledge that safety is woven into every factor of their jobs. And I believe this is an excellent reflection of Fort Calhoun's management.

... It's because of that continued effort of business and labor working together in the management of that facility, that I think has brought about a tremendous end in what has happened in the last fueling outage. We had 30 days scheduled in that facility. I'm happy to tell you that we did that in 29 days, 3 hours and 19 minutes under the called time and further to tell you that I'm extremely happy to say there was not one grievance filed by one worker. There wasn't one stoppage or one slow down on any part of this job and I think that is a great credit to the workers of OPPD and the management that has worked diligently to make sure we forge a long lasting relationship. (FCS-I-2)

Comment: Many of the employees from the Fort Calhoun Nuclear Station and their families live and work in local communities surrounding the nuclear power station. These people participate in local religious and service organizations that benefit the communities they live in and the State of Nebraska. They also participate in and support local schools and local governments. As these employees and their families live in surrounding communities, they have a strong incentive to ensure the continued safe operation of the nuclear station and the station's continued efforts to preserve the quality of life and environment.

As described, it can be seen that the Fort Calhoun Nuclear Station and its staff are a large and beneficial part of the local economy. (FCS-K-2) (FCS-Y-2)

Comment: Actually, Omaha Public Power District has been not only a monetary member of ours, but also has been a big volunteer member of our organization from that. In that, Roger Christianson, the Director of Economic Development, serves on our Executive Board and our Board of Directors. And many of the economic development staff and other staff of OPPD are involved in many of our activities, especially with recruitment of industry. (FCS-O-1)

Comment: Our mission is the creation of jobs and the creation of new net investment into Sarpy County. I think as some of you know, we're the third fastest growing county in the State of Nebraska. The last five years we have averaged over 1,000 new single-family housing units that have been built in Sarpy County.

I think it's safe to say in the Omaha metropolitan area that we are the largest provider of industrial and business sites in the Omaha metropolitan area. We currently have on inventory over 30 business, industrial, commercial, and office parks for location.

One of the things that we are seeing with regard to our development is a number of very large projects that are locating in Sarpy County. I'll give you a couple of examples. The Caterpillar Claus that goes by Claus Omaha right now located within Sarpy County within the last year. Shopco's Warehouse Distribution Center located in Sarpy County about a year ago.

And Nebraska Machinery relocated from the downtown area of Omaha into Sarpy County. So those are three of our major projects that located in Sarpy County within the last year.

One of the things that we are seeing from our prospects is that they are looking for reliable electrical power. A lot of those companies are looking for redundant feeds. They're looking for feeds coming from two different substations, because they want reliability, especially in the days of very high technical computer operations.

One of the things I think that ties to that is also the ability to provide a number of different sources to create that electrical power. Whether that be wind, nuclear, coal, oil, I think it's very, very important that we maintain and are looking at a wide variety of ways to generate electrical power.

We're going to continue to grow. Certainly, growth is very important to our state. I guess most of you know our legislature is being called back because our economic projections are about 120 million (dollars) lower than what they should be. And as a result of that, they are going to have to be cutting a number of major projects. That's why economic growth and the value of projects is very important to continue to grow our assessed valuation in the community.

So we are certainly very much in support of having a variety of sources available, and reliable sources available, for power for not only our residents but our new industries and businesses that locate within Sarpy County.

So I appreciate the opportunity to speak on record.
(FSC-O-2)

Comment: In addition, our homes and families are in this area. We contribute to the community with our volunteer work and our social leadership. It's also not surprising when you consider the fact that we are owned by the people of the community who buy power from us.

As you might know, Nebraska is unique among the 50 states. We have a total public power picture in Nebraska. Whether it's a public power district like OPPD or a municipally-owned organization, they're all publicly owned.

Nebraskans take a great deal of pride in this uniqueness and also in the fact that they own the organizations that provide their power. Our customers elect a Board of Directors. At the earlier meeting today, Anne McGuire, who is Chairman of our Nuclear Oversight Committee, attended and will report back to the Board independently on the proceedings that she observed.

We enjoy great support from our Board, as well as the other senior management group at Fort Calhoun -- or at OPPD. (FCS-P-2)

Comment: We also know that to successfully operate a nuclear power plant you must do so economically. Fort Calhoun Station is an economical source of electricity for our customers, and its cost effectiveness continues to improve.

We recently completed the most efficient refueling outage in the history of the plant. It's a tribute to the workers at the plant, the skilled labor that is available in the Omaha area, and all the support for Fort Calhoun in the community. Looking ahead, we see a continuing improvement in the area of cost effectiveness.

As we go forward with the license renewal for Fort Calhoun, our commitment remains continuous and the same. We have submitted our license renewal application in January, it was reported. We continue to update the plant to keep it current in its equipment needs. And we look forward to the license renewal process. (FCS-P-4)

Comment: In addition to being a safely operated facility, Fort Calhoun's operations is benefitting the community in the forms of jobs, payments in lieu of taxes, and community service. Continued operation would support the continuation of these benefits. (FCS-Q-8)

Comment: We have a great working relationship with Fort Calhoun Station. And because of their philosophy of providing continuing education to the response organizations, we have advanced from basic first aid in the 1960s and early 1970s to having people now providing advanced life support with being able to start IVs and also treat trauma patients and cardiac patients, which may occur at either Fort Calhoun Station or anywhere else in our responding area.

Another thing is -- that we found is OPPD and Fort Calhoun Station have always been good neighbors for Blair, Nebraska, in Washington County. The Blair Rescue Squad feels that the continued relationship with this organization is paramount as part of our community service to Washington County.

Fort Calhoun's management has always encouraged their personnel to be involved in community service and projects, and also be involved in groups such as fire departments and rescue squads. Over the past 25 years, Fort Calhoun employees have volunteered as firefighters and EMTs in Blair, Nebraska; Fort Calhoun, Nebraska; Kennard, Nebraska; Arlington; Tekamah; and Herman.

Now, we also have not just been involved in the organizations as far as being volunteers and firefighters and rescue squads. We have two individuals that have served as fire chiefs. We have assistant fire chiefs, as well as rescue and fire captains on all of these organizations.

The work by these individuals has also helped shape the Nebraska State Fire Service, which is our governing body for providing our regulation and guidelines on how we respond to activities in the state. And we have done that by having people serve on the national -- on our state board as well as also teaching classes at Nebraska State Fire School.

I guess we'd have to say, really and truly, the Fort Calhoun Station has been a driving force in Washington County for individuals that are involved in the fire and the rescue services. And its personnel is the best in the nuclear industry, and we feel that a license renewal would really impact our communities in a very positive sort

Now, that's one side of the situation. The other situation is I've been an employee of Omaha Public Power District for 32 years. I have the oldest active license on the Fort Calhoun Station. And because of Fort Calhoun and Omaha Public Power District, I've been able to be involved in the rescue services and the fire services and continue a tradition started by my family over 50 years ago.

I'm going to retire soon. I know you don't like to hear that. But I'd love to see Fort Calhoun continue to operate for an additional 20 years. And with input from the people that we have here, and with the people that are at Fort Calhoun Station, I see that as a very viable option for power production in Nebraska. (FCS-R-1)

Comment: When people get up at this podium and push economic progress through that plant, that's the gravest -- as a business person, for my entire life, my family has been involved in business my entire life, not the ministry, not education, we've been business people forever and ever. No one could advocate that.

My grandfather couldn't advocate financing a power plant through his banks. My father could not advocate it through energy sales. It's just impossible for somebody from an economic development group to say, "This is good for our area. It's so out of sight." I would love to have

you explain that to my grandson in 25 years when we've produced thousands of pounds of more radioactive waste that are going to be sitting some place; we don't even know where.

Yucca Flats, with a 4.6 on the Richter scale -- and I'm -- my voice is getting emotional now, and I'm trying to avoid that. The risk is too great. You can't have it.

Speaking to OPPD now, speaking to the nuclear regulatory people now, and I'm speaking to those disinterested people who I guess are not disinterested because they're here tonight.

No matter what the economic gain is, it's not enough. It's not enough. If we have to go without electricity for two years, if we have to go without, then we have to go without. You can't risk that catastrophic event. You cannot risk it.

And I'll leave that -- those words with you again. The risk is too great, not for myself -- I've got 20 more years to live. I'm 59. By statistics, I'll live 20 more years. My grandchildren, their grandchildren, and their grandchildren, you have this tremendous weight -- not weight. You have this tremendous power over their heads, and it's not something that could happen slowly. The exposure -- the death comes very, very quickly. (FCS-T-7)

Comment: One thing I read recently was that -- or heard that energy or a nuclear power plant is liable for roughly \$9 billion in terms -- in the event of a meltdown. The average cost of a meltdown, for recovery, would be \$110 billion. In terms of socioeconomic effects, I think that's a pretty serious effect.

I know -- I don't think it's exactly worth 30 percent of our energy use. I don't think \$100 billion should be passed on to any energy consumer. (FCS-W-1)

Comment: The management and employees of OPPD have a long history of civic involvement in our community. Last year alone they contributed over \$290,000 to the United Way campaign. The average gift per employee is well above our community average. Employees at Fort Calhoun contributed nearly a third of this total.

OPPD employees freely volunteer their time and talent to a wide array of important charitable and civic efforts in our community. These gifts of time and money have a significant positive impact on the quality of life in our community, addressing issues as diverse as early childhood education, and public safety. (FCS-AC-1)

Response: *The comments are noted. The majority of the comments are supportive of license renewal for Fort Calhoun Station Unit 1. Public services involving public safety, social services, tourism and recreation, and education were evaluated in the GEIS and determined to be Category 1 issues. The comments provide no new information on these public service issues and, therefore, will not be evaluated further.*

11. Comments Concerning Category 2 Socioeconomic Issues

As stated in 10 CFR Part 51, Table B-1, Category 2 socioeconomic issues are:

- Housing
- Public services: public utilities
- Public services: education (refurbishment)
- Offsite land use (refurbishment)
- Offsite land use (license renewal term)

- Public services: transportation
- Historic and archaeological resources.

Comment: We also interface with the State Historical Preservation Office and have confirmed that continued operations would not impact any historical or archaeological resources.
(FCS-D-6)

Comment: We also interfaced with the state historical preservation office and confirmed that the continued operation would not impact any historical or archaeological resources.
(FCS-Q-6)

Response: *The comments are noted. Historic and archaeological resource issues related to the renewal period were evaluated in the GEIS and determined to be a Category 2 issue. The comments provide no new information; however, NRC consultation with the State Historic Preservation Officer (SHPO) will be discussed in Chapter 4 of the SEIS.*

12. Comments Concerning Category 2 Threatened or Endangered Species, Aquatic Ecology, or Terrestrial Resources Issues

As stated in 10 CFR Part 51, Table B-1, Category 2 threatened or endangered species, aquatic ecology, or terrestrial resources issues include such matters as:

- Threatened or endangered species
- Entrainment of fish and shellfish in early life stages
- Impingement of fish and shellfish
- Heat shock

Comment: In the area of plants and animals, reviews of internal documentation and observations indicate that there are no threatened or endangered species at the site and on our associated transmission line rights of way. Interfaces and consultations with the U.S. Fish and Wildlife Service and both the Nebraska and Iowa Departments of Natural Resources supported these findings. NRC will be entering into formal consultations with these agencies under the Endangered Species Act during the development of their environmental impact statement.
(FCS-D-3)

Comment: But at that time I participated in the writing of the environmental impact statement for Fort Calhoun Station. In the following 10 years, due to the mandated pre- and post-operational studies that were associated with the granting of the original license, I participated in a very large number of reports, data gathering, information exchanges, which involved people from an entire community that sprang up at that time. These were the individuals who had expressed concerns about environmental effects of the plant.

They were the investigational groups from, for example, the University of Nebraska, Nebraska Game and Parks Commission, EPA, States of Missouri, Iowa, a whole community of interested people began studying the Missouri River and it's that particular area that I would like to bring to the attention of the people who will be making decisions concerning the environmental impact.

The volume of productivity at that time was astronomical. It was absolutely an unprecedented outpouring of investigation on a stretch of a river that up to that time had

received practically no attention. The period prior to that has given rise to a misconception. I would guess that if you were to ask an academic anywhere in this area what is known about the Missouri River, the answer would be nothing.

There is a confusion, a lack of information, that has become embedded in what we might refer to then as the common wisdom, that the Missouri River is a desert in terms of investigational enthusiasm that nobody knows anything about it and therefore the conclusion might rapidly be drawn that any activity on the river will have a variety of unforeseen effects because if you don't know what is there, you obviously cannot figure out what might happen.

Well, my remarks today are designed to eliminate that misconception. The river is thoroughly understood in a variety of ways. To start off with fisheries. The fisheries have been investigated over a period of approximately 50 years, starting off slowly, but then building at an enormous level of investigational studies. If you're interested in zooplankton, phytoplankton, macroinvertebrates, insect larvae, if you like larval fish, the distribution of eggs, from upstream hatchery areas down the river, if you are fascinated by impingement, entrainment, any of the things that you can think of, they have been done. They have been done in enormous detail.

I'm assuming that those of you who are specifically charged with this, know all the documents. However, there is a shortcut to getting to them if you do not know them all. I said that a community of investigators had sprung up. We met one another constantly at hearings, at meetings, at exchanges of information over a period of 12 years. People from Nebraska, Creighton University, University of Nebraska, a variety of other agencies. And met one another and typically they were in adversarial positions.

These were people who took opposite sides on practically everything. At the end of that period of time we were all sitting down at lunch and I said isn't it a shame that at the end of this, this enormous amount of investigation is going to disappear into file cabinets, internal documents, rarely seen publications and none of it will ever have been pulled together.

We agreed, there were five of us, who agreed to do the heavy lifting. We said we will meet and we met over a period of three years weekly in the library of Nebraska Game and Park Commission Office in Lincoln. The "we" incidentally if you're interested in names were Larry Hesse, Gary Hargenradar, Howard Lewis, Steven Reeds and myself.

We pulled together all of that information and asked the people who had done the work over that period of time to write and it came out to be 11 or 12 chapters on all the various subdivisional portions of the investigation. (FCS-N-1)

Comment: Thermal plume effects. We asked the Corps of Engineers to give us a chapter on the structural changes that have been brought about by the levy construction, dike construction. We asked them to pull out all of the information that would be critical to comprehending cross channel distributions, rates of flow and then put into those figures the distributional patterns for such things as larval fish drifts and so on.

If you think that you can drop a hoop net some place in the river, pull out a sample, and extrapolate to the distribution, just multiply your figure out by a cross-section, you're wrong. You're wrong by so much that you probably will be embarrassed by somebody who knows that there is a stratification, both vertically and horizontally, throughout every portion of the river.

The organisms do not follow the malted milk mixing pattern. They are very specifically distributed. All of that stuff is available. It's in a book; we put out a book. It's called The Middle Missouri River. It's available in every library in this area, most of the universities. I've called it to your attention. It'll make your life a lot easier if you take some time to look at what was done 30 years ago. (FCS-N-2)

Comment: In the area of plants and animals, reviews of internal documentation and observations indicated that there are no threatened or endangered species at the site or on our associated transmission rights of way. Interfaces and consultations with the U.S. Fish and Wildlife Service, and both the Nebraska and Iowa Departments of Natural Resources, supported these findings.

The NRC will be entering into formal consultations with these agencies under the Endangered Species Act during the development of the supplemental environmental impact statement. (FCS-Q-3)

Comment: The second point is -- or the second topic that I wanted to discuss was environmental impact. Recently, the Army Corps of Engineers is looking to change their manipulation of the Missouri River. There is a lobby against changing it from the power associations because they require high levels of water in the river during the summer to cool down the plants.

In turn, this basically greater -- or it threatens seriously endangered species, including the pallid sturgeon and the piping plover. (FCS-W-2)

Response: *The comments are noted. The comments relate to aquatic and terrestrial ecology issues and will be considered in the preparation of the SEIS. NRC consultation with the U.S. Fish and Wildlife Service (FWS) will be discussed in Chapter 4 of the SEIS.*

13. Comments Concerning Alternatives

Comment: We also are in an earthquake belt in this area. There was a catastrophic earthquake in 1803. There was an earthquake in Clarkson, Nebraska, just two or three years ago. That's a possibility. If we had an oil-fired plant, a gas-fired plant, a coal-fired plant, who cares? The plant is shut down for two or three days, you repair the cracks in the walls, and you go on. You can't do that with a nuclear power plant. The risk is too grave. (FCS-T-4)

Comment: And conservation is another issue that -- California recently was in an energy crisis, and it quickly had to cut energy use, so they cut it 15 percent in a year. When will the utility embark on an aggressive campaign of conservation? When will we put some energy and money into making it so we don't have to generate so much energy? (FCS-U-3)

Comment: Maybe that doesn't sound like a lot, but wind generators have nothing like this. There is no waste. There is no -- there is no body count. And this is the last thing I want to give you. This was produced basically by the Union of Concerned Scientists to demonstrate that, yes, we are the windiest region on earth.

Yes, we can have wind generators. Yes, nobody will sell us wind. That's why there isn't a built-in lobby pushing this technology. But I think it's time we all wake up and give up on a technology that has a body count. (FCS-U-10)

Response: *The comments are noted. Environmental impacts from reasonable alternatives to the Fort Calhoun Station Unit 1 license renewal will be evaluated in Chapter 8 of the SEIS.*

14. Comments Concerning Category 1 Uranium Fuel Cycle and Waste Management Issues

As stated in 10 CFR Part 51, Table B-1, Category 1 uranium fuel cycle and waste management issues include:

- Offsite radiological impacts (individual effects from other than the disposal of spent fuel and high level waste)
- Offsite radiological impacts (collective effects)
- Offsite radiological impacts (spent fuel and high level waste)
- Nonradiological impacts of the uranium fuel cycle
- Low level waste storage and disposal
- Mixed waste storage and disposal
- On-site spent fuel
- Nonradiological waste

Comment: We don't believe that the high level nuclear waste that's generated at the rate of a metric ton every month that it operates can be -- ever be managed. (FCS-S-3)

Comment: High level nuclear waste, if you believe or follow the logic of some recent publications from OPPD, is pretty benign stuff, and, you know, we're going to get rid of it anyway. And it's not -- we don't really make that much of it anyway. It's the Department of Defense that makes the most high level nuclear waste.

In fact, measured by radioactivity, nuclear power plants generate 95 percent of high level radioactive waste that we and the current generations and the future generations, practically forever, have to not dispose of, because there is no way to dispose of it, but live around and keep safe.

It is the most permanently lethal substance ever identified by human beings. If you stand within arms-length of it unshielded, you get a lethal dose within minutes. That's what we're talking about, and that's the bottom line issue. (FCS-S-5)

Comment: It's going to go on for thousands of years, not hundreds, not tens, but thousands of years with this risk. That's from the radioactive waste that we're producing today, which -- it's mind-boggling. (FCS-T-3)

Comment: Now, even if we shut down today, we've still got the nuclear waste that's been generated in the last 30 years. We can't afford to generate any more waste. It's -- the risk is too grave. I'll keep using that phrase. We can't afford to do it. (FCS-T-5)

Comment: And another reason not to relicense this nuclear power plant is the nuclear waste issue has not been solved. (FCS-U-5)

Comment: Yucca Mountain is a sieve. It's geologically a disaster. It is a fractured, leaky mountain, plagued by earthquakes, and its proposed waste containers have a badly limited viability. I'll just read a couple of things out of here real quick.

Evidence that the inside of the mountain is periodically flooded with water comes from zircon crystals found in calcite veins. Crystals do not form without complete immersion in water, says Jerry Sizman, a former DOE geologist who is suggesting that deep water rises and falls inside Yucca Mountain is shrugged off by the Department of Energy.

Okay. In 1998, the Yucca Mountain site may have an earthquake or lava flow every thousand years -- ten times more frequently than earlier estimated, according to a California Institute of Technology study. The finding means that radiation catastrophes at the Yucca Mountain site are much more likely during the proposed 10,000-year lifetime of the dump, not to mention the 250,000-year-long radioactive hazard period.

DOE -- and this is in '97. DOE researchers have found that rainwater has seeped from the top of Yucca Mountain 800 feet into the repository level in a mere 40 years. Scientists had said that rainwater would take hundreds or thousands of years to reach the waste cans. Federal guidelines have long required that the existence of fast-flowing water would disqualify the site.

Then, in 1995, physicians -- physicists at the Los Alamos found that buried waste might erupt in a nuclear explosion, scattering radioactivity to the winds or groundwater or both. Dr. Charles D. Bowman and Francisco Banieri charged that serious dangers will arise thousands of years from now, and after steel waste containers dissolve, and plutonium slowly begins to disperse into surrounding rock.

Now, in 1990, the National Research Council said the plan for Yucca Mountain is "bound to fail," because it is a "scientific impossibility to build an underground nuclear waste repository that will be safe for 10,000 years."

And in '89, 16 geologists with the U.S. Geologic Survey bluntly charged that the DOE was using stop work orders to prevent the discovery of problems that would doom the repository. The USGS geologists reported that, "There is no faculty for trial and error, for genuine research, for innovation, or for creativity."

Even the NRC complained that work at Yucca Mountain seemed designed mostly to get the repository built rather than to determine if the site is suitable. And just on and on. (FCS-U-6)

Response: *Onsite and offsite storage of spent nuclear fuel are Category 1 issues. The safety and environmental effects of long-term storage of spent fuel onsite have been evaluated by the NRC and, as set forth in 10 CFR 51.23, the Waste Confidence Decision, the NRC generically determined that such storage could be accomplished without significant environmental impact. In the Waste Confidence Decision, the Commission determined that spent fuel can be stored onsite for at least 30 years beyond the licensed operating life, which may include the term of a renewed license. At or before the end of that period, the fuel would be moved to a permanent repository. The analysis in the GEIS (NUREG-1437) is based on the assumption that storage of the spent fuel onsite is not permanent. The plant-specific supplement to the GEIS that will be prepared regarding license renewal for Fort Calhoun Station Unit 1 will be based on the same assumption.*

Likewise, the matter of processing and storing low-level waste is considered a Category 1 issue. The conclusion regarding this issue in the GEIS included consideration of the long-term

storage of low level waste on site during the license renewal term. The comments provide no new information and, therefore, will not be evaluated further.

15. Comments Concerning Postulated Accident Issues

As stated in 10 CFR Part 51, Table B-1, Category 1 postulated accidents issues include design basis accidents. In addition, the staff identified environmental impacts of design basis accidents as a Category 1 issue in the GEIS. Further, the Commission has determined that the probability-weighted environmental consequences from severe accidents (i.e., beyond design basis accidents) are small for all plants, but that alternatives to mitigate severe accidents must be considered for all plants that have not considered such alternatives. See 10 CFR 51.53(c)(3)(iii)(L).

Comment: There was an earthquake near Yucca Flats the other day of 4.6. We also are in an earthquake belt in this area. There was a catastrophic earthquake in 1803. There was an earthquake in Clarkson, Nebraska, just two or three years ago. That's a possibility. (FCS-T-4)

Comment: ... and this is about the risk assessment science, which is -- underestimates the risk of an accident, a catastrophic accident by at least 100 percent.

An accident in an U.S. nuclear power plant could kill more people than were killed by the atomic bomb dropped on Nagasaki. The financial repercussions could also be catastrophic. The 1986 accident at the Chernobyl nuclear plant cost the former Soviet Union more than three times the economic benefits accrued from the operation of every other nuclear -- Soviet nuclear power plant that they operated than in the entire lifetime.

But the consequences alone do not define risk. The probability of an accident is equally important. When consequences are very high, as they are for nuclear plant accidents, prudent risk management dictates that probabilities be kept very low. The NRC attempts to limit the risk to the public from nuclear plant operation to less than one percent of the risk the public faces from other accidents.

Well, nuclear plant assessments are not really -- are really not risk assessments because potential accidents consequences are not evaluated. They merely examine accident probabilities -- only half of the risk equation. Moreover, the accident probability calculations are seriously flawed. They rely on assumptions that contradict actual operating experience.

The risk assessments assume nuclear plants always conform with safety requirements, yet each year more than a thousand violations are reported. (FCS-U-7)

Response: *The comments are noted. Design basis and severe accidents, including events initiated by earthquakes, were evaluated in the GEIS and the impacts were determined to be small for all plants. A site-specific analysis of severe accident mitigation alternatives for Fort Calhoun Station Unit 1 will be performed by the NRC staff within the environmental analysis in Chapter 5 of the SEIS. This analysis will consider both the probability and consequences of severe accidents, and evaluate the potential means to prevent or mitigate these events. The comments provide no new information and will not be evaluated further in the context of the environmental review.*

16. Comments Concerning Issues Outside the Scope of License Renewal

Operational Safety

Comment: The safe operation of Fort Calhoun Station is first and foremost in our minds, for all the people that run the station and at OPPD. Over the years, we have demonstrated a high level of safety in all our programs and operation of the unit. (FCS-C-1)

Comment: If our customers, who are owners, felt we're not operating safely at Fort Calhoun, they would not hesitate to let us know that changes need to be made through many of the avenues that a public company has. (FCS-C-3)

Comment: We believe Fort Calhoun's top safety and performance ratings speak for OPPD expertise in nuclear plant operations. (FCS-E-2) (FCS-Z-2)

Comment: The safe operation of Fort Calhoun is first and foremost in our minds. Over the years, we have demonstrated the high level of safety and reliability of the station, which is not surprising considering the caliber of the people we have working there and supporting the station. (FCS-P1)

Comment: If our customers, who are not our owners, feel we are not operating Fort Calhoun safely, they have many avenues with which to register those concerns. (FCS-P-3)

Comment: The bottom line issue for me and other members of the Green Party is that we really don't think that a nuclear power plant can be safe. (FCS-S-2)

Comment: Based on your comments, can you guarantee when this review process is finished that Fort Calhoun will operate in a 100 percent safe manner? (FCS-T-10)

Response: *The comments are noted. When performing its review to renew an operating license of a nuclear plant, the NRC staff uses the standard that there is reasonable assurance that the activities authorized by a renewed license will continue to be conducted in accordance with the current licensing basis for the facility. The staff reviews the application to see if there is reasonable assurance that the applicant has identified the components affected by aging and has demonstrated adequate aging management practices are in place for those components for the extended term. In addition, during its environmental review, the NRC staff evaluates the adverse environmental impacts of continued operation to determine whether or not the impacts are such that preserving the option of license renewal for energy-planning decisionmakers would be unreasonable.*

The NRC's environmental review is confined to environmental matters relevant to the extended period of operation requested by the applicant. Therefore, operational safety is outside the scope of this review. However, although a topic may not be within the scope of review for license renewal, the NRC is always concerned with protecting health and safety. Any matter potentially affecting safety can be addressed under processes currently available for an existing operating license, absent a license renewal application. The comments are general in nature and provide no new information. Therefore, they will not be evaluated further.

Emergency Preparedness

Comment: My main concern on some of the aspects in the OPPD environmental response -- I'm particularly concerned about some of the things that might arise in the event of a severe accident and how these risks were assessed. In the event of a severe accident, the radiological doses received by the surrounding population are highly sensitive to meteorological conditions at the time of the release. In this context, the weather data and the model used to calculate the dispersion probabilities are crucial. A concern that I didn't see addressed is a long-term correlation between strong winds from the north and strong inversions. Now this is a weather pattern that is specific to the Missouri River Valley around Omaha and it needs to be accounted for. It can't be part of the generic environmental impact statement because it's a weather pattern that prevails in our area at certain times.

...

So my point is that the cases where you had a very strong low level inversion which would prevent any possible radioactive release from Fort Calhoun from escaping vertically and would also confine the release horizontally to the Missouri River Valley, those are exactly the cases that would produce the greatest exposure to the general population around Omaha to a concentrated radioactive plume. So during the worst case, the winds were the strongest...

Now since there's a demonstrated correlation between atypically strong winds blowing from Fort Calhoun toward Omaha and strong inversions, even though they're fairly rare, those cases would be responsible for most of the exposure risk, especially to people in the Omaha area and they need to be looked at carefully. (FCS-H-1)

...

So instead of the general model which I think as far as I can tell is what was used for calculating where the radiological release would go, I think we need a specific model for what happens if there's a serious accident and the radiological release travels down the Missouri River Valley toward Omaha under conditions of strong inversion. (FCS-H-2)

Comment: This is an addition to comments I made at the NRC Open House Associated with the Environmental Review for License Renewal at Fort Calhoun Station, Unit 1, held on June 18, 2002.

A major concern I have relates to a set of meteorological conditions specific to Fort Calhoun Station (FCS), which is not covered in the environmental review. This is a correlation between wind direction, wind speed, and poor dispersion conditions, and has the potential to move a poorly diluted airborne radiation release rapidly into the city of Omaha.

...

These data point to a set of weather conditions which occur at a significant frequency, combining strong stability and strong winds blowing from FCS toward Omaha. During such conditions, a low-level inversion would prevent the vertical dispersion of any radioactive release. Horizontal dispersion would be limited by the sides of the Missouri River Valley, which is bounded by hills approximately 100 meters above the valley bottom. These conditions have the potential to deliver a much larger amount of radiation to a much larger number of people than the average case.

Risk calculations must incorporate this correlation between poor mixing of any release, and the likelihood that such a release would be rapidly transported to Omaha. Total exposure estimates are likely to be highly sensitive to the inclusion of such cases. (FCS-AB-1)

Response: *These comments, although referring to the severe accident mitigation alternatives (SAMA) analysis presented in the ER, show a concern related to emergency preparedness and emergency response. There is a difference between the goals of and tools used for emergency preparedness and emergency response consequence assessments and those used for SAMA analyses.*

The MACCS computer code used for atmospheric dispersion calculations in the SAMA analysis presented by the applicant uses sequences of actual meteorological observations. The use of actual observations preserves the correlations that exist in the data. Data for an entire year were used in the analysis to ensure that the likelihood of each set of meteorological conditions was properly represented. The results of these calculations were compared with results of calculations for a longer period to ensure that the year chosen for review was not an atypical year. The use of MACCS code with observed meteorological data was appropriate for the SAMA analysis.

The applicant has a set of computational tools for emergency preparedness planning and response purposes that are different from those used in the SAMA analysis. Evaluation of those tools is outside the scope of license renewal. However, as this comment is related to current operations at Fort Calhoun Station Unit 1, it will be provided to the NRC Project Manager who oversees current operating and licensing activities for Fort Calhoun for consideration.

Comment: Now the environmental review assumed that there would be a 45-minute delay between the release and the commencement of evacuation. With the kind of wind speeds we see during those conditions, that 45-minute delay would mean that the radioactive plume was basically at the doorstep of north Omaha before there was an evacuation. (FCS-H-3) Since this is the case, I think that a mitigation strategy should be looked at which would involve sirens, rapid evacuation procedures and so forth for that portion of the Omaha metropolitan area which is located between the Missouri River bluffs. (FCS-H-4)

Comment: As a result of discussions with the NRC staff, I realize that even when the potential for increased exposure to Omaha residents is taken into account, there may be little effect on mitigation strategies adopted at Fort Calhoun Station itself, although cost-benefit analysis might be affected.

Out of general concern for public safety, I would also ask the Commissioners to consider mitigation that takes place outside the plant. Sirens and other simple measures might be cost effective for residents between the bluffs of the Missouri River Valley in the cities of Omaha and Council Bluffs, not necessarily related to the license renewal process. (FCS-AB-3)

Comment: The environmental review assumes a 45-minute delay between a release and commencement of evacuation. Those 45 minutes might well be sufficient to bring the release to the North Omaha area, under the weather conditions mentioned above. Would a rapid alert and evacuation strategy mitigate this risk? (FCS-AB-4)

Response: *The concern is related to emergency preparedness and response rather than SAMA analysis. In the event of an actual radiological emergency at a plant if evacuation of the public becomes warranted, it is likely that the evacuation will be initiated well in advance of an actual release of radionuclides with a goal of completing the evacuation before a release*

begins. The 45-minute delay referred to is a parameter of the MACCS code used in the SAMA analysis. It is not part of the plant's emergency planning or preparedness. The 45-minute delay is considered reasonable for the purposes of severe accident analysis. Review of emergency plans and preparedness is outside the scope of license renewal.

Emergency notification systems are required for nuclear power plants as part of the plant's emergency preparedness. This requirement is found at 10 CFR 50.47, "Emergency Plans," and Appendix E to 10 CFR Part 50, "Emergency Planning and Preparedness for Production and Utilization Facilities." The emergency plans and notification system have been evaluated using criteria set forth in NUREG-0654, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," and NUREG-0654, Revision 1, Supplement 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants—Criteria for Utility Offsite Planning and Preparedness." Further review of emergency plans and preparedness is outside the scope of license renewal. However, as this comment is related to current operations at Fort Calhoun Station Unit 1, it will be provided to the NRC Project Manager who oversees current operating and licensing activities for Fort Calhoun for consideration.

Comment: Another problem that I would note in regards to this is that the model that was used specified a deposition rate of 3 centimeters per second. Now that might sound kind of arcane, but if you go through the calculations, under those conditions if you say well, the plume is trapped by an inversion and it settles at 3 centimeters per second.

If you run through in 50 minutes, the plume all hits the ground if it doesn't get any higher than the level of the bluffs on both sides. So what that would essentially say is that if you use that assumption, the plume never really makes it to Omaha. It doesn't have time before it settles out. Now, that isn't necessarily valid either. A settling rate of 3 centimeters per second would work fairly well if you were talking about pretty large particulates, but if you're talking about small stuff in the air, that settling rate is much too fast.

So once again, the implications are in order to have a really adequate environmental review in the case of a severe accident, you need to look at this possibility that the settling rate is less than 3 centimeters per second, that it would occur during conditions where there was an inversion and the wind was directed from Fort Calhoun toward Omaha and that those conditions would tend to keep the plume concentrated. (FCS-H-5)

Response: *The MACCS computer code uses a parameter called the deposition velocity to calculate the rate of deposition on the ground from the concentration in the air above the ground. The deposition velocity is a transfer function that has the units of velocity, but it is not a velocity; and, it is not a settling velocity. Settling velocities are used to account for the decrease in the height of elevated plumes as a result of gravitational settling of particles. The plumes from Ft. Calhoun modeled by MACCS in the SAMA analysis presented by the applicant were for ground-level releases. Gravitational settling of the plume was not considered because the plume started at ground level. The staff concludes that a deposition velocity of 3 centimeters per second is reasonable for particles that might be released in a severe accident.*

Comment: Getting a good estimate of dispersion and transport under these conditions might require a more detailed modeling of airflow in the Missouri River Valley, or experimental release of tracers under appropriate conditions. (FCS-AB-2)

Response: *The MACCS code used in the SAMA analysis presented by the applicant is not used for emergency preparedness and response applications. MACCS was developed for use in probabilistic risk assessments. It has undergone extensive peer review and has been used in a large number of studies. It was an appropriate computational tool for use in the SAMA analysis. The applicant has other computational tools for emergency preparedness and response applications. Evaluation of those tools is outside the scope of license renewal. However, as this comment is related to current operations at the Fort Calhoun Station, it will be provided to the NRC Project Manager who oversees current operating and licensing activities for Fort Calhoun for consideration.*

Comment: Additionally, OPPD has participated, supported and helped coordinate full-scale emergency exercises involving the actuation and implementation of the Radiation Health Center. In August of 2001, evaluation of the Radiation Health Center by the Federal Emergency Management Agency said that the Medical Center staff is extremely well-trained and the equipment is excellent. We feel that OPPD support is a major contributor to the excellence of our Radiation Health Center.

OPPD's emergency preparedness organization also provides considerable equipment, supplies and training to various organizations in the surrounding vicinity. In addition to the state and county civil defense departments, OPPD has worked with local sheriff's departments, fire departments, ambulance crews, schools, nursing homes and others to ensure that these organizations can properly respond in emergency situations.

OPPD has established reception centers for the evaluation and decontamination of members of the general public if an emergency should arise.

Coordination with the American Red Cross at these centers has also been developed to provide housing to evacuate individuals, if necessary. As a result, the area around Fort Calhoun Station emergency planning zone has developed a trained, well-coordinated emergency response organization that could be invaluable in any type of emergency situation. (FCS-G-2) (FCS-AA-2)

Comment: I'm the Radiological Programs Manager with the Nebraska Emergency Management Agency and I'm here representing my boss, Al Berndt, who is the Assistant Director. He asked me to read a letter into the record. (FCS-J-1)

After this introduction, the commenter read the following statement:

Comment: The State of Nebraska and in particular, the Nebraska Emergency Management Agency, works closely and on a regular basis with the Fort Calhoun Nuclear Station's Security and Emergency Planning Staff to ensure the health and safety of the citizens of Nebraska through off-site emergency planning, training and exercising.

The Fort Calhoun Station's Security and Emergency Planning Staff ensure that any emergency on-site plan changes are reviewed and concurred with by the Nebraska Emergency Management Agency and the Nebraska Health and Human Services Regulation and Licensure, as well as with local emergency management officials.

Security measures are closely coordinated, not only with the FBI, but both with the Nebraska State Patrol and local law enforcement.

The Fort Calhoun Nuclear Station's Security and Emergency Planning Staff assists the Nebraska Emergency Management Agency by providing information for off-site planning,

updates and revisions and actively participates in annual training of emergency first responders through team training, that is, state and plant personnel conduct training together.

The Fort Calhoun Nuclear Station provides funding to support off-site planning and emergency response. As an example, the equipment provided, the station provided portable monitors for the local reception and care facilities.

The Fort Calhoun Nuclear Station's Security and Emergency Planning Staff help ensure close and friendly working relationships with the state and local officials and emergency first responders by hosting quarterly meetings to coordinate plans, training, exercises and drills. And on an annual basis, an appreciation night is sponsored by the Station for the efforts put forth by those local volunteer emergency first responders who attend training and exercises on their own time.

The close relationships developed by the Fort Calhoun Nuclear Station Security and Emergency Planning Staff with state and local agencies has paid off big dividends as evidenced by the last FEMA evaluated off-site full-scale exercise where there were no areas requiring corrective actions and no deficiencies.

In the immediate aftermath of the September 11, 2001 terrorist attack, there was close coordination between the Fort Calhoun Nuclear Station Security and Planning Staff with the Nebraska State Patrol and the Nebraska Military Department which includes the Nebraska Emergency Management Agency and the Nebraska Army and Air National Guard, as well as with local law enforcement to ensure an immediate response should it be necessary by the Fort Calhoun Nuclear Station. (FCS-K-1) (FCS-Y-1)

Comment: Throughout the years, emergency planners and responders, people that are the local people, the ones that are actually doing the actual grunt labor, the first responders, we have developed a very strong working relationship at multiple levels with the Fort Calhoun Station personnel.

The people there provide us with an open line of communication on multiple issues. They participate in local emergency planning in their facility and outside the fence as well. They provide us with use of facilities, equipment, personnel and financial resources directly in response to the REP plan. Also, Fort Calhoun Station personnel go beyond their minimum responsibilities of radiological emergency preparedness, but they also participate in our local emergency planning committees and support all our hazard emergency planning programs.

The Fort Calhoun personnel are neighbors, are friends, more than just faces entity that sits down the road. (FCS-L-1)

Comment: I have served as the Pottawattamie County Emergency Management Coordinator for eight years and during that period hardly a month has gone by where some form of interchange has not transpired between the Security and Emergency Planning Department and other nuclear operations staff at the OPPD, Fort Calhoun Nuclear Station and the Public Safety Staff in Pottawattamie County.

The referenced activities included quarterly emergency communications drills, unannounced communications checks, written correspondence involving improvements in emergency plans and training in many forms to include four FEMA evaluated radiological emergency preparedness exercises.

Other joint training activities included OPPD staff involvement and annual training of our county radiological emergency response organization and our joint quarterly off-site training meetings. The bottom line in our realm of experience, the staff at the OPPD and Fort Calhoun

Nuclear Power Station is thoroughly professional and meticulous in attention to detail concerning their approach to public safety. (FCS-M-1)

Comment: Another question that I would like answered -- and I didn't have time to research this, but I'm going to look into it, and I hope others will, too -- is to what extent potassium iodide has been stockpiled in the Omaha area in case of -- in case the worst happens. And I think that that should be all of our concern.

You know, the safety people, the fire safety people who are rescuing people and saving lives, and this could happen. We should be prepared for it. (FCS-S-9)

Comment: Please consider this a note of support for the Fort Calhoun Nuclear Station, operated by the Omaha Public Power District. (Federal Register page 31847, May 10, 2002.) A prior appointment precluded my attendance at either of the public meetings. Thank you for allowing me to submit comments in the e-mail.

As the Preparedness Bureau Chief, I've been actively involved in partnering with the staff of the Fort Calhoun Station to prepare response activities in the event of a disaster at the plant. The employees of the Station as well as their corporate counter-parts have demonstrated a high degree of cooperation with the State of Iowa as well as local county emergency management organizations. We work closely together to plan, train and exercise in preparation for an emergency at the plant. The professionalism of the Fort Calhoun and OPPD staff has been of the highest caliber. They have shown a strong commitment to minimize the impact on the surrounding populations and the environment in the unlikely event of a release from the plant. Iowa Emergency Management considers the staff to be active and important partners and we truly appreciate their assistance and support. (FCS-X-1)

Response: *The comments are noted. The NRC staff has an ongoing program for determining the adequacy of offsite emergency plans, and is supported in that role by the Federal Emergency Management Agency (FEMA). Each nuclear plant must have an approved emergency plan in accordance with 10 CFR Part 50. Drills and exercises are conducted periodically to verify the adequacy of the plans. If a problem is identified, they are resolved in the context of the current operating license. Current regulations require individual States to consider whether to use potassium iodide as a protective action measure in the event of an emergency. At this time, neither the State of Nebraska nor the State of Iowa have chosen to stockpile potassium iodide for use by the general public.*

Emergency planning is not within the scope of the environmental analysis for license renewal as set forth in 10 CFR Part 51. The comments provide no new information relating to license renewal and, therefore, will not be evaluated further in the context of the environmental review.

Safeguards and Security

Comment: One other concern that I would like to mention, although I realize that this one is dealt with in the generic environmental impact statement is I'm sure a concern that a lot of us have about possible terrorist activity. I am a little concerned what happens if a plane, either a commercial aircraft, Eppley is pretty close, or else a small plane that was loaded with explosives or some kind of chemical, did make a direct hit at the Fort Calhoun site, either at the containment structure, the auxiliary building. (FCS-H-6)

Comment: And we have serious concerns that are made more serious by the events of September 11th. (FCS-S-4)

Comment: Frances touched for a moment on the issue of terrorism, and I think the Fort Calhoun plant's proximity to Strategic Air Command -- I don't know if that has been given any consideration, but certainly if a terrorist wanted to damage a nuclear power plant and affect our nation's security, this would -- Fort Calhoun would probably be number one on the list.

So I think General Binder with the Nebraska National Guard was given the assignment over 20 years ago to develop an evacuation plan for the city of Omaha. That has never been done. Will the NRC require this to be done? (FCS-U-2)

Response: *The comments are noted. Each nuclear plant must have an approved safeguards contingency plan and emergency preparedness plan in accordance with 10 CFR Part 50. Safeguards and emergency planning is part of the current operating license and is outside the scope of the environmental analysis for license renewal. Drills and exercises are conducted periodically to verify the adequacy of the plans. If a problem is identified, they are resolved in the context of the current operating license. Any required changes to the safeguards contingency plan or emergency preparedness plans related to terrorist events will be incorporated and reviewed under the operating license.*

The comments provide no new information, and do not pertain to the scope of license renewal as set in 10 CFR Part 51 and Part 54. Therefore, they will not be evaluated further under this review. However, these comments will be provided to the NRC Project Manager who oversees current operating and licensing activities for Fort Calhoun for consideration.

Aging Management

Comment: With the containment is there going to be any problem with embrittlement? Does that mean that the containment is less able to withstand the impact of a plane toward the end of the licensing, the relicensing period than it is right now. (FCS-H-7)

Comment: Now, with all due appreciation and respect for the consciousness of the management of the Fort Calhoun Nuclear Station, it occurs to me to ask the question: is that a good idea in an aging nuclear power plant? Aging plants of any kind, aging machines of any kind, don't get safer. And the reason surprises are hard to handle is because they're surprises. (FCS-S-7)

Comment: But what I'm concerned about are the control rod drive mechanisms. And has an inspection of these assemblies and mechanisms been completed lately?

If one hasn't been completed, I'd like to know when one will be completed. And I want to turn this in as I guess a piece of evidence or whatever. This was produced by the Union of Concerned Scientists. It details problems that we're having with these -- the kind of reactors that are in Fort Calhoun.

Pressurized water reactors have these control rod drive mechanisms, and they are cracking and allowing water to leak out of the reactor. These should be inspected, first of all. They hold the fuel rods in the reactor vessel, and the reactor is pressurized at 2,000 pounds per square inch. So some of these cracks have gone almost halfway around the fuel rod.

And if they lose their grip on the fuel rod, the fuel rod is going to come out of the reactor pile, and this would result in a catastrophic accident. And this is the kind of accident that could cause catastrophic loss of life here in our community.

And at the time that this was printed, there was only one nuclear power plant, one pressurized reactor in the country that had this inspection completed. And I think that OPPD should check this out immediately. An inspection -- in fact, I think the plant should be shut down until the inspections are completed.

I know there was just a refueling, but, like I say, when this was printed there was none -- no inspections had been completed, and I wonder when this work will be done. And will the results be available at the library? Will the public be able to see whether these inspections have been done and whether the results are available?

Other countries have the same kind of reactor. In Japan, the vessel heads have been replaced. In France, they found it economical to replace the vessel heads having defective nozzles. Several heads have been replaced and are planned to be replaced.

In Sweden, replacement of the entire vessel head is planned. And removable insulation on the vessel head and N-13 monitoring systems were installed at French and Swedish plants for easy -- early detection of leakage from throughwall cracks in the nozzle walls.

And like to date, there has only been one reactor that has been checked out, and that's in Wisconsin. (FCS-U-1)

Comment: I'd like to touch on an issue, and I will leave this little document, once again, produced by the Union of Concerned Scientists. Its main subject is aging -- the aging of these plants. And this is pretty interesting because it applies -- it applies to used cars, it applies to anything that operates on this planet. And, of course, it's hard to see, but basically this is the bathtub curve.

When you first buy a car, you have maybe a few problems with it, learning how to operate it. And then you have a period of uninterrupted, steady, reliable performance. But then you get to the end of the bathtub, the other side of the bathtub, and failures start to increase.

Now, recently there has been some press about failure and equipment malfunctions at nuclear power plants -- have experienced a reduction in frequency, there is not as many reported incidents or equipment failures. But that's because most of the critical systems in a nuclear power plant are not being inspected once a month. They're being inspected once every four -- four times a year, and other systems are only being checked annually instead of quarterly.

So for any of the media that's here that's getting a warm, safe, comfortable feeling that reported accidents and equipment failures at nuclear power plants are going down, it's just that inspections are occurring less frequently. And this is at the stage of the aging process where the nuclear power plant should be being inspected more often, not less often.

You have more problems with an old power plant than you do with a new power plant. And there is three pages here of failures in the last year of nuclear power plants, serious things that could have led to a meltdown. And all of these problems are because of aging -- all of them -- so I'm going to turn this in as evidence and not read it all to everybody. (FCS-U-4)

Comment: Plants are assumed to have no design problems, even though hundreds are reported every year. Aging is assumed to result in no damage, despite evidence that aging materials killed four workers.

And here is the evidence right here. This is NRC stuff.

Reactor pressure vessels are assumed to be fail-proof, even though embrittlement forced the Yankee-Rowe nuclear plant to shut down, and the risk assessments assume that plant workers are far less likely to make mistakes than actual operating experience demonstrates. The risk assessments consider only the threat from damage to the reactor core, despite the fact that irradiated fuel in the spent fuel pools represents a serious health hazard and an easier target for terrorists.

FCS-U-8)

Response: *The comments are noted. As noted above, the NRC's environmental review is confined to environmental matters relevant to the extended period of operation requested by the applicant. Safety matters related to aging are outside the scope of this review. An NRC safety review for the license renewal period is conducted separately, and the results of that review will be discussed in a safety evaluation report on Fort Calhoun's aging management programs. The comments provide no new information and will not be evaluated further in the context of the environmental review. However, the comments will be forwarded to the project managers for the license renewal safety review and for the current operating and licensing activities for consideration.*

Need for Power

Comment: Our mission is the creation of jobs and the creation of new net investment into Sarpy County. I think as some of you know, we're the third fastest growing county in the State of Nebraska. The last five years we have averaged over 1,000 new single-family housing units that have been built in Sarpy County.

I think it's safe to say in the Omaha metropolitan area that we are the largest provider of industrial and business sites in the Omaha metropolitan area. We currently have on inventory over 30 business, industrial, commercial, and office parks for location.

One of the things that we are seeing with regard to our development is a number of very large projects that are locating in Sarpy County. I'll give you a couple of examples. The Caterpillar Claus that goes by Claus Omaha right now located within Sarpy County within the last year. Shopco's Warehouse Distribution Center located in Sarpy County about a year ago. And Nebraska Machinery relocated from the downtown area of Omaha into Sarpy County. So those are three of our major projects that located in Sarpy County within the last year.

One of the things that we are seeing from our prospects is that they are looking for reliable electrical power. A lot of those companies are looking for redundant feeds. They're looking for feeds coming from two different substations, because they want reliability, especially in the days of very high technical computer operations.

One of the things I think that ties to that is also the ability to provide a number of different sources to create that electrical power. Whether that be wind, nuclear, coal, oil, I think it's very, very important that we maintain and are looking at a wide variety of ways to generate electrical power.

We're going to continue to grow. Certainly, growth is very important to our state. I guess most of you know our legislature is being called back because our economic projections are about 120 million (dollars) lower than what they should be. And as a result of that, they are going to have to be cutting a number of major projects. That's why economic growth and the value of projects is very important to continue to grow our assessed valuation in the community.

So we are certainly very much in support of having a variety of sources available, and reliable sources available, for power for not only our residents but our new industries and businesses that locate within Sarpy County.
(FSC-O-2)

Response: *The comment is noted. As stated in 10 CFR 51.95(c)(2), the economic costs and benefits of renewing an operating license are outside the scope of license renewal. The comment provides no new information and, therefore, will not be evaluated further.*

Other Issues

Comment: I agree with what has been said about the expertise and the professionalism of the people that manage OPPD, and I have a great deal of respect and gratitude for them. And I've said it publicly before, I'll say it again, if I have to live near a nuclear power plant, I'm glad it's these guys that are managing it. Things could be worse. (FCS-S-1)

Response: *The comment is noted. It addresses the professionalism of the applicant, and is general in nature. The comment provides no new information and will not be evaluated further.*

Comment: As a public servant several years ago, I ran into conflict of interest all the time from myself and from people who served with me and from local citizens. But tonight, judging from name cards and from the comments, there are three -- four people speaking I think without a conflict of interest.

Everyone else works for OPPD, the NRC, etcetera, etcetera, etcetera. And I may be misjudging, but these are the people who spoke tonight. You know, if there are some that haven't spoken that are going to give another opinion here, I'd be happy to hear it. But the conflict of interest constantly shows through. You're employed by, benefit from, it goes on and on and on. And I don't think you people can participate and contribute to a hearing such as this.

It happens with me. It used to happen to me. It became very evident whenever you had that conflict, that's when you have to really step back, and you can't talk at a situation like this. And I want everyone to remember that in the continuing months that we go on now, to consider that conflict of interest and really address it to the NRC people. (FCS-T-11)

Response: *All members of the affected public are invited to comment on potential environmental impacts resulting from renewing the operating license of a nuclear plant. For example, in accordance with 10 CFR 51.28, the following diverse entities are specifically invited to participate in the scoping process:*

- a. *The applicant*
- b. *Any Federal agency that has jurisdiction by law or special expertise with respect to any environmental impact involved, or that is authorized to develop and enforce relevant environmental standards*
- c. *Affected State and local government agencies, including those authorized to develop and enforce relevant environmental standards*

- d. *Any affected Indian tribe*
- e. *Any person who requests or has requested an opportunity to participate in the scoping process, and*
- f. *Any person who intends to petition for leave to intervene.*

In addition, the NRC announced the public scoping meeting and invited participation in the scoping process by potentially affected members of the public through a Federal Register notice, advertisements and legal notices in local newspapers, a press release, and flyers posted locally. Thus, participation in this scoping process by diverse elements of the affected members of the public and local, State, and Federal government agencies is encouraged by the NRC in order to receive any applicable information from any affected individual or individuals pertaining to renewing the license of the facility.

Summary

The preparation of the plant-specific supplement to the GEIS (called a SEIS) for Fort Calhoun Station Unit 1 will take into account all the relevant environmental issues raised during the scoping process that are described above. The draft SEIS will be made available for public comment. Interested Federal, State, and local government agencies, local organizations, and members of the public will be given the opportunity to provide comments to be considered during the development of the final SEIS. Concerns identified that are outside the scope of the staff's environmental review have been or will be forwarded to the appropriate NRC program manager for consideration.

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