January 16, 2003

APPLICANT: Omaha Public Power District

FACILITY: Fort Calhoun Station, Unit 1

SUBJECT: SUMMARY OF TELECOMMUNICATION WITH OMAHA PUBLIC POWER DISTRICT (OPPD) TO DISCUSS DRAFT REQUESTS FOR ADDITIONAL INFORMATION (RAIs) FOR THE RENEWAL OF THE OPERATING LICENSE FOR FORT CALHOUN STATION, UNIT 1 (FCS)

On July 18 and September 5, 2002, the NRC staff (the staff) and representatives from OPPD held telecommunications (telecons) to discuss draft RAIs resulting from the staff's review of license renewal application (LRA) Sections 2.1.4, 2.2, 2.3.3.14, 2.3.3.19, 2.3.3.20, 2.3.4, B.3.2, and B.3.3. Telecon participants are listed in the enclosure.

2.1.4 Plant-Level Scoping of Systems and Structures

2.1.4-D1 On pages 2-9 of the LRA, it is stated that no additional equipment was included within the scope of license renewal due to the PTS Rule and that all systems credited for anticipated transient without scram (ATWS) mitigation are within the scope of license renewal for reasons other than ATWS mitigation. It is not clear what structures, systems, and components (SSCs) need be within the scope of license renewal to meet the requirements of 10 CFR 54.4a(3) for PTS and ATWS. Identify which SSCs are credited for meeting the requirements of 10 CFR 54.4a(3) for PTS and ATWS. This information is necessary in order for the staff to have reasonable assurance that all the SSCs have been correctly identified as within scope and subject to an aging management review (AMR) in accordance with 10 CFR 54.

Telecon Discussion:

At the July 18 telecon, the staff wanted clarification that all SSCs that are required to meet the scoping criterion for ATWS are clearly identified. OPPD suggested that the staff clarify this in the RAI. All agreed to revise the RAI to read:

> On page 2-9 of the LRA, it is stated that no additional equipment was included within the scope of license renewal due to the PTS Rule and all systems credited for ATWS mitigation are within the scope of license renewal for reasons other than ATWS mitigation. As written, the staff is concerned that all structures, systems, and components required to ensure compliance with the PTS Rule (10 CFR 50.61) and the ATWS Rule (10 CFR 50.62), are not

identified in the LRA. Therefore, the staff requests that the applicant identify which SSCs are credited for meeting the requirements of 10 CFR 54.4a(3) for PTS and ATWS. This information is necessary in order for the staff to have reasonable assurance that all the SSCs have been correctly identified as within scope and subject to an AMR in accordance with 10 CFR 54.

At the September 5, 2002, telecon, OPPD and the staff agreed to the RAI revision. The RAI will be renumbered to 2.1.4-1.

2.2 Plant-Level Scoping Results

2.2-D1 A legend was not provided for the system drawings. A legend is needed to ensure the staff can properly identify system components. Please provide such a legend.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. The final RAI will be renumbered to "2.2-1."

2.2-D2 For some of the systems highlighted on the system drawings, the license renewal boundaries appear to start/stop at the boundary between two design classes. Provide definitions of the design classes used at FCS and identify the classes which contain CQE components and limited CQE components.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. The final RAI will be numbered "2.2-2."

2.2-D3 Section 54.37(b) of 10 CFR requires that FSAR updates after the renewed license is issued must include any systems, structures, and components newly identified that would have been subject to an AMR in accordance with 10 CFR 54.21. Describe how the drawings, submitted as reference material for your application, will be maintained and updated to reflect newly identified SSCs.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. They do not plan to maintain the drawings after renewal of the license. Rather, they will maintain the list of SSCs that are within scope and SC's that are subject to an AMR. The RAI response will provide an explanation of how this is to be done.

The final RAI will be numbered "2.2-3."

2.3.3.14 Fire Protection (FP)

2.3.3.14-D1 LRA Section 2.1.4.1, "Plant Systems," states, on pages 2-8, "The Non-CQE FP SSCs satisfying the regulation are identified in the Fire Hazards Analysis (FHA)." LRA Section 2.3.3.14, "Fire Protection," states that the plant is divided into unique plant areas as required by Appendix A to NRC Branch Technical Position APCSB 9.5-1 and Appendix R to 10 CFR 50. LRA Section 2.3.3.14 also states that more information on the FP system can be found in Section 9.11 of the USAR. The USAR states that the updated FHA documents the FP program comparison matrix to Appendix A to BTP 9.5-1 and Appendix R, Section III.G, III.J., and III.O requirements. It appears that the applicant has used the FHA as the primary scoping tool to identify FP SSCs (Non-CQE) required to satisfy 10 CFR 50.48.

a. Discuss how plant commitments contained in drawings, the USAR and other plant documentation, which may also reflect the FCS FP current licensing basis, were reviewed to ensure that all FP SSCs relied upon for compliance to 10 CFR 50.48 were included within the scope of license renewal.

b. If the FHA is the primary scoping tool, describe how it is updated to reflect changes in, and commitments to, the approved FP program.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. The final RAI will be numbered "2.3.3.14-1."

2.3.3.14-D2 The staff identified, from its review of the flow diagrams, that the following components have been excluded from within the scope of license renewal. Please provide the basis for exclusion of the following components from within the scope of license renewal:

a. 11405-M-255, Sheet 1B - 12" Hose Valve Heads. Twelve-inch hose valve heads are not highlighted as within the license renewal boundary in this flow diagram and appears to be excluded from within scope of license renewal. Provide the basis for exclusion, since it appears that these valves provide a pressure boundary intended function, consistent with the rest of the FP system piping, which is identified as within scope of license renewal.

Telecon Discussion:

OPPD had no questions pertaining to this portion of the RAI, but noted that the drawing should be renumbered to 11405-M-266. The staff will revise the RAI to reference the correct drawing (see revised RAI below). OPPD will clarify that the referenced valves are used for testing only, and are normally shut for isolation.

b. 11405-M-266, Sheet 8 - Fire hose connections. The piping leading to the fire hose connections is not highlighted as within the license renewal boundary and appears to be excluded from within the scope of license renewal. Provide the basis for exclusion, since it appears this piping provides a pressure boundary intended function for the FP water supply.

Telecon Discussion:

OPPD had no questions pertaining to this portion of the RAI. OPPD will clarify that the referenced valves are used for testing only, and are normally shut for isolation.

c. 11405-M-266, Sheet 8A - Piping leading to transformer sprinklers. The piping leading to the transformer sprinklers is excluded from the scope of license renewal. The FP license condition states, "Omaha Public Power District shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Updated Safety Analysis Report for the facility and as approved in the SERs dated. . . ." USAR Table 9.11-1, "Extinguishing System Major Component Data" states, on page 8, that water spray systems are provided for main, auxiliary transformers, and house transformers. In addition, the fire hazards analysis (FHA), page 56, identifies that water spray systems are provided for the transformers. Furthermore, the comparison of the FHA Appendix A to BTP 9.5-1 identifies, on page 209, that the main power transformers are protected by water spray systems. It is the staff's view that, based on the references (the license condition, the USAR, and the FHA), the piping leading to the transformer sprinklers should be with the scope of license renewal and subject to an AMR. Identify where, in the LRA, these components are identified as within the scope of license renewal and subject to an AMR, or provide a technical justification for their exclusion.

Telecon Discussion:

At the July 18 telecon, OPPD stated that it will include, in its response, the FHA references that demonstrate that the component is only needed for insurance purposes, and is not required to meet 10 CFR 50.48. The staff stated that it will revise this portion of the RAI to provide a road map through the licensing documents to support its belief that the subject component should be within scope. The RAI was revised and provided to OPPD. At the September 5 telecon, OPPD and the staff agreed to a slightly revised version (see below). OPPD stated that they would revise the licensing basis to clarify what components are required by the FP program and which are provided solely for insurance purposes. This clarification will be completed and documented for the scoping inspection.

Subsequently, OPPD decided not to revise the licensing basis to clarify which components are required by the FP program and which are provided solely for insurance purposes. OPPD says that most of the SSCs originally not in-scope and questioned by the staff will be included in-scope. For any that OPPD still feels are outside the scope, OPPD will provide justification in the RAI response. At this time, OPPD considers the generator exciter CO_2 system to still be outside the scope of license renewal.

d. 11405-M-266, Sheet 11 & Sheet 12 - Retard Chambers. The piping leading up to, and including, the retard chambers is excluded. NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," includes water-based FP components within the scope of license renewal and subject to an AMR. Sprinkler system alarm components, such as retard chambers, orifice plates, and associated piping are typically within the scope of components that require an AMR. These components provide a pressure boundary function during system activation and are made of carbon-steel, which is subject to a loss of material as a result of corrosion. Identify where, in the LRA, these components are identified as within the scope of license renewal and subject to an AMR, or provide a technical justification for their exclusion.

Telecon Discussion:

At the July 18 telecon, the staff stated that it would review a similar issue for the North Anna LRA review and revisit this RAI. This portion of the RAI was revised and provided to OPPD. At the September 5 telecon, OPPD and the staff agreed that the revision was adequate (see revised RAI below).

e. 11405-M-259, Sheet 1 - Fire Protection Jockey Pump. The piping leading up to, and including, the jockey pump, is excluded from the scope of license renewal. The FP license condition states that "Omaha Public Power District shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Updated Safety Analysis Report for the facility and as approved in the SERs dated. . . ." Appendix A to Branch Technical Position, Section E.2.(c), states, "Details of the fire pump installation should, as a minimum, conform to NFPA 20, 'Standard for the Installation of Centrifugal Fire Pumps.'" NFPA-20 states that a fire pump shall not be used as a pressure maintenance pump. USAR Section 9.11, page 5, states that the pressurization of supply piping is provided by means of a jockey pump. USAR Table 9.11-1, "Extinguishing System Major Component Data," identifies the jockey pump. In addition, page 233 of the FHA, "Appendix A to BTP 9.5-1 Comparison," states that NFPA-20 was used as a guideline in the fire pump installation. It is the staff's view that, based on the references (the license condition, the branch technical position, NFPA-20, the USAR, and the FHA), the jockey pump casing should be within the scope of license renewal and subject to an AMR. Identify where, in the LRA, the jockey

pump is identified as within the scope of license renewal and subject to an AMR, or provide a technical justification for its exclusion.

Telecon Discussion:

At the July 18 telecon, the staff stated that it would provide OPPD with a detailed road map through the licensing documents to support the staff's belief that the subject component should be within scope. The staff revised the RAI and provided it to OPPD. At the September 5 telecon, OPPD and the staff agreed that the revision was adequate (see revised RAI below). The RAI will be renumbered to "2.3.3.14-2."

Following the telecon, this RAI was revised to read as follows:

2.3.3.14-D2 The staff identified, from its review of the flow diagrams, that the following components have been excluded from within the scope of license renewal. Please provide the basis for exclusion of the following components from within the scope of license renewal:

a. 11405-M-266, Sheet 1B - 12" Hose Valve Heads. Twelve-inch hose valve heads are not highlighted as within the license renewal boundary in this flow diagram and appear to be excluded from within scope of license renewal. Provide the basis for exclusion, since it appears that these valves provide a pressure boundary intended function, consistent with the rest of the FP system piping, which is identified as within scope of license renewal. If the hose valve heads are brought into scope, provide for the aging management information for the components.

b. 11405-M-266, Sheet 8 - Fire hose connections. The piping leading to the fire hose connections is not highlighted as within the license renewal boundary and appears to be excluded from within the scope of license renewal. Provide the basis for exclusion, since it appears this piping provides a pressure boundary intended function for the FP water supply. If the hose connections are brought into scope, provide the aging management information for the components.

c. 11405-M-266, Sheet 8A - Piping leading to transformer sprinklers. The piping leading to the transformer sprinklers is excluded from the scope of license renewal, as shown in the flow diagram. The staff believes that the piping should be included within scope and subject to an AMR. The staff's basis is provided below.

Background information

Section 54.4(a)(3) of 10 CFR requires SSCs to be included within the scope of license renewal if they are relied upon to comply with 10 CFR 50.48. Section 50.48 of 10 CFR requires each nuclear power plant to have an FP program that satisfies Criterion 3 of

Appendix A of 10 CFR Part 50 (GDC 3). The FP program commitments are documented in OPPD's FP license condition, which states that "Omaha Public Power District shall implement and maintain in effect all provisions of the approved FP program as described in the Updated Safety Analysis Report for the facility and as approved in the SERs dated. . . ." The documents described in the license condition show that FCS commits to meet 10 CFR 50.48 through commitments made to Appendix A to Branch Technical Position APCSB 9.5-1 and Appendix R to 10 CFR 50.

In an SER dated January 31, 1994, the staff approved FCS' implementation of changes to the technical specifications, in accordance with Generic Letter (GL) 86-10 and GL 88-12. In addition, this SER shows that FCS included a standard FP license condition (see GL 86-10), which described the references that contain their plant-specific approved FP program. The NRC-approved fire protection program[1] is also described in GL 86-10, "Implementation of Fire Protection Requirements," and GL 88-12, "Removal of Fire Protection Requirements From Technical Specifications."

As stated, the NRC-approved FP program for FCS is documented in the FP license condition, which refers to a number of SERs as well as the USAR. USAR Table 9.11-1, "Extinguishing System Major Component Data," states, on page 8, that water spray systems are provided for the main, auxiliary, and house transformers. In addition, page 56 of the FCS fire hazards analysis (FHA) states that water spray systems are provided for the transformers. Recall that LRA Section 2.1.4.1, "Plant Systems," states, on pages 2-8, "The Non-CQE FP SSCs satisfying the regulation are identified in the Fire Hazards Analysis (FHA)," and the USAR states that the updated FHA documents the FP program comparison matrix to Appendix A to BTP 9.5-1. Furthermore, page 209 of Appendix A to the FHA, which compares the FP program to the guidance in Appendix A to Branch Technical Position (BTP) 9.5-1, states that the main power transformers are protected by water spray systems. The FHA's comparison between the FP program and Appendix R,

[1]The NRC-approved FP program is defined in GL 88-12 as including the FP and post-fire safe shutdown systems necessary to satisfy NRC guidelines and requirements; administrative and technical controls; the fire brigade and fire protection related technical staff; and other related plant features which have been described by the licensee in the FSAR, fire hazards analysis, responses to staff requests for additional information, comparisons of plant designs to applicable NRC FP guidelines and requirements, and descriptions of the methodology for assuring safe plant shutdown following a fire.

Sections III.G, III.J, and III.O requirements also identify this spray function.

GDC 3 requires that SSCs, which are important to safety, be designed and located to minimize (consistent with other safety requirements) the probability and effect of fires and explosions. As defined in GL 84-01, "NRC Use of Terms, 'Important to Safety' and 'Safety-Related,'" SSCs important to safety encompass the broad scope of equipment covered by Appendix A to 10 CFR Part 50, and include more than just safe shutdown equipment and those narrowly identified as safety-related. Safety-related SSCs are defined in 10 CFR Part 50.49(b)(1). For example, in accordance with 10 CFR 50.48, some portions of suppression systems may be required in plant areas where a fire could result in the release of radioactive materials to the environment, even if no safety-related or safe shutdown equipment is located in that particular fire area. This equipment is considered "important to safety." In addition, equipment provided for the FP program to satisfy Appendix A to BTP 9.5-1 is also considered "important to safety." The NRC staff documented this position on pages 2-46 of NUREG-1743 (the license renewal safety evaluation for Arkansas Nuclear One-Unit 1)[2].

It is the staff's view that, based on these references (the license condition, along with the system descriptions in the USAR and the FHA), the piping leading to the transformer sprinklers is required to ensure that the spray systems can provide water to the transformers, as described in the USAR and FHA. Thus, they are part of the applicant's FP license condition and, as such, are required to meet 10 CFR 50.48. Therefore, these components should be within the scope of license renewal and subject to an AMR. On this basis, the staff requests that the applicant identify where these components are identified in the LRA as within the scope of license renewal and subject to an AMR, or provide a technical justification for their exclusion. If the subject piping is brought into scope, provide the aging management information for the component.

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[2]Excerpt from NUREG-1743: "The exclusion of any FP SSC on the basis that its intended function is not required for the protection of safe-shutdown equipment is not acceptable to the staff, in itself. Compliance with 10 CFR 50.48 requires a FP program that goes beyond safe shutdown, and includes such requirements as a means to limit fire damage to SSCs that are important to safety. . . ."

d. 11405-M-266, Sheet 11 & Sheet 12 - Retard Chambers

The piping leading up to, and including the retard chambers, is excluded from the scope of license renewal. It is the staff's understanding that the retard chamber is a metal container that fills with water when there is a surge in water pressure. It absorbs the pressure increase, thereby allowing the firm alarm pressure switch to operate only in an actual alarm condition. The drip cup at the bottom of the chambers allows the water surge to drain out. The staff's technical concern is that retard chambers require maintenance to ensure that the drip valve remains clean and does not become clogged from corrosion and rust, which could lead to false alarms.

NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," includes water-based FP components within the scope of license renewal and subject to an AMR. Sprinkler system alarm components, such as retard chambers, orifice plates, and associated piping are typically within the scope of license renewal and require an AMR. These passive, long-lived components provide a pressure boundary function during system activation and are made of carbon-steel, which is subject to a loss of material as a result of corrosion.

The wet pipe suppression system identified on these drawings is needed for protection of the radiation process buildings. On page 258 of the FCS FHA (EA-FC-97-001, Rev. 3), the licensee documents how it meets the intent of Appendix A to BTP 9.5-1. Specifically, Section F.14, "Radwaste Building," states that FCS meets the intent of Appendix A to BTP 9.5-1 by installing automatic sprinklers in the Linder Holdup Room of the radwaste processing building, due to the extra fire loading associated with high integrity containers (HICs). Because this spray function is documented in the FHA, the associated FP SSCs, which support this water suppression system, are required for compliance with 10 CFR 50.48 (for the same reasons discussed above regarding the transformer sprinkler piping) and, as such, are required by 10 CFR 54.4(a)(3) to be included within the scope of license renewal. Exclusion of these portions of the suppression systems, on the basis that no safety-related or safe shutdown equipment is contained in the radiation process building, is not acceptable on the basis that the scope of 10 CFR 50.48 provides for the protection of all SSCs important to safety, as discussed above for the transformer sprinkler piping.

On the basis of the above discussion, the staff requests that the applicant identify where these components are identified in the LRA as within the scope of license renewal and subject to an AMR, or provide a technical justification for their exclusion. If the retard chambers are brought into scope, provide the aging management information for the components.

e. 11405-M-259, Sheet 1 - Fire Protection Jockey Pump

(See the background information regarding 10 CFR 50.48, the FCS license condition, the NRC-approved FP program, and GDC 3 for RAI 2.3.3.14-2.c above.)

The piping leading up to and including the jockey pump is excluded from the scope of license renewal. The FP license condition states that "Omaha Public Power District shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Updated Safety Analysis Report for the facility and as approved in the SERs dated. . . ." Appendix A to Branch Technical Position, Section E.2.(c), states, "Details of the fire pump installation should, as a minimum, conform to NFPA 20, 'Standard for the Installation of Centrifugal Fire Pumps.'" NFPA-20 states that a fire pump shall not be used as a pressure maintenance pump. USAR Section 9.11, page 5, states that the pressurization of supply piping is provided by means of a jockey pump. USAR Table 9.11-1, "Extinguishing System Major Component Data" identifies the jockey pump. In addition, page 233 of the FHA, "Appendix A to BTP 9.5-1 Comparison," states that NFPA-20 was used as a guideline in the fire pump installation. Because this pressurization function is documented in the USAR, the associated FP SSCs are required for compliance with 10 CFR 50.48 (for the same reasons discussed above regarding the transformer sprinkler piping) and, as such, are required by 10 CFR 54.4(a)(3) to be included within the scope of license renewal.

It is the staff's view that, based on the references (the license condition and the branch technical position, NFPA-20, the USAR, and the FHA), the jockey pump casing should be within the scope of license renewal and subject to an AMR. On this basis, the staff requests that the applicant identify where the jockey pump is identified in the LRA as within the scope of license renewal and subject to an AMR, or provide a technical justification for its exclusion. If the jockey pump is brought into scope, provide the aging management information for the component.

2.3.3.14-D3 The staff identified, from its comparison of USAR Section 9.11, "Fire Protection System" to LRA Table 2.3.3.14-1, that the following components are not identified as FP components with intended functions required for compliance to 10 CFR 50.48. Provide the basis for exclusion of the following components from within the scope of license renewal:

a. Fire Hydrants. In accordance with the USAR Section 9.11, page 6, it states, "fire hydrants are located approximately 50 feet from the structure and are placed approximately every 300 feet along the fire ring main around the plant buildings." It is the staff's view that, based on the references (the license condition and the USAR), the hydrants should be within the scope of license renewal and subject to an AMR. Verify that the hydrants identified in USAR Table 9.11-4, "Fire Hose Locations,"

have been included in scope and are subject to an AMR. Provide justification for the exclusion of any fire hydrants required for compliance to 10 CFR 50.48.

Telecon Discussion:

OPPD had no questions pertaining to this portion of the RAI, and clarified that hydrants are included within scope and are identified as piping and valve bodies in LRA Table 2.3.3.14-1.

b. CO_2 System. The turbine generator exciter is protected by a total flooding CO_2 system, utilizing high pressure CO_2 storage tanks as a supply source, as stated in USAR Section 9.11, page 14. The applicant has not identified the CO_2 system, including storage tanks and associated piping, as included in the scope of license renewal and subject to an AMR. In addition, page 240 of Appendix A, FHA, states that a carbon dioxide system is installed in the generator exciter housing and that NFPA 12, "Standard on Carbon Dioxide Extinguishing Systems," was used as a guideline in the installation. It is the staff's view, based on the references (the license condition and the USAR), that the CO_2 system should be within the scope of license renewal and subject to an AMR. Identify where in the LRA the carbon dioxide system is identified as within the scope of license renewal and subject to an AMR, or provide a technical justification for its exclusion.

Telecon Discussion:

At the July 18 telecon, the staff stated that it will provide OPPD with a detailed roadmap through the licensing documents to support the staff's belief that the subject component should be within scope. The staff revised the RAI and provided it to OPPD. At the September 5 telecon, OPPD and the staff agreed that the revision was adequate (see revised RAI below). The RAI will be renumbered to "2.3.3.14-3."

Following the telecon, this RAI was revised to read as follows:

2.3.3.14-D3 The staff identified from its comparison of USAR Section 9.11, "Fire Protection System," to LRA Table 2.3.3.14-1, that the following components are not identified as fire protection components with intended functions required for compliance to 10 CFR 50.48. Provide the basis for exclusion of the following components from within the scope of license renewal:

a. Fire Hydrants. In accordance with the USAR Section 9.11, page 6, states, ". . . fire hydrants are located approximately 50 feet from the structure and are placed approximately every 300 feet along the fire ring main around the plant buildings." It is the staff's view that, based on the references (the license condition and the USAR), the hydrants should be within the scope of license renewal and subject to an AMR. Verify that the hydrants identified in USAR Table 9.11-4, "Fire Hose Locations," have been included in scope and are

subject to an AMR. Provide justification for the exclusion of any fire hydrants required for compliance to 10 CFR 50.48. If the fire hydrants are brought into scope, provide the aging management information for the components.

b. CO_2 System. (Also see the background information regarding 10 CFR 50.48, the FCS license condition, the NRC-approved FP program, and GDC 3 for RAI 2.3.3.14-2.c, above.)

The turbine generator exciter is protected by a total flooding CO_2 system, utilizing high pressure CO_2 storage tanks as a supply source, as stated in USAR Section 9.11, page 14. The applicant has not identified the CO_2 system, including storage tanks and associated piping, as included in the scope of license renewal and subject to an AMR, even though it appears to be credited in the documentation listed in the FP license condition.

In addition, page 240 of Appendix A to the FHA states that a carbon dioxide system is installed in the generator exciter housing and that NFPA 12, "Standard on Carbon Dioxide Extinguishing Systems," was used as a guideline in the installation. It is the staff's view, based on the references (the license condition and the USAR), that the CO_2 system should be within the scope of license renewal and subject to an AMR. Identify where the carbon dioxide system is identified in the LRA as within the scope of license renewal and subject to an AMR, or provide a technical justification for its exclusion. If the system is brought into scope, provide the aging management information for the system components.

2.3.3.19 Primary Sampling

2.3.3.19-D1 Drawing 11406-M-12, Sheet 1, shows Sample Heat Exchangers SL-3, SL-8A, SL-8B and Sample Cooler SL-51 as within the scope of license renewal for the primary sampling system. The intended functions of these components are heat transfer and pressure boundary. In all four cases, the primary sampling system inlet and outlet piping is not within the scope of license renewal. The failure of this piping could compromise the pressure boundary function of the heat exchangers and sample chiller. Provide justification for not including the inlet and outlet piping within the scope of license renewal.

Telecon Discussion:

OPPD had no questions with this RAI. The final RAI will be numbered "2.3.3.19-1."

2.3.3.20 Radiation Monitoring-Mechanical

2.3.3.20-D1 Drawing 11405-M-1, Sheet 2, is the only drawing listed as showing the license renewal boundaries for this system. The drawing appears to show only three equipment cabinets as within the scope of license renewal. Table 2.3.3.20-1 lists five component types subject to AMR. Clarify where the components within

the scope of license renewal for the radiation monitoring-mechanical system are shown and/or listed. Provide an inclusive drawing or drawings showing the adiation monitoring-mechanical system license renewal boundaries. This information is necessary in order for the staff to have reasonable assurance that all the SSCs have been correctly identified as within scope and subject to an AMR in accordance with 10 CFR 54.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. The proprietary drawings were provided electronically, the staff reviewed the drawings and discussed them with the applicant on July 23, 2002. Final RAI will be numbered "2.3.3.20-1."

2.3.4 Steam and Power Conversion Systems

2.3.4-D1 The steam generator blowdown system is identified in LRA Section 3.4 as included in the steam and power conversion systems group. The steam generator blowdown system is not part of the steam and power conversion systems listed in LRA Section 2.3.4. Additionally, LRA Table 2.2-1, "Plant Level Scoping Results," lists the steam generator feedwater blowdown system as being within the scope of license renewal. Given these discrepancies, in order for the staff to understand whether the steam generator feedwater blowdown system is within scope and subject to an AMR, please identify where, in the application, the steam generator feedwater blowdown system is addressed.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. OPPD will provide a system description, including system-intended functions, and clarify that the steam generator blowdown system consists of components from other systems. The RAI response will identify the components and the systems from which they come, where they can be found in the boundary drawings, and where they can be found in the AMR tables in LRA Section 3. The final RAI will be numbered "2.3.4-1."

B.3.2 Buried Surfaces External Corrosion Program

B.3.2-D1 The applicant states that the Buried Surface External Corrosion Program will be consistent with the GALL AMP, "Buried Piping and Tanks Inspection." In order to determine whether this AMP will be adequate to manage aging effects associated with external surfaces of buried components, the staff requests that the applicant discuss the changes that will be made to the current program in order to make it consistent with the GALL AMP.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. The staff wants the RAI response to include clarification on whether cathodic protection was provided for

buried components (answer - yes, but not credited for piping, only for pilings). OPPD will include information in its response, clarifying that all underground piping and tanks are coated, and that some copper tubing off the diesel fuel oil tank is not coated. RAI will be renumbered "B.3.2-1."

B.3.2-D2 The detection of aging effects in buried components is plant-specific and depends on plant operating experience as well as industry operating experience. Therefore, the staff must further evaluate the applicant's operating experience and proposed inspection frequency. The staff requests that the licensee expand the discussion of this AMP to include the inspection frequency and the applicable industry operating experience.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. The staff stated that the response should include information on when recent buried piping excavations were done and what piping was excavated. The staff also wants to know what criteria was used to decide what portions of the tanks would be excavated in 2004. OPPD will include this information in its response. RAI will be renumbered "B.3.2-2."

B.3.3 General Corrosion of External Surfaces Program

B.3.3-D1 In the applicant's description of the preventive actions attributed to the program, the applicant stated, "This program does not prevent aging." The staff recognizes that an aging management program may not prevent the occurrence of an aging effect. However, the program description should clearly describe how it will be used to manage aging effects. Therefore, the staff requests that the applicant describe what this program accomplishes; e.g. maintains coatings, sealants, and caulking to prevent advanced corrosion that could hinder the component's ability to function. In the applicant's description of the preventative actions attributed to the program, the applicant stated, "This program does not prevent aging." The staff recognizes that the aging of passive SSC's within a plant cannot be prevented; however, the staff requests that the applicant describe what this program accomplishes; e.g. maintains coatings, sealants, and caulking to prevent advanced corrosion that could hinder the component's ability to function.

Telecon Discussion:

OPPD had no questions pertaining to this RAI, but noted a typo in the RAI. Specifically, the RAI is repeated in the second half of the paragraph. The staff will revise the RAI to delete the duplication (see below):

> In the applicant's description of the preventive actions attributed to the program, the applicant stated, "This program does not prevent aging." The staff recognizes that an aging management program may not prevent the occurrence of an aging effect. However, the program

description should clearly describe how it will be used to manage aging effects. Therefore, the staff requests that the applicant describe what this program accomplishes (e.g., maintains coatings, sealants, and caulking to prevent advanced corrosion that could hinder the component's ability to function).

RAI will be renumbered "B.3.3-1."

B.3.3-D2 In its description of the monitored or inspected parameters, the applicant describes the methods that will be employed to detect signs of external corrosion and conditions that could result in external corrosion. Although fluid leakage is identified as a monitored parameter, the staff believes that other parameters, such as tank wall thickness, cracked sealant, or degraded coatings, are important to detect degraded surface conditions. Therefore, the staff requests that the applicant describe parameters, besides fluid leakage, that detect degradation of surface conditions on components within the scope of this program, and provide justification why these parameters need not be included in this aging management program to manage aging of components within the program scope.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. The staff asked whether all inspections are visual (answer - yes), and asked that this be included in the RAI response. RAI will be renumbered "B.3.3-2."

B.3.3-D3 Detection of loss of material and cracking on the external surfaces of inaccessible components is not discussed in the program description. This is an important consideration in the staff's determination of the adequacy of this aging management program. Therefore, the staff requests that the applicant describe the methods, besides the observance of fluid leakage, that will be used to detect loss of material and cracking in locations that may be inaccessible, such as the bottom of a tank and provide a justification for why these methods are not material to demonstrate adequate aging management for components within the scope of the program.

Telecon Discussion:

OPPD had no questions pertaining to this RAI. The staff asked that the response clarify that AMPs, such as the buried surfaces external corrosion program, and the FP program are credited for managing aging in inaccessible components. RAI will be renumbered "B.3.3-3."

B.3.3-D4 In its description of the monitoring and trending of aging effects, the applicant states that evidence of fluid leaks, significant coating damage, or significant corrosion is documented. In order to determine whether the monitoring and trending of aging effects are adequate for this program, the staff needs more information regarding the extent of the documentation process. Therefore, the

staff requests the applicant to provide more detail on this documentation process. For instance, are all inspections documented and the results trended, or are only significant findings documented using a corrective action process?

Telecon Discussion:

OPPD had no questions pertaining to this RAI. OPPD will clarify in its response that it has a coatings program at FCS, but it is not credited for license renewal. Maintenance of coatings is done by coating procedures through corrective actions. License renewal AMPs credit programs that manage aging of the components' base metal. RAI will be renumbered "B.3.3-4."

B.3.3-D5 The applicant states that plant procedures provide criteria for determining the acceptability of inspected components. In order to determine whether the acceptance criteria is adequate to ensure that appropriate corrective actions are taken upon the discovery of aging, the staff needs to understand the basis for the acceptance criteria. Therefore, the staff requests that the applicant discuss the NRC or industry guidance and operating experience used to establish the acceptance criteria. Does the criteria incorporate GL 98-04, "Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System After A Loss-of-Coolant Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in Containment," Information Notice 86-99, "Degradation of Steel Containments," or Regulatory Guide 1.54, "Service Level I, II, and III Protective Coatings Applied to Nuclear Power Plants"?

Telecon Discussion:

OPPD had no questions pertaining to this RAI. RAI will be renumbered "B.3.3-5."

OPPD has reviewed and provided comments on this telecon summary.

/***RA***/

William F. Burton, Project Manager
License Renewal 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

staff requests the applicant to provide more detail on this documentation process. For instance, are all inspections documented and the results trended, or are only significant findings documented using a corrective action process?

Telecon Discussion:

OPPD had no questions pertaining to this RAI. OPPD will clarify in its response that it has a coatings program at FCS, but it is not credited for license renewal. Maintenance of coatings is done by coating procedures through corrective actions. License renewal AMPs credit programs that manage aging of the components' base metal. RAI will be renumbered "B.3.3-4."

B.3.3-D5 The applicant states that plant procedures provide criteria for determining the acceptability of inspected components. In order to determine whether the acceptance criteria is adequate to ensure that appropriate corrective actions are taken upon the discovery of aging, the staff needs to understand the basis for the acceptance criteria. Therefore, the staff requests that the applicant discuss the NRC or industry guidance and operating experience used to establish the acceptance criteria. Does the criteria incorporate GL 98-04, "Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System After A Loss-of-Coolant Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in Containment," Information Notice 86-99, "Degradation of Steel Containments," or Regulatory Guide 1.54, "Service Level I, II, and III Protective Coatings Applied to Nuclear Power Plants"?

Telecon Discussion:

OPPD had no questions pertaining to this RAI. RAI will be renumbered "B.3.3-5."

OPPD has reviewed and provided comments on this telecon summary.

/***RA***/

William F. Burton, Project Manager
License Renewal Section
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No.: 50-285

Enclosure: As stated

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OFFICE	PM:RLEP:DRIP	LA:RLEP:DRIP	SC:RLEP:DRIP
NAME	WBurton	HBerilla	SLee
DATE	1/16/03	12/17/2002	1/16/03

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WBurton
E-MAIL:
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J. Moore
R. Weisman
M. Mayfield
A. Murphy
W. McDowell
S. Smith (srs3)
T. Kobetz
R. Assa
C. Munson
RLEP Staff

T. Mensah
A. Wang
K. Kennedy (RIV)

Telecon Participants

OPPD	NRC
Don Findlay	Butch Burton
Ken Henry	David Cullison
Tom Matthews	Tanya Mensah
Bernie Van Sant	Carolyn Lauron

Enclosure

Ft. Calhoun Station, Unit 1
cc:
Winston & Strawn
ATTN: James R. Curtiss, Esq.
1400 L Street, N.W.
Washington, DC 20005-3502

Mr. Kent Wilcox, Chairman
Washington County Board
of Supervisors
P.O. Box 466
Blair, NE 68008

Mr. Wayne Walker, Resident Inspector
U.S. Nuclear Regulatory Commission
Post Office Box 309
Fort Calhoun, NE 68023

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Mr. John Fassell, LLRW Program Manager
Health and Human Services
Regulation and Licensure
Consumer Health Services
301 Cententiall Mall, South
P. O. Box 95007
Lincoln, Nebraska 68509-5007

Mr. Richard P. Clemens
Manager - Fort Calhoun Station
Omaha Public Power District
Fort Calhoun Station FC-1-1 Plant
Post Office Box 399
Hwy. 75 - North of Fort Calhoun
Fort Calhoun, NE 68023

Mr. Joseph Gasper
Manager - Nuclear Licensing
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
Post Office Box 399
Hwy. 75 - North of Fort Calhoun
Fort Calhoun, NE 68023-0399

Mr. S. K. Gambhir
Division Manager - Nuclear Operations
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
Post Office Box 399
Hwy. 75 - North of Fort Calhoun
Fort Calhoun, NE 68023-0399

Mr. Mark T. Frans
Manager - Nuclear Licensing
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
Post Office Box 399
Hwy. 75 - North of Fort Calhoun
Fort Calhoun, NE 68023-0399

Mr. Alan P. Nelson
Nuclear Energy Institute
1776 I Street, N.W., Suite 400
Washington, DC 20006-3708

W. Dale Clark Library
Attn: Margaret Blackstone
215 South 15th Street
Omaha, NE 68102

Blair Public Library
Attn: Ruth Peterson
210 South 17th Street
Blair, NE 68008-2055