



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-4005**

April 19, 2004

Jeffrey S. Forbes, Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72801-0967

**SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 2 - NRC LICENSE RENEWAL SCOPING AND
SCREENING INSPECTION REPORT 05000368/2004-06**

Dear Mr. Forbes:

On March 1 to 5, 2004, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Arkansas Nuclear One, Unit 2 facility. The enclosed report documents the inspection findings, which were discussed in a telephone conference call with Mr. Tim Mitchell, Director, Nuclear Safety Assurance, Mr. Dale James, Licensing Manager, and other members of your management and staff on April 15, 2004. We will conduct a public exit for both this inspection and the license renewal aging management review inspection after we have completed the latter inspection.

During this inspection, we examined activities that support your application for a renewed license for the Arkansas Nuclear One, Unit 2 facility. The inspection consisted of a selected examination of procedures and representative records. Inspectors interviewed site personnel regarding your process for performing scoping and screening of plant equipment as required by 10 CFR Part 54. In addition, for a sample of plant systems and structures, inspectors performed visual examination of accessible portions to observe effects of aging.

Based on the results of this inspection, the team concluded that the scoping and screening portion of your license renewal activities were conducted as described in your Arkansas Nuclear One, Unit 2, License Renewal Application and that documentation supporting the application is in an auditable and retrievable form. The team found that your staff had not included a system component and a structural component in the scope of license renewal that should have been included. Your staff agreed with the team's assessment and corrected the errors. The team determined that these errors were not indicative of a flawed scoping and screening methodology. In a discussion subsequent to the onsite inspection, your staff explained that, although not explicitly called out as being in the scope of license renewal, these two components were included in aging management programs. These two items remain open pending the team's review of the aging management programs in the upcoming license renewal aging management inspection.

Entergy Operations, Inc.

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Sincerely,

//RA//

Linda J. Smith, Chief,
Plant Engineering Branch
Division of Reactor Safety

Docket: 50-368
License: NPF-6

Enclosure:
Inspection Report 05000368/2004-06
w/Attachments 1 and 2

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket(s): 50-368
License(s): NPF-6
Report No.: 05000368/2004-06
Licensee: Entergy Operations, Inc.
Facility: Arkansas Nuclear One, Unit 2
Location: Junction of Hwy. 64W and Hwy. 333 South
Russellville, Arkansas
Dates: March 1 - April 15, 2004
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Accompanying Personnel: G. Suber, Project Manager
Office of Nuclear Reactor Regulation
Approved By: Linda J. Smith, Chief
Plant Engineering Branch

Enclosure

SUMMARY OF FINDINGS

IR 05000368-06, 03/01/2004 - 03/-5/2004, Entergy Operations, Inc., Arkansas Nuclear One, Unit 2. License Renewal Inspection Program, Scoping and Screening.

This inspection of the applicant's license renewal scoping and screening activities was performed by three regional office inspectors, one resident inspector, and one staff member from the office of Nuclear Reactor Regulation. The team used NRC Manual Chapter 2516 and NRC Inspection Procedure 71002 as guidance for performing this inspection. No "findings" as defined in NRC Manual Chapter 0612 were identified.

The team concluded that, in general, the applicant performed their license renewal scoping and screening activities in accordance with the Arkansas Nuclear One, Unit 2, License Renewal Application.

The team identified that the applicant had made two errors in implementing their scoping and screening methodology, which are discussed below. The team concluded that these were human errors made in implementing the scoping and screening process and not indicative of an inadequate scoping and screening methodology.

- During a plant tour, the team discovered a potential interaction between the spent fuel pool cooling system pumps and the emergency feedwater system, a safety-related system that is in the scope of license renewal. In a license renewal scoping document, the applicant stated that certain components, including these pumps, did not have the potential for affecting a safety-related system. However, the team found that a breach of the pump casing of the spent fuel pool cooling pumps had the potential to spray two active components in the emergency feedwater system, potentially preventing this system from performing its safety function. In accordance with 10 CFR Part 54, if the failure of a nonsafety-related component could prevent a safety-related function from being performed, that component should be in the scope of license renewal and subject to an aging management review. The applicant agreed and corrected their license renewal scoping document. Subsequent to the inspection, the applicant told the team that despite this error, the casing for the spent fuel pool cooling pumps was included in a program for managing the effects of aging. This item remains open pending the team's review of this program in the upcoming license renewal aging management inspection. (See Section II.A.29 of this report.)
- During a walkdown of the switchyard, the team noted that cabling necessary for coping with a station blackout event was supported by the concrete floor slab in the switchyard control house. In accordance with 10 CFR 54.4(a)(3), the applicant had appropriately included the cabling in the scope of license renewal as a system relied on for meeting the NRC's station blackout rule (10 CFR 50.63). However, the applicant did not include the structure on which it was mounted. As the cabling could not perform its station blackout coping function without adequate support, its structural support system must also be in the scope of license renewal. The applicant agreed to include the entire structure in the scope of license renewal. Subsequent to the inspection, the applicant told the team that despite this omission, the floor slab was included in a program for managing the effects of aging. This item remains open pending the team's review of this program in the upcoming license renewal aging management inspection. (See Section II.B of this report.)

In observing the field condition of selected plant systems, structures, and components the team found no significant adverse conditions as a result of aging.

The team found that the license renewal documents supporting the applicant's license renewal application were in an auditable and retrievable form. (See Section II.D of this report.)

REPORT DETAILS

I. Inspection Scope

This inspection was conducted by a team of NRC Region IV inspectors and members of the Office of Nuclear Reactor Regulation staff to verify, through sampling, that the applicant's license renewal scoping and screening activities were performed as described in their Unit 2, License Renewal Application (LRA), and that they were successful in identifying systems, structures, and components for which an aging management review is required consistent with 10 CFR Part 54 (the Rule). In addition, for those systems and structures chosen for inspection, the team verified the accuracy of the applicant's results of their scoping and screening activities. To do this, the team (1) examined documents which supported the LRA; (2) interviewed licensee personnel involved in performing scoping and screening activities; (3) reviewed the results of the applicant's scoping and screening process; and (4) performed field observations of selected accessible plant systems, structures, and components.

The systems (including mechanical and electrical systems) and structures groups selected for inspection are identified in Attachment 2 to this report. Based on their risk significance and the importance of their safety function, the team selected systems and structures that the applicant had determined were in the scope of license renewal. In addition, the team chose to review some systems and structures that the applicant had determined not to be in scope of license renewal, to verify that they were appropriately excluded from the license renewal scope. In addition to performing a document review, a visual examination of accessible portions of the chosen systems and structures was performed to identify effects of aging.

In 10 CFR 54.37, the NRC requires that all information and documentation required by, or otherwise necessary to document compliance with the provisions of Part 54 shall be retained in an auditable and retrievable form for the term of the renewed license. The team also examined license renewal documents to verify that they were in an auditable and retrievable form.

II. Findings

A. Evaluation of Scoping and Screening of Mechanical Systems

The team evaluated the applicant's scoping process for mechanical systems by evaluating the applicant's methodology for determining the mechanical systems within the scope of license renewal. In addition, the team reviewed the list of plant systems that the applicant had determined to be within the scope of license renewal using that methodology. The applicant's methodology for determining those systems which are in the scope of license renewal is described in LRPG-03, "System and Structure Scoping." The applicant performed scoping at the system level by reviewing the ANO Unit 2 component database (which lists all Unit 2 plant systems and structures), and determining the functions that those systems performed. The applicant then evaluated the functions to determine which met the criteria of 10 CFR 54.4. The systems and structures that perform functions which meet any of the three criteria were included in the scope of license renewal. The team concluded that the applicant had performed their license renewal scoping activities for mechanical systems in accordance with the LRA and their methodology described in LRPG-03.

The team reviewed the applicant's methodology for screening of mechanical systems as described in the LRA and in LRPG-04, "Mechanical System Screening and Aging Management Reviews." For those mechanical systems within scope of license renewal, the applicant then performed a screening process for determining the portions of and components in those systems that were necessary for performing the systems' intended functions. The applicant utilized official station system drawings, component databases, system descriptions, and license basis documents to create license renewal in-scope system boundary drawings. Components needed to support each of the system's functions were included within these boundaries. Long-lived, passive components, within the system's boundary, that perform or support an intended function without moving parts or change in configuration or properties were identified for aging management.

The team also reviewed the applicant's methodology for performing screening of nonsafety-related systems whose failure could cause physical damage to safety-related systems. This methodology included screening out those nonsafety-related systems that contained only air or gas, because there are no aging effects associated with air and gas systems that would cause failure such that safety-related systems in close proximity would be affected. The applicant also excluded portions of the systems whose components were not housed in a safety-related structure on the basis that there are no safety-related components in nonsafety-related structures. Finally, the applicant screened out those nonsafety-related components that could not have a spacial interaction with safety-related components. Those remaining nonsafety-related mechanical system components that did not screen out were subjected to an aging management review.

The team performed field walkdowns of selected systems to observe equipment material condition, and found no significant age-related material condition problems. The team also performed field walkdowns to confirm the results of the applicant's methodology for screening out nonsafety-related systems and components whose failure would not cause physical damage to safety-related systems and components. The team identified one interaction between a nonsafety-related system and a safety-related system that the applicant had not considered. This interaction involved the potential for a breach of the pump casing of the spent fuel pool cooling pumps to spray two active components in the emergency feedwater system (a safety-related system). The applicant agreed to add this portion of the spent fuel pool cooling system to their license renewal scope. This issue is discussed below in Paragraph 19. With the exception of this issue, the team concluded that the applicant had performed the screening of mechanical systems in accordance with the LRA and their methodology described in LRPG-04.

A list of the mechanical systems selected for review are listed in Attachment 2 of this report. The team's review of these selected mechanical systems is discussed below:

1. Auxiliary Steam System

The auxiliary system provides low pressure steam for heating and process purposes to support normal plant operation or testing. This system consists of nonsafety-related components whose failure could impact safety-related components; therefore, the applicant determined that the system is in the scope of 10 CFR 54.4(a)(2). The team reviewed the applicant's license renewal boundary drawings, design basis documents,

and scoping documents; and conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system in accordance with the methodology described in the LRA.

2. Breathing Air System

The breathing air system provides a reliable supply of quality compressed air for use in air-respirators. The system includes a containment penetration with safety-related components that provide containment isolation on a design basis event. The containment penetration and the portions of the breathing air system which are safety-related were determined by the applicant to be within the scope of 10 CFR 54.4(1). The team reviewed the applicant's license renewal boundary drawings, the design basis documents, and scoping documents, and conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system in accordance with the methodology described in the LRA.

3. Chemical & Volume Control

The chemical and volume control system functions to maintain reactor coolant system inventory and control reactor coolant system chemistry. The applicant considered only the portion of the system that delivers makeup water and boric acid to the reactor coolant system to be in the scope of license renewal. The team reviewed the license renewal boundary drawings, design basis information, the Updated Final Safety Analysis Report (UFSAR), system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

4. Circulating Water

The circulating water system functions to provide cooling water for removal of heat from the main condenser. The applicant essentially considered all of the circulating water system to be in the scope of license renewal because of the possible impact upon plant safety-related components. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

5. Component Cooling Water

The component cooling water system functions to provide closed cycle cooling water to non-safety-related components to support normal plant operation. The applicant essentially considered all of the component cooling water system to be in the scope of

License Renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

6. Containment Spray

The containment spray system functions to provide spray cooling water to the containment atmosphere during a loss of coolant accident or steam line break accident inside containment. The applicant essentially considered all of the containment spray system to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

7. Control Element Drive Mechanisms

The control element drive mechanisms function to position the control element assemblies to control reactor power within the core. The system is part of the reactor coolant system pressure boundary that must be maintained during a safe shutdown after a fire. The applicant considered the control element drive mechanisms to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

8. Diesel Fuel Services

The diesel fuel services function to provide a drain path in the event of a fuel oil leak from the emergency diesel generator fuel oil day tanks. The applicant considered these nonsafety-related components not to be in the scope of licensee renewal due to the fact the components are not required for the regulated events for license renewal and their failure could not prevent a safety-related system from performing its function. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

9. Drain Collection Header

The drain collection header functions to provide a drain flow path for numerous components in the auxiliary building of the plant. The applicant essentially considered all of the drain collection header to be in the scope of license renewal because of the possible impact upon plant safety-related components. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

10. Emergency Feedwater

The emergency feedwater system functions to provide a safety grade backup source of feedwater to the steam generators when main feedwater is not available. The system is the safety-related source of feedwater required for cooling during design basis events and is credited with operation during safe shutdown following a fire. The applicant essentially considered all of the emergency feedwater system to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

11. Extraction Steam

The extraction steam system functions to deliver steam and condensate extracted from the turbine to secondary components in order to increase plant efficiency and support electrical power generation. The applicant considered these nonsafety-related components not to be in the scope of Licensee Renewal due to the fact the components are not required for the regulated events for license renewal. The team reviewed License renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

12. Feedwater

The feedwater system functions to provide a continuous water supply to the steam generators between 2% and 100% power to support normal operations. The applicant considered only those portions of the feedwater system that isolate the containment during a feedwater line break to be in the scope of license renewal. The team reviewed

license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of the accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

13. Fire Protection (water)

The fire protection (water) system functions to provide water suppression as required for the fire regulated event. The applicant essentially considered all of the fire protection (water) system to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this systems and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA

14. Fuel Handling

The fuel handling system functions to provide the capability of underwater handling and transfer of spent fuel and control components removed from the reactor to the spent fuel pool, movement of fuel and control components within the reactor vessel and movement of new fuel from the spent fuel pool to the reactor vessel. The applicant essentially considered all of the fuel handling system to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

15. Fuel Oil

The fuel oil system functions to provide fuel oil for site components including various diesel engines and the auxiliary boiler. The system supports both Unit 1 and Unit 2 diesel engines. The applicant considered only those components that provide fuel oil to safety related components in Unit 2 to be in the scope of the Unit 2 license renewal. The Unit 1 fuel oil system is credited as a backup supply to the Unit 2 diesel generators in the case of a fire that renders the Unit 2 fuel oil transfer pumps unavailable; therefore the applicant considered those portions of the Unit 1 fuel oil system to be in the scope of the Unit 2 license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

16. Gaseous Waste Processing

The gaseous waste processing system functions to collect, store, and process radioactive waste from systems onsite to allow the reuse or release of the waste to the environment. The applicant considered this system to be outside the scope of license renewal. The team reviewed, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system in accordance with the methodology described in the LRA.

17. Heater Drains

The heater drains system functions to direct water from the feedwater heaters to the appropriate component to support secondary plant feedwater heating and maximize electrical generation. The system does not contain safety-related components, is not required for the regulated events for license renewal, and its failure could not prevent a safety-related system from performing its function. Therefore, the applicant considered the heater drains systems to be outside the scope of License Renewal. The team reviewed design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system in accordance with the methodology described in the LRA.

18. Hydrogen Purge

The hydrogen purge system's original function was to release the post-accident containment atmosphere and reduce the hydrogen concentration by adding air to the reactor building. The applicant now utilizes hydrogen recombiners and the hydrogen purge system is not used for post-accident containment hydrogen control. The system does contain safety-related components that provide containment integrity and includes the hydrogen analyzers and their supporting equipment. The applicant considered only those safety-related components to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

19. Instrument Air

The instrument air system functions to provide compressed air for pneumatic equipment including instruments and valve operators. The system consists of nonsafety-related compressors, filters, dryers, aftercoolers, dryers, receivers, piping, valves, etc. to compress, store and distribute the air. Safety-related portions of the system include components for the personnel hatch, equipment hatch, emergency hatch, temporary access penetration, and the integrated leak rate containment penetrations. The applicant considered only those components that are safety-related to be within the

scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

20. Low Level Radwaste

The low level radwaste system functions to collect and handle low level solid radioactive waste. The system has no safety-related components, is not required for any regulated events in the scope of license renewal, and its failure could not prevent the accomplishment of a safety-related function. Therefore, the applicant considered this system to be outside the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system in accordance with the methodology described in the LRA.

21. Main Steam

The main steam system functions to convey steam generated by the steam generators to the turbine generator and to other auxiliary equipment for power generation. The applicant considered only those portions of the main steam system that isolate the containment during a main steam line break to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

22. Nitrogen Supply

The nitrogen supply system provides pressurized nitrogen gas to site components including safety injection tanks, steam generator secondary and the reactor quench tank. Nitrogen is also supplied to safety grade plant components including electrical penetrations to prevent leakage under accident conditions. The applicant determined that the nitrogen supply system is in the scope of license renewal in accordance with 10 CFR 54.4(a)(1) and (a)(2). The team reviewed the license renewal boundary drawings, the design basis documents, and scoping documents. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

23. Post Accident Sampling System

The post accident sampling system functions to provide post accident sampling of the containment. The system contains nonsafety-related components whose failure could impact safety-related components, and the applicant essentially considered all of the post accident sampling system to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

24. Radiation Monitoring System

The radiation monitoring system functions to monitor various potentially radioactive process systems. The system contains no safety-related mechanical components, is not required for any safety analyses or required to function for any of the regulated events for license renewal, and its failure could not prevent the accomplishment of a safety function. Therefore, the applicant considered the radiation monitoring system to be outside the scope of license renewal. The team reviewed design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system in accordance with the methodology described in the LRA.

25. Reactor Coolant

The reactor coolant system functions to remove heat from the reactor core and internals and transfer this heat to the main steam system. The applicant essentially considered all of the reactor coolant system to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

26. High Pressure Safety Injection and Low Pressure Safety Injection

The high pressure safety injection system functions to provide emergency core cooling and core reactivity control under accident conditions including a loss of coolant accident or a main steam line break. The low pressure safety injection system functions to provide emergency core cooling under accident conditions and support shutdown cooling operation. The applicant essentially considered all of the high pressure and low pressure safety injection systems to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the systems. No significant age-

related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for these systems and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

27. Service Water

The service water system functions to provide cooling water to two independent flow paths, which furnish water to two independent safety-related, engineered safety features equipment trains and two nonsafety-related flow paths. The system provides an emergency supply of water to the emergency feedwater and the fuel pool systems, and is the safety-related source of cooling water for equipment cooling during design basis events. The applicant essentially considered all of the service water system to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations, and conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

28. Shutdown Cooling

The shutdown cooling system functions to provide cooling of the reactor coolant system without reliance on the steam generators. The applicant essentially considered all of the shutdown cooling system to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed. The team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

29. Spent Fuel Pool

The spent fuel pool system functions to store new and spent fuel in a subcritical condition. The applicant included only the spent fuel racks, the new fuel racks, and the piping out to the first isolation valve to be within the scope of license renewal. The cooling loop for removal of decay heat was considered to be outside the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team also conducted field observations of accessible portions of the system. No significant age-related material condition problems were observed.

During a walkdown of the spent fuel pool cooling system, the team discovered a potential interaction between the spent fuel pool cooling system pumps and the emergency feedwater system, a safety-related system that is in the scope of license

renewal. In Engineering Report A2-ME-2003-001-01, "Aging Management Review of Nonsafety-related Systems and Components Affecting Safety-related Systems," the applicant stated that certain components, including these pumps, did not have the potential for affecting a safety-related system, because they were located in separate rooms. Although these pumps were in separate cubicles, the team found that the cubicles were open at the top. A breach of the spent fuel pool cooling pump casing has the potential to spray two active components in the emergency feedwater system located within the same cubicle. These active components, the common main steam inlet isolation valve to the turbine-driven emergency feedwater pump turbine driver (2CV-0340-2) and the bypass valve (2CV-0205-2), isolate steam from the steam generators to the turbine driven emergency feedwater pump. A breach of the "B" spent fuel pool pump has the potential to spray these components and prevent their safety function of allowing steam to the turbine driven emergency feedwater pump. In accordance with 10 CFR 54.4(a)(2), any nonsafety-related system, structure, or component whose failure could prevent a safety-related function from being performed should be in the scope of license renewal. The applicant agreed and corrected Engineering Report A2-ME-2003-001-01. The team considered this to be an isolated human error made in implementing the scoping and screening methodology, and not indicative of a flawed scoping and screening methodology. Subsequent to the inspection, the applicant told the team that despite this error, the room containing the spent fuel cooling pumps was part of an aging management program. In addition, the spent fuel pool cooling pumps are of stainless steel, and that all stainless steel pump casings are listed as components requiring an aging management program. This item remains open pending the team's review of this program in the upcoming license renewal inspection aging management review inspection (Open Item 1).

In all other respects, the team concluded that the applicant had performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

30. Station Service Air

The station service air system functions to provide compressed air for service air outlets located throughout the plant site which will be used for operation of pneumatic tools and other requirements. The service air system contains safety-related components and therefore, the applicant essentially considered all of the station service air system to be in the scope of license renewal. The team reviewed license renewal boundary drawings, design basis information, the UFSAR, system/structure scoping worksheets, and screening calculations. The team concluded that the applicant performed scoping and screening for this system and identified the mechanical components subject to aging management in accordance with the methodology described in the LRA.

B. Evaluation of Scoping and Screening of Electrical Systems

The team observed that the scoping and screening of electrical systems employed significantly different methods than the mechanical or structural disciplines. During this inspection, the team reviewed the LRA, LRP-05, "Electrical Screening, Scoping, and Aging Management Reviews,"

Revision 0; Engineering Evaluation Reports 02-R-2007-01, "ANO-2 License Renewal Project Electrical Screening and Aging Management Reviews," Revision 1; and 02-R-2008-01, "Electrical Component Screening for License Renewal for Arkansas Nuclear One - Unit 2," Revision 1. These documents described the methodology the applicant used to perform the scoping and screening of electrical commodities to determine those needing an aging management review. Electrical components at Arkansas Nuclear One (ANO) Unit 2 are classified as either Class 1E (as defined in industry electrical standard IEEE-308, "Criteria for Class 1E Electrical Systems") or as non-nuclear safety. Class 1E is the safety classification of electrical equipment and systems that are essential to emergency reactor shutdown, containment isolation, reactor core cooling, and containment and reactor heat removal, or are otherwise essential in preventing significant release of radioactive material to the environment. Class 1E equipment was identified by reviewing the ANO Unit 2 component database. All electrical systems that contain equipment classified as Class 1E were considered by the applicant to be safety-related and were included within the scope of license renewal.

In Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Licenses," dated July 2001, the NRC endorsed the use of NEI 95-10 as an acceptable method for complying with Part 54. The applicant performed their screening activities for electrical and I&C systems and components as described in LRPG-05, which utilized the guidance contained in NEI 95-10, "Industry Guidelines on Implementing the Requirements of 10 CFR Part 54, the License Renewal Rule," dated April 2001. In particular, the applicant used NEI 95-10 to develop a listing of electrical component commodity groups for electrical systems and instrumentation and control (I&C) systems within the scope of license renewal, and for determining which of these electrical and I&C components were active and which were passive. The applicant did not identify any commodity groups, beyond those listed in Appendix B of NEI 95-10. In accordance with this NEI guidance, the applicant determined that only those commodity groups that perform a passive function are subject to aging management review. The passive electrical commodity groups were reviewed to identify those commodity groups or components that are not subject to replacement based on a limited qualified life or specified time period. Most electrical components included in the ANO, Unit 2 Environmental Qualification Program do not meet the long-lived screening criterion of 10 CFR 54.21(a)(1)(ii). Consequently, the insulated cables and connections, terminal blocks, and electrical portions of electrical and I&C containment penetration assemblies covered by the applicant's equipment qualification program were not subject to an aging management review.

The results of the applicant's scoping and screening effort identified the following electrical and I&C commodity groups or subgroups that require an aging management review:

- Bus Duct - Isolated Phase (Iso-Phase), Non- segregated 4.16 KV and 480 V bus duct
- Non-EQ Insulated Cables
- Non-EQ Connectors
- Non-EQ Splices
- Non-EQ Electrical Penetration Assemblies
- Non-EQ Terminal Blocks
- Passive Electrical Switchyard commodities credited for restoration of offsite power when recovering from an SBO event, Includes iso-phase bus duct, non-segregated 480 V bus duct, High Voltage Electrical Switchyard Bus, High Voltage Transmission Conductors and Connections, and High Voltage Insulators

The applicant concluded that all of the other electrical and I&C commodities identified in ANO Unit 2 are either active, are subject to replacement based on a qualified life or specified time period, or do not perform any intended safety functions and are thus not subject to aging management review.

During a walkdown of the electrical distribution system in the switchyard, the team noted that the startup transformer breaker control cabling (part of an in-scope electrical system) was supported by the concrete floor slab in the switchyard control house. The startup transformer breaker control cabling is credited by the applicant for recovering from a station blackout event, which is one of the regulated events whose components are required to be in the scope of license renewal in accordance with 10 CFR 54.4(a)(3). The team found that the applicant had appropriately included the cabling in the scope of license renewal as an electrical cabling system relied on for meeting the NRC's station blackout rule (10 CFR 50.63). However, the applicant did not include the structure on which it was mounted. As the cabling could not perform its station blackout coping function without adequate support, its structural support system must also be in the scope of license renewal. The applicant subsequently agreed to include the entire structure in the scope of license renewal. The team considered this to be a human error made in implementing the scoping and screening methodology, and not indicative of a flawed scoping and screening methodology. The team considered this to be an isolated human error made in implementing the scoping and screening methodology, and not indicative of a flawed scoping and screening methodology. Subsequent to the inspection, the applicant told the team that despite this omission, the floor slab was included in a program for managing the effects of aging. This item remains open pending the team's review of this program in the upcoming license renewal aging management inspection (Open Item 2).

The team found the applicant's methodology for performing the scoping and screening of electrical and I&C components and systems to be satisfactory and agreed with their conclusions.

C. Evaluation of the Scoping and Screening of Structural Components

Using the list of selected structures in Attachment 2, the team evaluated the applicant's scoping and screening process for structures. The team evaluated the applicant's methodology for determining the structures and commodity groups that were within the scope of license renewal. In addition, the team reviewed the list of plant structures and commodity groups that the applicant had determined to be within the scope of license renewal using that methodology. The applicant's methodology for determining those structures and commodity groups which are in the scope of license renewal is described in LRP-03, "System and Structure Scoping." The applicant performed scoping of structures by listing all plant structures, and determining those that perform a license renewal intended function as described in 10 CFR 54.4. The applicant grouped structural components, such as pipe supports, into commodity groups. Most of the structures or structural components determined by the applicant to be in the scope of license renewal were in the scope because their failure could prevent a safety function from being performed. For instance, if the structure contained a component that performed a safety function it was in the scope of license renewal. The major structures in the scope of license renewal are the containment building, auxiliary building, turbine building, and intake structure,

which house most of the safety-related equipment. The results of the applicant's screening of structures and structural components were presented in Engineering Report 02-R-2008-01, "System and Structure Scoping Method and Results." The team concluded that the applicant had performed their license renewal scoping activities for structures in accordance with the LRA and their methodology described in LRPG-03 and Engineering Report 02-R-2008-01.

The team reviewed the applicant's methodology for screening of structures and structural components described in the LRA and in LRPG-06, "Structural Screening and Aging Management Reviews." For those structures and structural components within scope of license renewal, the applicant performed a screening process for determining those that were subject to an aging management review. Structures and structural components subject to an aging management review are those that perform and intended license renewal function without moving parts and without a change in configuration or properties (passive) and are not subject to replacement based on a qualified life or specified time period (long-lived).

The team performed field walkdowns of selected structures and structural components to observe equipment material condition, and found no significant age-related material condition problems. The team also performed field walkdowns of structures that were determined by the applicant to be not in the scope of license renewal to confirm the results of the applicant's methodology for screening out structures. During a walkdown of yard structures, the team identified a structure that should have been in the scope of license renewal. The applicant subsequently agreed to include the entire structure in the scope of license renewal. With the exception of this issue, the team concluded that the applicant had performed the screening of structures and structural components in accordance with the LRA and their methodology described in LRPG-06.

The team's review of individual structures and structural components (bulk commodities) is discussed below.

1. Administrative Building

The administrative building provides office space for site personnel, is not a safety-related structure, and is not a seismic Category I structure. Based on this, the applicant determined that this structure is not in the scope of license renewal. The team walked-down the structure and found that the technical support center is contained in the administrative building. In questioning the applicant, the team was told that in the initial stages of a design basis accident, the licensee will use the control room for technical support center functions. As the accident progresses, personnel will go to the technical support center in the administrative building. In the event that the administrative building cannot be used, technical support center functions will move to the emergency offsite facility. This was reviewed and approved by NRC staff in a safety evaluation report. The applicant determined that the administrative building does not meet any of the license renewal scoping criteria in 10 CFR 54.4, and is, therefore, not in the scope of license renewal. The team agreed with the applicant's conclusion.

2. Auxiliary Building: Spent Fuel Pool System Bulk Commodities

The spent fuel pool is a seismic Category I structure located in the ANO Unit 2 auxiliary building. The auxiliary building is safety-related, and provides support to non-safety related equipment whose failure could directly prevent satisfactory accomplishment of required functions. The applicant concluded the entire building and all the structural components in the auxiliary building (as bulk commodities) are in the scope of license renewal per 10 CFR 54.4(a)(1) and (a)(2). The team agreed with this decision. The team walked down portions of the auxiliary building, and found no significant age-related material condition problems.

3. Condensate Storage Tanks (2T41A and B)

The purpose of the 2T41A and B condensate storage tanks is to support normal plant operation by providing demineralized water to certain plant systems. These tanks are nonquality-related (non-Q). This water supply is not required during emergency operation, for fire safe shutdown, or for responding to the license renewal regulated events listed in 10 CFR 54.4(a)(3). Based on this, the applicant concluded that the controlled access #3 building is not in the scope of license renewal. The team agreed with this decision. The team walked down the outside of the 2T41A and B condensate storage tanks, and found no significant age-related material condition problems.

4. Containment Building

The containment building is a seismic Category I, safety-related building whose purpose is to serve as a biological shield and a pressure container during certain design basis accident event scenarios. The building is a post-tensioned, reinforced concrete structure, and has a steel liner attached to the inside concrete face. The structure provides support and protection for the reactor pressure vessel, safety-related systems, and engineered safety features. It also contains structural components that support and protect safety-related systems and components. The applicant concluded that the containment building was in the scope of license renewal in accordance with 10 CFR 54.4(a)(1), (a)(2) and (a)(3). The team agreed with this conclusion. The team could not walk down the containment building as the plant was operating.

5. Controlled Access #3 Building

The purpose of the controlled access #3 building is to provide space for personnel access to radiation/contamination controlled access. The building is nonsafety-related and is not a seismic Category I structure. The building does not contain any safety-related equipment and is not required for any of the regulated events listed in 10 CFR 54.4(a)(3). The applicant concluded that the controlled access #3 building is not in the scope of license renewal. The team agreed with this decision.

6. Electrical Manholes

Electrical manholes are small reinforced concrete structures located partially underground. Their purpose is to support and protect electrical cables (some safety-

related) and cables that are required to support the applicant's response the regulated events listed in 10 CFR 54.4 (a)(3). The applicant included electrical manholes are in the scope of license renewal in accordance with 10 CFR 54.4(a)(1), (a)(2), and (a)(3) and subject to an aging management review. The team agreed with this determination. The team observed the outside of the manholes and found no significant age-related material condition problems.

7. Emergency Cooling Pond

The emergency cooling pond is a 14 acre pond contained in an earthen structure lined with rip-rap. A grouted spillway consisting of an earthen structure lined with rip-rap, is used to provide over-flow protection. The emergency cooling pond is a seismic Category I structure with safety-related intake and discharge structures. The pond provides an ultimate heat sink if Lake Dardenelle is not available. Water is gravity fed from the emergency cooling pond to the intake structure. The earthen structure is within the scope of license renewal and subject to an aging management review. However, the rip-rap liner is not listed as in the scope of license renewal, since rip-rap is not credited with preserving emergency cooling pond inventory. The team agreed. The team performed a walkdown of the emergency cooling pond and observed no significant age-related material condition problems.

8. Emergency Diesel Fuel Oil Storage Tank Vault

The emergency diesel fuel oil storage tank vault is a safety-related, seismic Category 1 structure whose purpose is to provide support and protection to the underground fuel oil storage tanks and associated equipment. The tanks supply fuel oil to the emergency diesel generators (a safety-related system), and the vault is shared between ANO Unit 1 and Unit 2. The Unit 1 and Unit 2 portions of the vault may be required to be accessed following a Unit 2 fire event. The emergency diesel fuel oil storage tank vault was determined by the applicant to be in the scope of license renewal in accordance with 10 CFR 54.4(a)(1), (a)(2), and (a)(3). The team agreed with this determination. The team walked down accessible portions of the emergency diesel fuel oil storage tank vault, and found no significant age-related material condition problems.

9. Intake Structure

The intake structure is a reinforced concrete structure and houses safety-related and nonsafety-related equipment, and is a seismic Category 1 structure. Its purpose is to house, protect, and give structural support to plant equipment, such as the service water pumps. The Unit 2 intake structure is considered by the applicant to be an extension of the Unit 1 intake structure. The fire pumps which are shared by both units are house in the Unit 1 intake structure. For that reason the applicant included the Unit 1 intake structure in the Unit 2 license renewal scope, and determined that is subject to an aging management review. The structural components that have license renewal intended functions (10CFR54.4) were also determined by the applicant to be in the scope of license renewal (listed as bulk commodities) and subject to an aging management review. The team agreed with this determination. The team walked down the intake structure and found no significant age-related material condition problems.

10. Post-Accident Sampling System Building

The post-accident sampling system building is a seismic structure and was determined by the applicant to be within the scope of license renewal for 10 CFR 54.4(a)(2). The post-accident sampling system building supports and protects equipment that is part of the post accident sampling system, which is non-safety related. It was designated seismic Category I to avoid the interaction with nearby safety related equipment. Additionally, the post-accident sampling system building is water tight to protect against the probable maximum flood. The applicant included all the structural bulk commodities in the post-accident sampling system building in the scope of license renewal and subject to an aging management review. The team agreed with this determination.

D. Evaluation of License Renewal Documents

In 10 CFR 54.37, the NRC requires that all information and documentation required by, or otherwise necessary to document compliance with the provisions of Part 54 shall be retained in an auditable and retrievable form for the term of the renewed license. In performing this inspection, the team reviewed numerous license renewal documents which are listed in Attachment 1 of this report. The team found all of these documents to be in an auditable and retrievable form.

III. Exit Meeting

On March 5, 2004, the team leader presented the inspection results to Mr. Garry Young and other members of his staff in a final site briefing. On April 15, 2004, the team leader presented the results of this inspection to Mr. Tim Mitchell, Mr. Dale James, and other Arkansas Nuclear One management and staff in a telephone exit meeting.

**ATTACHMENT 1
SUPPLEMENTAL INFORMATION**

KEY POINTS OF CONTACT

Licensee Personnel

R. Ahrabli, Structural Lead Engineer for Arkansas Nuclear One (ANO), Unit 2 License Renewal
S. Bonner, ANO Unit 2, System Engineer
A. Cox, Technical Manager for ANO Unit 2 License Renewal
K. Gaston, Mechanical Engineer for ANO Unit 2 License Renewal
K. Graham, Electrical Engineer for ANO Unit 2 License Renewal
T. Ivy, Mechanical Lead Engineer for ANO Unit 2 License Renewal
J. Holtz, Senior Electrical Engineer, Design Engineering
N. Mosher, Licensing Engineer
R. Rucker, Electrical Lead Engineer ANO Unit 2 License Renewal
M. Stroud, Project Manager for ANO Unit 2 License Renewal
A. Taylor, Mechanical Engineer ANO Unit 2 License Renewal
G. Young, Group Manager for ANO Unit 2 License Renewal

OPEN ITEMS

- Open Item 1 The team identified that the spent fuel pool cooling pump casings were not in the scope of license renewal. The applicant told the team that despite this error, the pump casings were included in an aging management program. The item remains open pending the team's review of this aging management program.
- Open Item 2 The team identified that, in the switch yard control building, the supporting structure for cabling credited for coping with a station blackout event was not listed in the scope of license renewal. The applicant told the team that despite this error, the switch yard control building was already in an aging management program. The item remains open pending the team's review of this aging management program.

LIST OF DOCUMENTS REVIEWED

Calculations

87-EQ-0003-01, "ANO-2 HELB Breaks outside Containment for the Replacement Steam Generator and Power Uprate," Revision 4

Drawings

LRA-M-204, Sht 5, "Emergency Feedwater Storage," Revision 0

LRA-M-217, Sht 1, "Emergency Diesel Generator Fuel Oil Storage," Revision 0

LRA-M-2202, Sht 3, "Auxiliary Steam System," Revision 0

LRA-M-2202, Sht 4, "Lube Oil, Lube Oil Cooling, Electro/Hydraulic Controls & Main Steam," Revision 0

LRA-M-2204, Sht 4, "Emergency Feedwater," Revision 0

LRA-M-2206, Sht 1, "Steam Generator Secondary System," Revision 0

LRA-M-2210, Shts 1&2, "Service Water System," Revision 0

LRA-M-2218, Sht 1, "Service Air System," Revision 0

LRA-M-2218, Sht 3 & 6, "Instrument Air System," Revision 0

LRA-M-2234, Sht 1, "Component Cooling Water System," Revision 0

LRA-M-2236, Sht 1, "Containment Spray System," Revision 0

Engineering Reports

A2-CS-2002-002-0, "Aging Management Review of the Auxiliary Building Turbine Building and Yard Structures," Revision 1

A2-EP-2002-003-01, "Engineering Report-Site Specific Operating Experience; ANO-2 License Renewal Project Operating Experience Reviews," Revision 1

A2-ME-2003-001-01, "Aging Management Review of Nonsafety-related Systems and Components Affecting Safety-related Systems," Revision 1

02-R-2005-01, "ANO-2 License Renewal Project Aging Management Review of the Reactor Coolant System," Revision 1

02-R-2005-02, "ANO-2 License Renewal Project Aging Management Review of the Emergency Core Cooling Systems," Revision 1

02-R-2005-03, "ANO-2 License Renewal Project Aging Management Review of the Containment Spray System," Revision 1

02-R-2005-05, "ANO-2 License Renewal Project Aging Management Review of the Hydrogen Control System," Revision 1

02-R-2005-06, "ANO-2 License Renewal Project Aging Management Review of the Containment Penetrations," Revision 1

02-R-2005-07, "ANO-2 License Renewal Project Aging Management Review of the Spent Fuel Pool System," Revision 1

02-R-2005-13, "ANO-2 License Renewal Project Aging Management Review of the Fuel Oil System," Revision 1

02-R-2005-16, "ANO-2 License Renewal Project Aging Management Review of the Service Water System," Revision 1

02-R-2005-20, "ANO-2 License Renewal Project Aging Management Review of the Main Feedwater System," Revision 1

02-R-2005-21, "ANO-2 License Renewal Project Aging Management Review of the Emergency Feedwater System," Revision 1

02-R-2008-01, "System and Structure Scoping Method and Results," Revision 1

License Renewal Project Guidelines

LRPG-01, "License Renewal Project Plan," Revision 0

LRPG-03, "System and Structure Scoping, Revision 0

LRPG-04, "Mechanical System Screening and Aging Management Reviews," Revision 0

LRPG-05, "Electrical System Scoping, Screening, and Aging Management Reviews," Revision 0

LRPG-06, "Structural Screening and Aging Management Reviews," Revision 1

Miscellaneous Documents

Arkansas Nuclear One, Unit 2 Final Safety Analysis Report, Chapter 9, "Auxiliary Systems," Amendment 17.

NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule," Revision 3

ULD-0-19, "Arkansas Nuclear One Upper Level Document, Station Blackout," dated 3/3/1998

ULD-2-STR-01 "Arkansas Nuclear One Upper Level Document, Auxiliary Building," Revision 1

ULD-2-SYS-01, "Arkansas Nuclear One Upper Level Document, Emergency Diesel Generator,"
Revision 5

ULD-2-SYS-05, "Arkansas Nuclear One Upper Level Document, Containment Spray System,"
Revision 3

Procedures

DC-147, "Engineering Reports," Revision 0

AD-103, "Document Control and Records Management Activities," Revision 6

ATTACHMENT 2
SYSTEMS and STRUCTURES SELECTED FOR REVIEW

MECHANICAL SYSTEMS SELECTED FOR REVIEW

	<u>System Name</u>	<u>Applicant Designated System In-Scope?</u>
1.	Auxiliary Steam	Yes
2.	Breathing Air	Yes
3.	Chemical & Volume Control	Yes
4.	Circulating Water	Yes
5.	Component Cooling Water	Yes
6.	Containment Spray	Yes
7.	Control Element Drive Mechanisms	Yes
8.	Diesel Fuel Services	No
9.	Drain Collection Header	Yes
10.	Emergency Feedwater	Yes
11.	Extraction Steam	No
12.	Feedwater	Yes
13.	Fire Protection (water)	Yes
14.	Fuel Handling	Yes
15.	Fuel Oil	Yes
16.	Gaseous Waste Processing	No
17.	Heater Drains	No
18.	Hydrogen Purge	Yes
19.	Instrument Air	Yes
20.	Low Level Radwaste	No
21.	Main Steam	Yes
22.	Nitrogen Supply	Yes
23.	Post Accident Sampling	Yes
24.	Radiation Monitoring System	No
25.	Reactor Coolant	Yes
26.	High and Low Pressure Safety Injection	Yes
27.	Service Water	Yes
28.	Shutdown Cooling	Yes
29.	Spent Fuel Pool	Yes
30.	Station Service Air	Yes

ELECTRICAL SYSTEMS SELECTED FOR REVIEW

<u>System Name</u>	<u>System in License Renewal Scope?</u>
2A - 4.16 KV Switchgear	Yes
2D- DC Power System	Yes
2H- 6.9 KV Switchgear	Yes
2HT- Heat Tracing System	Yes
ARMS- Area Radiation Monitoring System	Yes
COMM- Communications	Yes
DFAS- Diverse Emergency Feedwater Actuation	Yes
EC- Plant Computer System	Yes
EL- Emergency Lighting	Yes
ES- Engineered Safety Features Actuation System	Yes
HR- Hydrogen Recombiners	Yes
IC- Incore Instrumentation	Yes
NI- Nuclear Instrumentation	Yes
RADS- Remote Acquisition and Data System	Yes
XFMR- Main, Unit Auxiliary, Startup Transformers	Yes
Switchyard Components to first Breaker	Yes

STRUCTURES SELECTED FOR REVIEW

<u>Structure Name</u>	<u>Structure in License Renewal Scope?</u>
1. Administrative Bldg (TSC, CAS, SDG)	No
2. Auxiliary Building	Yes
3. Condensate Storage Tanks (2T41A and B)	No
4. Containment Building	Yes
5. Controlled Access #3	No
6. Electric Manhole	Yes
7. Emergency Cooling Pond	Yes
8. Emergency Diesel Fuel Oil Stg Tank Vault	Yes
9. Intake Structure	Yes
10. Post-Accident Sampling System Building	Yes
11. Various cable trays in the plant	Yes
12. Switchyard Control Building	No; however applicant added to the scope as a result of this inspection