UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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November 1, 2000

Southern Nuclear Operating Company, Inc.
ATTN: Mr. H. L. Sumner, Jr.
Vice President - Hatch Project
P. O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: EDWIN I. HATCH NUCLEAR POWER PLANT - NRC INSPECTION REPORT NOS. 50-321/00-09, 50-366/00-09

Dear Mr. Sumner:

On September 15, 2000, the NRC completed an inspection at your Birmingham, Alabama offices regarding your application for license renewal for the Hatch, Units 1 and 2 reactor facilities. The enclosed inspection report presents the results of that inspection. The results of this inspection were discussed on October 5, 2000, with members of your staff in an exit meeting open for public observation at the Hatch site.

The purpose of this inspection was an examination of activities that support your application for a renewed license for the Hatch facilities. The inspection consisted of a selected examination of procedures and representative records, and interviews with personnel regarding the process of scoping and screening plant equipment to select equipment subject to an aging management review.

The inspection concluded that the scoping and screening portion of your license renewal activities were conducted as described in your License Renewal Application and that documentation supporting your application is in an auditable and retrievable form. With the exception of the items identified in this report, your scoping and screening process was successful in identifying those systems, structures, and commodity groups required to be considered for aging management.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room

or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at *http://www.nrc.gov/NRC/ADAMS/index.html* (the Public Electronic Reading Room).

Sincerely,

\RA

Charles A. Casto, Director
Division of Reactor Safety

Docket Nos.: 50-321,50-366
License Nos.: DPR-57, NPF-5

Enclosure: NRC Inspection Report Nos. 50-321/00-09, 50-366/00-09

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*See attached concurrence sheet and **E-Mail concurrence sheets

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-321, 50-366
License Nos:	DPR-57, NPF-5
Report No:	50-321/00-09, 50-366/00-09
Licensee:	Southern Nuclear Operating Company, Inc. (SNC)
Facility:	E. I. Hatch Nuclear Power Plant, Units 1 & 2
Location:	P. O. Box 2010 Baxley, Georgia 31515
Dates:	September 11 - 15, 2000
Inspectors:	B. Crowley, Reactor Inspector M. Scott, Reactor Inspector K. Van Doorn, Reactor Inspector H. Wang, Mechanical Engineer, NRR T. Bloomer, Mechanical Engineer, NRR W. Burton, Project Manager, NRR
Approved by:	Caudle Julian Team Leader Division of Reactor Safety

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SUMMARY OF FINDINGS

IR 05000321-00-09, IR 05000366-00-09; 09/11-15 /2000; Southern Nuclear Operating Company, E.I. Hatch Nuclear Power Plant, Units 1 & 2. License Renewal Inspection Program, Scoping and Screening.

This inspection of License Renewal activities was performed by four regional office engineering inspectors, and three staff members from the office of Nuclear Reactor Regulation. The inspection program followed was NRC Manual Chapter 2516 and NRC Inspection Procedure 71002. This inspection did not identify any "findings" as defined in NRC Manual Chapter 0610. However, the following notable issues were identified and will be the subject of further NRC review.

During the review of the license renewal treatment of the fire protection program, there were several issues identified that will require further discussions and exchange of correspondence between the applicant and the NRR staff to resolve. Also, in the fire protection area, NRC identified two examples of the deletion of requirements to maintain fire protection equipment operable using the 10 CFR 50.59 change process. These changes to the current licensing basis were made without prior NRC review or knowledge. This issue is considered an unresolved item (50-321, 366/ 000-09-01) and will be reviewed further in the current Region II Integrated Inspection Report. (Section C.d)

During the review of the license renewal treatment of the Plant Service Water system, NRC identified two system components that were apparently not considered during license renewal scoping and screening. The applicant stated they intend to review those components to determine if they are in scope for license renewal. The NRC will examine the results of the applicant's review during a future inspection. (Sections C.a.14 & C.c.12)

Report Details

System and Component Level Scoping and Screening

A. NRR Scoping and Screening Audit

By letter dated February 29, 2000 Southern Nuclear Operating Company (SNC) submitted to the NRC an application to renew the operating licenses for the Hatch Nuclear Plant to allow an additional 20 years of operation. As part of the review of the application, the NRR staff conducted a scoping and screening audit at the Birmingham, Alabama headquarters of Southern Nuclear Operating Company, Inc. (SNC) from June 12 through June 15, 2000. The purpose of the audit was to determine whether the scoping and screening methodology described in the license renewal application (LRA) was developed and implemented in accordance with the requirements of 10 CFR Part 54 and with the LRA. While the audit team determined that the development and implementation of the scoping and screening methodology was consistent with 10 CFR Part 54 and with the LRA, the team found that the license renewal implementing procedures did not adequately document the process. Specifically, the procedures did not provide a clear description of all essential activities in the scoping and screening process nor did they clearly portray the sequence in which these activities were actually accomplished.

As a result, the staff issued a request for additional information (RAI), requesting SNC to revise the implementing procedures to clearly reflect the scoping and screening process. By letter dated August 29, 2000, SNC committed to revising the procedures by September 11, 2000. During the scoping and screening inspection that is the subject of this report, the inspectors reviewed the revised procedures and confirmed that they had been revised to more accurately reflect the Plant Hatch scoping and screening process as required by 10 CFR 54.35 and 10 CFR 54.37(a).

B. Inspection Scope

This inspection was conducted by NRC Region II inspectors and members of the NRR staff to interview applicant personnel and to examine a sample of documentation which supports the license renewal application (LRA). This inspection reviewed the results of the applicant's scoping of plant systems and screening of components within those systems to identify the list of components that need evaluation for aging management. The team selected a sample of systems, structures, and commodity groups (SSC) from the LRA scoping results to verify the adequacy of the applicant's scoping and screening documentation and implementation activities. The team reviewed the identified system functions, the associated boundary drawings, and the active/passive and short/long lived determinations of the selected SSCs to confirm the accuracy of the applicant's results. The SSCs selected for review during this inspection are listed in Attachment 2 to this report. Some systems and functions that the applicant had determined not to be in scope for license renewal were selected for inspection. The inspectors reviewed supporting documentation and interviewed applicant engineers to confirm the accuracy of the LRA conclusions.

C. Findings

a. Evaluation of Scoping and Screening of Mechanical Systems

The inspectors evaluated the applicant's scoping and screening process for mechanical components by reviewing a number of plant systems that the applicant determined to be within the scope of license renewal. The applicant performed scoping based on functions. In many cases, functions extend across system boundaries. The process was performed by first identifying plant systems and structures and their functions. Then each system and structure function was reviewed to determine whether it met any of the scoping criteria specified in 10CFR 54.4(a). Any function deemed to meet one or more of the scoping criteria specified in 10 CFR 54.4(a) was considered within the scope of the rule and was designated as an intended function. Evaluation boundaries and boundary drawings were developed for each intended function. All components included in the evaluation boundary were grouped, where practical, and screened for aging management considerations. The following systems and intended functions were reviewed:

1. B11 Reactor Assembly

The reactor assembly consists of the reactor pressure vessel (RPV) and the internals, including the core, core shroud, steam separator and dryer assemblies, and jet pumps. The control rods, control rod drive (CRD) housings, and CRDs are included. The LRA identified two in-scope intended functions for the reactor assembly. Function B11-01 was termed Nuclear Boiler. The reactor vessel internals provide proper coolant distribution to allow power operation without fuel damage and provide positioning and support for fuel assemblies to ensure control rod movement is not impaired. The pressure boundary function was evaluated as part of the Nuclear Boiler System B21 system. Function B11-02 is termed Reactivity Control. The CRD housing supports mitigation of damage to the fuel barrier in the event a drive housing breaks or separates from the bottom of the reactor. To satisfy these functions, the RPV and internals were considered in license renewal scope. The LRA did not identify any out-of-scope functions for this system. The team found that the applicant had performed scoping and screening for this system in accordance with the methodology described in the Hatch LRA.

2. B21 Nuclear Boiler (NB) System

The NB system consists of components and systems required to generate steam. Functions supplied by the NB System include supplying feedwater to the reactor, conducting steam from the reactor, reactor overpressure protection, and some reactor control and/or engineered safety feature functions. Most of the major components are part of the reactor coolant pressure boundary. The system contains the following major components: four steam lines, eleven safety/relief valves, eight main steam isolation valves, two feedwater lines, four feedwater line check valves, and instrumentation and controls. The LRA identified four in-scope intended functions for the NB system.

Function B21-01 is termed Pressure Control. The pressure control function of the system prevents an overpressurization of the nuclear system. It also provides automatic depressurization for small breaks to allow water injection into the reactor by low pressure coolant injection (LPCI) and core spray (CS) operation.

Function B21-02 is termed Reactor Coolant Pressure Boundary Integrity. The NB system is designed to maintain the reactor coolant pressure boundary integrity. This function includes pressure containing class 1 piping and components which form a portion of the reactor coolant

pressure boundary with the exception of the pressure control and recirculation functions. For containment isolation, only the valve body is included in the scope of function B21-02. The remainder of the valve is included in system C61 (primary containment isolation). Portions (class 1) of the following pressure containing systems are included in the B21-02 function: B11, B31, C11, C41, E11, E21, E41, E51, G31, and L50.

Function B21-03 is termed Rod Worth Minimizer. The rod worth minimizer provides a means of enforcing procedural restrictions on preprogrammed control rod manipulations which are designed to limit rod worth to the values assumed in the plant accident analysis (design basis rod drop accident).

Function B21-04 is termed Nuclear Boiler Instrumentation. Nuclear Boiler instrumentation provides process information to the operator and signals to other systems in the nuclear power plant.

To satisfy these functions, the reactor pressure control components, reactor coolant pressure boundary piping and components, and nuclear boiler instrumentation were considered in license renewal scope. The LRA did not identify any out-of-scope functions for this system. The team found that the applicant had performed scoping and screening for this system in accordance with the methodology described in the Hatch LRA.

3. B31 Reactor Recirculation (RR) System

The reactor recirculation system ensures adequate core cooling during power operation by supplying coolant flow past the reactor fuel bundles**.** The system consists of two loops external to the RPV. Each external loop contains one variable speed motor-driven recirculation pump, two motor operated gate valves, and a motor generator set to control the recirculation pump speed. Suction is from the RPV annulus and discharge is to the reactor vessel jet pumps. The LRA identified four in-scope intended functions for the RR system.

Function B31-02 is termed Recirculating Pump Trip (RPT) Breakers. The RPT breakers are designed to trip the M-G set drive motor breaker on appropriate signals - high reactor vessel steam dome pressure signal, or an indication of a low reactor water level. The RPT breakers trip to prevent the core from exceeding thermal limits during abnormal transients.

Function B31-03 is termed Reactor Coolant Pressure Boundary. The RR system ensures adequate core cooling during power operation by supplying coolant flow past the reactor fuel bundles. The piping, pumps, and valves that form these two loops make up part of the reactor coolant pressure boundary. This function only includes recirculation piping, pumps, and valves up to the first isolation valves of small bore branches.

To satisfy these functions, the RPT breakers, the RR pumps, and the RR system piping and associated components were considered in license renewal scope.

The team also reviewed applicant's justification for excluding the B31–01 - Reactivity Control RR system function from license renewal scope. The RR system ensures reactivity control without control rod movement by maintaining forced circulation of water past the fuel bundles.

The inspector reviewed the applicant's supporting documentation (Form 5 from procedure LRS 1-3) and discussed with applicant personnel, the applicant's decision to consider this function out-of-scope for license renewal. The applicant stated that decision was based on the fact that the reactor power can only be partially controlled by varying the recirculation flow rate without

moving the control rods; it is not possible to shut down the reactor with this system; and reactivity control provided by RR is not a safety-related function.

The team found this conclusion acceptable and determined that the applicant had performed scoping and screening for this system in accordance with the methodology described in the Hatch LRA.

4. C11 Control Rod Drive (CRD) System

The CRD system provides pressurized, demineralized water for the cooling and manipulation of the CRD mechanisms. In addition, the CRD system provides purge water for the reactor water cleanup (RWCU) pump and reactor recirculation pump seals. The alternate rod insertion system is a subsystem of the CRD System. Water enters the system from the condensate header downstream of the condensate demineralizers or from the condensate storage tank. The major components of the system are: two drive water pumps and associated piping and valves, two scram discharge headers and associated piping and valves, and drive water insert and withdraw piping and associated valves for each control rod drive. The LRA identified two in-scope intended functions for the CRD system.

Function C11-04 is Reactor Scram. The scram mode allows quick shutdown of the reactor by rapidly inserting withdrawn control rods into the core in response to a manual or automatic signal.

Function C11-07 is Alternate Rod Insertion. Alternate rod insertion reduces the probability of occurrence of a Anticipated Transient Without Scram event. Signals are provided which respond to an ATWS event or to a manual initiation to depressurize the CRD scram pilot valve air header using valves that are separate from normal RPS scram valves, thus providing a redundant parallel method for control rod insertion.

To support these functions, the following were considered in license renewal scope: the scram discharge headers and associated piping, valves and instrumentation; the drive water insert and withdraw piping and associated valves; and certain solenoid control valves for the scram discharge piping.

The team also reviewed applicant's justification for excluding the following CRD system functions from license renewal scope. Function C11-02 is titled Vessel Injection. The CRD pumps pump from the condensate storage tank to the reactor via the feedwater system. The CRD pumps are therefore a potential source of high pressure makeup to the reactor. Function C11-05 is titled Alternate Boron Injection. This function provides an alternate method of injecting boron in the RPV using the CRD pumps.

From discussions with applicant personnel, review of Emergency Operating Procedures (EOPs)s, and review of Form 5 from procedure LRS 1-3, the inspectors determined that function C11-02 was excluded based on the fact that the function is not taken credit for in accident analysis in the FSAR, but was included in EOPs as another contingency source of water to the RPV. This is one of three possible sources of adding some water to the RPV if primary sources (condensate/feedwater, core spray, or LPCI) are not available. Relative to function C11-05, the CRD pumps can be used as an alternate method of injecting boron into the RPV. Although this method is provided for in EOPs, it is not taken credit for in accident mitigation in the FSAR or the System Evaluation Document (SED) and requires special system alignment, equipment changes, and installation and routing of temporary hoses. Also, this is only one of three methods of alternate boron injection. EOPs also provide for the use of HPCI or RCIC systems as a contingency method to inject boron into the RPV.

The team found this conclusion acceptable and determined that the applicant had performed scoping and screening for this system in accordance with the methodology described in the Hatch LRA.

5. C41 Standby Liquid Control (SLC) System

The SLC system is designed as an independent backup system to the CRD system to shut down the reactor from full power operation in the event control rods do not insert. This is accomplished by mixing a neutron absorber with the coolant. The system is located in the reactor building and consists of a low temperature sodium pentaborate solution storage tank, a test tank, two full capacity positive displacement pumps, two explosive actuated shear plug valves, two accumulators, the poison sparger, and necessary piping, valves, and instrumentation. The LRA identified two in-scope intended functions for the SLC system.

Function C41-01 is Reactivity Control. The standby liquid control system assures reactor shutdown from full power operation to cold subcritical by mixing a neutron absorber with the primary reactor coolant.

Function C41-03 is SLC Testing. The testing function is not safety related. However, to accomplish this function, equipment from the C41-01 function is used as well as the test tank and piping. The equipment common to C41-01 is brought in scope under that function. The test tank is qualified to seismic category II/I criteria and, therefore, has the potential to prevent a safety-related function. It is for that reason that the testing function is brought into scope. To support these functions, essentially the entire system including system instrumentation and the test tank supports were determined to be in license renewal scope.

The team also reviewed applicant's justification for excluding the C41-02 - Vessel Injection SLC system function from license renewal scope. The SLC system in the vessel injection mode uses the same flow path as SLC injection for reactivity control. SLC vessel injection is one of the alternate means to maintain RPV level when normal systems are unable to maintain inventory.

Based on discussions with applicant personnel and review of Form 5 from procedure LRS 1-3, the inspectors determined that this function was excluded from scope based on: (1) the function was not described in the FSAR or the SED and, (2) although referenced in EOPs, the function does not provide a significant mitigating ability due to the small volume of water that can be added to the RPV using the SLC system. The use of the SLC system for adding water to the RPV is only one of seven possibilities if other main systems (condensate/feedwater, core spray, LPCI, HPCI, or CRD) are not available. Use of the SLC system for this function would require a very unusual alignment using the SLC test tank and possibly providing water to the test tank using a fire hose. Also, the pumps and piping used for this function were in scope under function C41-01.

The team found this conclusion acceptable and determined that the applicant had performed scoping and screening for this system in accordance with the methodology described in the Hatch LRA.

6. E11 Residual Heat Removal (RHR) System

The RHR system is a cooling system having many possible functions, but its main purposes are to remove residual decay heat from the reactor during normal shutdown conditions and to serve as a low pressure Emergency Core Cooling System (ECCS) in response to a large break Loss Of Coolant Accident (LOCA). The primary loop is driven by RHR pumps which circulate water

that has passed through the reactor core. The primary side RHR system consists of four pumps, the shell side of two RHR heat exchangers, and their associated piping and controls. This equipment is divided into two independent trains that can be aligned to different flow paths. Each alignment is called an operational mode. The primary trains can take suction from the suppression pool in the torus or from the reactor coolant recirculation loop and can discharge water to multiple locations. The two most used primary alignments are the shutdown cooling (SDC) mode and the Low Pressure Coolant Injection (LPCI) mode. The RHR heat exchangers are the major heat removal components in most alignments for the various modes of operation. The secondary loop of RHR uses the site's river water to remove heat by cooling the tube side of the RHR heat exchangers. Two trains of two pumps each take suction on the river. These secondary side pumps are called the RHR service water (RHRSW) pumps. A support subsystem for both RHR and Core Spray (CS) systems are the two jockey pumps and components that maintain the piping full of water and pressurized on both emergency cooling systems.

The inspector reviewed the applicants' supporting documentation on the systems against the appropriate sections of the FSAR, System Evaluation Documents (SEDs), the Maintenance Rule (MR) program, and system drawings. The required portions of the system piping and components were within the application's LRA scope for aging management. The SEDs discussed one function not in scope in the LRA nor was its function in the MR program. This was spent fuel pool (SFP) cooling. As discussed below, two separate SFP cooling systems were normally and historically used for spent fuel cooling. As stated in the SEDs, the RHR is backup to the main SFP cooling systems. The RHR piping available to connect to the reactor cavity cooling was within LRA scope. The inspector observed that License Renewal Scoping Decision Basis Function Form 5 contained a minor error that was to be corrected by the applicant. For function E11-04, dated September 4, 1997, the document listed valves MOV 73 and 75 in lieu of MOV 73 and check valve FO78. The inspector concluded that the applicant had appropriately scoped and screened this system as described in the LRA and identified the components and their functions that were subject to aging management.

7. G71 Decay Heat Removal (DHR) Systems

As described in the FSAR, the spent fuel pool has three cooling systems available. The main SFP cooling source is the Fuel Pool Cooling and Cleanup (FPCC) System. This two train (two pumps and two exchangers) system is cooled by the reactor building closed cooling water (RBCCW) system. It is operated full time unless under repair. It has a filtration and demineralizing capability. Two back up systems for the FPCC system are the Decay Heat Removal (DHR) and RHR systems. The DHR system is described in the same section of the FSAR as the FPCC system. It utilizes the plant cooling towers' basin water and two plate type heat exchangers for the SFP heat sink. The RHR system is as described above. All three are one hundred percent capacity systems. The RHR is safety related while the other two heat removal systems are non-safety-related. Neither of the non-safety related systems are within the scope of the MR or LRA.

The SFP purpose is to retain water around the spent fuel. It is a seismic Category I structure, and it is located within the secondary containment structure that would limit possible radiological releases. The SFP itself is within the LRA scope (system T24).

The inspector reviewed the associated boundary drawings, FSAR sections, and LRA supporting documents. The applicant preferentially uses the DHR systems during outages. The DHR and FPCC systems have pipe entry through the upper elevations of the SFP with anti-siphon features. The SFP has no lower elevation penetrations which could present possible ways to lose water volume thus a pipe rupture failure of any of the three cooling systems would not

result in volume loss by gravity drain. Without SFP cooling, the time required to boil is 14.7 hours for Unit 1 SFP and 22.8 hours for the Unit 2 SFP. The applicant's personnel routinely observe the SFP areas (a Technical Specification 3.7.8 requirement). Thus, should one cooling system fail, there would be sufficient time to supply additional water to the pool and restore cooling. The inspector agreed with the applicant conclusion that the DHR system need not be in scope for aging management.

8. E21 Core Spray (CS) System

The CS system is an ECCS system that protects the reactor core by removing residual heat in the event of a LOCA. The system is composed of two independent redundant trains. Each train provides 100 percent capacity via a motor driven centrifugal pump supplied from the suppression pool or condensate storage tank (CST). The flow delivery is through two reactor vessel internal spray spargers located above the fuel in the reactor vessel. The CS and RHR (in Low Pressure Coolant Injection mode) systems are actuated together to remove residual post-accident heat.

The inspectors reviewed the associated boundary drawings, FSAR sections, and supporting documents. The required portions of the CS system piping and components were within LRA scope. The applicant excluded from scope two functions listed in the MR program and added one not covered by MR. These were the primary containment flooding, torus fill, and, alternate SDC, respectively.

A beyond-design-basis scenario had been postulated by the applicant that required the flooding of containment following a LOCA. The scenario was addressed using an emergency operating procedure (EOP-112). Containment flood injection could be accomplished by use of in-scope piping using either or both of the RHR and CS system components.

The applicant utilizes a normal operating procedure and sections of CS system to fill the torus. Technical specification 3.6.2.2 requires that the torus be filled to a specified level without a source being identified prior to modes 1, 2, and 3 entry. The fill function can be carried out through other LRA in scope piping. The inspector agreed with the applicant's conclusion that these two functions of CS need not be in the scope of aging management.

Alternate SDC can be accomplished utilizing an existing abnormal operating procedure via LRA in scope components and piping. The postulated action is beyond the CS design basis and the function is not referenced in the SEDs nor the FSAR. The CS system could however, be utilized for SDC in the unlikely event that a fire in the plant defeated the RHR SDC mode. The inspectors concluded that the applicant had appropriately scoped and screened this system and identified the components and their functions that were subject to aging management.

9. E41 High Pressure Coolant Injection (HPCI) System

The HPCI system is composed of a high pressure and high capacity steam turbine driven pump, system piping, valves, controls, and instrumentation to accomplish its safety-related function. The system ensures that the reactor is adequately cooled to limit fuel cladding temperature during a small break LOCA that does not depressurize the vessel. Its suction sources are the suppression pool and the CST. The flow is distributed in the vessel via the feedwater spargers.

The inspector reviewed the associated boundary drawings, FSAR sections, and supporting documentation. The required portions of the HPCI system piping and components were within LRA scope. On a function evaluation sheet, the applicant addressed one function not

described in the MR program. This was the testing of the HPCI pump. Although recognized in the SEDs, during the LRA screening, this function was determined not to be in scope. However, the equipment for testing was included in scope for other functions. The inspector concluded that the applicant had appropriately identified the components and their functions that should be subject to aging management.

10. L35 Piping Specialities

The inspectors reviewed the associated boundary drawings, FSAR sections, and supporting documents. The potential components of consideration included seismic category I and certain seismic category II pipe supports and miscellaneous piping and test connections. Due to a large safety factor inherent with their design, safety-related supports had been previously excluded from the MR program. During the LRA process these supports had been included in the scope under seismic criteria. The seismic category II supports that restrained or captured fire protection piping were also included in the LRA scope. Test hookup connections and open-ended nipples that are separated from the piping systems by redundant closed valves were considered and logically excluded from scope. The inspectors concluded that the applicant had appropriately scoped and screened this area and identified the components that were subject to aging management.

11. L36 Insulation

The inspector reviewed the associated boundary drawings, FSAR sections, and supporting documentation. The potential components of consideration were insulation inside of the drywell and then outside of drywell. The insulation inside of the drywell was determined to be out of the LRA scope while the remaining insulation remained in scope. As a part of the applicant's response to NRC Bulletin 96-03 and BWR owners' group efforts, the applicant had performed an evaluation of insulation in drywell. The applicant had earlier determined that the emergency core cooling system strainers required modification to prevent possible plugging. The installed, larger strainers would not be blocked by potential post LOCA drywell debris such as loose insulation. The inspectors examined the design change's calculation and the applicant's existing process and specifications that would maintain insulation under the 10 CFR 50, Appendix B requirements.

Insulation outside of the drywell was in scope for freeze protection and certain rooms' heat load considerations. The inspectors concluded that the applicant had appropriately scoped and screened this area and identified the components that were subject to aging management.

12. G11 Radwaste

This system is designed to collect store process analyze and dispose of liquid waste effluent that may contain radioactive materials. It includes sump pumps piping and valves for transferring liquid wastes from sumps in the Reactor Building, Turbine Building, Waste Gas Treatment Building, Radwaste Building, Off-Gas Building, and Control Building. Air operated containment isolation valves that are part of this equipment are evaluated in system C61 Primary Containment Isolation. The inspector reviewed the applicant's FSAR and license renewal supporting documentation for this system. The system is designed to protect against the potential of excessive releases of radioactive liquid to the river by automatic isolation upon sensing high effluent release levels or low dilution flow. The FSAR states that even if the entire contents of all radioactive waste tanks were to be released into the soil under the radwaste building, 10CFR20 dose limits would not be exceeded. The applicant concluded that this system is not in scope for license renewal. The inspectors found that conclusion acceptable.

13. N62 Off Gas

This system contains, processes, monitors, and discharges potentially radioactive gaseous waste from the plant during normal operation. The gaseous radwaste system is continuously monitored and isolates to prevent treated gas of unacceptable high radioactivity from entering the main stack. A radiation monitor is used to provide an alarm on high radiation in the off-gas and to isolate the off-gas system. This system is not classified as safety related. The inspectors reviewed the license renewal support documentation for this system. It states that the system is isolated upon indication of high radiation to limit offsite concentration releases to less than those specified in 10CFR20. The FSAR states that the failure analysis of this system is bounded by other radiological release analyses. The applicant concluded it is not in scope for license renewal. The inspectors found that conclusion acceptable.

14. P41 Plant Service Water System

The Plant Service Water System (PSW) provides raw water for removal of heat generated by the operation of various systems, both safety-related and non-safety-related, and provides makeup water to the plant circulating water system. The PSW also provides radwaste dilution and is available for emergency fuel pool makeup. The PSW consists of two divisions, each containing two pumps and associated valves and piping. The two safety related divisions pass through isolation valves before merging to supply the non-safety-related loads. A separate standby diesel generator PSW pump is provided to service standby diesel generator 1B and is considered to be Unit 2 equipment. The inspector reviewed applicable sections of the FSAR, the system description, the applicant's documentation of the decision basis for scoping and screening, and applicable drawings. The applicant considered the portions of the system to be in scope which support essential mechanical/environmental equipment (includes all safety-related equipment and fuel pool makeup), turbine building isolation, and 1B diesel generator cooling.

The team concluded that the applicant had performed scoping and screening in accordance with the Hatch LRA. However, the applicant's documentation did not clearly address a guard pipe associated with division I PSW piping in the diesel generator building shown on drawing HL-11600. The applicant confirmed that the guard pipe had not been considered for scoping and screening. During the inspection, the applicant researched licensing documentation and could find no design basis for the guard pipe. The applicant indicated that the scoping and screening would be performed and documented for this pipe. Subsequent to the inspection, the applicant provided the documentation. The applicant decided to consider the guard pipe not in scope but to perform a one time inspection of the service water piping inside the guard pipe. The team concluded that this was acceptable and will review the status of this item during a future inspection.

In addition, the inspector noted that several boundaries ended in the middle of piping runs versus at a component such as a valve. An example was the 30-inch piping downstream of the turbine building isolation valves. In this case, the applicant explained that the intention was to include the piping up to the seismic support where the piping changes from seismic Class I to Class II. The other boundaries were also intended to be at seismic supports. The applicant's justification was considered reasonable, however, the team questioned how the site personnel would be able to understand where the boundaries were intended to be located. The applicant indicated that they would provide clarifying notes on the boundary drawings. This was considered to be an appropriate action. These boundaries will be reviewed during subsequent onsite inspections.

15. W33 Traveling Water Screens/Trash Rakes

The traveling screens and trash rakes serve to filter debris in the river water downstream of the course trash screens at the intake structure to protect the Plant Service Water (PSW) pumps. They support the integrity of the PSW system. The system consists of two traveling screens, two motors, and two screen wash lines. Each serve the common bay for both Units' pumps. Rotation and washing of the screens is not needed for accident scenarios, however, these must maintain structural integrity following a design basis earthquake. The inspector reviewed applicable sections of the FSAR and the applicant's documentation of the decision basis for scoping and screening. The applicant considered the system to be in scope for structural integrity of the screens and rakes and screen wash isolation. The team found this conclusion acceptable and determined that the applicant had performed scoping and screening in accordance with the Hatch LRA.

16. P42 Reactor Building Closed Cooling Water

Reactor Building Closed Cooling Water System (RBCCW) provides cooling for various equipment in the reactor building such as recirculation pumps, control rod drive pumps, drywell pneumatic coolers, sump coolers, reactor water cleanup equipment, fuel pool cooling heat exchangers, and associated valves and piping. The RBCCW also has a containment isolation function. The RBCCW consists of three one-half capacity pumps, two full capacity heat exchangers, a surge tank, a chemical addition system, and associated valves and piping. The system is Seismic Class I but the only safety-related function is containment isolation. The inspector reviewed applicable sections of the FSAR, the system description, the applicant's documentation of the decision basis for scoping and screening, and applicable drawings. The applicant considered the system to be in scope for the inside containment pressure boundary and the containment isolation function only. The team found this conclusion acceptable and determined that the applicant had performed scoping and screening in accordance with the Hatch LRA.

17. P64 Primary Containment Chilled Water System (Unit 2)

The Primary Containment Chilled Water System (PCCW) is provided to maintain the drywell area below a maximum average air temperature of 150 degrees F (135 degrees F dry bulb) during normal operation by providing chilled water to the drywell fan coil units. The system can also provide chilled water to the reactor building or radwaste building fan coil units. The system consists of two chilled water pumps, two centrifugal chillers, a chemical addition tank, a chemical feed pump, an expansion tank, and associated valves and piping. The system is not required to provide cooling during accident conditions. The inspector reviewed applicable sections of the FSAR, the system description, the applicant's documentation of the decision basis for scoping and screening, and applicable drawings. The applicant considered the PCCW to be in scope for the inside containment pressure boundary and the containment isolation function. The team found this conclusion acceptable and determined that the applicant had performed scoping and screening in accordance with the Hatch LRA.

18. P65 Reactor Building Chilled Water

The Reactor Building Chilled Water System (RBCW) provides chilled water to the reactor building and radwaste building area cooling units. The system consists of two chilled water pumps, two centrifugal chillers, two condenser circulation water pumps, two cooling towers, several fan coil units, and associated valves and piping. The system does not perform a safety-related function. The inspector reviewed applicable sections of the FSAR and the applicant's documentation of the decision basis for scoping and screening. The applicant determined that

the RBCW was not in scope. The team found this conclusion acceptable and determined that the applicant had performed scoping and screening in accordance with the Hatch LRA.

19. Control Building Chilled Water

The Control Building Chilled Water System (CBCW) provides chilled water to control building area air handling units other than the control room. The CBCW consists of an air-cooled, skid-mounted chiller unit, two circulating pumps, an expansion tank, an air separator, a chemical addition tank, and associated valves and piping. The system does not perform a safety-related function. The inspector reviewed the applicable sections of the FSAR and the applicant's documentation of the decision basis for scoping and screening. The applicant determined that the CBCW was not in scope. The team found this conclusion acceptable and determined that the applicant had performed scoping and screening in accordance with the Hatch LRA.

b. Evaluation of Scoping and Screening of Electrical Systems

The inspectors observed that the scoping and screening of electrical systems employed significantly different methods than the mechanical or structural disciplines. During this inspection the inspectors reviewed several of the applicant's procedures from the License Renewal Services Procedures Manual used for accomplishing license renewal activities. For the electrical discipline, the staff reviewed procedure LRS 1-8, Electrical IPA Procedure, Rev. 3.

The procedure described how the applicant first accomplished screening of electrical commodities to determine those needing an aging management review. The applicant began by compiling a generic list of all electrical components in use at Plant Hatch. They began with the generic electrical component list from NEI 95-10, Rev 0, and augmented it by expert review of Hatch electrical design engineers. This list was then screened to eliminate active and short lived components and the remaining items are the electrical commodity groups subject to an aging management review.

The applicant used a "spaces approach" described in document SAND 96-0344, Aging Management Guideline for Commercial Nuclear Power Plants - Electrical Cables and Terminations. Starting with a list of structures in the scope of license renewal, they compiled a list of physical in-plant areas which contain in-scope electrical equipment. The areas were further divided using the Fire Hazards Analysis drawings. For these areas, the environmental parameters were determined, e.g. normal ambient temperature, total expected 60-year accumulated radiation dose, normal humidity, areas of significant moisture, wetting or submergence, and "hot spots" where temperature exceeds the normal temperature in other parts of the room. The applicant performed an extensive in-plant temperature monitoring program to gather measured temperature data.

For the list of electrical commodities subject to an aging management review, the applicant then determined the 60 year life based on temperature and radiation dose. These limits were derived from data from the Environmental Qualification program, manufacturer's published data, and other industry information based on materials of construction.

The 60 year life criteria of the various components was then compared to the determined ambient environment of the plant spaces. The worst case situations were given a detailed review to confirm that the electrical commodity was actually installed in that space and to further confirm more specific environmental data.

An aging management review was performed and documented for each commodity or component type listed. These AMRs were documented as described in procedure LRS 1-6, Aging Management Review Procedure. The inspectors reviewed all available aging management review reports as follows:

AMR001E Phase Bussing completed 1/13/2000
AMR002E Nelson Frames completed 1/13/2000
AMR003E Electrical Splices, Connectors, and Terminal Blocks completed 1/13/2000
AMR004E Insulated Electrical Cable - Outside Containment completed 1/18/2000
AMR005E Insulated Electrical Cable - Inside Containment completed 1/14/2000
Appendix A Glossary of aging Management Terms completed 2/29/2000

Each of the Aging Management Reviews concluded that no new aging management programs are needed for electrical components.

The inspectors had selected a sample of electrical systems and associated functions from the applicant's LRA for review. For each of the selected systems the inspector reviewed the associated boundary drawings which depict the portion of the electrical systems which were found to be in scope for license renewal. The inspector found no anomalies. The existence of the boundary drawings is actually moot since actual electrical scoping and screening was performed as described above and did not depend on the boundary drawings. The systems whose boundary drawings were reviewed during this inspection were as follows:

A70 Analog Transmitter Trip System
A71 Nuclear Steam Supply Shutoff System
C71 Reactor Protection System
C82 Remote Shutdown System
D11 Process Radiation Monitoring System
R20 Plant A/C Electrical System
R33 Conduits, Raceways & Trays
R42 D/C Electrical
R43 Emergency Diesel Generators
R44 Uninterruptible Power Supply

c. Evaluation of Scoping and Screening of Structural Components

1. T23 Primary Containment

This intended function deals with the drywell/torus of the primary containment. The primary containment is a pressure suppression system consisting of a drywell, a torus, and a connecting vent system. The intended function of the primary containment is to provide, in conjunction with other safeguard features, the capacity to limit the release of fission products in the event of a Design Basis Accident so that offsite dose will not exceed the guideline values set forth in 10 CFR Part 100. The primary containment is in scope for license renewal due to the fact that the structure is safety related and required for safe shutdown and accident consequences mitigation. The primary containment performs its intended functions in a passive manner and has a service life of more than 40 years. The entire structure and other structural elements inside the primary containment were included in the scope for license renewal including the following components:

> The entire drywell, including slabs, external and internal walls, and other internal concrete elements. Structural steel, refueling bellows, and miscellaneous embedded steel shapes and plates are also included.

Containment isolation valves, piping, and other components between the isolation valves that are nor part of any other in-scope mechanical systems.

Primary containment mechanical penetrations, personnel and equipment access hatches, and instrument penetrations. Primary containment electrical penetrations are evaluated in Intended Function T52-01.

The inspectors agreed with the applicant's assessment.

2. C61 Primary Containment Isolation

The intended functions of primary containment isolation & integrity and signal transmission are for the primary containment isolation system (PCIS). The PCIS includes the instrumentations, controls, and actuators to isolate the primary and secondary containment, isolate various fluid systems, and initiate the standby gas treatment system in order to prevent or reduce the release of radioactive materials.

The PCIS consists primarily of relays, switches, fuses, and indicating lights and has no mechanical components. The PCIS performs the following intended functions:

Primary containment isolation
Secondary containment isolation
Standby gas treatment system initiation
Permissive annunciation

Most functions performed by the PCIS are safety related as well as fire protection, equipment qualification, and station blackout requirements. The applicant concluded that all of this equipment is in the scope of license renewal. The inspectors agreed with the applicant's scoping and screening process of the PCIS.

3. L48 Access Doors, Containment Integrity

This intended function of containment integrity evaluates the access doors of the secondary containment. Only access doors necessary to maintain the secondary containment integrity are included in this function. Doors to cope with station blackout were evaluated in intended function Z41. Penetrations, both mechanical and electrical, of the secondary containment (reactor building) are not included in this function. Those penetrations are evaluated in intended function T54. Penetrations for HVAC system are evaluated in intended function T41. Penetrations that penetrate the fire walls are evaluated in intended function X43. The integrity of the primary containment is evaluated in Intended Function T23. Secondary containment plays a role in preventing significant offsite releases. There are over 30 doors included in this evaluation. Boundary description package 1L48-B01 lists all the in scope doors. The inspectors agreed with this scoping assessment.

4. T24 Fuel Storage

The Fuel Storage system is a passive system consisting of spent reactor fuel storage and new reactor fuel storage, both located within the plants secondary containment. Spent fuel storage provides underwater storage space for spent fuel assemblies, which require radiation shielding and cooling during storage and handling. The new fuel storage provides dry storage for new fuel assemblies. Both functions are in scope. During the scoping and screening inspection applicant supporting documentation for spent fuel identified the existence of bladders, bladder N2 back-up supply, and inflatable seals for the transfer canal expansion joints. There was no

mention of these items in the LRA Table 2.4.4-1. Discussions with SNC suggested that the bladders and the inflatable seals were out of scope based on being short lived. A Screening Evaluation Record was identified for the inflatable seals, but no such documentation was identified for the bladders. SNC suggested that they were for the low friction foot pads identified in HNP-1-FSAR and are out of scope. Similarly, for the New Fuel Storage, drains in the bottom of the structure are identified in drawing H-25548, but are not mentioned in the New Fuel Boundary Description Package and are said to be out of scope by SNC. Further investigation by the applicant identified function T45-02 Primary /Secondary Containment Abnormal Leakage Indication/ Isolation in the Equipment and Floor Drainage system as out of scope. The inspectors stated that these issues will be reviewed further during a future inspection.

5. T29 Reactor Building, Containment and Support

This intended function is for the reactor building (secondary containment). The reactor building encloses the reactor, the reactor primary containment, auxiliary cooling systems, new fuel storage vault, and spent fuel storage pool. The reactor building provides secondary containment for the reactor and primary containment for auxiliary systems and provides primary containment during reactor refueling and maintenance operation when the primary containment is open. The reactor building provides the support to maintain equipment integrity. The reactor building also provides an additional barrier when the primary containment system is functional, therefore, it is relied on to prevent or mitigate the consequences of accidents that could result in potential offsite release. This intended function is a safety related function. The scope of this intended function also includes the blowout panels in the pipe chase between the reactor building and the turbine building.

The boundary of the structure included in the evaluation, as described in boundary description package 1T29-B01, is the entire reactor building, including slabs, external and internal walls, roof and internal concrete features, and steel columns and beams. Miscellaneous steel items such as base plates, embedded plates, gratings, and platforms are included. Structural supports, such as hangers (pipe supports), are evaluated in Intended Functions L35, cable trays, are evaluated in Intended Functions R33. There are several function boundaries that are located within the reactor building boundary. These functions are evaluated in their own boundary packages. These includes Drywell/Torus (T23-01), Spent Fuel (T24-01), New Fuel (T24-02), and Drywell Penetrations (T52-01).

Embedded Plates, anchor bolts, reinforcing steel, concrete, and structural steel are treated as “commodity” groups and are included in this evaluation. Interior penetrations (penetrations that penetrate interior walls) are also included. Mechanical and electrical penetrations that penetrate the reactor building are evaluated in intended function T54-01.

The inspectors reviewed the scoping assessment of this function and its boundary description and agreed with the applicant that all system, structures, and components necessary to perform this function are included in the scoping package.

6. T41 Reactor Building HVAC

Intended Function T41-01 of the reactor building HVAC systems, including the refueling floor HVAC, control the release of airborne radioactivity during normal plant operation by promoting air movement from areas of lower to areas of greater airborne radioactivity concentration before final filtration and exhaust. The indirect radioactive release control is a safety related function of T41. The duct work associated with T41 is considered non-safety related but must retain its integrity to ensure the operation of the standby gas treatment system (SGTS). The function

also monitors the exhaust air stream for high radiation, shuts down the normal supply and exhaust systems, and initiates the SGTS if needed. Should either a LOCA isolation signal or high radiation signal be generated, system exhaust will be redirected through the SGTS which is evaluated in intended function T46-01.

Intended function T41-02 of the reactor building HVAC is to provide a source of cooling to support the operation of the ECCS and CRD pump rooms. In addition, cooling is also provided for the RCIC pump room. The ECCS room coolers are required to operate and mitigate the consequences of accidents, therefore, all components, including fans, supports, instrumentation, duct work, and connecting piping and valves are designed to Seismic Category I requirements and are within the license renewal scope. The RCIC and CRD room coolers are not included in this function. Cooling for the RHR pump room is required during SBO.

Intended function T41-07 of the reactor building HVAC provides cooling to the RCIC and CRD pump rooms for reliable operation of the RCIC and CRD pumps. These coolers are not required for a safe plant shutdown following major accidents, therefore, only the cooling units' coils are treated as safety-related to maintain the PSW pressure boundary. However, cooling for the RCIC pump room is required during SBO, therefore, all components of the RCIC pump room coolers are in scope for other functions.

The inspectors reviewed the boundary description packages, the system evaluation descriptions, and Boundary Drawing HL16023 which shows the scoping boundaries of the reactor building HVAC and found the applicant's assessment satisfactory.

7. T45 Equipment and Floor Drainage

This intended function of the Equipment and Floor Drainage System is to detect abnormal leakage in the reactor building and/or drywell through sump pump timers, temperature switches, and sump level switches. If any abnormal leakage is detected, the sump will be automatically isolated and indication is provided and annunciated to the control room operator. A malfunction of any component would cause annunciation in the control room. A failure of any component in this system will not prevent the safe shutdown of the reactor. The system does not perform any safety-related function.

Section 10.13 of Unit 1 FSAR and Section 11.2.3.4 of the Unit 2 FSAR state that the isolation of this system occurs automatically. The control of radwaste discharge is evaluated in G11-01. Since the system does not perform any safety related function and its failure will not prevent a safe shutdown of the reactor, the system is not in the license renewal scope. The inspectors agreed with this assessment.

8. T47 Drywell Cooling

Intended function T47-01 of the Drywell Cooling System controls the air temperature and prevents thermal stratification in the drywell during periods of normal plant operation, extended plant shutdown or maintenance and emergency conditions.

For this function, in the Form 5 of the Plant Hatch Scoping Template, the applicant indicated that the drywell cooling system is designed to maintain the drywell average temperature of 150°F. It further stated that per the bases of TS 3.6.1.5 “Should cooling not be provided, the temperature could exceed 150^{o} F for as much as 32 hours before shutdown would be required.” The team reviewed Section 3.6.1.5 of the Unit 1 Technical Specification and found it to say when drywell average air temperature limit ($\leq$150°F) is not met, restore drywell average temperature to within limit in 8 hours, otherwise, be in Mode 3 (hot shutdown) in 12 hours and in Mode 4 (cold shutdown) in 36 hours. The T.S. does not allow the applicant 32 hours to initiate a shutdown.

The applicant responded that given the normal surveillance requirement with a frequency of 24 hours and an 8 hours to restore the temperature to within limit, this is an upper limit of 32 hours before a plant shutdown. Furthermore, the applicant indicated that the scoping results basis is, that T.S. 3.6.1.5 provides assurance that no extended drywell temperature excursions above the limit can occur. The function is not in scope, since failure of the function results in plant shutdown - not loss of safety function. The inspectors agreed that the failure of intended function T47-01 will not result in loss of safety functions, therefore, the applicant’s assessment that T47-01 is not in-scope is acceptable.

9. T48 Primary Containment Purge and Inerting System

The Primary Containment Purge and Inerting System (P&I) is composed of several components and subsystems which are required to supply and maintain an inert atmosphere inside the primary containment. Other functions of this system include venting and purging of the containment atmosphere and vacuum relief between the torus and drywell as well as between the torus and reactor building. Major equipment for the system includes a purge air supply fan, liquid nitrogen storage tank, ambient vaporizer, steam vaporizer, vacuum breaker, valves, piping, and controls and instrumentation.

The inspectors reviewed supporting documents, including the FSAR, the maintenance rule scoping manual, the system evaluation documents, and the Equipment Location Index to verify

that all in-scope system functions were correctly identified and documented. The functional evaluation boundaries for each in-scope function were reviewed and all in-scope components were verified to be within their proper functional evaluation boundaries. Structural supports were verified to be scoped within their proper structural boundary. Finally, each in-scope component was reviewed to determine if it was properly screened. The team confirmed that all mechanical and structural components associated with the P&I were properly scoped and screened. The team also reviewed a sample of components that the applicant identified as not being within the scope of license renewal and/or not subject to an AMR to confirm that this determination was made correctly.

The inspectors questioned whether the steam vaporizer was correctly identified as not being within the scope of license renewal. The applicant provided documentation that confirmed that the steam vaporizer did not perform a function which supported the intended safety function of the P&I system and that this component was correctly scoped out.

The inspectors concluded that the applicant had properly applied the scoping and screening methodology, as described in the LRA and associated implementation procedures, to correctly identify functions of the P&I system that are within the scope of license renewal and functions not within scope and to identify components subject to an AMR as well as components not subject to an AMR.

10. T52 Drywell Penetrations

Intended function T52-01 of the drywell penetration system only addresses the electrical penetrations that pass through the drywell concrete wall. All other penetrations including the personnel and equipment hatches are addressed in T23-01. These penetrations are in-scope because they are safety-related and they are needed for safe shutdown of the reactor, mitigation of the consequences of an accident, fire protection requirements, and equipment qualification for the sealing material between the structural steel and the cables. The inspectors find this scoping assessment acceptable.

11. T54 Reactor Building Penetrations

This intended function T54-01 of the Reactor Building Penetrations addresses the electrical and mechanical penetrations to allow piping and conductors to penetrate the secondary containment boundary and maintain the secondary containment leakage rate within design limit. The HVAC penetrations through the secondary containment are evaluated in function T41-01. Penetrations that breach the fire walls of the reactor building are evaluated in function X43-07. All penetrations that do not breach the fire walls (X43) and are not in the scope of function T41-01 and are necessary for the secondary containment integrity are in scope under this intended function.

The penetrations under this intended function are supported and sealed with “Nelson Frame” which forms a barrier for fission products and fire protection. Miscellaneous steels are used for support and polymers or rubber for sealing. The inspectors concur with the applicant’s assessment.

12. W35 Intake Structure

The intake structure is a reinforced concrete building designed to protect the residual heat removal service water equipment and PSW equipment from the influence of environmental conditions such as flooding, earthquakes, and tornadoes. The inspector reviewed applicable sections of the UFSAR, the applicant's documentation of the decision basis for scoping and screening, and selected drawings. The applicant determined that the entire structure was in scope.

The inspectors concluded that the applicant decision was correct and they had performed scoping and screening in accordance with the Hatch LRA. However, applicant documentation did not clearly address two attendant structures. These were the two steel sheet pile cells upstream and downstream of the intake area and two creosote wood walls between the sheet piles and the intake. These structures were shown in drawings H-12192 and H-12193. The applicant indicated that these structures would be evaluated and documented for license renewal scoping and screening. Subsequent to the inspection, the applicant provided the documentation of the evaluation results. The applicant determined that neither of the structures are in scope. After reviewing the applicant's supporting documentation for these items, the inspectors concluded that this issue will be reviewed further during a future inspection.

13. Y39 Emergency Diesel Generator Building

The emergency diesel generator building is a seismic Class I structure which houses the diesel generators and attendant systems for both Units. The building protects this equipment from severe natural phenomena. The inspectors reviewed applicable sections of the UFSAR and the applicant's supporting documentation of the decision basis for scoping and screening. The applicant determined that the entire structure was in scope. The inspectors found this conclusion acceptable and determined that the applicant had performed scoping and screening in accordance with the Hatch LRA.

14. Z29 Control Building

The control building is a seismic Class I structure which houses equipment and personnel essential for safe shutdown of the reactor and maintaining it in a safe condition. The control building includes the substructure, foundations, superstructure, walls, floors, roof, doors and sanitary drain system necessary to maintain equipment integrity and personnel habitability. The inspector reviewed applicable sections of the UFSAR and the applicant's supporting documentation of the decision basis for scoping and screening. The applicant determined that the entire structure was in scope. The inspectors found this conclusion acceptable and determined that the applicant had performed scoping and screening in accordance with the Hatch LRA.

d. Evaluation of scoping and Screening of Fire Protection Systems

X43 Fire Protection System

The fire protection system assures through defense-in-depth design that a fire will not prevent the operability of designated safe shutdown equipment that can be used to shut down the plant and maintain it in a safe configuration. The Hatch Nuclear Plant fire protection plan outlines the plans for fire protection, fire detection and suppression capability, and limitation of fire damage. The applicant concludes in Table 2.2-1 of the LRA that the fire protection system functions in-scope for license renewal are; Cardox Fire Suppression for EDGs, Halon Suppression -

Remote Shutdown Panel (Unit 2), Plant Wide Fire Suppression With Water, Fire Detection, Penseals and Fire Barriers for Preventing Fire Propagation, Manual Carbon Dioxide Fire Protection, and Cardox Fire Suppression for the Computer Room.

As a result of the NRR staff's review of SNCs responses to the NRC's requests for additional information (RAIs) regarding fire protection, several issues were identified and inspected during the Scoping and Screening inspection. Following are the results of these inspections.

The inspector reviewed documentation to confirm that the applicant examined sources other than their Fire Hazards Analysis (FHA) during their scoping process. Applicant supporting documentation indicated that a variety of SER's, Exemption Requests, Schedule Exemption Requests and Exemptions Request Clarifications were examined.

Table 2.2-1 of the LRA indicated that Halon Fire Suppression for Remote Shutdown Panel (Unit 2) was in scope for license renewal. In response to an RAI, SNC stated that the upcoming LRA update will remove the Halon fire suppression function from scope. The inspector reviewed applicant supporting documentation. Form 2, the License Renewal Docketed Correspondence List, in the Plant Hatch Scoping Template, which is part of the License Renewal Services Procedures Manual indicated the equipment was in scope. Similarly, Form 5, the License Renewal Scoping Decision Basis - Function Sheet, of the same document referenced found that it was in scope. After questioning SNC on these findings, SNC provided a 10 CFR 50.59 evaluation Licensing Document Change Request 99-181, Rev.0, dated 11/19/99 and FHA revision 18C that analyzed the removal from regulatory requirements of the FHA and physical disabling of the Halon Fire Suppression for Remote Shutdown Panel (Unit 2) and explained the rationale behind the removal. The inspector questioned the appropriateness of using the 10CFR 50.59 process to remove the regulatory requirement and the physical function of originally installed plant fire protection equipment without a prior NRC review. Because this item was part of NRC's 10/4/78 Safety Evaluation Report SER, this item will require further discussion between the NRC Region and headquarters staff for resolution, both as a current licensing issue and subsequently as a license renewal issue.

Another RAI response from SNC regarding the scope of yard fire hydrants in boundary drawings, identified 3 hydrants as being recently removed from the FHA and thus regulatory commitment for operablity based on the hydrants not being required to be operable to meet 10 CFR 50 Appendix R or appendix A to Branch Technical Position APCSB 9.5-1. Secondly, SNC stated the hydrants are not required for system loop header flow. During the inspection SNC provided a copy of a 10 CFR 50.59 evaluation Licensing Document Change Request 99-171 Rev. 0, dated 11/15/99, which removed the yard fire hydrants and associated hydrant hose houses from Hatch's CLB. The applicant stated that their intention in implementing the 50.59 was not for removal of yard fire hydrants but rather just the hydrant hose houses, due to the personnel hazard of spiders, snakes and wasps taking residence within the hose houses. The applicant stated that the hose houses would be replaced by portable hose carriers which could be moved to the hydrant. The inspector reviewed the 50.59 and pointed out that its effect was to remove from the FHA all of Operating Requirement 1.7.1 which removed the operability and surveillance requirements for the hydrants and the hose houses. After consultations with the NRR staff the inspector expressed concern to the applicant that the operability of the yard hydrants is necessary to meet the fire protection requirements of 10 CFR 50 Appendix R as stated in the NRC SER dated 10/4/78. As in the issue discussed above, the inspector again expressed concern to the applicant about the inappropriateness of using the 10 CFR 50.59 process to remove originally installed plant fire protection equipment from regulatory operability requirements without prior NRC review. After discussions, SNC agreed to place the hydrants in scope for license renewal. At the conclusion of this inspection SNC stated their intention to take action to restore the hydrants operability requirements to the FHA by replacing a modified

Table 1.7.1, which provides the operating requirements and surveillance requirements, back into section 9.2 of the FHA or other comparable action. The issue of the applicant using the 10 CFR 50.59 process to remove regulatory requirements for operability of originally installed plant fire protection equipment will be resolved by Region II and discussed further in their NRC Integrated Inspection Report 2000-005. This issue is considered an unresolved item (50-321, 366/ 00009-01).

A RAI was issued by NRC on the Reactor Pressure Vessel (RPV) Inventory Make-up function listed in Table 2.2-1 of the LRA as not being in scope, and questioning this decision. The applicant's SSC Function Assessment record states that the fire protection water suppression system can be aligned to inject to the RPV using the condensate transfer and RHR system flow paths, and lists several Emergency Operating Procedures (EOPs) which invoke this function of the fire protection water suppression system. Procedure 31EO-EOP-110-1S, Alternative RPV Water Level Control, indicates that this action is performed only when required by Emergency Operating Procedure Flow Charts. A second procedure EOP 31EO-112-1S Primary Containment Flooding indicates that this action is performed only when required by Severe Accident Guidelines (SAG). SNC further explained that this RPV inventory make-up function would be relied upon only as a seventh or eighth contingency makeup supply. Lastly, P&ID drawings numbers H-11033 sheets 1 and 3, H-26046, and H-26014 were examined to identify any other functions which may have taken credit for use of the fire protection water suppression system to increase RPV inventory, and none were identified. The inspector agreed that this remote contingency function should be excluded from the scope of license renewal because it is not relied upon for compliance to 10 CFR 50.48.

The function of Plant Wide Fire Suppression With Water was the subject of a number of RAI's, several of which were further reviewed during the scoping and screening inspection. SNC explained that the scoping decision to omit the dedicated storage tank fill lines and pumps from scope was interpreted as "no refill is required in a design basis event" from the requirement in Appendix A to BTP 9.5-1 which states, "Two separate reliable water supplies should be provided. (If tanks are used, 2 100% capacity tanks of 300,000 gallons each, shall be installed. They should be interconnected so that pumps can take suction from either or both."). The capacity of the 300,000 gallon tanks are sufficient and the FHA, revision 14B makes no mention of the fill lines or refill pumps. The FHA does require that once per 31 days the water supply volume is verified to be at least the minimum specified, and that during required testing of the system that the combined volume of the tanks may not fall below 450,000 gallons. The inspector found this item requires further documentation and discussion between SNC and the NRR staff.

Surveillance Procedures for Fire Hydrants, 42SV-FPX-022-0S, and Sprinkler System Surveillance Safety Related Areas, 42SV-FPX-016-1S, identifying testing intervals and procedures, and the Deluge Valves and Protectospray Nozzle drawings were provided by SNC to answer other RAI's. Similarly, to explain SNC's decision to consider the Cardox hose reels as active components, the Chemetron product specification was provided. While this does show the hose reel, further documentation of the testing (pulling the hose, testing the system, reloading the hose) is required to demonstrate that failures will be identified in a timely fashion. To justify the Fire extinguishers, air packs and CO2 based and water based fire hoses are short lived, a new RAI response was provided, which identified the replacement time frames and the surveillance requirement procedures. Formal docketing of this response is still required.

In responses to RAI's, SNC indicated that the Control building 112 ft elevation (which incorporates the lube oil storage tank) and Radwaste building water sprinkler fire suppression systems are not included in the regulatory commitments for safe shutdown, and are therefore out of scope. Further discussion with SNC led to the reconsideration of the scoping decision for

the Control building elevation 112. At the conclusion of this inspection, the applicant stated their intention to include the fire suppression system protecting the lube oil storage tank in scope for license renewal. While the Radwaste building fire suppression system is listed in the FHA, and is credited in a NRC SER dated 10/04/78, SNC has indicated that the building is no longer used for solid radwaste, and therefore has no safety significance. No documentation was provided regarding this statement. This issue about the scoping of the radwaste building fire suppression system will be reviewed further with the NRR staff.

In discussions regarding Hatch's commitment to fire protection standard NFPA 25, SNC indicated that they might reconsider and follow the recommendation to test or replace sprinklers at the 50 year interval. SNC also discussed an inspection test connection and root cause inspections that are performed on Dry systems. Formal documentation for these items is needed by the NRR staff for further review.

Applicant supporting documentation was reviewed for the functions Halon Fire Suppression for Miscellaneous Applications and the EDG Building Fire Protection. The miscellaneous applications were identified in the LRA as the Plant Simulator and Document Control. Some discrepancies in the additional locations were found, such as, whether document storage is included, and if there is a computer building. While the FHA section 4.11 revision 12B, does not list the Computer Building or the document storage, it does list the record storage and record vault. SNC informed the inspection team that there is no Computer Building, and that item is listed in error. The other discrepancies are nomenclature differences.

Emergency Diesel Generator Building Fire Protection, which is identified in Table 2.2-1 as out of scope, also has a footnote that the system is captured in X43-01. The roll up fire doors and HVAC fire dampers for the diesel generator building were not identified in any of the X43 associated boundary drawings. Further investigation by SNC led to the function X41-02 EDG Building Environmental Control, which didn't have an electronic version of the P&ID. SNC provided boundary drawing 1X41-B02 from their stick files, which identified the roll up fire doors and HVAC fire dampers as in scope. A correction to Table 2.2-1 is needed to identify not only X43-01 but all of the EDG Building fire protection functions, such as X41-02.

In general boundary drawings were well prepared, but some inconsistencies in how the legends were handled were encountered. In one instance the legend was referenced to another drawing, and that drawing was not available except for the stick files. Other instances of P&IDs being referenced and not being available electronically, created some confusion.

Exit Meeting Summary

The results of this inspection were discussed on October 5, 2000, with members of the SNC staff in an exit meeting open for public observation at the Hatch site. The applicant acknowledged the findings presented and presented no dissenting comments. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Applicant

R. Baker, License Renewal Project Manager
J. Branum, Project Engineer
D. Crowe, Licensing Manager
J. Davis Senior Engineer
R. Dedrickson, Plant Hatch Staff
D. Drinkard, SAER manager
J. Hornbuckle, Senior Engineer
S. Kirk, Engineering Supervisor
I. Luker, SNC Engineer
B. Mattews, SNC Engineer
K. McCracken, Manager - REES
T. Moore, GMNS
J. Mulvehill, Senior Engineer
C. Pierce, License Renewal Services Manager
D. Stephens, License Renewal Engineer
L. Sumner, Vice President - Hatch Project
S. Tipps, Nuclear Safety & Compliance Manager
C. Tully, Hatch Licensing Engineer
J. Vance, Hatch Project Manager
P. Wells, Hatch Plant General Manager

NRC

C. Casto, Director, Division of Reactor Safety, RII
K. Clark, Public Affairs Officer
T. Fredette, Resident Inspector
J. Starefos, Acting Senior Resident Inspector

ITEMS OPENED

Unresolved item (50-321, 366/ 00009-01) - Two examples of the applicant using the 10 CFR 50.59 process to remove regulatory requirements for operability of originally installed plant fire protection equipment. This will be resolved by Region II and discussed further in their NRC Integrated Inspection Report 2000-005.

LIST OF DOCUMENTS REVIEWED

Engineering Documents

Unit 1 and Unit 2 System Evaluation Documents for various systems
Edwin I. Hatch Nuclear Plant Response to NRC Bulletin 96-03, dated October 1, 1996
52GM-MNT-019-0S, Rev. 2 ED 2, Removal, Storage, and Installation of Thermal Insulation
52GM-MNT-018-0S. Rev. 3 ED 3, Removal, Storage, and Installation of Reflective Insulation
Specification SS-6902-111, Rev 3,Thermal Insulation - Inside Primary Containment for Unit 1
Specification SS-2102-111, Rev. 3, Thermal Insulation - Inside Primary Containment for Unit 2
S-31927A, Instruction Manual for Installation on Class I & II Piping
Hatch Project support - Licensing Memorandum, IN 87-10, Suppression Pool Cooling and Waterhammer, Log HL-5136, dated March 26, 1996
Penfex Corporation Drawing D-7214-S-125, Rev. 14, Residual Heat Removal Exchanger
Southwestern Engineering Company Drawing, Rev. 5, EM-86272, Residual Heat Removal Heat Exchanger

Licensing Documents

Hatch Final Safety Analysis Report for Unit 1 and Unit 2
Hatch Unit 2 Technical Specification, Amendment No. 135

Procedures Reviewed

31EO-EOP-102-1S, Rev. 4 ED 2, RPV Venting During Primary Containment Flooding
31EO-EOP-10-1S, Rev. 6, RC RPV Control (non-ATWS)
31EO-EOP-15-1S, Rev 4, CP-1 Alternate Level Control, Steam Cooling, and Emergency RPV Depressurization
31EO-EOP-108-1S, Rev 4, Alternate RPV Depressurization
31EO-EOP-107-1S, Rev 4, Alternate RPV Pressure Control
31EO-EOP-112-2S, Rev 3 ED 1, Primary Containment Flooding
31EO-EOP-109-1S, Revision 3, Alternate Boron Injection
31EO-EOP-110-1S, Revision 2, Alternate RPV water Level Control
31EO-EOP-011-1S, Revision 6, RCA RPV Control (ATWS)
31EO-EOP-017-1S, Revision 6, CP-3 ATWS Level Control
EOP Chart RCA RPV Control (ATWS) for EOP 31EO-EOP-011-1S
EOP Chart CP-3 ATWS Level Control for EOP 31EO-EOP-017-1S
EOP Chart CP-1 Alternate Level Control for EOP 31EO-EOP-017-1S
EOP Chart RC RPV Control (Non-ATWS) for EOP 31EO-EOP-010-1S
EOP Chart CP-2 RPV Flooding for EOP 31EO-EOP-016-1S
Lesson Plan LR-LP-20232-05, EOP 112: Primary Containment Flooding, May 19, 1997

Lesson Plan LT-LP-20201-05, Introduction to Abnormal Procedures, January 8, 1999
Informal System to Function Matrix
Informal Function to System Matrix
License Renewal Services Manual Procedure LRS 1-2, Revision 2, Scoping Procedure
License Renewal Services Manual Procedure LRS 1-3, Revision 6, Plant Hatch Scoping Template
License Renewal Services Manual Procedure LRS 1-4, Revision 4, Boundary Procedure
License Renewal Services Manual Procedure LRS 1-5, Revision 4,Civil/Mechanical Structure/Component Screening Procedure
License Renewal Services Manual Procedure LRS 1-8, Revision 3, Electrical IPA Procedure

License Renewal Boundary Drawings

The following is a list of the drawings reviewed central to inspection findings. Many other boundary drawings were reviewed by the inspectors for information only.

HL-16061, Unit No. 1, Standby Liquid Control System P&ID
HL-16062, Unit No. 1, Nuclear Boiler System P&ID, Sheet No. 1
HL-16063, Unit No. 1, Nuclear Boiler System P&ID, Sheet No. 2
HL-16064, Unit No. 1, Control Rod Drive System P&ID, Sheet No. 1
HL-16065, Unit No. 1, Control Rod Drive System P&ID, Sheet No. 2
HL-16066, Unit No. 1, Reactor Recirculation System P&ID, Sheet No.1
HL-16145, Unit No. 1, Nuclear Boiler System P&ID, Sheet No. 3
HL-16188, Unit No. 1, Reactor Water Clean-up System P&ID., Sheet 1
HL-26000, Unit No. 2, Nuclear Boiler System P&ID, Sheet No. 1
HL-26001, Unit No. 2, Nuclear Boiler System P&ID, Sheet No. 2
HL-26003, Unit No. 2, Reactor Recirculation System P&ID, Sheet No. 1
HL-26006, Unit No. 2, Control Rod Drive System P&ID, Sheet No. 1
HL-26007, Unit No. 2, Control Rod Drive System P&ID, Sheet No. 2
HL-26009, Unit No. 2 Standby Liquid Control System P&ID
HL-26036, Unit No. 2 Reactor Water Clean-up System P&ID, Sheet 1
HL-26077, Unit No. 2 Primary Containment Valve & Equipment Drainage System P&ID
HL-26384, Unit No. 1&2 Post Accident Reactor Coolant and Containment Atmosphere Sampling System P&ID
H-16002, Rev. 32, Fuel Pool Cooling System P.&I.D.
H-16003, Rev. 20, Fuel Pool Filter/Demineralizer System P.&I.D.
H-44131, Rev. 1, Decay Heat Removal System P.&I.D.. Sheet 1
H-44132, Rev. 1, Decay Heat Removal System P.&I.D., Sheet 2
HL-16332, Rev. A, HPCI System P.&I.D., Sheet 1
HL-16333, Rev. A, HPCI System P.&I.D., Sheet 2
HL-16328, Rev. A, Jockey Pump P.&I.D., Unit 1
HL-16331, Rev. A, Core Spray P.&I.D., Unit 1
HL-26018, Rev. A, Core Spray P.&I.D., Unit 2
HL-26019, Rev. A, Jockey Pump P.&I.D. and R.H.R and Core Spray Systems
HL-26020, Rev. A, HPCI System P.&I.D., Unit 2, Sheet 1
HL-26021, Rev. A, HPCI System P.&I.D., Unit 2, Sheet 2
HL-26014, Rev A, R.H.R. System P.&I.D., Unit 2, Sheet 1
HL-26015, Rev A, R.H.R. System P.&I.D., Unit 2, Sheet 2
HL-16329, Rev. A, R.H.R. System P.&I.D., Unit 1, Sheet 1
HL-16330, Rev. A, R.H.R. System P.&I.D., Unit 1, Sheet 2
HL-11004, Rev. 0, R.H.R. Service Water Outside Building P.&I.D., Unit 1

HL-21039, Rev. A, R.H.R. Service Water System P.&I.D., Unit 2
H-16831, Rev. 2, R.H.R. System Discharge to Recirc. System, Unit 1
H-16829, Rev. 2, R.H.R. System Discharge to Recirc. Header, Unit 1
H-16843, Rev. 1, R.H.R. System Service Water Side “A”, Unit 1
H-16842, Rev. 2, R.H.R. System Discharge to Side “B”, Unit 1
H-26820, Rev. 1, R.H.R. System Discharge Through Heat Exchanger, Unit 2
H-26820, Rev. 1, R.H.R. System Supply to Heat Exchanger and Pump Discharge, Unit 2
DL-11001, Revision A, P & ID For Service Water Piping at Intake Structure Sheet 1
HL-16002, Revision A, P & ID Fuel Pool Cooling System
HL-16011, Revision A, Reactor Building Service Water System P & ID
HL-11024, Revision A, P & ID Service Water Piping Sheet 4
H-11146, Revision 30, Piping Service Water Pump Structure to Building
HL-11600, Revision A, P & ID for Service Water @ Diesel Generator Sheet 2
HL-11609, Revision A, P & ID Service Water Piping Sheet 2
HL-11611, Revision A, P & ID Service Water Piping Sheet 4
HL-21033, Revision A, Turbine Building Service Water System P & ID Sheet 1
HL-21035, Revision A, Turbine Building Service Water System P & ID Sheet 3
HL-26050, Revision A, Reactor Building - Plant Service Water System P & ID Sheet 1
HL-26051, Revision A, Reactor Building - Plant Service Water System P & ID Sheet 2
HL-16009, Revision A, Reactor Building Closed Cooling Water P & ID
HL-26055, Revision A, Reactor Building Closed Cooling Water P & ID
HL-26081, Revision A, Primary Containment Chilled Water System P & ID & PFD Sheet 2
H-12192, Revision 8, Outdoor Concrete Intake Structure General Arrangement
H-12193, Revision 5, Outdoor Concrete Intake Structure Sheet Piling Cell Arrangement & Details
HL-13350, Master Single Line Diagram
HL-13354, Single Line Diagram 4160V electrical supply
HL-13361, Single Line Diagram 600V Bus 1C & 1D
HL-13362, Sh. 1 Single Line Diagram Diesel Bldg. Station Service
HL-13362, Sh. 2 Single Line Diagram Diesel Bldg. Station Service
HL-13370, Sh. 1 Single Line Diagram 125/250V DC Station Service Div. I
HL-13370, Sh. 2 Single Line Diagram 125/250V DC Station Service Div.I
HL-13371, Sh. 1 Single Line Diagram 125V DC Emergency Station Service
HL-13371, Sh. 2 Single Line Diagram 125V DC Emergency Station Service
HL-11631, Sh. 1 Diesel Generator P&ID 1A & 1C
HL-11638, Sh. 1 Diesel Generator P&ID 1B
HL-11638, Sh. 2 Diesel Generator P&ID 1B
HL-16000, Nitrogen Inerting System P&ID
HL-16024, Primary Containment Purge & Inerting System P&ID

ATTACHMENT 2

HATCH LICENSE RENEWAL INSPECTION
SYSTEMS AND FUNCTIONS SELECTED FOR INSPECTION
FROM HATCH LICENSE RENEWAL APPLICATION TABLE 2.2-1
PLANT HATCH SYSTEM AND STRUCTURE FUNCTION SCOPING RESULTS

System Number	System Name	LRA Determined In Scope?	Function Number/Name
Mechanical Systems			
B11	Reactor Assembly	Yes	B11-01 Nuclear Boiler
		Yes	B11-02 Reactivity Control
B21	Nuclear Boiler System	Yes	B21-01 Pressure Control
		Yes	B21-02 Reactor Coolant Pressure Boundary Integrity
		Yes	B21-03 Rod Worth Minimizer
		Yes	B21-04 Nuclear Boiler Instrumentation
B31	Reactor Recirculation	Yes	B31-02 RPT Breaker Trip
		Yes	B31-03 Reactor Coolant Pressure Boundary Integrity
C11	Control Rod Drive	**No**	C11-02 Vessel Injection
		Yes	C11-04 Reactivity Control (Reactor Scram)
		No	C11-05 Alternate Boron Injection
		Yes	C11-07 Alternate Rod Insertion (ARI)
C41	Standby Liquid Control	Yes	C41-01 Reactivity Control
		No	C41-02 Vessel Injection
		Yes	C41-03 SBLC Testing
E11	Residual Heat Removal (RHR)	Yes	E11-01 LPCI
		Yes	E11-02 Containment Sprays
		Yes	E11-04 RHRSW Vessel/Containment Injection
		Yes	E11-05 Shutdown Cooling
		Yes	E11-08 Suppression Pool Cooling
		Yes	E11-10 Alternate Shutdown Cooling
G71	Decay Heat Removal	**No**	G71-01 Fuel Pool and Reactor Cavity Cooling
E21	Core Spray System	Yes	E21-01 Core Cooling

System Number	System Name	LRA Determined In Scope?	Function Number/Name
		No	E21-02 Primary Containment Flooding
		Yes	E21-04 Alternate Shutdown Cooling
		Yes	E21-05 ECCS Keep Fill
E41	High Pressure Coolant Injection (HPCI)	Yes	E41-01 Core Cooling
		No	E41-02 Alternate Boron Injection
		No	E41-03 Alt Press Control/Alt Depress
		No	E41-04 RPV Venting
L35	Piping Specialties	Yes	L35-01 Pipe Supports
		Yes	L35-02 Non-Seismic Pipe Supports
		No	L35-03 Miscellaneous Piping and TestConnections
L36	Insulation	**No**	L36-01 Equipment and Piping Insulation-Inside Drywell
		Yes	L36-02 Piping Insulation-Outside Drywell
G11	Radwaste	**No**	G11-02 Liquid Radioactive WasteProcessing
N62	Off Gas	**No**	N62-02 Process & Control The Release of Gaseous Radioactive Wastes
P41	Plant Service Water	Yes	P41-01 Essential Mechanical/Environmental Support
		Yes	P41-02 Turbine Building Isolation
		No	P41-03 Radwaste Dilution
		No	P41-04 Non-Essential Mechanical/Environmental Support
		Yes	P41-05 1B EDG Cooling (Standby PSW)
		No	P41-06 Circulating Water System Flume Make-up
P42	Reactor Building Closed Cooling Water (RBCCW)	Yes	P42-01 Reactor Building Equipment Cooling
P64	Primary Containment Chilled Water (Unit 2)	Yes	P64-02 Drywell Cooling
P65	Reactor Building Chilled Water	**No**	P65-01 Reactor Building Equipment/Area Cooling

System Number	System Name	LRA Determined In Scope?	Function Number/Name
P67	Control Building Chilled Water	**No**	P67-01 Chilled Water to Control Building HVAC
Electrical Systems			
A70	Analog Transmitter Trip System	Yes	A70-01 Process Parameter Monitoring
A71	Nuclear Steam Supply Shutoff	Yes	A71-01 Signal Transmission
C71	Reactor Protection System	Yes	C71-01 Reactivity Control
		Yes	C71-02 Power Supply
C82	Remote Shutdown	Yes	C82-01 Alternate Control Room
D11	Process Radiation Monitoring	Yes	D11-01 Main Steam Line Radiation Monitoring
		No	D11-03 Primary Containment FissionProduct Radiation Monitoring
		No	D11-04 Primary Containment Gamma Radiation Monitoring (Narrow Range)
		Yes	D11-06 Primary Containment Gamma Radiation Monitoring (Wide Range)
		No	D11-07 Off-Gas Radiation Monitoring
		No	D11-09 Main Stack Radiation Monitoring
		No	D11-11 Reactor Building Vent StackRadiation Monitoring
		Yes	D11-12 Reactor Building VentilationRadiation Monitoring
		Yes	D11-13 MCR Air Intake RadiationMonitoring
		Yes	D11-14 Refueling Floor VentilationRadiation Monitoring
R20	Plant A/C Electrical	Yes	R20-01 1E A/C Electrical Supply
R33	Conduits, Raceways & Trays	Yes	R33-01 Wire & Cable Integrity
		Yes	R33-02 Wire & Cable Integrity / Non-Safety Related
R42	D/C Electrical	Yes	R42-01 Plant 1E D/C Electrical Supply
		Yes	R42-02 EDG 1E D/C Electrical Supply

System Number	System Name	LRA Determined In Scope?	Function Number/Name
R43	Emergency Diesel Generators	Yes	R43-01 Stand-by A/C Power Supply
R44	Uninterruptible Power Supply	**No**	R44-01 Vital A/C
Structural			
T23	Primary Containment	Yes	T23-01 Torus/Drywell
C61	Primary Containment Isolation	Yes	C61-01 Primary Containment Isolation &Integrity
		Yes	C61-02 Signal Transmission
L48	Access Doors	Yes	L48-01 Containment Integrity
T24	Fuel Storage	Yes	T24-01 Spent Fuel Integrity
		Yes	T24-02 New Fuel Integrity
T29	Reactor Building	Yes	T29-01 Containment and Support
T41	Reactor Building HVAC	Yes	T41-01 Indirect Radioactive Release Control
		Yes	T41-02 Essential Mechanical/Environ.Support - ECCS Room Coolers
		Yes	T41-07 Essential Mechanical/Environ. Support - RCIC and CRD Room Coolers
T45	Equipment and Floor Drainage	**No**	T45-02 Primary/Secondary Containment Abnormal Leakage Indication/Isolation
T47	Drywell Cooling	**No**	T47-01 Drywell Mechanical/Environmental Support
T48	Primary Containment Purge And Inerting	Yes	T48-01 Primary Containment Nitrogen Inerting
T52	Drywell Penetrations	Yes	T52-01 Primary Containment Integrity
T54	Reactor Building Penetrations	Yes	T54-01 Secondary Containment Integrity
W33	Traveling Water Screens/Trash Rakes	Yes	W33-01 Intake Structure Trash Removal

System Number	System Name	LRA Determined In Scope?	Function Number/Name
W35	Intake Structure	Yes	W35-01 RHRSW and PSW system Integrity
Y39	EDG Building	Yes	Y39-01 EDG and Equipment Integrity
Z29	Control Building	Yes	Z29-01 Equipment Integrity & Personnel Habitability
X43	Fire Protection	Yes	X43-01 Cardox Fire Suppression for EDG's
		Yes	X43-02 Halon Fire Suppression for Remote Shutdown Panel (Unit 2)
		No	X43-03 RPV Inventory Makeup
		Yes	X43-04 Plant Wide Fire Suppression With Water
		Yes	X43-06 Fire Detection
		Yes	X43-07 Penseals & Fire Barriers For Preventing Fire Propagation
		Yes	X43-08 Manual CO_2 Fire Protection
		Yes	X43-10 Cardox Fire Suppression for the Computer Room

Systems or functions determined by the applicant in the LRA not to be in the scope of license renewal are marked **No** and bolded in the table above.

ATTACHMENT 3

LIST OF ACRONYMS USED

AMR	Aging Management Review
ATWS	Anticipated Transient Without Scram
CBCW	Control Building Chilled Water System
CLB	Current Licensing Basis
CRD	Control Rod Drive
CS	Core Spray
CST	Condensate Storage Tank
DHR	Decay Heat Removal System
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedure
FHA	Fire Hazards Analysis
FPCC	Fuel Pool Cooling & Cleanup System
FSAR	Final Safety Analysis Report
HPCI	High Pressure Coolant Injection
HVAC	Heating, Ventilation & Air Conditioning System
LOCA	Loss of Coolant Accident
LPCI	Low Pressure Coolant Injection
LRA	License Renewal Application
MR	Maintenance Rule
NB	Nuclear Boiler
NEI	Nuclear Energy Institute
NFPA	National Fire Protection Association
NRR	NRC Office of Nuclear Reactor Regulation
PCCW	Primary Containment Chilled Water System
PCIS	Primary Containment Isolation System
PSW	Plant Service Water
RAI	Request For Additional Information
RBCCW	Reactor Building Closed Cooling Water
RBCW	Reactor Building Chilled Water System
RCIC	Reactor Core Isolation Cooling System
RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water
RPT	Recirculation Pump Trip Breakers
RPV	Reactor Pressure Vessel
SAG	Severe Accident Guidelines
SBO	Station Black Out
SDC	Shut Down Cooling System
SED	System Evaluation Document
SER	NRC’s Safety Evaluation Report
SFP	Spent Fuel Pool
SGTS	Standby Gas Treatment System
SLC	Standby Liquid Control System
SNC	Southern Nuclear Operating Company
SSC	Systems, Structures, and Commodity Groups