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June 28, 2001

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Subject: Oconee Nuclear Site  
Docket Nos. 50-269, 50-270, 50-287  
10 CFR 50.59 Annual Report

Attached are descriptions of Oconee facility changes, tests, and experiments which were completed subject to the provisions of 10 CFR 50.59 between January 1, 2000, and December 31, 2000. This report is submitted pursuant to the requirement of 10 CFR 50.59 (d) (2).

An attachment to denote any UFSAR changes performed in accordance with licensing amendments is also included for information.

If there are any questions, please contact Larry Nicholson at (864) 885-3292.

Very truly yours,

W. R. McCollum, Jr., Site Vice President  
Oconee Nuclear Site

Attachment

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## Attachment 1

### Oconee Facility Changes - 2001

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## I. NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: EFW

NSMs ON-13056, rev. 1, added a simplex strainer in each suction line of the Motor Driven Emergency Feedwater (EFW) pumps. The strainers are located upstream of check valves 1C-850 and 1C-852. A differential pressure gage is added to monitor the differential pressure across each strainer. The differential pressure transmitters are connected to the Operator Aid Computer (OAC) and have local indication. A single point alarm is used to alert operators to a clogging strainer. Replaced isolation valves 1C-849 and 1C-851 with gate valves. Replaced check valves 1C-850 and 1C-852 with nozzle check valves. Replaced some piping with larger pipe diameter piping.

### SAFETY EVALUATION SUMMARY

Motor Driven EFW pumps will not be affected by a common cause failure mechanism due to the strainer additions. Each motor driven EFW flow path has a separate strainer. The condensate from the hotwell is typically clean water. Passive failures of the hotwell and condenser's structural components (rivets) are considered to be beyond licensing basis. Thus, the strainers are not to clog on any type of expedited basis using SAR assumed criteria. The occasional few rivets that are in the strainers will not adversely affect the required flowrate to the EFW pumps. Thus, there is not a common cause failure that would plug both strainers. If one strainer would become blocked, it would be considered a random failure. Since the strainer's failure would be the assumed single failure, the other motor driven EFW pump's flowpath would still be able to provide adequate decay heat removal. This modification involves no USQs or safety concerns. UFSAR Section 10.4.7.2 was revised accordingly. (Pkg. 00-94)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: EFW

NSMs ON- 23056, rev. 1, added a simplex strainer in each suction line of the Motor Driven Emergency Feedwater (EFW) pumps. The strainers are located upstream of check valves 2C-850 and 2C-852. A differential pressure gage is added to monitor the differential pressure across each strainer. The differential pressure transmitters are connected to the Operator Aid Computer (OAC) and have local indication. A single point alarm is used to alert operators to a clogging strainer. Replaced isolation valves 2C-849 and 2C-851 with gate valves. Replaced check valves 2C-850 and 2C-852 with nozzle check valves. Replaced some piping with larger pipe diameter piping.

### SAFETY EVALUATION SUMMARY

Motor Driven EFW pumps will not be affected by a common cause failure mechanism due to the strainer additions. Each motor driven EFW flow path has a separate strainer. The condensate from the hotwell is typically clean water. Passive failures of the hotwell and condenser's structural components (rivets) are considered to be beyond licensing basis. Thus, the strainers are not to clog on any type of expedited basis using SAR assumed criteria. The occasional few rivets that are in the strainers will not adversely affect the required flowrate to the EFW pumps. Thus, there is not a common cause failure that would plug both strainers. If one strainer would become blocked, it would be considered a random failure. Since the strainer's failure would be the assumed single failure, the other motor driven EFW pump's flowpath would still be able to provide adequate decay heat removal. This modification involves no USQs or safety concerns. UFSAR Section 10.4.7.2 was revised accordingly. (Pkg. 00-94)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: EFW

NSMs ON- 33056, rev. 1, added a simplex strainer in each suction line of the Motor Driven Emergency Feedwater (EFW) pumps. The strainers are located upstream of check valves 3C-850 and 3C-852. A differential pressure gage is added to monitor the differential pressure across each strainer. The differential pressure transmitters are connected to the Operator Aid Computer (OAC) and have local indication. A single point alarm is used to alert operators to a clogging strainer. Replaced isolation valves 3C-849 and 3C-851 with gate valves. Replaced check valves 3C-850 and 3C-852 with nozzle check valves. Replaced some piping with larger pipe diameter piping.

### SAFETY EVALUATION SUMMARY

Motor Driven EFW pumps will not be affected by a common cause failure mechanism due to the strainer additions. Each motor driven EFW flow path has a separate strainer. The condensate from the hotwell is typically clean water. Passive failures of the hotwell and condenser's structural components (rivets) are considered to be beyond licensing basis. Thus, the strainers are not to clog on any type of expedited basis using SAR assumed criteria. The occasional few rivets that are in the strainers will not adversely affect the required flowrate to the EFW pumps. Thus, there is not a common cause failure that would plug both strainers. If one strainer would become blocked, it would be considered a random failure. Since the strainer's failure would be the assumed single failure, the other motor driven EFW pump's flowpath would still be able to provide adequate decay heat removal. This modification involves no USQs or safety concerns. UFSAR Section 10.4.7.2 was revised accordingly. (Pkg. 00-19 & 94)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Keowee Hydro Station

NSM ON-52985 (Part AL1) replaced two THKM 1200 breakers in the Keowee 125 Vdc System with Siemens MD frame breakers. Also added an additional parallel feeder for each pole to the cabling that connects the battery to the bus. Provided an alternate power supply from DC Distribution Center 2DA for the generator protection and main transformer fire protection circuits.

### SAFETY EVALUATION SUMMARY

This modification does not create any conditions or events, which lead to accidents previously, evaluated in the SAR. The Keowee Hydro units are used for mitigation of loss of power scenarios. The changes in this modification do not change the current function of the Keowee Hydro Units. The Keowee Hydro units and their role in the Oconee emergency power system are not adversely affected by this modification. The modification does not cause any adverse effects to the Keowee single failure design or adversely affect the Keowee start time of 23 seconds. There is no adverse affect on containment integrity and no new release paths are created. The evaluation concluded that no unreviewed safety questions (USQ) were created by the NSM. No Technical Specification changes are required. UFSAR Figure 8-6 was revised accordingly. (Pkg. 00-119)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Standby Shutdown Facility (SSF)

NSM ON-52991 Part AL1 replaced six THKM 1200 breakers (normal and standby battery, battery charger, and main) in the Standby Shutdown Facility (SSF) 125 Vdc Distribution Center DCSF with Siemens ND frame breakers. A standoff (or backplate) was installed to facilitate mounting of the Siemens ND breakers. Also, the battery breakers were wired to the Operator Aid Computer (OAC).

### SAFETY EVALUATION SUMMARY

The SSF consists of accident mitigation structures, systems, and components for postulated fire, sabotage, and flooding events. The SSF is also credited as the alternate AC (AAC) power source and the source of decay heat removal required to demonstrate safe shutdown during the required station blackout coping duration. The SSF is not used in the normal operation of Oconee. The probability of these events occurring is not increased due to the replacement of the THKM breakers with seismically qualified breakers. Battery status indication is to be added and is to provide indication of an unusual configuration (dedicated battery breaker open) that could result in a loss of the SSF DC System on a charger failure. Thus, the failure of the charger will be able to be detected, if the failure occurs during normal operation. The breakers are designed such that SSF mitigation of accidents is not adversely affected. There are no new safety/non-safety interfaces. The system is not required to be designed to withstand single failures. There are no adverse effects to the rest of the plant. The new and modified components do not cause any seismic interaction concerns between non-seismic and seismic structures, systems, and components. The evaluation concluded that no unreviewed safety questions (USQ) were created by the NSM. No UFSAR or Improved Technical Specification changes are required.

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Condensate

NSM ON-32980 added a flow path from the "3A" Moisture Separator Drain Tank (MSDT) to a new demineralizer. Only a portion of the Moisture Separator Reheater (MSR) drain flow will be routed through this path. Then this flow will go to the condenser.

### SAFETY EVALUATION SUMMARY

This evaluation is for both the isolated and unisolated states. The change does not create any conditions or events that lead to accidents previously evaluated in the SAR. The modification is non-QA. This modification involves no USQs or safety concerns. Addressing UFSAR, technical specification, and SLC changes from the isolated state: No UFSAR, technical specification, or SLC changes are required. Addressing UFSAR, technical specification, and SLC changes from the unisolated state: UFSAR Sections 10.3.5.1 and 10.4.5.2 and UFSAR Figure 10-4 were revised accordingly. UFSAR Section 11.6.3.2.1 was revised accordingly. No technical specification or SLC changes are required. (Pkg. 00-18)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Main Feedwater

NSM ON-33007 "Main Feedwater Pump Discharge Pressure Switch Removal" removed the main feedwater pump (FDWP) discharge pressure input to the Reactor Protection System (RPS) Anticipatory Reactor Trip System (ARTS) and the Emergency Feedwater (EFW) System. The modification reconfigures the ARTS to initiate a loss of main feedwater anticipatory reactor trip solely in response to indications of low FDWP control oil pressure. The ARTS loss of main turbine anticipatory trip is unchanged. The EFW circuitry is reconfigured to automatically initiate on low control oil pressure and low-low steam generator level. The Anticipated Transient without Scram (ATWS) Mitigation System Actuation Circuitry (AMSAC) initiation of EFW on low FDWP discharge pressure remains unchanged.

### SAFETY EVALUATION SUMMARY

The RPS and EFW are accident mitigation systems. The removal of the FDWP discharge pressure inputs from the ARTS and EFW systems will not prevent these mitigative systems from sensing a loss of main feedwater and providing their design functions. AMSAC/DSS is unaffected by this modification and will continue to monitor FDWP discharge and hydraulic oil pressures to detect a loss of main feedwater. Removal of the FDWP discharge pressure switches is postulated to potentially reduce the possibility of a reactor trip. Sufficient diversity exists such that the probability of challenging the PORV will not be increased by this modification. The NRC approved the Technical Specification change request. This change has been incorporated in Technical Specifications, Selected Licensee Commitments and the UFSAR; therefore this modification places the plant within a previously evaluated condition. The actuation of the EFW System on low FDWP hydraulic oil pressure and low-low steam generator water level actuation functions are unaffected by the modification. Deletion of the FDWP discharge pressure switches and associated hardware removes secondary instrumentation with the potential for causing a reactor trip. This modification involves no safety concerns or USQs. No Technical Specifications or UFSAR changes are required to implement this modification.

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: 125 Vdc Vital Instrument & Control (I&C) Batteries

NSM ON-12998/0 (Part AL1) replaced the two Unit 1 125 Vdc Vital I&C Batteries (1CA, 1CB) and the battery racks. The existing battery rack bases and anchors were removed, and the method of connecting the power cables to the battery was changed. A battery test circuit with circuit breaker disconnects was added. The new test disconnects were added to provide QA-1 isolation between the battery test connections in the Turbine Building and the 125 Vdc batteries located in the Auxiliary Building.

### SAFETY EVALUATION SUMMARY

The Vital I&C Batteries and their associated system are used for mitigation of some loss of power scenarios. Replacement of the batteries does not change the existing design basis. Each new battery is sized to carry the continuous emergency load for a period of one hour in addition to supplying power for the operation of momentary loads during a one hour period. The new batteries are sized to support the Station Blackout coping strategy that allows for operation of the equipment required during the scenario for four hours. The new batteries, racks, terminal boxes and disconnects are QA-1 and seismically qualified. The new batteries are completely redundant. An Appendix R review was completed. The batteries and new associated cabling meet electrical separation criteria and specifications for electrical components as listed in UFSAR Sections 8.3.1.4.6, 8.3.1.5, and 9.5.1.4.3. The design of the new batteries meets Tech Spec 3.8.5 and Table 3.8.5-1 requirements. All installed components reside in a mild environment. No alarm or protective features were eliminated. The existing ventilation system is still adequate to maintain hydrogen generation at or below UFSAR limits with the new batteries. This modification involves no USQs or safety concerns. No technical specification changes are required. UFSAR Table 3-68 will be revised to include the seismic documentation reference for the new Unit 1 batteries. (Pkg. 00-95)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: 125 Vdc Vital Instrument & Control (I&C) Batteries

NSM ON-32998/0 (Part AL1) replaced the two Unit 3 125 Vdc Vital I&C Batteries (3CA, 3CB) and the battery racks. The existing battery rack bases and anchors were removed, and the method of connecting the power cables to the battery was changed. A battery test circuit with circuit breaker disconnects was added. The new test disconnects were added to provide QA-1 isolation between the battery test connections in the Turbine Building and the 125 Vdc batteries located in the Auxiliary Building.

### SAFETY EVALUATION SUMMARY

The Vital I&C Batteries and their associated system are used for mitigation of some loss of power scenarios. Replacement of the batteries does not change the existing design basis. Each new battery is sized to carry the continuous emergency load for a period of one hour in addition to supplying power for the operation of momentary loads during a one hour period. The new batteries are sized to support the Station Blackout coping strategy that allows for operation of the equipment required during the scenario for four hours. The new batteries, racks, terminal boxes and disconnects are QA-1 and seismically qualified. The new batteries are completely redundant. An Appendix R review was completed. The batteries and new associated cabling meet electrical separation criteria and specifications for electrical components as listed in UFSAR Sections 8.3.1.4.6, 8.3.1.5, and 9.5.1.4.3. The design of the new batteries meets Tech Spec 3.8.5 and Table 3.8.5-1 requirements. All installed components reside in a mild environment. No alarm or protective features were eliminated. The existing ventilation system is still adequate to maintain hydrogen generation at or below UFSAR limits with the new batteries. This modification involves no USQs or safety concerns. No technical specification changes are required. UFSAR Table 3-68 will be revised to include the seismic documentation reference for the new Unit 3 batteries.

(Pkg. 00-95)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Electrical

NSM ON-13026 installed a manually operated isolated phase bus disconnect switch on the isolated phase bus on the line to the main transformer from the generator. It disconnected all three phases at the same time. The bolted flexible links were replaced with a welded aluminum flexible link. A section of new bus was added between the isolated phase bus disconnect switch and the welded aluminum flexible link

### SAFETY EVALUATION SUMMARY

The isolated phase bus will still perform its function of supplying power to the unit step-up and unit auxiliary transformers during normal operation. The isolated phase bus is not required to function for mitigation of accidents that are evaluated in the SAR. The probability of a loss of on or off site power is not increased. The equipment affected by this modification is non-QA. The design of the new disconnect switches and flexible welded link assemblies will not adversely affect the performance of the isolated phase bus circuit. The disconnect switch is specified to be locked when it is in the open or closed position. There are no additional power or control requirements. There are no alarm or setpoint changes and no computer points added as a part of this modification. The isolated phase bus disconnect switch and the welded link/new bus unit are manufactured to have the same conductivity and same insulation properties as the existing isolated phase bus. The new equipment will not interact with QA equipment in a seismic event. An electrical Appendix R fire review was completed. The existing cooling system is sufficient to cool the existing isolated phase bus and the additions. No new safety to non-safety (or QA-1 to non-QA-1) electrical interfaces are added. The new electrical equipment is located in a mild environment. This modification involves no USQs or safety concerns. No technical specification or SLC changes are required. UFSAR Section 8.1.2 and UFSAR Figure 8-1 were updated accordingly. (Pkg. 00-108)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

### SAFETY EVALUATION SUMMARY

SYSTEM: Electrical

NSM ON-23026 installed a manually operated isolated phase bus disconnect switch on the isolated phase bus on the line to the main transformer from the generator. It disconnected all three phases at the same time. The bolted flexible links was replaced with a welded aluminum flexible link. A section of new bus was added between the isolated phase bus disconnect switch and the welded aluminum flexible link.

The isolated phase bus will still perform its function of supplying power to the unit step-up and unit auxiliary transformers during normal operation. The isolated phase bus is not required to function for mitigation of accidents that are evaluated in the SAR. The probability of a loss of on or off site power is not increased. The equipment affected by this modification is non-QA. The design of the new disconnect switches and flexible welded link assemblies will not adversely affect the performance of the isolated phase bus circuit. The disconnect switch is specified to be locked when it is in the open or closed position. There are no additional power or control requirements. There are no alarm or setpoint changes and no computer points added as a part of this modification. The isolated phase bus disconnect switch and the welded link/new bus unit are manufactured to have the same conductivity and same insulation properties as the existing isolated phase bus. The new equipment will not interact with QA equipment in a seismic event. An electrical Appendix R fire review was completed. The existing cooling system is sufficient to cool the existing isolated phase bus and the additions. No new safety to non-safety (or QA-1 to non-QA-1) electrical interfaces are added. The new electrical equipment is located in a mild environment. This modification involves no USQs or safety concerns. No technical specification or SLC changes are required. UFSAR Section 8.1.2 and UFSAR Figure 8-1 were updated accordingly. (Pkg. 108).

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Essential Siphon Vacuum (ESV)

NSM ON-13000, Part C tied the ESV system into the existing plant Vacuum Priming system on Unit 1.

### SAFETY EVALUATION SUMMARY

The operation of the ESV and SSW systems is not affected. The new description for the as-built, as designed plant does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs, including vacuum priming, are degraded. There is no affect on reactivity. No plant safety limits or setpoints are adversely impacted. This activity also has no effect on any margins of safety as previously evaluated in the SAR. This modification involves no USQ's or safety concerns. No Technical Specification changes are required. UFSAR Section 9.2.2.1 and Figures 9-9 and 10-5 were revised accordingly. UFSAR Section 9.2.2.2.5 and Figures 9-42 (Siphon Seal Water System) and 9-43 (Essential Siphon Vacuum System) were added. (Pkg. 00-88)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Keowee Hydro Station

NSM ON-53049 replaced Keowee Hydro Station's existing Westinghouse type SV volts per hertz relays with new ABB RXLK 2H electronic relays. Removed relay K1GENTDVHZTD and relay K2GENTDVHZTD. Replaced the existing Westinghouse type SV voltage build up relays with new ABB SSV-T and 27H relays. Restored the control circuit to pre Minor Modification OE-10585 and OE-10586 condition, by restoring the field flashing breaker trip signal from relay 90X1ATD and removing the jumper around the relay 90X1C contact in the field flashing breaker close circuit. Replaced two Cutler-Hammer relays (11G and 11M) per unit with Struthers-Dunn 219 series relays.

### SAFETY EVALUATION SUMMARY

This change does not create any conditions or events, which lead to accidents previously, evaluated in the SAR. The Keowee Hydro units are used for mitigation of loss of power scenarios. The Keowee Hydro units and their role in the Oconee emergency power system are not adversely affected by this modification. There is no adverse affect on containment integrity and no new release paths are created. The seismic qualification of the modified cabinets are not adversely affected with the new panels. The seismically qualified cabinets that have components changed in them are still seismically qualified after the changes are made. The replacement ABB RXLK 2H, SSV-T, 27H, and Struthers-Dunn 219 series relays perform the same function as the original relays but are different in design. The modification does not change any relay logic. Different replacement relays are used due to differences in their application. The difference in application primarily has to do with the relay setpoint needed. The modification does not change the current function of the Keowee Hydro Units or cause any adverse effects to the Keowee start time of 23 seconds. This modification does not adversely affects the Keowee single failure design. This modification involves no USQs or safety concerns. No UFSAR, technical specification, or SLC changes are required.

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Reactor Coolant (RCS)

NSM ON-13066 replaced the reactor coolant pump shaft seals, with the same style seals as Unit 2 and 3. This modification was installed in two phases. Because of the urgent nature of this modification, field walkdowns of inaccessible areas could not be performed prior to design work being completed. Several piping hangers must be designed with specific field measurements. Also, piping being deleted by this modification, the Reactor Building secondary shield wall in several places. The empty penetrations for these pipes need to be evaluated for shielding against missiles and radiation streaming. Operating restrictions were built into the Phase 1 design since the Reactor Coolant Pumps (RCP) would not be functional and operational with only the Phase 1 design completed.

### SAFETY EVALUATION SUMMARY

The combined scope of Phase 1 and Phase 2 of NSM ON-13066 involved no unreviewed safety questions. No technical specification or Selected Licensee Commitment changes are required. UFSAR Sections 5.2.3.10.5, 9.3.2.2.1, Tables 5-5, 5-16, and 9-6 and Figures 5-17 and 9-18 were revised accordingly. (Pkg. 00-65)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Reactor Coolant System (RCS)

NSM ON-13066 Phase 2 did the actual installation of the reactor coolant pump seals. Because of the urgent nature of this modification, field walkdowns of inaccessible areas could not be performed prior to design work being completed. Several piping hangers needed to be designed with specific field measurements. Also, piping that is being deleted by this modification passes through the Reactor Building secondary shield wall in several places. The empty penetrations for these pipes needed to be evaluated for shielding against missiles and radiation streaming. The effects of the piping removal could not initially be evaluated for these issues due to accessibility limitations. Because of this incomplete engineering work, this modification was to be installed in two phases. This approach allowed the majority of the work to proceed while these outstanding engineering items were completed during installation. The NSMs scope document was revised after the outstanding items that are part of Phase 2 were completed. Since Phase 1 did not install all required components from a functional component/system perspective, Unit 1 could not return to service without the Phase 2 design being completed. The Phase 2 design had to be complete prior to the unit entering Mode 4. These restrictions are deleted from the NSMs scope since the combined Phase 1 and Phase 2 design is now complete.

### SAFETY EVALUATION SUMMARY

The combined scope of Phase 1 and Phase 2 of NSM ON-13066 involve no unreviewed safety questions. No technical specification or Selected Licensee Commitment changes are required. UFSAR Sections 5.2.3.10.5, 9.3.2.2.1, Tables 5-5, 5-16, and 9-6 and Figures 5-17 and 9-18 were revised accordingly. (Pkg. 65)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Control Rod Drive Mechanisms (CRDM)

NSM – 13032 Part BM1 is a continuation of the replacement of the Type A CRDMs on Unit 1 with Type C CRDMs. The upgrade consisted of CRDM assemblies which includes new motor tubes, internals and bolting hardware, stator/water jacket assemblies, and position indicator (PI) tubes. The jackscrew closure assemblies were replaced with closure assemblies with a hydraulic tension design. Seismic plates were replaced to accommodate the new PI tube.

### SAFETY EVALUATION SUMMARY

The CRDMs are classified as QA Condition 1 due to their Class A pressure boundary with the reactor coolant. The Type C CRDMs are designed to the same pressure and temperature requirements as the Type A CRDMs. The Type C CRDMs will be direct replacements for the old ones and are attached to the top of the reactor vessel head inside the service structure. The Type C motor tubes will be identical with respect to the lower flange bolt hole circle, size, and location of the index pin so installation / removal will be the same as for existing CRDMs. There are no new failure mechanisms for the Type C CRDMs as compared to the Type A CRDMs. No new failure modes have been determined to cause the rods to not trip, or to "stick". The mitigation of a 10 CFR 50 Appendix R fire is not affected. There are no new safety / non safety electrical interfaces. The Type C CRDMs have a 0.1 second longer trip time than the Type A CRDMs. Safety analyses model the two different CRDMs only in the initial delay on releasing the control rods. In that respect the assumed control rod release delay bounds both types of CRDMs. That is, the safety analysis value is slower than the slowest CRDM type installed at Oconee. This modification involves no USQs or safety concerns. No technical specification changes are required. Changes to UFSAR sections 4.5.3, and Table 4-22 are being made to reflect that unit 1 will now have all of Type C CRDMs. (Pkg. 00-12)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Reactor Building Cooling Units (RBCUs)

NSM ON-13041 removed the motor operated discharge dampers located in the Unit 1 RBCUs and installed dampers that operate on a combination of fan discharge pressure and gravity counterweights. This modification eliminates damaged dampers and the cause for the damage. The new design performs the intended functions – to prevent air backflow through RBCU fans when they are not running and to prevent the off cycle fan from rotating backwards. VN-13041AM1A to NSM-13041 modified an existing Reactor Building structural steel column and damper linkage shafts in order for the Unit 1 RBCU "B" damper to be installed. The damper linkage protruded beyond the damper housing creating the interference.

### SAFETY EVALUATION SUMMARY

The replacement of the RBCU discharge dampers does not create any conditions or events that lead to an accident. The present functionality of the system is unchanged and no new failure modes are postulated. Neither the normal reactor building cooling nor the emergency functions provided by the RBCUs is adversely affected. The discharge dampers are located in a non-Q.A. portion of the RBCU. The dampers are not required to operate during accident conditions. New limit switches were installed for damper position, however, there are no new electrical safety to non-safety interfaces created. The slight modification to the steel column did not result in any structural degradation. No new radiological release pathways are created. There is no adverse affect any plant safety limits, set points, or design parameters. The change does not adversely affect the fuel, fuel cladding, Reactor Coolant System pressure boundary, or containment integrity. This modification did not change any of the existing functions, but simply provides equivalent performance characteristics and much greater reliability. This modification involves no USQ's or safety concerns. No Technical Specification changes are required. UFSAR Section 3.1.49 and Figure 6-3 were revised per package 00-13 to show the elimination of the power operators on the dampers on Unit 1.

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Reactor Building Cooling Units (RBCUs)

NSM ON-23041 removed the motor operated discharge dampers located in the Unit 2 RBCUs and installed dampers that operate on a combination of fan discharge pressure and gravity counterweights. This modification eliminates damaged dampers and the cause for the damage. The new design performs the intended functions – to prevent air backflow through RBCU fans when they are not running and to prevent the off cycle fan from rotating backwards. VN-23041AM1A to NSM-23041 modified an existing Reactor Building structural steel column and damper linkage shafts in order for the Unit 2 RBCU "B" damper to be installed. The damper linkage protruded beyond the damper housing creating the interference.

### SAFETY EVALUATION SUMMARY

The replacement of the RBCU discharge dampers does not create any conditions or events that lead to an accident. The present functionality of the system is unchanged and no new failure modes are postulated. Neither the normal reactor building cooling nor the emergency functions provided by the RBCUs is adversely affected. The discharge dampers are located in a non-Q.A. portion of the RBCU. The dampers are not required to operate during accident conditions. New limit switches were installed for damper position, however, there are no new electrical safety to non-safety interfaces created. The slight modification to the steel column did not result in any structural degradation. No new radiological release pathways are created. There is no adverse affect any plant safety limits, set points, or design parameters. The change does not adversely affect the fuel, fuel cladding, Reactor Coolant System pressure boundary, or containment integrity. This modification did not change any of the existing functions, but simply provides equivalent performance characteristics and much greater reliability. This modification involves no USQ's or safety concerns. No Technical Specification changes are required. UFSAR Section 3.1.49 and Figure 6-3 were revised per package 99-67 to show the elimination of the power operators on the dampers on Unit 2.

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Reactor Building Cooling Units (RBCUs)

NSM ON-33041 removed the motor operated discharge dampers located in the Unit 3 RBCUs and installed dampers that operate on a combination of fan discharge pressure and gravity counterweights. This modification eliminates damaged dampers and the cause for the damage. The new design performs the intended functions – to prevent air backflow through RBCU fans when they are not running and to prevent the off cycle fan from rotating backwards. The purpose of NSM ON-33041 is to replace the existing motor operated dampers with dampers that will operate on a combination of fan discharge pressure and gravity counter weights. It is felt that this type of damper operating system will provide equivalent performance characteristics and much greater reliability.

### SAFETY EVALUATION SUMMARY

The replacement of the RBCU discharge dampers does not create any conditions or events that lead to an accident. The present functionality of the system is unchanged and no new failure modes are postulated. Neither the normal reactor building cooling nor the emergency functions provided by the RBCUs is adversely affected. The discharge dampers are located in a non-Q.A. portion of the RBCU. The dampers are not required to operate during accident conditions. New limit switches were installed for damper position, however, there are no new electrical safety to non-safety interfaces created. The slight modification to the steel column did not result in any structural degradation. No new radiological release pathways are created. There is no adverse affect any plant safety limits, set points, or design parameters. The change does not adversely affect the fuel, fuel cladding, Reactor Coolant System pressure boundary, or containment integrity. This modification did not change any of the existing functions, but simply provides equivalent performance characteristics and much greater reliability. This modification involves no USQ's or safety concerns. No Technical Specification changes are required. UFSAR Section 3.1.49 and Figure 6-3 were revised to show the elimination of the power operators on the dampers on Unit 3. (Pkg. 00-13)

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Condensate

NSM ON-32981/0 (Parts AL1, AL2, AK1, AM1) upgraded the Polishing Demineralizer Flow Balance and Powdex Cell Precoat control systems with more modern, reliable electronic components.

### SAFETY EVALUATION SUMMARY

The modified system is non-nuclear safety related, thus the modification is non-nuclear safety related. There are some condensate system USI A-46 (SQUG) issues, dealing with some existing system valves, which require the new Powdex cabinet section to be mounted/braced QA Condition 4. There are also several components being deleted from the Unit 3 Control Board that have been evaluated for seismic issues. The old panel front is to be removed and the new panel section is to be mounted/braced using QA grade anchors and material. Mounting/bracing is to be QA-4. The use of QA-4 mounting/bracing is due to the fact that Powdex panels are contained in the USI A-46 (SQUG) Safe Shutdown Equipment List (SSEL). These panels house functions that must meet specific control requirements of that program. A Failure Modes & Effects Analysis (FMEA) was performed to analyze the Powdex System response for the various component failures. The inlet 'A' valves, and the Backwash outlet and drain 'U' valves are not being replaced and will continue to fail 'as-is' on loss of power. The outlet 'E' valves (including actuators and positioners) are being replaced and are designed to fail 'as-is' on loss of instrument air, loss of signal, or on loss of power. This failure mode is the same as the original valves and is to prevent the Condensate System from undergoing transients on a single component failure. The Powdex System is important to the plant's operation and failure of the system to bypass can cause secondary side transients. The Powdex System will continue to be automatically bypassed upon a high system differential pressure or low main feedwater pump suction pressure. This modification involves no USQs or safety concerns. No UFSAR, technical specification, or SLC changes are required.

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Main Steam

NSM ON-13054 Performed piping analyses to evaluate the Main Steam stop valves closure steam hammer loads and combine them correctly with other loads (e.g. seismic, tornado). Conducted pipe support evaluations for all hangers with an identified load increase.

### SAFETY EVALUATION SUMMARY

The Main Steam System delivers the generated steam from the outlet of the steam generators to the various system components throughout the Turbine Building without incurring excessive pressure losses (Reference 1, Section 10.3.3). The Unit 1 Main Steam System has been determined to be Operable with Non-Conforming Items. A steam hammer load caused by the Main Steam stop valve rapid closure had not been previously considered in the Main Steam branch piping analyses, nor had it been included properly in the 36 inch header piping analyses. The purpose of this modification is to bring the Main Steam System piping and the affected branch piping into full design basis and regulatory compliance. This modification adds some new hangers and redesigns some existing pipe supports. No Technical Specification, Selected Licensee Commitment (SLC), or UFSAR changes are required.

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Keowee Hydro Station

NSM ON-53051 Part AL1 replaced Keowee's auxiliary power loadcenter breakers with new Westinghouse DB breakers that utilize the original "X" relay scheme. There are 8 breakers used for the Keowee Unit 1 auxiliary power loadcenter 1X that are replaced. The breakers used for the auxiliary power loadcenter 1X that are replaced are Westinghouse Type DB-50 breakers designated as 1X1B, 1X3B, & 1X3C (spare) and Westinghouse Type DB-25 breakers designated as 1X1C (spare), 1X2A, 1X2B, 1X2C, & 1X2D.

### SAFETY EVALUATION SUMMARY

The Keowee Hydro units are used for mitigation of loss of power scenarios. This modification does not change, or adversely affect, the current function of the Keowee Hydro Units or the breakers. There are no new safety/non-safety electrical interfaces. The power sources are adequate and the cabling and other electrical components are adequately sized. The modification meets the applicable electrical criteria in the UFSAR, such as the electrical separation criteria. The new components are qualified for their environment. An electrical 10 CFR 50 Appendix R fire review was performed. There is no adverse affect on containment integrity, and no new radiological release pathways are created. There is no affect on reactivity management. This modification involves no USQs or safety concerns. No UFSAR or technical specification changes are required.

## NUCLEAR STATION MODIFICATIONS

### DESCRIPTION

SYSTEM: Main Steam

NSM 13018 modified the Main Steam Turbine Stop Valve Channel B 15 second closure circuit by rewiring the circuitry so that it continues to actuate on a Reactor Trip as originally designed but will now achieve the Tech Spec. closure criteria from full open to full close in less than or equal to 1 second. The QA- classification for the affected components is QA-5.

### SAFETY EVALUATION SUMMARY

No automatic or manual features of the SSC are being added or deleted. No automatic feature is being converted to manual and no manual feature is being converted to automatic. No unwanted or previously unreviewed system interaction is being introduced. No seismic or environmental qualifications are being altered. The quality group classification for the components in this circuitry remains QA-5. No changes are being made that could affect core reactivity in a different way than those that have previously been analyzed with the Channel A closure logic and the existing Channel B closure logic. Components being added (i.e. interposing relays and cabinet internal wiring) are equivalent or better than those components being removed. NSM-ON-13018 will affect Unit 1 only. The changes being made by the proposed NSM will have no adverse affect on the function of the SSCs of the Main Steam system, or its interfacing systems because the transient characteristics have already been evaluated by the Channel A closure logic. No UFSAR changes are required.

## II. MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Condenser Circulating Water (CCW), ASW

Minor Modification ONOE's-10385 and 10386 changed out the existing Rosemount SSF Auxiliary Service Water (ASW) flow transmitters on Units 1& 2 with another Rosemount QA-1 device with a narrower range to reduce readout uncertainty. The loop range was changed from 1200 to 600 gpm with a high alarm setpoint of 500 gpm. The analog flow indicator was replaced with higher accuracy digital indicator.

### SAFETY EVALUATION SUMMARY

This change was made to improve readability of the ASW flowrate indication. The new components are QA Condition 1, Class E. This change does not cause, or adversely affect the mitigation of, any previously analyzed SAR accidents. No new radiological release pathways or failure modes are created. The CCW and ASW systems will continue to perform their design functions during normal and accident conditions. There is no adverse effect on plant setpoints, safety limits, or design parameters. There is no effect on reactivity. Based on the safety evaluation performed, no USQs or safety concerns are created by this minor modification. No Technical Specification or Selected Licensee Commitment changes are required. No UFSAR changes are required.

MINOR MODIFICATION (ONOE's)

DESCRIPTION

SYSTEM: Reactor Building Containment

ONOE-10553 was performed to revise information within OSS-0254.00-00-4001 concerning the containment isolation system.

SAFETY EVALUATION SUMMARY

The majority of changes to OSS-0254.00-00-4001 were performed to simply reflect as-built station policies, programs, and plant conditions. The only change affecting as-built station policies, programs, and plant conditions involved the revised scope of penetrations requiring Type C LLRTs. The basis for requirements of performing Type C LLRTs was revised to reflect a changed station interpretation of current codes and standards. The documentation of why (or why not) certain penetrations are required to be Type C LLRT was revised to reflect the change in interpretation of code requirements. UFSAR section 16.6.1, which documents Type C LLRT requirements, was also revised to reflect the changed interpretation. Thus, the documentation of testing requirements as well as the actual performance of testing is to be performed within the confines of applicable codes and standards. Minor modification ONOE-10553 involves no unreviewed safety question or safety concerns. No Technical Specification changes are required.

## MINOR MODIFICATION (ONOE's)

### DESCRIPTION

SYSTEM: Spent Fuel Cooling (SF)

OE-10993 directs the installation of a Thermowell in the Spent Fuel Cooling (SF) outlet piping. TN/O/A/10993/MM/01M is the procedure for the implementation and verification of Minor Modification OE-10993.

### SAFETY EVALUATION SUMMARY

Thermowells were added to the SF Header of the SF Coolers to aid in performance testing. Loss of Spent Fuel inventory can be aided by several different sources, the Bleed Hold Up Tank, Concentrated Boric Acid Storage Tank, Boric Acid Mix Tank or Demineralized Water may all be used. Also an alternate source of make up is the Borated Water Storage Tank. Contingencies listed in OP/1 & 2/A/1104/006 instruct Operations Department personnel what to do in the event that a loss of SF inventory is detected. Some of the Spent Fuel Cooling systems most important functions are to maintain SF system inventory, to provide fission product decay heat removal, water cleanliness, purification and maintain system temperature. (Reference 1,2). During implementation, as well as after completion, the design of the SF system and its ability to provide SF Cooling and SSF RC make-up during an Appendix "R" fire will not be affected. The design and implementation of ONOE-10993 doesn't present any USQ's and does not require changes to the UFSAR or any Technical Specification.

MINOR MODIFICATION (ONOE's)

DESCRIPTION

SYSTEM: Recirculating Cooling Water (RCW)

Minor Modification OE-11353 installed a Thermowell in the Recirculating Cooling Water (RCW) outlet piping. TN/0/A/11353/MM/01M is the procedure for the implementation and verification.

SAFETY EVALUATION SUMMARY

The RCW systems most important functions are to maintain closed loop, corrosion inhibited, cooling water and the capacity of it's inventory is essential to SF Cooling operability. (Reference 1). This system is Duke Class "G", it has no ISI condition and is Non QA. The design of this modification will not change any of those parameters. The RCW system will not be adversely affected by this modification because it's design is in accordance with the pressures and temperatures outlined on the Flow Diagram. No new accidents are created. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. All seismic environmental, and QA requirements were maintained. All Design Basis requirements were maintained. No USQs or safety concerns are involved with this modification. No Technical Specification or UFSAR changes are required.

MINOR MODIFICATIONS (ONOE's)

DESCRIPTION

SAFETY EVALUATION SUMMARY

SYSTEM: High Pressure Injection (HPI)

Minor Modification ONOE-11489 installed a new control valve for 1HP-120. The new valve will remain air operated and provide the desired flow control and improve valve reliability. The valve is at the same location that the original valve was located. The new valve will perform the same design functions as the original.

Minor Modification ONOE-11489 replaced valve 1HP-120 due to the desire to improve valve reliability. The new valve does not affect the normal valve functions or HPI design basis functions. The modification has changed the valve size but valve is not addressed in the UFASR and no credit is taken for this valve to mitigate any postulated events. No USQ's are involved with this Modification. No changes to UFSAR or Technical Specifications are required.

## MINOR MODIFICATION (ONOE's)

### DESCRIPTION

SYSTEM: Low Pressure Injection (LPI)

Minor Modifications ONOE-12477 and ONOE-12478 replaced the operator of valves (1LP-17 and 1LP-18) with Rotork 90NA1-29 motor operators (29 RPM). The modification also installed a logic that allow the control room Operator throttling capability with these valves when the RZ module is in "MANUAL".

### SAFETY EVALUATION SUMMARY

The Safety Review evaluated that ONOE-12477/ONOE-12478 (valve operator replacement) and ONOE-14877/ONOE-14878 (valve replacement) will increase the margin required to meet GL 89-10 and remove the requirement to meet GL 95-07. The modifications also enhance the system's normal and event mitigation design and safety function without introducing a failure mode that has not already been analyzed. No USQs or safety concerns are involved with this modification. No changes to the Technical Specifications are required. Tech Spec 3.5.3 bases, UFSAR Section 15.14.3.3.6, 6.3.3.2, 6.3.3.3, Figure 6-1, and Figure 9-19 were revised accordingly. (Pkg. 00-03.)

## MINOR MODIFICATION (ONOE's)

### DESCRIPTION

SYSTEM: AC Power – MCCs 3XS1

Minor Mod ONOE-12845 replaced all the obsolete type CY motor starters in safety related motor control center (MCC) 2XS2 with an equivalent type TM motor starter. In the past, the B-finger in some of the old motor starters has stuck in the open position, preventing valves from operating electrically. The problem appears to have been a design or aging problem associated with MOV starters.

### SAFETY EVALUATION SUMMARY

The replacement of obsolete components with newer more reliable devices that provide all required SAR described functions does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. No new accidents are created. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. The replacement components do not function differently than the existing components. The voltage pickup and dropout capabilities for the CY Starters are equivalent to the components that are to be replaced. The overload heaters, including the alarm overload, provide the protective features. The new components are compatible with the existing MCC components. The new components are QA-1, seismically and environmentally qualified. The applicable design and protective features for Onsite Power Systems and electrical separation criteria and component specifications, as specified in the UFSAR, are maintained. An electrical 10 CFR 50 Appendix R fire review was completed. There are no new safety/non-safety interfaces. The modification does not adversely affect the single failure protection of the components or systems that are supplied by the affected MCCs. The electrical components (fuses, breakers, cabling, etc.) and power supplies are adequate for the loads. Neither the modification, nor the procedure for the replacement of C-Y starters in the MCCs, involves an Unreviewed Safety Question. No Technical Specification changes are required. UFSAR Figure 8-4 was revised accordingly (Pkg. 99-70)

## MINOR MODIFICATION (ONOE's)

### DESCRIPTION

SYSTEM: Electrical

Minor Modification ONOE-13663 is to change the power source to Isolation Damper CD-11A from Ventilation Rm. Power Panelboard 3KG to Equipment Rm. Power Panelboard 3KE and revise the control logic for dampers CD-11A and CD-11B. This modification will correct a single failure vulnerability concern for Isolation Dampers CD-11A and CD-11B in the Unit 3 Control Room Ventilation System.

### SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reference the most up to date as-built plant and/or operating practices does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways, failure modes, or accident scenarios are created. There are no reactivity management concerns. There are no physical changes to the plant or procedures. There is no effect on plant safety limits, setpoints, or design parameters. There is no reduction in any safety margins associated with the fission product barriers. There is no increase in the allowable quantities of hydrazine or chlorine onsite. As such, this change does not involve an unreviewed safety question (USQ) and no Technical Specification changes are required. UFSAR Sections 2.2.2.2 and 2.2.3.1.3 were revised accordingly. (Pkg. 00-118)

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Once Through Steam Generators (OTSG)

Minor modification ONOE's-13519 documents tube repairs in the 3AOTSG. The repairs included the removal of any existing plugs which might contain defects, and installation of stabilizers (as necessary) and plugs as required by the results of visual inspections (bubble or drip tests) and eddy current testing, and the tube stabilization criteria document. Presently there are 281 in-service sleeves installed in the 3A Steam Generator and 792 tubes plugged. Based on the information in Test Acceptance Criteria (TAC) ONTC-0-100A-0001-001, Rev. 2, there must be greater than 13,201 tubes available in each steam generator to meet core thermal-hydraulic design criteria.

Following the completion of the repair activities (tube plugging/sleeving) performed under this modification, the TAC was re-evaluated using the revised plugging and sleeving numbers.

### SAFETY EVALUATION SUMMARY

The inspections and repairs are done to ensure the integrity of the OTSGs. All the repair parts are QA condition 1 and will be no more likely to fail than the existing parts. Tube stabilization and plugging are accepted industry practices for removing heat exchanger tubes from service. Once the steam generator manways are closed up and secured the RCS pressure boundary of the steam generator is intact. This activity does not cause, or adversely affect the mitigation of, any previously analyzed SAR accidents. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways, or failure modes are created. No new failure modes are created. The OTSGs will continue to perform their design functions during normal and accident conditions. Based on the safety evaluation performed, no unreviewed safety questions are involved with these minor modifications. No changes to the Technical Specifications or the UFSAR are required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Once Through Steam Generators (OTSG)

Minor modification ONOE's-13520 documents tube repairs in the 3BOTSG. The repairs include the removal of any existing plugs which might contain defects, and installation of stabilizers (as necessary) and plugs as required by the results of visual inspections (bubble or drip tests) and eddy current testing, and the tube stabilization criteria document. Presently there are 247 in-service sleeves installed in the 3B Steam Generator and 594 tubes plugged. Based on the information in Test Acceptance Criteria (TAC) ONTC-0-100A-0001-001, Revision 2, there must be greater than 13,201 tubes available in each steam generator to meet core thermal-hydraulic design criteria. Following the completion of the repair activities (tube plugging/sleeving) performed under this modification, the TAC was re-evaluated using the revised plugging and sleeving numbers.

### SAFETY EVALUATION SUMMARY

The inspections and repairs are done to ensure the integrity of the OTSGs. All the repair parts are QA condition 1 and will be no more likely to fail than the existing parts. Tube stabilization and plugging are accepted industry practices for removing heat exchanger tubes from service. Once the steam generator manways are closed up and secured the RCS pressure boundary of the steam generator is intact. This activity does not cause, or adversely affect the mitigation of, any previously analyzed SAR accidents. There is no adverse effect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways, or failure modes are created. No new failure modes are created. The OTSGs will continue to perform their design functions during normal and accident conditions. Based on the safety evaluation performed, no unreviewed safety questions are involved with these minor modifications. No changes to the Technical Specifications or the UFSAR are required.

## MINOR MODIFICATION (ONOE's)

### DESCRIPTION

SYSTEM: High Pressure Injection (HPI)

Minor Modification ONOE-13719 will install a new control valve for 3HP-120. The new valve will remain air operated and provide the desired flow control and improve valve reliability. The valve will be located at the same location that the original valve was located. The new valve will perform the same design functions as the original.

### SAFETY EVALUATION SUMMARY

The new valve does not affect the normal valve functions or HPI design basis functions. The modification has changed the valve size. Valve 3HP-120 is not addressed in the UFASR and no credit is taken for this valve to mitigate any postulated events. No USQ's are involved with this Modification. No changes to UFSAR or Technical Specifications are required.

## MINOR MODIFICATIONS (ONOE<sub>s</sub>)

### DESCRIPTION

SYSTEM: Letdown Storage Tank (LDST)

This modification, ONOE- 13906, revised the Unit 3 LDST level setpoints. Additionally, several editorial changes to drawings were implemented.

### SAFETY EVALUATION SUMMARY

This modification does not modify any plant control functions or any setpoints at which control functions occur. This modification changes alarm setpoints ONLY. The affect this modification could have on the HPI system operation is to alert OPS prior to reaching the analyzed maximum (92 inches) and minimum (55 inches) level limits in the LDST. No HPI system control functions or components will be affected by this modification. UFSAR 5.2.3.10.3 is revised to reflect the higher 'Low' setpoint for the LDST level alarm. The time span for the notification to OPS of low LDST level during the most adverse conditions for RCS leakage is also changed. Per the change to UFSAR 5.2.3.10.3 (see attachment 23 of ONOE-13906), the LDST low level setpoint change gives a shorter time span for which notification to OPS of low LDST level during the most adverse conditions for RCS leakage would occur. OPS would be notified of low LDST level within 17 hours of initiation of an RCS leak of 1 gpm under worst case initial conditions of low level in the RB sump and high level in the LDST. With the previous setpoint of 57 inches the time span is 18 hours. This represents a conservative change in that OPS could be notified up to one hour sooner of a low LDST level. As such, this change does not involve an unreviewed safety question (USQ) and no Technical Specification changes are required. UFSAR Section 5.2.3.10.3 was revised. (Pkg. 00 - 115)

## MINOR MODIFICATION (ONOE's)

### DESCRIPTION

SYSTEM: Standby Shutdown Facility (SSF)

Minor modification ONOE-13991 reduced the SSF ASW pump minimum flow requirement to 500 GPM. The SSF ASW pump manufacturer has qualified the SSF ASW pump for 3 ½ days of operation with a pump minimum flow rate of 500 GPM. The actual flow rate through the SSF ASW pump minimum flow line will still be set at 600 GPM ± 30 GPM. Therefore, the temperature of the water returned to the CCW supply pipe by the SSF ASW System will not be affected and the temperature of the water supplied to the SSF ASW pump, the SSF DSW pump and the SSF HVAC service water pump will not be affected.

### SAFETY EVALUATION SUMMARY

This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse effect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. A USQ evaluation was performed and found that no unreviewed safety question exists. No changes were required to the plant technical specifications. No changes were required to the UFSAR.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: CCW

Minor modification ONOE-14480 revised the CCW System Design Bases Document (DBD) to show the correct functions for CCW-487 (Chiller Cooling Water Seismic/Non-Seismic Boundary Check). Specifically, the existing safety function (seismic boundary) described in the CCW System DBD will be changed to a non-safety function. A new safety function will be added to acknowledge that the valve shall open upon restart of the chillers after a loss of off-site power. Testing of this valve will be required, and the IST database will be changed to test the valve periodically. The valve name in the CCW System DBD will be changed to be consistent with the Equipment Database. Other minor changes were made to the Equipment Database to correct typographical errors and populate several fields with data.

### SAFETY EVALUATION SUMMARY

This change does not require a change to Technical Specifications. No new radiological release pathways or failure modes are created. There is no change to plant setpoints, safety limits or design parameters. There are no reactivity management concerns. The affected systems will continue to perform their design functions during normal and accident conditions. Therefore, the provisions of 10 CFR 50.59 do not apply to this change and a USQ evaluation is not required. A change to the UFSAR is not required.

MINOR MODIFICATIONS (ONOE's)

DESCRIPTION

SYSTEM: CCW

Minor Modification ONOE-14514 revised the CCW System Design Bases Document (DBD) to show the correct functions for several valves associated with the LPSW recirculation mode during a dam failure. Testing requirements are included for these valves. Also, the Equipment Database will be changed to correct minor errors and to populate several fields with data.

SAFETY EVALUATION SUMMARY

The changes to the CCW System DBD are consistent with the existing abnormal procedure. All changes are consistent with the SAR. No physical changes are being made. The change to the design documents will not affect the capability of the CCW or other systems to perform their intended functions. This change does not require a change to Technical Specifications. A change to the UFSAR is not required. Also, the answers to all the screening questions were "No". Therefore, the provisions of 10 CFR 50.59 do not apply to this change and a USQ evaluation is not required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: CCW

Minor Modification ONOE-14536 revised the CCW System DBD to clarify several design basis functions and to clarify the need for testing several non-safety functions.

### SAFETY EVALUATION SUMMARY

The CCW System DBD is changed to clarify several design basis functions and to clarify the need for testing several non-safety functions. Several changes are associated with non-safety functions that are covered by the Maintenance Rule, specifically the dam failure recirculation mode and the ECCW second siphon (condenser decay heat removal). These modes of operation are clearly not required per the UFSAR Section 9.2.2.2.1, but they are included in the MR, because they are the preferred modes, as described in the abnormal procedures (References 2, 3, 6, and 10). Testing requirements are clarified for these non-safety functions, but this is outside the scope of the SAR. The changes do not directly affect any station procedures for operation, testing or maintenance. Any such procedure changes would have their own separate 50.59 evaluation. The changes described above do not deviate from any statement or description in the SAR. The rewrite of Section 20.1.3.3, which describes the functions for HPSW and SSW, is consistent with the existing functions as described in the SAR. The maximum CCW pump motor stator temperature is changed to a more restrictive limit, which is consistent with existing design documents. Therefore, this change can have no adverse effects on the operation of the CCW pump motors. A change to the UFSAR or Tech Spec is not required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: FDW

MINOR MODIFICATION OE-14578 documents the tube and/or plug repairs performed on the 1A Steam Generator. These repairs include the removal of any existing plugs which might contain defects, and installation of stabilizers (as necessary) and plugs as required by the results of visual inspections (bubble or drip tests) and eddy current testing, and the tube stabilization criteria document. The modification process is being used to perform this activity because the plugging of steam generator tubes requires revision to drawings and manuals contained within the Oconee Nuclear Site Document Management system

### SAFETY EVALUATION SUMMARY

All the repair parts are QA condition 1 and will be no more likely to fail than the existing parts. Tube stabilization and plugging are accepted industry practices for removing heat exchanger tubes from service. Once the steam generator manways are closed up and secured the RCS pressure boundary of the steam generator is intact. Presently there are 233 in-service sleeves installed in the 1A OTSG and 557 tubes plugged. Based on the information in TAC ONTC-0-100A-0001-001, there must be greater than 13,201 tubes available in each steam generator to meet core thermal-hydraulic design criteria. Based on the evaluation performed, no unreviewed safety questions are created by this minor modification. No changes to the UFSAR or Technical Specifications are required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: FDW

MINOR MODIFICATION OE-14579 documents the tube and/or plug repairs performed on the 1B Steam Generator. These repairs include the removal of any existing plugs which might contain defects, and installation of stabilizers (as necessary) and plugs as required by the results of visual inspections (bubble or drip tests) and eddy current testing, and the tube stabilization criteria document. The modification process is being used to perform this activity because the plugging of steam generator tubes requires revision to drawings and manuals contained within the Oconee Nuclear Site Document Management system

### SAFETY EVALUATION SUMMARY

All the repair parts are QA condition 1 and will be no more likely to fail than the existing parts. Tube stabilization and plugging are accepted industry practices for removing heat exchanger tubes from service. Once the steam generator manways are closed up and secured the RCS pressure boundary of the steam generator is intact. Presently there are 178 in-service sleeves installed in the 1B Steam Generator and 1642 tubes plugged. Based on the information in TAC ONTC-0-100A-0001-001, Revision 2, there must be greater than 13,201 tubes available in each steam generator to meet core thermal-hydraulic design criteria. Based on the evaluation performed, no unreviewed safety questions are created by this minor modification. No changes to the UFSAR or Technical Specifications are required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: RCS

MINOR MODIFICATION OE-14589 provides new maximum allowed reactor coolant pump seal leakage rates that are associated with establishing seal injection flow within 8 minutes after a loss of component cooling to the labyrinth seal and HPI seal injection flow. For maximum allowed seal leakage rates associated with establishing seal injection flow within 10 minutes, the limit for RC pump 1A2 will be increased from 4.5 GPM to 4.7 GPM. No physical modifications will be made to the plant by this minor modification.

### SAFETY EVALUATION SUMMARY

Operating limits provided for Unit 1, by Westinghouse Reactor Coolant pump manufacturer, for pump protection during normal operation will not be changed due to this revision of the Unit 1 maximum allowed seal leakage rates. The maximum allowed Reactor Coolant pump seal leakage rates were chosen to insure that the SSF RC makeup system is capable of providing adequate seal injection flow to prevent RC pump seal degradation or failure during an accident that requires operation of the SSF. No unreviewed safety question exists. No changes will be required to technical specifications or to the UFSAR.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Main Steam (MS)

Minor Modification ONOE-15044 increased the allowed range for the MSR/V set points and how many valves can actuate simultaneously.

### SAFETY EVALUATION SUMMARY

The MSR/V set point range is being changed to +1% and -3% (it was previously +1% and -1%). The modification does not allow a higher MSR/V set point range. The normal operating MS system pressure will remain about 900 psig. The MSR/V set points will be above, the turbine bypass valve post-reactor trip controlling set point of 1010 psig. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This activity has no effect on any margins of safety as previously evaluated in the SAR. This modification involves no USQs. No Tech Specs are affected or revised. UFSAR Sections 10.3.3 and 3.9.3.3 were revised accordingly. (Pkg. 00-62)

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: FDW

MINOR MODIFICATION OE-15098 documents the tube and/or plug repairs performed on the 2A Steam Generator. These repairs include the removal of any existing plugs which might contain defects, and installation of stabilizers (as necessary) and plugs as required by the results of visual inspections (bubble or drip tests) and eddy current testing, and the tube stabilization criteria document. The modification process is being used to perform this activity because the plugging of steam generator tubes requires revision to drawings and manuals contained within the Oconee Nuclear Site Document Management system.

### SAFETY EVALUATION SUMMARY

All the repair parts are QA condition 1 and will be no more likely to fail than the existing parts. Tube stabilization and plugging are accepted industry practices for removing heat exchanger tubes from service. Once the steam generator manways are closed up and secured the RCS pressure boundary of the steam generator is intact. Presently there are 275 in-service sleeves installed in the 2A Steam Generator and 677 tubes plugged. Based on the information in TAC ONTC-0-100A-0001-001, Revision 2, there must be greater than 13,201 tubes available in each steam generator to meet core thermal-hydraulic design criteria. Based on the evaluation performed, no unreviewed safety questions are created by this minor modification. No changes to the UFSAR or Technical Specifications are required.

MINOR MODIFICATIONS (ONOE's)

DESCRIPTION

SAFETY EVALUATION SUMMARY

SYSTEM: FDW

MINOR MODIFICATION OE-15099 documents the tube and/or plug repairs performed on the 2B Steam Generator. These repairs include the removal of any existing plugs which might contain defects, and installation of stabilizers (as necessary) and plugs as required by the results of visual inspections (bubble or drip tests) and eddy current testing, and the tube stabilization criteria document. The modification process is being used to perform this activity because the plugging of steam generator tubes requires revision to drawings and manuals contained within the Oconee Nuclear Site Document Management system

All the repair parts are QA condition 1 and will be no more likely to fail than the existing parts. Tube stabilization and plugging are accepted industry practices for removing heat exchanger tubes from service. Once the steam generator manways are closed up and secured the RCS pressure boundary of the steam generator is intact. Presently there are 252 in-service sleeves installed in the 2B Steam Generator and 893 tubes plugged. Based on the information in TAC ONTC-0-100A-0001-001, Revision 2, there must be greater than 13,201 tubes available in each steam generator to meet core thermal-hydraulic design criteria. Based on the evaluation performed, no unreviewed safety questions are created by this minor modification. No changes to the UFSAR or Technical Specifications are required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Keowee

Minor Modification ONOE-15526 changes setpoints in the Unit 1 Keowee Governor as follows:

- The shutdown runback wicket gate limit will be changed from 50% to 39.5% (38.5% – 40.5%) gate.
- The partial shutdown wicket gate limit will be changed from 25% to 27.5% (26.5% – 28.5%) gate.
- The upper speed switch for the partial shutdown solenoid will be changed from 122 rpm to 127 (126 – 128) rpm.

The changes in these setpoints are to reduce the generator acceleration and thus, the maximum frequency overshoot. The change in setpoint for the speed switch will be close to the synchronous speed of the generator. Thus, a seal in circuit will be added to assure that the partial shutdown solenoid does not drop out during a speed transient. This seal in circuit will consist of two relays that will be installed in the governor cabinet. Associated wiring will also be contained in this cabinet. A spare conductor in an existing cable will be used to wire from the existing speed switch in the permanent magnet generator (PMG) to the relays in the governor cabinet.

### SAFETY EVALUATION SUMMARY

The modification is designed such that the Keowee frequency overshoot will be at a lower frequency than the current design for any given net head and for all lake levels. The frequency in the modified state will be back within steady state conditions in less time than the existing design for any given net head and all lake levels. This modification does not increase the maximum voltage during emergency startup. This modification also does not create conditions such that the voltage is more likely to go below 13.5 kV or above 14.49 kV. The modification does not create any conditions such that Oconee equipment and their function will be less likely to start, more likely to stop running after being started, or be otherwise adversely affected. There is no adverse effect on containment integrity and no new release paths are created. This modification does not create any unreviewed safety questions. No changes to the UFSAR or technical specifications are required. A new Selected Licensee Commitment is to be added to specify that the Keowee Hydro net head must be greater than or equal to 120 feet and is applicable when a Keowee Unit is shutdown.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Keowee

Minor Modification ONOE-15527 changes setpoints in the Unit 2 Keowee Governor as follows:

- The shutdown runback wicket gate limit will be changed from 50% to 39.5% (38.5% – 40.5%) gate.
- The partial shutdown wicket gate limit will be changed from 25% to 27.5% (26.5% – 28.5%) gate.
- The upper speed switch for the partial shutdown solenoid will be changed from 122 rpm to 127 (126 – 128) rpm.

The changes in these setpoints are to reduce the generator acceleration and thus, the maximum frequency overshoot. The change in setpoint for the speed switch will be close to the synchronous speed of the generator. Thus, a seal in circuit will be added to assure that the partial shutdown solenoid does not drop out during a speed transient. This seal in circuit will consist of two relays that will be installed in the governor cabinet. Associated wiring will also be contained in this cabinet. A spare conductor in an existing cable will be used to wire from the existing speed switch in the permanent magnet generator (PMG) to the relays in the governor cabinet.

### SAFETY EVALUATION SUMMARY

The modification is designed such that the Keowee frequency overshoot will be at a lower frequency than the current design for any given net head and for all lake levels. The frequency in the modified state will be back within steady state conditions is less time than the existing design for any given net head and all lake levels. This modification does not increase the maximum voltage during emergency startup. This modification also does not create conditions such that the voltage is more likely to go below 13.5 kV or above 14.49 kV. The modification does not create any conditions such that Oconee equipment and their function will be less likely to start, more likely to stop running after being started, or be otherwise adversely affected. There is no adverse affect on containment integrity and no new release paths are created. This modification does not create any unreviewed safety questions. No changes to the UFSAR or technical specifications are required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Condenser Circulating Water (CCW)

Minor modification ONOE-15541 revised design documents and licensing documents regarding the design basis for fire protection water supplies. CCW pumps are required to supply suction to the High Pressure Service Water (HPSW) pumps during a fire. If CCW pumps are lost, an unassisted siphon supplies the suction to the HPSW pumps. The design basis will be changed to take credit for a combination of the unassisted siphon and water in the embedded CCW inlet pipes.

### SAFETY EVALUATION SUMMARY

The HPSW and CCW Systems will continue to be capable of performing their required accident mitigation functions. The changes will ensure that the fire protection water supply will meet the existing objective, which is to supply water for fire suppression for at least 2 hours. There are no adverse effects on containment integrity, radiological release pathways, fuel design, filtration systems, MSRV relief setpoints, or Radwaste systems. Therefore, the consequences of an accident evaluated in the SAR are not increased. No new types of accidents or failure mechanisms are postulated. The CCW and HPSW systems will continue to be operated within its existing design parameters for flow, temperature and pressure. No new malfunctions are postulated. This change involves no physical modifications to the plant. The change involves no relaxation of seismic, environmental, or QA requirements. There are no concerns associated with reactivity management. The proposed change does not affect any margins of safety defined in the basis for any technical specification. The proposed change does not affect any safety limits or limiting safety system settings. No plant safety limits, setpoints, or design parameters are adversely affected. There is no impact to the nuclear fuel, cladding, Reactor Coolant System (RCS), or containment integrity.

Sections 9.5.1.2 and 9.5.1.2.5 of the UFSAR have been revised due to the proposed changes. There are no Technical Specifications affected by the proposed changes. Selected Licensee Commitments (SLC) Manual, Section 16.9.1 contains operability requirements for the Fire Suppression Water Supply Systems, but the suction supply for the HPSW pumps is not addressed. (Pkg. 00-44)

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Once Through Steam Generators (OTSG)

Minor modification ONOE's-15615 documents tube repairs in the 3AOTSG. The repairs include the removal of any existing plugs which might contain defects, and installation of stabilizers (as necessary) and plugs as required by the results of visual inspections (bubble or drip tests) and eddy current testing, and the tube stabilization criteria document. Presently there are 275 in-service sleeves installed in the 3A Steam Generator and 938 tubes plugged. Based on the information in Test Acceptance Criteria (TAC) ONTC-0-100A-0001-001, Rev. 2, there must be greater than 13,201 tubes available in each steam generator to meet core thermal-hydraulic design criteria. Following the completion of the repair activities (tube plugging/sleeving) performed under this modification, the TAC was re-evaluated using the revised plugging and sleeving numbers.

### SAFETY EVALUATION SUMMARY

The inspections and repairs are done to ensure the integrity of the OTSGs. All the repair parts are QA condition 1 and will be no more likely to fail than the existing parts. Tube stabilization and plugging are accepted industry practices for removing heat exchanger tubes from service. Once the steam generator manways are closed up and secured the RCS pressure boundary of the steam generator is intact. This activity does not cause, or adversely affect the mitigation of, any previously analyzed SAR accidents. There is no adverse effect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways, or failure modes are created. No new failure modes are created. The OTSGs will continue to perform their design functions during normal and accident conditions. Based on the safety evaluation performed, no unreviewed safety questions are involved with these minor modifications. No changes to the Technical Specifications or the UFSAR are required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Once Through Steam Generators (OTSG)

Minor modification ONOE's-13520 documents tube repairs in the 3BOTSG. The repairs include the removal of any existing plugs which might contain defects, and installation of stabilizers (as necessary) and plugs as required by the results of visual inspections (bubble or drip tests) and eddy current testing, and the tube stabilization criteria document. Presently there are 246 in-service sleeves installed in the 3B Steam Generator and 686 tubes plugged. Based on the information in Test Acceptance Criteria (TAC) ONTC-0-100A-0001-001, Revision 2, there must be greater than 13,201 tubes available in each steam generator to meet core thermal-hydraulic design criteria. Following the completion of the repair activities (tube plugging/sleeving) performed under this modification, the TAC was re-evaluated using the revised plugging and sleeving numbers.

### SAFETY EVALUATION SUMMARY

The inspections and repairs are done to ensure the integrity of the OTSGs. All the repair parts are QA condition 1 and will be no more likely to fail than the existing parts. Tube stabilization and plugging are accepted industry practices for removing heat exchanger tubes from service. Once the steam generator manways are closed up and secured the RCS pressure boundary of the steam generator is intact. This activity does not cause, or adversely affect the mitigation of, any previously analyzed SAR accidents. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No new failure modes are created. The OTSGs will continue to perform their design functions during normal and accident conditions. Based on the safety evaluation performed, no unreviewed safety questions are involved with these minor modifications. No changes to the Technical Specifications or the UFSAR are required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Reactor Coolant System (RCS)

Minor modification ONOE-15722 removed the eight thermal couple nozzles from Unit 1's Reactor Vessel head.

### SAFETY EVALUATION SUMMARY

This minor modification will not result in a nuclear safety issue. This work is acceptable because the design and material chosen for this application are acceptable in preventing leaks and catastrophic failures of unused nozzle penetrations in the reactor vessel head. These penetrations were installed as part of the pre- and initial criticality checkouts for the B&W units. This minor modification does not represent a health or nuclear safety concern for the general public. No change to Technical Specifications will be required. UFSAR Section 18.3.4, Control Rod Drive Mechanism Nozzle and Other Vessel Closure Penetrations Inspection Program, and Chapter 5, Section 5.3.1 were revised accordingly. (Pkg. 00-79)

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Building Spray (BS)

Minor modification ONOE-15763 revised the design basis specification for Building Spray (BS) System. The purpose of the revision is to incorporate the provision of Emergency Operating Procedure (EOP) changes, which impose new throttling requirements for the BS pumps and manual (remote or local) positioning requirements for BS-1&2.

### SAFETY EVALUATION SUMMARY

The overall effects of the combined changes to the emergency operating procedures were evaluated. The combined changes to the emergency operating procedures were evaluated to be within the limits required by safety analyses with respect to postulated environmental conditions, containment responses, core integrity, and radiological effects. In addition, the changes were determined to be within the capability of being accomplished within acceptable time frames required by safety analyses. Therefore, this activity does not operate systems outside of their capability or licensing bases. Based upon the considerations documented in this evaluation and the responses to the seven standard questions, these changes the BS System Design Basis Specification involves no unreviewed safety question or safety concerns. No Technical Specification or Selected Licensee Commitment changes are required. UFSAR Section 6.2.2.4 was revised accordingly. (Pkg. 00-76)

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: SSF

Minor modification ONOE-16006 revised the SSF Diesel Support System DBD to list CCW-312 and CCW-313 with an active to close function. This revision is needed because CCW-312 and CCW-313 are required to be capable of closing following a seismically induced Turbine Building Flood in order to prevent flooding of the SSF Pump Room.

### SAFETY EVALUATION SUMMARY

Requiring CCW-312 and CCW-313 to be active to close will not adversely affect equipment malfunctions. If failure of the non seismic SSF sump pumps occurs during a seismically induced Turbine Building Flood, isolation provided by CCW-312 and CCW-313 will prevent water from the flooded yard drain system from entering the SSF Pump Room. Since the SSF is not required to meet single failure criteria, failure of CCW-312 and/ or CCW-313 during a seismically induced Turbine Building Flood does not increase equipment malfunction consequences previously evaluated in the SAR. No unreviewed safety question exists. No changes will be required to plant technical specifications. UFSAR Section 9.6.3.6 was revised accordingly. (Pkg. 00-106)

MINOR MODIFICATIONS (ONOE's)

DESCRIPTION

SAFETY EVALUATION SUMMARY

SYSTEM: Electrical

Minor modification ONOE-12847 replaces all the obsolete type CY motor starters in safety related motor control center (MCC) 1XS2 with an equivalent type TM motor starter.

Most of the loads supplied by these motor starters are QA-1 and are required to function upon Engineered Safeguards (ES) signals to provide safety features during various plant modes of operation. Most of the affected components or the systems they support are addressed in the Tech. Specs. and the FSAR. The implementation of this modification and its procedure will not impair the safety functions of any system, structure, or component essential for the safe operation of the plant. All work will be performed, verification tests and final re-tests completed, and equipment returned to service prior to being required to support plant operation in accordance with the Technical Specifications. Equipment may be returned to service at any mode in which plant and equipment conditions occurring during the performance of this work will not challenge mitigating systems as outlined in the FSAR and will not violate any Tech Spec requirements. This modification does not create any unreviewed safety questions. No changes to the UFSAR or technical specifications are required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Steam Generator (OTSG)

Minor modification OE-15616 documents tube repairs in the 3B OTSG. These repairs include the removal of any existing plugs which might contain defects, and installation of stabilizers (as necessary) and plugs as required by the results of visual inspections (bubble or drip tests) and eddy current testing, and the tube stabilization criteria document

### SAFETY EVALUATION SUMMARY

Tube stabilization and plugging are accepted industry practices for removing heat exchanger tubes from service. Once the steam generator manways are closed up and secured the RCS pressure boundary of the steam generator is intact. Presently there are 246 in-service sleeves installed in the 3B OTSG and 686 tubes plugged. Based on the information in TAC ONTC-0-100A-0001-001, there must be greater than 13,201 tubes available in each steam generator to meet core thermal-hydraulic design criteria. Following the completion of the repair activities (tube plugging/sleeving) performed under this modification, the TAC will be re-evaluated using the revised plugging and sleeving numbers. Based on the evaluation performed, no unreviewed safety questions are created by this minor modification. No changes to the UFSAR or Technical Specifications are required.

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Low Pressure Injection (LPI)

Unit 1 - ONOE-12477/ONOE-12478 (valve operator replacement) and ONOE-14877/ONOE-14878 (valve replacement) increased the margin required to meet G.L. 89-10 and remove the requirement to meet G.L. 95-07. The modifications will enhance the system's normal and event mitigation design and safety function.

### SAFETY EVALUATION SUMMARY

This activity will not prevent any SSC from performing its required functions. This change does not affect the design, function or operation of plant SSCs. They do not adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This activity has no effect on any margins of safety as previously evaluated in the SAR. This modification involves no USQs. No changes to the Technical Specifications are required. Tech Spec Bases 3.5.3, UFSAR Section 15.14.3.3.6, 6.3.3.2, 6.3.3.3, and Fig. 6-1 & Fig. 9-19 were revised accordingly. (Pkg. 00-03)

## MINOR MODIFICATIONS (ONOE's)

### DESCRIPTION

SYSTEM: Low Pressure Injection (LPI)

Unit 3 - ONOE-14637/ONOE-14638 (valve operator replacement) and ONOE-13692/ONOE-13694 (valve replacement) increased the margin required to meet G.L. 89-10 and remove the requirement to meet G.L. 95-07. The modifications will enhance the system's normal and event mitigation design and safety function.

### SAFETY EVALUATION SUMMARY

This activity will not prevent any SSC from performing its required functions. This change does not affect the design, function or operation of plant SSCs. They do not adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This activity has no effect on any margins of safety as previously evaluated in the SAR. This modification involves no USQs. No changes to the Technical Specifications are required. Tech Spec Bases 3.5.3, UFSAR Section 15.14.3.3.6, 6.3.3.2, 6.3.3.3, and Fig. 6-1 & Fig. 9-19 were revised accordingly. (Pkg. 00-03)

### III. TEMPORARY MODIFICATIONS (TSMs)

#### DESCRIPTION

SYSTEM: Reactor Coolant System

Temporary Modification ONTM-2112 added temporary supplemental Quench Tank cooling. This Temporary Modification will utilize some permanent piping connections in the High Pressure Service Water (HPSW), Low Pressure Service Water (LPSW), and Coolant Storage (CS) Systems. The Temporary Modification is to add three plate heat exchangers plumbed in parallel. Using four pipes as manifolds creates a "heat exchanger skid". These manifolds are supported by a tube steel space frame, which is anchored to the floor. Several pipes with ball valves come out from the manifolds and go to the heat exchangers. Cooling water will be provided from valve 3HPSW-455. A diverter (wye) valve will be attached to the hose station valve, 3HPSW-455. The fire hose will be reconnected to one branch of the diverter valve and cooling water piping will be connected to the other branch. This fire hose station will be declared out of service and a fire hose will be staged at hose station valve 3HPSW-19 to cover this area. High Density Polyethylene (HDPE) will be used for much of the cooling water piping. A duplex basket strainer is to be added for the incoming HPSW System water. Local pressure gages are to be added. When the Temporary Modification is removed, the facility will be returned to its design with Minor Modifications installed.

#### SAFETY EVALUATION SUMMARY

This change does not create any conditions or events, which lead to accidents previously, evaluated in the SAR. Any HPSW System leakage through a cooler leak to the Quench Tank recirculating water line would be sampled before being added to the Reactor Coolant System (RCS). Thus, the probability of boron dilution events is not increased by this Temporary Modification. The potential for increased Auxiliary Building flooding is not increased by this modification, since no new water sources are introduced and the new piping is designed to the same class as the adjoining piping and is designed to piping codes. This Temporary Modification does not create any unreviewed safety questions (USQ). This Temporary Modification changes the way the facility is described in the UFSAR. Changes to the UFSAR are not required due to the temporary nature of this modification.

## IV. PROCEDURES

### DESCRIPTION

SYSTEM: Control Rod Drive System (CRD)

ONS Procedure, PT/0/A/0811/002, "Reactor Trip Review Procedure" was revised to allow scheduled, procedurally controlled manual trips below 5%FP to be performed without having to perform any portion of NSD 505, specifically the "Post-Trip Review" portion.

### SAFETY EVALUATION SUMMARY

Tripping an ONS unit from a critical condition at < 2% FP as a method of shutting down the unit involves primarily the CRD system and the unit's response to the trip at this low power (in mode 2). The safety design function of the CRD system is to trip the reactor in response to a reactor trip signal or in response to a manual trip initiation by control room operators. The use of the CRD system to shut the unit down, as described above, does not invalidate or jeopardize the safety design function of the system. The tripping of the reactor at this low power does induce any significant transient and is in fact essentially transparent from the standpoint of primary and secondary side systems response.

Chapter 15, Accident Analyses, of the ONS UFSAR, was reviewed in relation to this evaluation. None of the sections were identified as potentially applicable. All of the Chapter 15 accidents were reviewed with respect to this evaluation, however none of the Chapter 15 accidents previously evaluated in the SAR appear to be impacted by this proposed change. There are no unreviewed safety questions (USQs) associated with this proposed commitment change or with the proposed changes to NSD 505. No Technical Specification changes are required. The UFSAR section 7.2.4 was updated accordingly. (Pkg. 00-61)

## PROCEDURES

### DESCRIPTION

SYSTEM: Low Pressure System (LPSW),

This safety evaluation supports Operations procedure PT/0/A/0251/026, LPSW Cross-Connect Flush, Revision 0. The reason for this change is to allow a flow path for Unit 3 LPSW pump minimum flow requirements (4,250 gpm) during 3EOC-18.

### SAFETY EVALUATION SUMMARY

No safety related equipment should be adversely affected due to spray from potential leakage. The LPSW pump minimum flow requirements are maintained. Separation criteria and environmental qualification criteria are not adversely affected. No additional electrical loads are imposed and no SSC protection features are modified. The activity does not affect any test acceptance criteria used to demonstrate adequate performance of the systems. The activity will not alter any assumptions previously made in evaluating the radiological consequences of an accident. There is no adverse effect on containment integrity and no new release paths are created. No adverse effects on the Appendix R fire analysis will occur. No new accidents different than already evaluated in the SAR are postulated. The activity does not adversely affect Containment Integrity. No new types of malfunctions of equipment are postulated. No new adverse interactions were determined to exist. The activity does not affect any margins of safety defined in the basis for any technical specification. The activity does not affect any safety limits or limiting safety system settings.

Based on the preceding discussion, the activity involves no safety concerns or USQs. No changes to Technical Specifications or the UFSAR are required.

## PROCEDURES

### DESCRIPTION

SYSTEM: Low Pressure System (LPSW),

This safety evaluation supports Operations procedure PT/0/A/0251/026, LPSW Cross-Connect Flush, Revision 1. This change is for temporary Butterfly valve downstream of LPSW-454.

### SAFETY EVALUATION SUMMARY

The Unit 1,2, and 3 LPSW Systems will continue to perform all design, operation, and accident mitigation functions, as they are presently described in the SAR. Separation criteria and environmental qualification criteria are not adversely affected. No additional electrical loads are imposed and no SSC protection features are modified. The activity does not affect any test acceptance criteria used to demonstrate adequate performance of the systems. The activity will not alter any assumptions previously made in evaluating the radiological consequences of an accident. There is no adverse effect on containment integrity and no new release paths are created. No adverse effects on the Appendix R fire analysis will occur. No new accidents different than already evaluated in the SAR are postulated. The activity does not adversely affect Containment Integrity. No new types of malfunctions of equipment are postulated. No new adverse interactions were determined to exist. The activity does not affect any margins of safety defined in the basis for any technical specification. The activity does not affect any safety limits or limiting safety system settings.

Based on the preceding discussion, the activity involves no safety concerns or USQs. No changes to Technical Specifications or the UFSAR are required.

## PROCEDURES

### DESCRIPTION

SYSTEM: Moisture Separator Reheater (MSR)

This safety evaluation supported procedure TT/0/A/0271/015. The purpose of this activity was to verify that satisfactory operation of the HD system occurs when MSR flow is transferred from the Pump Mode to the Dump Mode with minimum line temperatures established. A second part of this activity will assess MSR operation when transferring from the Pump Mode to the Dump Mode.

### SAFETY EVALUATION SUMMARY

This activity involves operation and observation of the MSR Drain System. The equipment will be operated in accordance with approved procedures. Also, there are no SSC impacted by performance of this activity. This activity does not affect the pressure boundary associated with the RCS or any controls which could cause an accident initiation. No new radiological release pathways or failure modes are created. This procedure does not adversely affect any plant safety limit, set point, or design parameter. Additionally, this procedure does not adversely impact the fuel, fuel cladding, RCS, or containment integrity. Therefore there is no reduction in the margin of safety as defined in Technical Specifications. Based upon the considerations documented in this evaluation and the responses to the seven standard questions, this activity involves no unreviewed safety question or safety concerns. No UFSAR, Technical Specification, or Selected Licensee Commitment changes are required.

## PROCEDURES

### DESCRIPTION

### SAFETY EVALUATION SUMMARY

SYSTEM: MCC

This safety evaluation supports TN/2/A/12848/MM/02E to control the isolation of the motor starters and their loads. Their removal from service will be scheduled via the work control process with OPS involvement to ensure that the equipment is operational as required by Tech Spec. The procedure provides documentation of the removal of the existing and installation of the replacement motor starters using existing approved plant procedures. Installation and functional testing of all affected circuitry will be controlled and documented within this procedure. The procedure provides documentation of Verification testing and re-tests of all components by use of existing, approved, plant procedures.

This procedure for the replacement and documentation of C-Y starters in Oconee UNIT 2 MCC 2XS2 does not create an Unreviewed Safety Question. No changes to the SAR documents are required. The implementation of this modification and its procedure will not impair the safety functions of any system, structure, or component essential for the safe operation of the plant. All work will be performed, verification tests and final re-tests completed, and equipment returned to service prior to being required to support plant operation in accordance with the Technical Specifications. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No Technical Specification are required as a result of this procedure change. UFSAR Table 3-68, "Electrical Equipment Seismic Qualification", was revised accordingly. (Pkg. 00-96)

## PROCEDURES

### DESCRIPTION

SYSTEM: OAC

This change involves an upgrade to the Super-MARGINS (SMARGINS) software. The current software, SMARGINS version 7 (SMARG07 --Reference 1), is being replaced by version 8 (SMARG08 -- Reference 2).

### SAFETY EVALUATION SUMMARY

SMARG08 is an improved version of SMARG07. The new software incorporates modifications to increase the range of power distributions used to calculate margin to thermal and mechanical limits for the fuel. The methodology of calculating the margin to the limits is not changed. SMARG08 was certified per Duke Power's directive for software certification (NSD-800) and verified to yield the same results as SMARG07, excepting the new modifications. The modifications are in compliance with Technical Specifications and approved methods. This change involves no material changes to the plant. The SMARGINS software and resident workstation are not part of any SSC important to safety and do not directly affect any SSCs. The SMARGINS software is not installed at the plant, but rather on workstations in the Nuclear General Office. As indicated, the new software produces the same, or more conservative, analytical results as the replaced software. The assurance of the fuel integrity limits associated with the referenced Technical Specifications is not compromised. This change involves no USQs. No changes to the Technical Specifications, UFSAR, or other SAR documents are required.

## PROCEDURES

### DESCRIPTION

SYSTEM: Penetration Room Ventilation (PRVS)

This safety evaluation supports a change to OP/0/A/1104/041 for not requiring an immediate plant shutdown in the event of a failure of AHU 3-9.

### SAFETY EVALUATION SUMMARY

Removal of this statement from the OP simply allows an operability evaluation to be entered in the event of a failure of AHU 3-9 rather than an immediate plant shutdown. Testing and engineering evaluation have shown that dose limits would not be compromised with one train of the Unit 3 PRVS operating and AHU 3-9 off. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification or UFSAR changes are required as a result of this procedure change.

## PROCEDURES

### DESCRIPTION

SYSTEM: Penetration Room Ventilation System (PRVS)

This safety evaluation supports procedure TT/3/A/0110/023 to evaluate options that might eliminate the adverse interaction between the Unit 3 PRVS and the PEER with AHU 3-9 off. The test will temporarily seal the exhaust louvers in the Unit 3 Purge Exhaust Equipment Room and operate a variety of Auxiliary Building Exhaust Fan combinations. Test results will be examined to determine which combinations were most effective with maintaining vacuum to adjacent Auxiliary Building zones with AHU 3-9 off. If testing shows a particular combination to be successful with adequate margin, a modification can be initiated to make permanent the test conditions that proved to be the most effective. Once the changes are implemented, the outstanding NCI can be removed. The results of this evaluation are that there are no unreviewed safety questions generated for the performance of this test.

### SAFETY EVALUATION SUMMARY

The PRVS will be run in its normal periodic testing (non-accident) configuration. This test will operate one train of PRVS. ES functions of the system will remain available. AHU 3-9 will be shut off during the test and restarted at the end of the test. Exhaust Fans 3-4 and 3-6 will also be briefly shut off. The exhaust louvers in the PEER will be sealed for a portion of this test. However, should an accident occur during these evolutions, the accident mitigating functions of the PRVS will not be compromised. No new failure modes are created by this test. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no UFSAR or technical specification changes are required.

## PROCEDURES

### DESCRIPTION

SYSTEM: Low Pressure Service Water (LPSW)

This safety evaluation is for Rev. 11 to PT/3/A/0251/023, "LPSW System Flow Test." The activity is for the following: (1) Verify LPSW flow conditions while simulating accident conditions. (2) Verify or set travel stop positions for cooler outlet valves. (3) Verify throttling capability of associated LPSW valves. (4) Obtain performance data for 3LPSW-251. (5) Demonstrate the Unit 3 LPSW pumps can take suction siphon from the ECCW siphon.

### SAFETY EVALUATION SUMMARY

These changes to the procedure simply facilitate and enhance the system flow test. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. The LPSW system can still fulfill all its cooling requirements (LPI, RBCUs, RCP coolers, etc.). The LPI pumps will not cavitate during performance of the test. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. There is no change to plant setpoints, safety limits or design parameters. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification or UFSAR changes are required as a result of this procedure.

## PROCEDURES

### DESCRIPTION

SYSTEM: Low Pressure Injection (LPI)

The safety evaluation supports test procedure TT/1/A/0150/055 to verify the performance of the new LPI Injection valves 1LP-17 & 18, which were replaced under Minor Modification ONOE-12477, 12478, 14877, & 14878. The test will,

- verify that the injection valves can pass the required LPI design flow, 3,000 gpm,
- verify the valves' Cv. curve,
- determine the manual throttling position required for the valves during some design basis accident scenarios,
- verify the injection valves can open and close under design flow conditions, and
- verify the injection valves can be throttled from the control room at flow rates up to and including 3000 gpm.

### SAFETY EVALUATION SUMMARY

The required unit status for TT/1/A/0150/055 is for Unit 1 to be in No Mode, Mode 6, or Mode 5 with RCS Loops Filled. TT/1/A/0150/055 is written such that it is performed while Unit 1 is in Normal Decay Heat Mode per OP/1/A/1104/004 (LPI System). TT/1/A/0150/055 creates a system alignment in which these valves can be tested. During the above alignment, valves 1LP-17 & 18 are manually throttled to various flow rates and valve position is recorded. The valves are then remotely throttled from the control room to assess the valves' remote throttling performance. This system alignment does not exceed design limits of the LPI system. Procedural control is in place to ensure adequate decay heat removal capability is maintained during this evolution. Abnormal Procedure, AP/1/A/1700/026, "Loss of Decay Heat Removal," addresses the equipment required if LPI were to be lost during Mode 5 or 6.

The performance of TT/1/A/0150/055 involves no USQs or safety concerns. No UFSAR or Technical Specification changes are required.

## PROCEDURES

### DESCRIPTION

SYSTEM: Penetration Room Ventilation (PRVS)

This safety evaluation supports procedure TT/3/A/0110/022 to evaluate options that might eliminate the adverse interaction between the Unit 3 PRVS and the PEER with AHU 3-9 off and to examine the effects of a simulated loss of switchgear TC. The test manipulates doors and/or exhaust louvers that may make the PRVS system (one train operating) able to maintain a vacuum with respect to all adjacent Auxiliary Building zones with AHU 3-9 off and in a simulated loss of switchgear TC configuration. A modification may then be initiated to make permanent the test conditions that proved to be the most effective.

### SAFETY EVALUATION SUMMARY

This activity does not increase the likelihood of initiation or adversely affect the mitigation of any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification or UFSAR changes are required as a result of this test procedure.

## PROCEDURES

### DESCRIPTION

SYSTEM: Reactor Building Purge (RBPS)

Revision 5 of OP/1,2,3/A/1102/014 established a limit of 40°F for outside air temperature when the RB Purge system is operating with the equipment hatch off.

### SAFETY EVALUATION SUMMARY

This activity does not increase the likelihood of initiation or adversely affect the mitigation of any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification or UFSAR changes are required as a result of this test procedure.

## PROCEDURES

### DESCRIPTION

SYSTEM: emergency procedure (EOP)

The emergency procedure (EOP) has been revised throughout to meet the standards outlined in the EOP to Writer's Guide for Emergency and Abnormal Procedures Rev. 7.

### SAFETY EVALUATION SUMMARY

The procedure changes have been evaluated not to affect analysis, the intent of the procedure and have been evaluated that not change the SAR and commitments. The procedure changes did not involve an Unreviewed Safety Question. No UFSAR or Tech Spec changes are required. As a result, this activity may be implemented under the 10CFR50.59 regulation. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification or UFSAR changes are required as a result of this procedure change.

## PROCEDURES

### DESCRIPTION

SYSTEM: LPSW System

This 10CFR 50.59 USQ Evaluation is to review test procedure PT/2/A/0251/023, "LPSW System Flow Test". Significant changes were made to the test procedure. Thus this evaluation is for the entire test procedure, not just the changes. The purpose of the test is to verify Low Pressure Service Water System (LPSW) flow conditions while simulating accident conditions.

### SAFETY EVALUATION SUMMARY

PT/2/A/0251/023 will not change or prevent any actions described in the SAR nor will they alter any assumptions previously made in evaluating the radiological consequences of an accident. The LPSW System will continue to perform all design, operation, and accident mitigation functions, as they are presently described in the SAR. No other SSCs are adversely affected by the performance of PT/2/A/0251/023. PT/2/A/0251/023 will not affect any fission product barriers or hinder the access to accident mitigation equipment in post accident conditions. The Reactor Coolant System pressure boundary is not adversely affected. No new adverse interactions were determined to exist. No new failure modes are credible. The performance of PT/2/A/0251/023 does not adversely affect any plant safety limit, set point, or design parameters. The test also does not adversely affect the fuel, fuel cladding, RCS, or containment integrity. No SSCs are degraded. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification or UFSAR changes are required as a result of this procedure change.

## PROCEDURES

### DESCRIPTION

SYSTEM: Penetration Room Ventilation (PRVS)

This safety evaluation supports TT/3/A/0110/022, rev. 1. The test will manipulate doors and/or exhaust louvers that may make the PRVS system (one train operating) able to maintain a vacuum with respect to all adjacent Auxiliary Building zones with AHU 3-9 off and in a simulated loss of switchgear TC configuration. If testing shows this to be successful, a modification can be initiated to make permanent the test conditions that proved to be the most effective. Once the changes are implemented, the outstanding NCI can be removed.

### SAFETY EVALUATION SUMMARY

The ventilation systems are not accident initiators. The purpose of the TT is simply to gather data during both one and two train operation of the PRVS with AHU 3-9 off and for a simulated loss of switchgear TC. Running one or two trains of PRVS in these configurations will not increase the probability of an accident. No ES functions of the PRVS system will be defeated for this test. Changing the stack flow criteria in the TT will not increase the probability of an accident. Change #1 to the TT will only remove stack flow prerequisite conditions and will not affect any plant equipment. Since the ventilation systems are not accident initiators, this activity will not increase the probability of an accident evaluated in the SAR. There are no safety concerns or unreviewed safety questions resulting from the performance of TT/3/A/0110/022 or revision 1 for TT/3/A/0110/022. No UFSAR or technical specification changes are required.

## PROCEDURES

### DESCRIPTION

SYSTEM: ECCW, ESV, LPSW

This safety evaluation supports procedure (TT/3/A/0261/014) that is used to test the Emergency Condenser Circulating Water (ECCW) System, including the Essential Siphon Vacuum (ESV) System support function. This test is required by Technical Specification SR 3.7.8.9.

### SAFETY EVALUATION SUMMARY

The testing activities associated with the ECCW System cannot cause any of the accidents evaluated in Chapter 15 of the UFSAR. The ECCW System is involved with mitigation of a LOCA/LOOP or other LOOP events. No postulated accidents are affected by this test procedure. The CCW System, ESV System, and LPSW System are operated within their design bases, as described in the SAR. There are no adverse effects on containment integrity, radiological release pathways, fuel design, filtration systems, MSR/V relief setpoints, or Radwaste systems. Therefore, the consequences of an accident evaluated in the SAR are not increased. No new types of accidents or failure mechanisms are postulated. This change does not change the physical design of the system. The LPSW, CCW, and ESV Systems will continue to be operated, tested, and maintained as described in the SAR. The systems will continue to be operated within their existing design parameters. No new malfunctions are postulated. This change involves no physical modifications to the plant or changes in operating characteristics or procedures. The change involves no relaxation of seismic, environmental, or QA requirements. There are no concerns associated with reactivity management. The change does not affect any safety limits or limiting safety system settings. No plant safety limits, setpoints, or design parameters are adversely affected. There is no impact to the nuclear fuel, cladding, Reactor Coolant System (RCS), or containment integrity. The proposed change does not require a change to Technical Specifications. The proposed change does not involve an unreviewed safety question. No changes to the UFSAR are required.

## PROCEDURES

### DESCRIPTION

SYSTEM: Condensate

This safety evaluation supports TT/0/A/0261/017. The purpose of the procedure is: 1.) To obtain performance data for "A" and "B" Chiller Condenser Service Water Pumps. 2.) To reverse flow test check valve CCW-487 (Chiller Cooling Water Seismic/Non-Seismic Boundary Check).

### SAFETY EVALUATION SUMMARY

The activity does not create any conditions or events, which lead to accidents previously evaluated in the SAR. After the performance of the test procedure, the Chilled Water (WC) System will continue to operate as originally designed. During the performance of TT/0/A/0261/017, control area cooling is maintained to ensure cooling of vital equipment. The WC System remains operable during the test. Proceduralized controls prevent tripping an operating chiller. The activity will not change or prevent any actions described in the SAR nor will they alter any assumptions previously made in evaluating the radiological consequences of an accident. The WC System will continue to perform all design, operation, and accident mitigation functions, as they are presently described in the SAR. No other SSCs are adversely affected by the performance the test procedure. The activity will not affect any fission product barriers or hinder the access to accident mitigation equipment in post accident conditions. The Reactor Coolant System pressure boundary is not adversely affected. No new failure modes are postulated. Adequate Chiller Condenser Service Water Pump NPSH is maintained during the test. Throttling CCW-460 will not result in any adverse affects. The performance of the test procedure does not adversely affect any plant safety limit, set point, or design parameters. The test also does not adversely affect the fuel, fuel cladding, RCS, or containment integrity. The performance of TT/0/A/0261/017 involves no USQs or safety concerns. No UFSAR or Technical Specification changes are required.

## PROCEDURES

### DESCRIPTION

SYSTEM: Condensate

The purpose of TT/0/A/0261/018 (Chiller Condenser Service Water Pump Air Accumulation) is to determine if air accumulation occurs in Chiller Condenser Service Water Pump piping during CCW siphon flow.

### SAFETY EVALUATION SUMMARY

The activity does not create any conditions or events, which lead to accidents previously evaluated in the SAR. After the performance of the test procedure, the Chilled Water (WC) System will continue to operate as originally designed. During the performance of TT/0/A/0261/018, control area cooling is maintained to ensure cooling of vital equipment. The WC System remains operable during the test. No adverse interactions are expected during the performance of the test procedure. WC System Single failure criteria requirements are maintained. The activity will not change or prevent any actions described in the SAR nor will they alter any assumptions previously made in evaluating the radiological consequences of an accident. The WC System will continue to perform all design, operation, and accident mitigation functions, as they are presently described in the SAR. The activity will not affect any fission product barriers or hinder the access to accident mitigation equipment in post accident conditions. The Reactor Coolant System pressure boundary is not adversely affected. No accidents different than already evaluated in the SAR are postulated. No new failure modes are postulated. The performance of the test procedure does not adversely affect any plant safety limit, set point, or design parameters. The test also does not adversely affect the fuel, fuel cladding, RCS, or containment integrity.

The performance of TT/0/A/0261/018 involves no USQs or safety concerns. No UFSAR or Technical Specification changes are required.

## **V. OPERABILITY EVALUATIONS**

None

## VI. SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Low Pressure Service Water (LPSW)

This safety evaluation supports a revision to Selected Licensee Commitment (SLC) 16.9.12, "Additional Low Pressure Service Water (LPSW) System and Siphon Seal Water (SSW) System Operability Requirements." LPSW-251 & -252 are the normal LPI Cooler flow control valves and are normally in AUTO at a set point of 3000 gpm. If these control valves are inoperable, this SLC revision allows the valves to be failed open during normal operation. With LPSW-251,-252 failed open and unavailable, LPSW-4 and LPSW-5 can be throttled to maintain sufficient LPSW pump NPSH and adequate LPSW flow to the safety related loads.

### SAFETY EVALUATION SUMMARY

No new components are being added to the facility. The SLC revision does not adversely affect LPSW or SSW flow used for normal or accident operation. Therefore, this SLC revision will not create any condition which will cause a LOCA, LOOP, or any other accident analyzed in the FSAR. The ESV, LPSW, and SSW Systems are designed to withstand a single active failure without loss of function. This requirement has not changed and will continue to be met. The guidance provided in SLC 16.9.12 is consistent with Oconee's design basis. No new equipment is being added and no new adverse interactions were determined to exist. SLC 16.9.12 does not adversely affect any plant safety limits, set points, or design parameters. The change also does not adversely affect the fuel, fuel cladding, Reactor Coolant System, or containment integrity. With the requirements within SLC 16.9.12, the margin of safety as defined in the basis to any Technical Specification will not be reduced. The SSW, ESV and LPSW Systems continue to be fully capable of fulfilling its safety functions.

The revision to Selected Licensee Commitment 16.9.12 does not result in an Unreviewed Safety Question or safety concerns. No Technical Specification changes are required.

## VI. SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Condensate

This revision to Selected Licensee Commitments (SLC) 16.9.11 will add an option to allow a condenser outlet valve to be incapable of automatically closing if it is already closed and capable of operating either manually or automatically. Also, a note will be added to state that the valve control switch may be placed in the HAND position with the valve open for the purpose of immediately closing the valve. This note will allow operators to manually close a condenser outlet valve without having to enter an Action condition. The Bases section will be revised accordingly.

### SAFETY EVALUATION SUMMARY

The condenser outlet valves will continue to be capable of performing their required functions. There are no adverse effects on containment integrity, radiological release pathways, fuel design, filtration systems, MSR/V relief setpoints, or Radwaste systems. The consequences of any malfunction of a condenser outlet valve or a condenser expansion joint would be the same as described in the SAR. If a condenser outlet valve is closed and is capable of operating either manually or automatically, it is in a safe position for mitigating a TB flood. The proposed change does not affect any margins of safety defined in the basis for any technical specification. The TB flood protection measures are not included in the Technical Specifications. The proposed change does not affect any safety limits or limiting safety system settings. No plant safety limits, setpoints, or design parameters are adversely affected. There is no impact to the nuclear fuel, cladding, Reactor Coolant System (RCS), or containment integrity.

The proposed change to SLC 16.9.11 does not require a change to Technical Specifications. The proposed changes do not involve an unreviewed safety question. No changes to the UFSAR are required, other than the change to the SLC itself.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Additional Low Pressure Service Water (LPSW)

Selected Licensee Commitment (SLC) 16.9.12, "Additional Low Pressure Service Water (LPSW) System Operability Requirements" is revised. The revision is editorial in nature and simply adds a reference to OSC-5409 for referral for the single failure analysis information. This SLC defines operability requirements for the Siphon Seal Water (SSW) System.

### SAFETY EVALUATION SUMMARY

The revision to SLC 16.9.12 provides a source for information regarding single failure conclusions. No new components are being added. SLC 16.9.12 ensures that the safety-related functions of the SSW, ESV, and Low Pressure Service Water (LPSW) systems are maintained. SLC 16.9.12 does not create any conditions or events, which lead to accidents previously evaluated in the SAR. The SLC revision does not adversely affect SSW flow used for normal or accident operation. Therefore, this SLC revision will not create any condition which will cause a Loss of Coolant Accident (LOCA), Loss of Offsite Power (LOOP), or any other accident analyzed in the UFSAR. By maintaining SSW flow to the ESV pumps following a LOOP, the probability of equipment malfunction is reduced by the conditions within the SLC. The revision to Selected Licensee Commitment 16.9.12 does not result in an Unreviewed Safety Question or safety concerns. No Technical Specification changes are required. SLC 16.9.12 was revised.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: CO2 fire suppression system

This safety evaluation supports changes to SLC 16.9.5 which clarifies the fire watch patrol requirements to insure that the correct fire watch patrol frequency based on Keowee CO2 fire suppression system inoperability and the availability and operability of the area(s) fire detection instrumentation. Therefore, either by remote indication by fire alarm panel located in the control rooms or by observation from assigned fire watch patrol, the appropriate personnel as expected can mitigate early indications of fire development.

### SAFETY EVALUATION SUMMARY

No equipment modifications or technical changes are being made as a result of this change. This change is a clarification of the administrative requirements when fire barriers are found to be inoperable. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification changes are required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Keowee

This revision to Selected Licensee Commitments (SLC) 16.9.7 changed all the required lake levels to absolute lake levels without instrument error included. Also, the Bases section was revised to state that instrument error must be added if using a computer point to verify lake level.

### SAFETY EVALUATION SUMMARY

The lake level limits in SLC 16.9.7 are established to ensure the LPSW System and the Keowee Hydro remain operable to perform their roles in mitigating design basis accidents. The changes to allow use of the absolute lake level limits (without instrument error included) will not prevent the LPSW System and Keowee Hydro from performing their required safety functions. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification changes are required. This revised SLC is consistent with other sections of the UFSAR, and no UFSAR changes are necessary.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Keowee

This 10CFR50.59 Safety Evaluation addresses a revision to Selected Licensee Commitment (SLC) 16.9.7, "Keowee Lake Level." SLC 16.9.7 is revised to allow unit operation at a lake level of 791 feet. SLC 16.9.7 was also revised to identify important components whose operability is dependent on Lake Level.

### SAFETY EVALUATION SUMMARY

The lake level limits ensure adequate pump NPSH and/or pump capacity. No new components are being added to the facility. SLC 16.9.7 ensures that the safety-related functions of the LPSW, WC, ESV, HPSW and ECCW systems are maintained by ensuring adequate lake level requirements. SLC 16.9.7 does not create any conditions or events, which lead to accidents previously evaluated in the SAR. The SLC revision does not adversely affect flow rates used for normal or accident operation. Therefore, this SLC revision will not create any condition which will cause a LOCA, LOOP, or any other accident analyzed in the FSAR. The LPSW, WC, ESV, HPSW and ECCW systems are designed to withstand a single active failure without loss of function. This requirement has not changed and will continue to be met. The guidance provided in SLC 16.9.7 is consistent with Oconee's design basis. No accidents different than already evaluated in the SAR are postulated. No new failure modes are postulated. SLC 16.9.7 does not adversely affect any plant safety limits, set points, or design parameters. The change does not adversely affect the fuel, fuel cladding, Reactor Coolant System, or containment integrity. With the requirements within SLC 16.9.7, the margin of safety as defined in the basis to any Technical Specification will not be reduced.

The revision to Selected Licensee Commitment 16.9.7 does not result in an Unreviewed Safety Question or safety concerns. No Technical Specification changes are required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: None

These changes upgrade the SLC figures 16.6.2-1, 16.6.2-2, and 16.6.2-3 in coordination with the license renewal effort to only provide additional information and enhance the figures 16.6.2-1, 16.6.2-2, and 16.6.2-3 to reflect that for a 60 year plant life. The prescribed lower limits of these tendons remain above minimum required values.

### SAFETY EVALUATION SUMMARY

This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No SSCs are degraded. There is no effect on reactivity. There is no change to plant setpoints, safety limits or design parameters. This activity also has no effect on any margins of safety as previously evaluated in the SAR. The revision to these SLCs did not result in any plant modifications or other activities that could have resulted in an unreviewed safety question. No Technical Specification changes were required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Reactor Coolant System (RCS)

This revision changed the sampling frequency for RCS chloride, fluoride, and oxygen to 72 hours (SLC 16.5.7, Chemistry Requirements, SR 16.5.7.1). The latest revision to this SLC during ITS implementation carried the wording forward of 'three times per week'. This change is being made to be consistent with SLC requirements at the other stations (McGuire and Catawba) and to define a specific frequency (i.e. 72 hours vs. 3/week) which is easier to interpret.

### SAFETY EVALUATION SUMMARY

No additional safety implications are created as a result of the proposed change. The change merely clarifies the SLC frequency. The ability of the RCS and associated systems to perform their intended functions is not affected by this change. No new Operator actions will be required. Existing equipment and procedures support the proposed change. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No SSCs are degraded. There is no effect on reactivity. There is no change to plant setpoints, safety limits or design parameters. This activity also has no effect on any margins of safety as previously evaluated in the SAR. The revision to these SLCs did not result in any plant modifications or other activities that could have resulted in an unreviewed safety question. No Technical Specification changes were required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Control Room Ventilation system (CRVS)

This 50.59 evaluation supports revision to the SLC 16.15.2 bases to more clearly define the requirements for CRVS filter/flow testing.

### SAFETY EVALUATION SUMMARY

This documentation activity did not change existing system design, construction, or operation. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity does not involve a physical alteration of the plant. There is no change to plant setpoints, safety limits or design parameters. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No Technical Specification changes were required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: High Pressure Injection (HPI)

This change revised Selected Licensee Commitment (SLC) 16.13.1 Minimum Staffing Requirements to reflect the addition of three operators when Condition B of Technical Specification (TS) 3.5.2, High Pressure Injection (HPI) is entered. This requirement is a commitment from the High Pressure Injection (HPI) license amendment 314, 314 & 314. The NRC on 9/6/00 issued HPI License Amendment 314, 314 & 314.

### SAFETY EVALUATION SUMMARY

The ADV flow path for each steam generator is credited as a compensatory measure to permit continued operation with Thermal Power  $\leq$  75% RTP: a) for 30 days with an HPI pump or HPI discharge crossover valve(s) inoperable; and b) for 72 hours with an HPI train inoperable. During these times, manual operator action of the ADV flow path is credited for depressurizing the steam generator and enhancing primary-to-secondary heat transfer during certain small break loss of coolant accidents (LOCAs). This activity does not involve an unreviewed safety question. This change involves increasing staffing to reflect two operators to manipulate the ADV flow paths and one operator to activate the SSF, if necessary. No changes to Technical Specifications are required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Reactor Coolant System (RCS)

This safety evaluation supports a revision to Selected Licensee Commitment (SLC) 16.5.1, which includes:

- The design of the high point vents,
- The description of the high point vents,
- Adding the information on the PORV that was included in previous documentation,
- Separation of the bases description of the Reactor Vessels Head Vent / RCS Loop A and Loop B High Point Vents and the PORV, and
- Include the clarification of “capable of being opened” as “capable of being opened or open”.

### SAFETY EVALUATION SUMMARY

The revision to SLC 16.5.1 provides more complete information pertaining to the constituents of the Reactor Coolant system Vents. The first consisting of Hot Leg Loop "A" Vent Valves RC155 & RC156, Hot Leg Loop "B" Vent Valves RC157 & RC158, Reactor Vessel Head Vent Valves RC159 & RC160 and the second consisting of Pressurizer Vent Valves RC66 (PORV) and RC4 (Block Valve). Providing the additional information in the bases of SLC 16.5.1 clarifies the function and description of the Reactor Coolant System Vents and retains information pertaining to the Pressurizer Vent portion which was in original documentation relative to Generic Letter 83-37 dated November 25, 1985. Based on the considerations documented in this evaluation and the responses to the seven standard questions, the activity of adding information to the bases of Selected Licensee Commitment 16.5.1 “Reactor Coolant System Vents” involves no unreviewed safety questions or safety concerns. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. There is no change to plant setpoints, safety limits or design parameters. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No Technical Specification changes were required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: High Pressure Injection (HPI)

This activity involved the revision of SLC 16.6.12 (Additional High Pressure Injection (HPI) Requirements) to include compensatory actions associated with the operable but degraded / non-conforming condition identified within PIP 01-00157. The revision of SLC 16.6.12 provides additional HPI system requirements beyond those captured within Technical Specifications. It should be noted that the normal and post accident operation of the HPI system is unaffected by this activity.

### SAFETY EVALUATION SUMMARY

This documentation activity did not change existing system design, construction, or operation. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity does not involve a physical alteration of the plant. There is no change to plant setpoints, safety limits or design parameters. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No Technical Specification changes were required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: High Pressure Injection (HPI)

This change will delete all HPI requirements with the exception of Surveillance Requirement (SR) 16.6.12.1 and SR 16.6.12.2 from SLC 16.6.12. The SLC was revised to reflect the requirements from the High Pressure Injection (HPI) license amendment 314, 314 & 314. The NRC on 9/6/00 issued HPI License Amendment 314, 314 & 314. All HPI requirements with the exception of the SRs have been relocated in the new HPI technical specification. This change is purely logistical and editorial.

### SAFETY EVALUATION SUMMARY

This change is purely editorial and supported by license amendment 314,314 & 314. The NRC on 9/6/00 issued HPI License Amendment 314, 314 & 314. This change involved a SLC change for 16.6.12. No other changes to the UFSAR are required. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity does not involve a physical alteration of the plant. There is no change to plant setpoints, safety limits or design parameters. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No Technical Specification changes were required. The subjects SLCs were revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Reactor Building Spray (RBS)

This safety evaluation supports a new Selected Licensing Commitment (SLC) 16.6.13. It requires surveillance of three plant parameters used as inputs to safety analyses and system calculations. These parameters are identified in the Problem Investigation Process (PIP) database program as compensatory measures required for maintaining the Building Spray (BS) system Operable But Degraded. These parameters are inputs to the containment response analysis, which documents the availability of a minimum containment overpressure of 2.2 psi.

### SAFETY EVALUATION SUMMARY

This activity creates a new licensing commitment to perform surveillance of plant parameters critical to maintaining the design basis of the Low Pressure Injection system. The parameters involved are Reactor Building pressure and temperature, and BWST temperature. These parameters must remain within limits assumed in the containment response analysis, which supports the credit of 2.2 psi containment overpressure for Oconee Nuclear Station. Credit of 2.2 psi containment overpressure has been identified as required to ensure adequate NPSH for LPI pumps under worst case accident conditions. The surveillance's are to be performed once each 12-hour shift, and are performed in the control room. No design basis or safety functions of any structure, system or component are adversely affected by this change. This activity does not in any way affect the mitigation of any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification changes are required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Emergency Core Cooling System (ECCS)

This safety evaluation supports a revision to Selected Licensee Commitments (SLC) 16.6.5. The revision establishes a one hour restoration time for the Core Flood Tank outlet valve breakers if found closed or not tagged open.

### SAFETY EVALUATION SUMMARY

This activity adds a one-hour restoration time allowance to Selected Licensing Commitment 16.6.5, which requires the Core Flood Tank outlet valve breakers to be open and tagged. This change will make the required action for a mispositioned breaker consistent with valve mispositioning as currently provided for in Technical Specification 3.5.1. This activity does not involve an unreviewed safety question. This activity does not in any way affect the mitigation of any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification changes are required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: RCS, FDW, MS (various systems)

This safety evaluation supports changes to Selected Licensee Commitment (SLC) 16.9.18, which provides a regulatory commitment addressing operability and inspection requirements for snubbers. This commitment was previously Technical Specifications (TS) 3.14 and 4.18 and was approved for relocation to the UFSAR. The changes clarify MODE applicability of this SLC, clarify appropriate use of snubber required actions, and incorporates Generic Letter (GL) 90-09 visual inspection frequencies.

### SAFETY EVALUATION SUMMARY

The changes to SLC 16.9.18 do not change the functional testing requirements for snubbers, nor does it decrease the acceptance criteria for visual inspections. Only the visual inspection frequencies are being changed to those recommended in GL 90-09. The NRC has already approved these frequencies. Visual inspections performed to the frequencies given in GL 90-09 are stated to provide the same confidence level of the snubber population's operability. Visual inspections performed according to GL 90-09 frequencies are consistent with the description of the visual inspection program given in UFSAR Section 3.9.3.4.2.2. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification changes are required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Fire Protection

This change deletes SR 16.9.2.3, adds three new surveillance requirements (SR) (16.9.2.3, 16.9.2.4, and 16.9.2.5), adds explanatory information to the Bases section, and enhances Table 16.9.2-1 (to clarify between actuation devices and fire detection instrumentation). The new surveillance requirements enhance the determination of system operability for the sprinkler spray system components than was previously stated with only one SR. The Bases section will also be changed to better describe the intent of the new SR's.

### SAFETY EVALUATION SUMMARY

The performance criteria for each sprinkler and spray system can still be met by assuring sufficient water flow impingement on the surface area of the location and/or equipment. Therefore, it is considered an enhancement to the SLC to define in more discrete terms the engineering expectations of functionality for sprinkler and spray system performance. This change does not change the license basis or any previously approved NRC commitments. This activity does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No SSCs are degraded. There is no effect on reactivity. There is no change to plant setpoints, safety limits or design parameters. This activity also has no effect on any margins of safety as previously evaluated in the SAR. The revision to these SLCs did not result in any plant modifications or other activities that could have resulted in an unreviewed safety question. No Technical Specification changes and no UFSAR changes were required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Reactor Coolant System (RCS)

This safety evaluation supports the revision of Selected Licensee Commitment 16.5.1 "Reactor Coolant System Vents", the information added is material referenced in the SER dated November 2, 1983. Specifically, information from the letter dated March 26, 1982 that describes the normal configuration of the High Point vent and Pressurizer vent.

### SAFETY EVALUATION SUMMARY

The revision to SLC 16.5.1 will provide more complete information pertaining to the constituents of the Reactor Coolant system Vents. The first consisting of Hot Leg Loop "A" Vent Valves RC155 & RC156, Hot Leg Loop "B" Vent Valves RC157 & RC158, Reactor Vessel Head Vent Valves RC159 & RC160 and the second consisting of Pressurizer Vent Valves RC66 (PORV) and RC4 (Block Valve). Providing the additional information in the bases of SLC 16.5.1 clarifies the function and description of the Reactor Coolant System Vents and retains information pertaining to the Pressurizer Vent portion which was in original documentation relative to Generic Letter 83-37 dated November 25, 1985. Based on the considerations documented in this evaluation and the responses to the seven standard questions, the activity of adding information to the bases of Selected Licensee Commitment 16.5.1 "Reactor Coolant System Vents" involves no unreviewed safety questions or safety concerns. No USQs are involved and no Technical Specification changes are required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Control Room Ventilation system (CRVS)

Technical Specification (TS) 5.5.12, Ventilation Filter Testing Program, specifies the testing requirements for the Control Room Ventilation system (CRVS) filters. SLC 16.15.2 defines the surveillance requirements for CRVS filter testing and is thus the interpretation of TS 5.5.12. Therefore, to add clarity to the requirements concerning filter/flow testing in the CRVS, the bases section of SLC 16.15.2 was revised.

### SAFETY EVALUATION SUMMARY

The results of this evaluation show that there are no unreviewed safety questions created by this activity. It does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There are no physical changes to the plant. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification changes are required. The subject SLC was revised accordingly.

## SELECTED LICENSEE COMMITMENTS

### DESCRIPTION

SYSTEM: Borated Water Storage (BWST)

This activity creates a new licensing commitment to perform surveillance of plant parameters critical to maintaining the design basis of the Low Pressure Injection system. The parameters involved are Reactor Building pressure and temperature, and BWST temperature. These parameters must remain within limits assumed in the containment response analysis, which supports the credit of 2.2 psi containment overpressure for Oconee Nuclear Station. Credit of 2.2 psi containment overpressure has been identified as required to ensure adequate NPSH for LPI pumps under worst case accident conditions. The surveillance's are to be performed once each 12-hour shift, and are performed in the control room. This activity does not involve an unreviewed safety question. No changes to Technical Specifications

### SAFETY EVALUATION SUMMARY

The results of this evaluation show that there are no unreviewed safety questions created by this activity. It does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There are no physical changes to the plant. There is no effect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No USQs are involved and no Technical Specification or UFSAR changes are required.

## VII. UFSAR CHANGES (Pkg. 99-164)

### DESCRIPTION

SYSTEM: Reactor

This activity revised UFSAR Table 4-3 to provide minor corrections to the cycle 1 core burnup data. The original FSAR shows the Unit 1 and 2 values rounded to 9600 and 14,400 MWD/MTU, respectively. The Unit 3 value is listed in the original FSAR as 14,275 MWD/MTU, but this is a projection, because the information in the original FSAR is dated 8/25/72, while Unit 3, cycle 1 didn't end until 9/18/76. This activity will therefore revise UFSAR Table 4-3 regarding the cycle 1 core average burnup data to ensure consistency with existing design basis documents.

### SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reflect the as-built plant does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. This activity only revises UFSAR Table 4-3 regarding the cycle 1 core average burnup data to ensure consistency with existing design basis documents. These two statements define Oconee's design basis for radiation monitoring. There is no physical change to the plant SSCs or operating procedures. Plant SSCs as evaluated in the SAR, are not adversely affected by this activity. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There are no adverse effects on reactivity. No safety parameters, set points, or design limits are changed. There is no adverse impact to the nuclear fuel, cladding, RCS, or required containment systems. The margins of safety as defined in the bases to any Technical Specifications are not reduced. This UFSAR change involves no safety concerns or USQs. No Technical Specification changes are required. UFSAR Table 4-3 was revised accordingly.

## UFSAR CHANGES (Pkg. 99-165)

### DESCRIPTION

SYSTEM: Reactor

This activity revised UFSAR Section 4.2.3.1.1 to clarify the fuel rod gas pressure criterion for consistency with the currently approved criterion. This section provides summaries of the analyses of fuel rod cladding stress and strain for reload fuel cycle designs, including "Cladding Stress", "Cladding Strain" and "End of Life Pressures". Topical Report BAW-10183P-A, "Fuel Rod Gas Pressure Criterion", was issued and approved by the NRC to address a revised fuel rod gas pressure criterion to be used in the current analyses. In addition, use of the TACO-3 computer code, including the revised fuel rod gas pressure criterion as described in DPC-NE-2008P-A, "Fuel Mechanical Reload Analysis Methodology Using TACO3" has been reviewed and approved by the NRC. The text of the "End of Life Pressures" analysis is the same as the revised fuel rod gas pressure criterion. This criterion does not represent a separate analysis for reload fuel cycle designs, but a replacement of the existing criterion, as is clearly stated in BAW-10183P-A.

### SAFETY EVALUATION SUMMARY

This activity only updates UFSAR Section 4.2.3.1.1 to match the current, previously reviewed and approved fuel rod gas pressure criterion. Adding, correcting or clarifying UFSAR information to more accurately reflect the as-built plant does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. No physical changes to the station are made by this activity. This activity will not prevent any SSC from performing its required functions. This change does not affect the design, function or operation of plant SSCs. They do not adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This activity has no effect on any margins of safety as previously evaluated in the SAR. As such, this change does not present an unreviewed safety question and no Technical Specification changes are required. UFSAR Section 4.2.3.1.1 was revised accordingly.

UFSAR CHANGES (Pkg. 99-167)

DESCRIPTION

SYSTEM: Reactor

This activity revised UFSAR Section 4.3.2.4.4 so that missing text included in the Original SAR is restored, thus correcting a somewhat confusing sentence regarding the negative effect of distributed poisons (lumped burnable poisons or control rods) on the moderator temperature coefficient. Amplifying information related to the moderator temperature coefficient was omitted when the information was transcribed from the Original SAR. Restoring this information will ensure that the statement is complete, and supports the conclusion provided.

SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reflect the as-built plant does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways, failure modes, or accident scenarios are created. There are no reactivity management concerns. There are no physical changes to the plant or procedures. There is no effect on plant safety limits, setpoints, or design parameters. There is no reduction in any safety margins associated with the fission product barriers. As such, this change does not involve an unreviewed safety question (USQ) and no Technical Specification changes are required. UFSAR Section 4.3.2.4.4 was revised accordingly.

UFSAR CHANGES (Pkg. 99-171)

DESCRIPTION

SAFETY EVALUATION SUMMARY

SYSTEM: Reactor

UFSAR Section 4.2.2 describes the fuel system design. The discussion includes fuel assembly types Mk-B4 through Mk-B10L, however, only fuel types Mk-B9 through Mk-B10L are currently in use in the ONS core designs. This activity will revise UFSAR Sections 4.2.2.1.1, 4.2.2.1.2, 4.2.2.1.3, 4.2.2.1.5 and 4.2.2.1.6 to indicate that certain fuel assembly types are no longer in use at Oconee Nuclear Station. Affected text will be changed from present tense to past tense as appropriate to differentiate previous fuel assembly types from those in current use. The text is being retained to show the evolution of the fuel assembly designs over time.

The revisions described above are merely grammatical changes to reflect that certain fuel assembly types are not used in current core designs. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways, failure modes, or accident scenarios are created. There are no reactivity management concerns. There are no physical changes to the plant or procedures. There is no effect on plant safety limits, setpoints, or design parameters. There is no reduction in any safety margins associated with the fission product barriers. As such, this change does not involve an unreviewed safety question (USQ) and no Technical Specification changes are required. UFSAR Section 4.2.2 was revised accordingly.

## UFSAR CHANGES (Pkg. 99-172)

### DESCRIPTION

SYSTEM: Reactor

This activity revised UFSAR Section 4.3.2.5 to correct the assumed control rod group worth. UFSAR Section 4.3.2.5 currently states that the assumed nominal Control Rod Assembly (CRA) group worth is 1.2%  $\Delta\rho$ . Calculations OSC-6654, "Oconee Unit 3 Cycle 17 Reload Safety Evaluation and 50.59", OSC-6907, "Oconee Unit 1 Cycle 18 Reload Safety Evaluation", and OSC-7045, "Oconee Unit 2 Cycle 17 Reload Safety Evaluation and 50.59", along with UFSAR Sections 15.2 and 15.3, assume a nominal CRA group worth of 1.5%  $\Delta\rho$ . This activity will therefore revise UFSAR section 4.3.2.5 for consistency with the remainder of the UFSAR, and with the design basis.

### SAFETY EVALUATION SUMMARY

These changes were made to clarify, correct, and enhance the UFSAR. This revision has no impact on the system design, function, or operation as previously evaluated in the SAR. This activity will not prevent any SSC from performing its required functions. This change does not affect the design, function or operation of plant SSCs. They do not adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This activity has no effect on any margins of safety as previously evaluated in the SAR. As such, this change does not present an unreviewed safety question and no Technical Specification changes are required. UFSAR Section 4.3.2.5 was revised accordingly.

## UFSAR CHANGES (Pkg. 99-180)

### DESCRIPTION

SYSTEM: Radwaste

This activity revised UFSAR Sections 4.2.1.2.1, 4.2.2, 4.3.1 and 4.3.3.2 to clarify the design bases of the power Doppler coefficient and moderator temperature coefficient (MTC). These sections of the UFSAR currently state that: "The power Doppler and moderator temperature coefficients at power will be negative.", "The burnable poison rod assemblies (BPRAs) assure a negative moderator coefficient through core lifetime.", and "Current nuclear design bases require that the MTC and the power Doppler coefficient be negative at power." This wording could be mis-interpreted as requiring that the MTC and Doppler coefficients each be negative throughout the power operating range. This is not the design basis. The design basis is that the reactor core and associated coolant systems be designed so that the combination of the reactivity effects from the Doppler and moderator temperature coefficients be negative throughout the power operating range.

### SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reflect the as-built plant does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways, failure modes, or accident scenarios are created. There are no reactivity management concerns. There are no physical changes to the plant or procedures. There is no effect on plant safety limits, setpoints, or design parameters. There is no reduction in any safety margins associated with the fission product barriers. As such, this change does not involve an unreviewed safety question (USQ) and no Technical Specification changes are required. UFSAR Sections 4.2.1.2.1, 4.2.2, 4.3.1 and 4.3.3.2 were revised accordingly.

UFSAR CHANGES (Pkg. 00-01)

DESCRIPTION

SYSTEM: Spent Fuel (SF) Cooling

This 10CFR50.59 USQ Evaluation supports changes to the Oconee Updated Final Safety Analysis Report (UFSAR), Sections 3.7.3.9 and 3.7.5. This change adds clarification to the UFSAR concerning Spent Fuel (SF) Cooling system seismic boundary valves that remain open during normal reactor operation.

SAFETY EVALUATION SUMMARY

Correcting UFSAR information to more accurately reflect the as-built plant, current operating practices, or licensing documentation does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways, failure modes, or accident scenarios are created. There are no reactivity management concerns. There are no physical changes to the plant or procedures. There is no effect on plant safety limits, setpoints, or design parameters. There is no reduction in any safety margins associated with the fission product barriers. As such, this change does not involve an unreviewed safety question (USQ) and no Technical Specification changes are required. UFSAR Sections 3.7.3.9 and 3.7.5 were revised accordingly.

UFSAR CHANGES (Pkg. 00-04)

DESCRIPTION

SYSTEM: Turbine Building Sump

UFSAR Section 3.4.1.1.1 was revised to include additional information to clarify the time available from receiving the Turbine Building Emergency High Level Alarm until the 1.75-ft. high curbs at the doorway entrances to the Auxiliary Building are overtopped. This activity is to clarify existing conditions and does not in any way change the physical characteristics of the Station or any of its Operations.

SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reflect the as-built plant does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways, failure modes, or accident scenarios are created. There are no reactivity management concerns. There are no physical changes to the plant or procedures. There is no effect on plant safety limits, setpoints, or design parameters. There is no reduction in any safety margins associated with the fission product barriers. As such, this change does not involve an unreviewed safety question (USQ) and no Technical Specification changes are required. UFSAR Sections 3.4.1.1.1 was revised accordingly.

UFSAR CHANGES (Pkg. 00-10)

DESCRIPTION

SYSTEM: None

UFSAR Section 12.4.5.1, Laboratory and Portable Instruments were revised to allow use of calibration devices for portable air samples other than "Magnehelic Gauges" as described in the UFSAR. Calibration of portable air samples does not require connection to or affect any plant structures, systems or components that are safety related or important to safety.

SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reflect the as-built plant does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. There is no adverse affect of this activity, which provides consistency and clarity. It does not adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. This activity has no effect on any margins of safety as previously evaluated in the SAR. As such, this change does not present an unreviewed safety question and no Technical Specification changes are required. UFSAR Section 12.4.5.1 was revised accordingly.

## UFSAR CHANGES (Pkg. 00-11)

### DESCRIPTION

SYSTEM: Low Pressure Injection (LPI)

In order to allow for both LPI coolers to be placed in service, a new mode of operation is being implemented within operating procedures. The new mode of operation, LPI "series" mode, is similar to both "high pressure" mode and "switchover" mode. UFSAR Section 9.3.3.2.1 was revised to describe and document a new mode of operating the Low Pressure Injection (LPI) system.

### SAFETY EVALUATION SUMMARY

This change does not affect the design, function or operation of plant SSCs. They do not adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This activity has no effect on any margins of safety as previously evaluated in the SAR. As such, this change does not present an unreviewed safety question and no Technical Specification changes are required. UFSAR Section 9.3.3.2.1 was revised accordingly.

## UFSAR CHANGES (Pkg. 00-28)

### DESCRIPTION

SYSTEM: 125 Volt DC

This safety evaluation supports revision to the UFSAR Section 8.3.2.1.1 (125 Volt DC Instrumentation and Control Power System) by removing obsolete information and excessive detail relating to the diode monitoring system as indicated on the attached UFSAR pages. Statements regarding a diode monitor failure analysis, performance of diode factory tests and various diode monitor-operating parameters will be deleted which are beyond level of detail normally found in the UFSAR. Several non-technical editorial changes are also made.

### SAFETY EVALUATION SUMMARY

Clarifying UFSAR information to more accurately reflect the as-built plant, current operating practices, or licensing documentation does not in any way adversely affect the design, integrity, operation or function of the electrical power system. The system is not adversely affected by this activity, which provides consistency and clarity. It does not adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. Based on the above evaluation, the design, function, operation and existing safety analyses for the associated SSC for the diode monitoring system remain unchanged. This change to Section 8.3.2.1.1 of the UFSAR results in no Unreviewed Safety Questions.

UFSAR CHANGES (Pkg. 00-15)

DESCRIPTION

SAFETY EVALUATION SUMMARY

SYSTEM: None

This evaluation supports changes to UFSAR Section 6.4.2.5, Toxic Gas Protection. Section 6.4.2.5 was revised to indicate that the storage of chlorine by the Adkins Water Treatment Plant operated by the Greenville Water System on Lake Keowee has been reviewed for potential impact on Oconee Nuclear Station. This description originally stated that no potential sources of toxic gas releases were identified off site.

There is no physical change to the plant SSCs or operating procedures. Neither the emergency power systems or other important to safety mechanical SSCs will be affected. There are no shutdown margin, reactivity management or fuel integrity concerns. Therefore, analyzed accident scenarios are not impacted. This change is an editorial clarification. This activity is not a test procedure and does not physically change out or modify any plant system, structures or components. No valve manipulations, electrical alignments, or system configuration changes are required. No new hazardous materials or potential missiles are installed. This UFSAR change will not adversely affect the ability to mitigate any SAR described accidents. Unit trips and analyzed accidents do not apply to this editorial type change. There is no adverse impact on relief valve setpoints or Radwaste systems. No safety related or important to safety equipment necessary to place or maintain the plant in safe shutdown condition will be impacted. There is no risk of unit trip, or challenge to the RPS or other safety systems.

UFSAR CHANGES (Pkg. 00-17)

DESCRIPTION

SYSTEM: None

This safety evaluation supports changes to UFSAR Section 3.8.4.5, "Structural Acceptance Criteria", and Table 3-14, "Accident, Wind and Seismic Load Combinations and Factors for Class 1 Structures". These UFSAR sections were revised to clarify the allowable stress criteria for reinforced concrete design vs. structural steel design, and the applicability of Table 3-14 to reinforced concrete design.

SAFETY EVALUATION SUMMARY

The clarification that stress limits currently in 3.8.4.5 apply only to concrete and the clarification in Table 3-14 that concrete capacity reduction factors apply to embedded fabricated structural steel result in no USQ's. These changes were made to clarify, correct, and enhance the UFSAR Radwaste systems descriptions and current operating practices. This change does not affect the design, function or operation of plant SSCs. They do not adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. UFSAR Section 3.8.4.5, and Table 3-14 were revised accordingly.

UFSAR CHANGES (Pkg. 00-27)

DESCRIPTION

SYSTEM: High Pressure Injection (HPI), Spent Fuel Pool (SFP)

The activity is a clarifying UFSAR change, to document existing licensing basis information in Section 3.2.2. The concern of the NRC was the ability of a secondary side system (EFW) to withstand a tornado missile. Duke erroneously propagated that issue into an unnecessary commitment to provide an alternate primary side suction source for HPI from the SFP post tornado. NEI 98-03 guidance allows licensees to restore the UFSAR wording to the original content if a change was made in error.

Note:

The removal of the Spent Fuel Pool as a suction source for the HPI pump is under evaluation by the NRC. (Duke Energy letter to NRC, dated May 18, 2001)

SAFETY EVALUATION SUMMARY

No physical changes are made to any plant SSCs. There is no adverse effect on accident initiation or mitigation. No new radiological release pathways are created. This UFSAR change does not adversely affect any plant safety limits, set points, or design parameters, nor does it adversely affect the fuel, fuel cladding, RCS, or containment integrity. No technical specification or SLC changes are required.

These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. This change does not involve an unreviewed safety question. No Technical Specification changes are required. UFSAR Section 3.2.2 was revised accordingly.

## UFSAR CHANGES (Pkg. 00-42)

### DESCRIPTION

#### SYSTEM: Low Pressure Injection (LPI)

This activity revised the information provided in one section of the UFSAR for clarity and consistency with another section. UFSAR, section 6.3.3.2 stated that the LPI pumps will reach full speed within 8 seconds of receiving an ES actuation signal. Section 15.14.3.3.6 states that the time delay between breaker closure and pump motors operating at rated speed are 5 seconds. Section 6.3.3.2 was revised to state that the LPI pumps will reach full speed within 5 seconds to agree with Section 15.14.3.3.6.

### SAFETY EVALUATION SUMMARY

This change does not adversely affect the design, integrity, operation or function of systems, structures and components. This change does not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This change does not involve an unreviewed safety question and no Technical Specification changes are required. UFSAR Section 6.3.3.2 was revised accordingly.

UFSAR CHANGES (Pkg. 00-54)

DESCRIPTION

SYSTEM: Reactor

This change to UFSAR Chapter 9, Section 9.1.2.5 corrected the wording to describe the current methodology used to assess degradation of Boraflex in the spent fuel storage racks. The change does not result in an USQ or have any impact on public health and safety, because it does not

SAFETY EVALUATION SUMMARY

This change replaces neutron attenuation testing of a representative sample of actual Boraflex panel enclosures with an assessment method using the RACKLIFE computer code. This computer code calculates panel by panel degradation using inputs of rack irradiation history, silica concentration in the spent fuel pool, and purification system operation. Using the RACKLIFE computer code to assess the degradation of Boraflex in the spent does not result in any plant modifications, procedure changes, or other activities that could involve an unreviewed safety question. This change does not in any way increase the likelihood of initiation, or adversely affect the mitigation of, any SAR described accidents. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no affect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No Technical Specification changes are required. There are no unreviewed safety questions or safety concerns. UFSAR Section 9.1.2.5 was revised accordingly.

UFSAR CHANGES (Pkg. 00-60)

DESCRIPTION

SAFETY EVALUATION SUMMARY

SYSTEM: None

UFSAR Section 11.3.3 was revised to reduce unnecessary vendor-specific information. The revision also consolidates and enhances the clarity of summary information in UFSAR Table 11-7, regarding certain RIAs. This change is highly editorial in nature.

Adding, correcting or clarifying UFSAR information does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways, failure modes, or accident scenarios are created. There are no reactivity management concerns. There are no physical changes to the plant or procedures. There is no effect on plant safety limits, setpoints, or design parameters. There is no reduction in any safety margins associated with the fission product barriers. As such, this change does not involve an unreviewed safety question (USQ) and no Technical Specification changes are required. UFSAR Section 11.3.3 and UFSAR Table 11-7 were revised accordingly.

UFSAR CHANGES (Pkg. 00-61)

DESCRIPTION

SAFETY EVALUATION SUMMARY

SYSTEM: Reactor

This activity was performed to revise Duke's / ONS's commitment to GL 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events" to comply with the NRC's SERs on the subject responses. Specifically, this change would only require that a "post-trip review" be performed for unscheduled reactor shutdowns/trips as opposed to "every reactor trip, planned and unplanned".

No Technical changes were made. No Technical Specification changes are required. There are no unreviewed safety questions or safety concerns. No Selected Licensee Commitment changes were required. The UFSAR section 7.2.4 was updated accordingly.

## UFSAR CHANGES (Pkg. 00-75)

### DESCRIPTION

SYSTEM: Low Pressure Injection (LPI), Building Spray (BS)

This activity revised the information provided in the UFSAR for LPI and BS pump NPSH to reflect the results of recently revised analyses.

### SAFETY EVALUATION SUMMARY

The summary table demonstrates that the NPSH requirements for the LPI and BS pumps will both be satisfied in the sump recirculation mode following a limiting large break LOCA with the most limiting single failure and credit for 2.2 psi containment overpressure. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways, failure modes, or accident scenarios are created. There are no reactivity management concerns. There are no physical changes to the plant or procedures. There is no effect on plant safety limits, setpoints, or design parameters. There is no reduction in any safety margins associated with the fission product barriers. As such, this change does not involve an unreviewed safety question (USQ) and no Technical Specification changes are required. UFSAR Section 6.1.3 and Table 6-33 were revised accordingly.

## UFSAR CHANGES (Pkg. 00-76)

### DESCRIPTION

SYSTEM: Building Spray (BS)

The Reactor Building Spray System Design Basis Specification, OSS-0254.00-00-1034, was revised to address new post-accident operating requirements for the pumps and injection valves. Emergency procedures (EP/1/A/1800/001 change 28b, EP/2/A/1800/001 change 30b, EP/3/A/1800/001 change 28b) have been revised to incorporate the following changes in the mitigation strategy associated with the Building Spray (BS) system:

- Addition of actions to ensure that BS-1 and BS-2 are opened (automatically or manually, including local manual action if necessary)
- Earlier throttling of BS pumps and a lower flow rate for throttling

### SAFETY EVALUATION SUMMARY

The overall effects of the combined changes to the emergency operating procedures were evaluated. The combined changes to the emergency operating procedures were evaluated to be within the limits required by safety analyses with respect to postulated environmental conditions, containment responses, core integrity, and radiological effects. In addition, the changes were determined to be within the capability of being accomplished within acceptable time frames required by safety analyses. Therefore, this activity does not operate systems outside of their capability or licensing bases. Based upon the considerations documented in this evaluation and the responses to the seven standard questions, these changes the BS System Design Basis Specification involves no unreviewed safety question or safety concerns. No Technical Specification or Selected Licensee Commitment changes are required. UFSAR Section 6.2.2.4 was revised accordingly.

UFSAR CHANGES (Pkg. 00-78)

DESCRIPTION

SYSTEM: None

Part 1: This change to UFSAR Chapter 18, Section 18.4, commitment #3 corrected the administrative date in which this commitment will be completed from December 31, 2000 to July 1, 2001.

Part 2: Revised the reactor vessel materials' chemistry (copper) values, to the latest available information and Revise the initial Charpy V-Notch Upper Shelf Energy ( $C_V$  USE) values to reflect the latest information. Revised reactor vessel fluence values for 48 EFPY based on latest information.

SAFETY EVALUATION SUMMARY

Technical Specifications 3.4.3 and 3.4.12, including Bases, reference the requirement for using the 10CFR50 Appendix G method to determine vessel materials toughness values. Calculation of new values and revising the UFSAR with the new information does not affect these requirements or the bases of these Technical Specifications. The changes to the UFSAR being implemented by this UFSAR revision do not affect compliance with any existing Technical Specification, nor create the necessity for any new Technical Specification.

Updating this information does not perform a physical change to the plant that could affect the probability of occurrence of an accident. This change does not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This change does not involve an unreviewed safety question and no Technical Specification changes are required. UFSAR Sections 5.2.1.8 and 5.2.3.3.4, and Tables 5.27, 5.28, and 5.29 and Section 18.4 were revised accordingly.

UFSAR CHANGES (Pkg. 00-81)

DESCRIPTION

SYSTEM: Standby Shutdown Facility Auxiliary Service Water

This evaluation is for a UFSAR revision to section 18.3.11 (Heat Exchanger Performance Testing Activities). Section 18.3.11 currently implies that the Low Pressure Service Water System provides raw water to the Standby Shutdown Facility HVAC coolers. The Standby Shutdown Facility Auxiliary Service Water system actually supplies the SSF HVAC coolers. Minor editorial changes were also included.

SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reference the most up to date as-built plant, operating practices, or licensing does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. This change does not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This change does not involve an unreviewed safety question and no Technical Specification changes are required. UFSAR Section 18.3.11 was revised accordingly.

UFSAR CHANGES (Pkg. 00-83)

DESCRIPTION

SAFETY EVALUATION SUMMARY

SYSTEM: Containment Hydrogen Monitoring

This activity increased the allowable time for placing the Containment Hydrogen Monitoring System into service following ES actuation. The allowable time is increased from 30 minutes to 90 minutes.

Analyses show that many hours are available prior to the hydrogen concentration reaching its lower flammability limit. Analyses also show that hydrogen concentration for accidents well beyond the Oconee Nuclear Station design basis do not pose a threat to the containment buildings at Oconee. This change does not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This change does not involve an unreviewed safety question and no Technical Specification changes are required. UFSAR Section 9.3.7.1 was revised accordingly.

## UFSAR CHANGES (Pkg. 00-84)

### DESCRIPTION

#### SYSTEM: Cable Tray Supports

Section 3.10.1 of the UFSAR was revised to prescribe the methods for seismic evaluation and design of cable tray and tray supports contained in the Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment, Revision 2. Section 8.3.1.4.6.1 of the UFSAR was revised to state that tray support type HC-6 was evaluated using methods for seismic evaluation of cable tray supports contained in the Generic Implementation (GIP) for Seismic Verification of Nuclear Plant Equipment.

### SAFETY EVALUATION SUMMARY

These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There is no physical change to the plant or procedures. This activity has no effect on any margins of safety as previously evaluated in the SAR. There are no USQ's as a result of these changes. There is no change in the licensing basis criteria for design of cable tray and tray supports because there are no existing criteria for those components. As such, this change does not present an unreviewed safety question and no Technical Specification changes are required. UFSAR Sections 3.10.1 and 8.3.1.4.6.1 were updated accordingly.

UFSAR CHANGES (Pkg. 00-89)

DESCRIPTION

SYSTEM: Reactor

This safety evaluation supports the update to the Oconee UFSAR Chapters 6 and 15 for B11 fuel.

SAFETY EVALUATION SUMMARY

The UFSAR changes are based on methods previously reviewed and approved by the NRC. This UFSAR revision does not involve any physical changes to the facility, nor does it alter its design bases. These revisions do not change procedures or methods of operation. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There are no adverse effects on reactivity. This change does not involve an unreviewed safety question. No Technical Specification changes are required. UFSAR Chapters 6 and 15 were revised accordingly.

## UFSAR CHANGES (Pkg. 00-97)

### DESCRIPTION

SYSTEM: High Pressure Injection (HPI)

This 10 CFR 50.59 evaluation considers specific content changes to UFSAR Sections 6.3.2.2.1, 6.3.2.8, and 6.3.5 in order to remove incongruity in the subject paragraph excerpts. Specifically, all statements regarding inoperable ECCS ES valve operators are removed by this UFSAR change. Existing Technical Specifications contain adequate administrative provisions in the absence of the existing UFSAR content.

### SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reference the most up to date as-built plant, operating practices, design or licensing information does not in any way adversely affect the design, integrity, operation or function of an SSF systems, structures and components. This UFSAR revision does not involve any physical changes to the facility, nor does it alter its design bases. These revisions do not change procedures or methods of operation. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There are no adverse effects on reactivity. This change does not involve an unreviewed safety question. No Technical Specification changes are required. UFSAR Sections 6.3.2.2.1, 6.3.2.8, and 6.3.5 were revised accordingly.

## UFSAR CHANGES (Pkg. 00-101)

### DESCRIPTION

SYSTEM: High Pressure Service Water (HPSW)

This safety evaluation was performed to delete words in the UFSAR that state that reverse gravity flow through the condensate coolers during a Turbine Building flood is necessary to supply the suction of the High Pressure Service Water (HPSW) pumps. Currently, UFSAR Section 3.4.1.1.1 states that reverse gravity flow through the Condenser Circulating Water (CCW) side of the condensate coolers is desirable during a Turbine Building flood to provide suction to HPSW, LPSW, and SSF ASW pumps. Contrary to the UFSAR, the supporting calculations do not address suction for the HPSW pumps.

### SAFETY EVALUATION SUMMARY

The UFSAR does mention the ability to supply suction to the HPSW pumps. This information in UFSAR Section 3.4.1.1.1 was added in the 1996 update, and it is a paraphrase of the information in a 4/28/86 letter to the NRC regarding a summary of Turbine Building flood modifications. There is no evidence that the NRC relied on the information in the 4/28/86 letter or the UFSAR to support any license amendment or any other safety evaluation report (SER). There is no information in the SAR to indicate that the HPSW pumps are relied upon to mitigate a Turbine Building flood. The revision does not result in any plant modifications, procedure changes, or other activities. There is no increase in the consequences of any SAR described accident. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. No SSCs are degraded. There is no affect on reactivity. This activity also has no effect on any margins of safety as previously evaluated in the SAR. No Technical Specification changes are required. There are no unreviewed safety questions or safety concerns. UFSAR Section 3.4.1.1.1 was revised accordingly.

UFSAR CHANGES (Pkg. 00-104)

DESCRIPTION

SYSTEM: None

This safety evaluation was performed for changes to UFSAR Section 12.3.1 which eliminated obsolete information that is in error or has no true basis in the design of the facility or implementation of the Radiation Protection program.

SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reference the most up to date as-built plant, operating practices, or licensing does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. This change does not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This change does not involve an unreviewed safety question and no Technical Specification changes are required. UFSAR Section 12.3.1 was revised accordingly.

## UFSAR CHANGES (Pkg. 00-105)

### DESCRIPTION

SYSTEM: None

This safety evaluation supports changes to the information provided in the UFSAR related to environmental qualification of accident mitigation equipment. Outdated information is replaced with (previously approved) current licensing basis information. The change replaces references to ONS' response to IEB 79-01B with current program documents such as NSD 303. Lower tier implementation documents are also identified, such as: 1) The Environmental Qualification Criteria Manual, which defines the environmental conditions both inside and outside of the reactor building following a postulated design basis event. 2) The Environmental Qualification Master List (OLT-2780-03.01), which identifies the scope of equipment requiring environmental qualification. and 3) The Environmental Qualification Maintenance Manual (EQMM-1393.01), which defines the requirements for maintaining the environmental qualification of the accident mitigation equipment for the life of the plant.

### SAFETY EVALUATION SUMMARY

Adding, correcting or clarifying UFSAR information to more accurately reference the most up to date as-built plant, operating practices, or licensing does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. This change does not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This change is largely editorial in nature. This change does not involve an unreviewed safety question and no Technical Specification changes are required. UFSAR Sections 3.11 and 6.3.2.8 were revised accordingly.

## UFSAR CHANGES (Pkg. 00-106)

### DESCRIPTION

SYSTEM: SSF Diesel Support System

This safety evaluation supports the revision of the SSF Diesel Support System DBD to list CCW-312 & CCW-313 with an active to close function. CCW-312 and CCW-313 are located in the SSF Pump Room. These check valves prevent back leakage of water from the yard drain from flowing into the SSF Pump Room if the SSF sump pumps are not operating or if the pumps were to fail during a seismically induced Turbine Building Flood.

### SAFETY EVALUATION SUMMARY

Requiring CCW-312 and CCW-313 to be active to close decreases the consequences of a seismically induced Turbine Building Flood since floodwater will be unable to enter the SSF Pump Room via the yard drain system. No accidents evaluated in the SAR other than flooding will be affected. This change does not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This change is largely editorial in nature. This change does not involve an unreviewed safety question and no Technical Specification changes are required. UFSAR Section 9.6.3.6 was revised accordingly.

UFSAR CHANGES (Pkg. 00-107)

DESCRIPTION

SYSTEM: Component Cooling

This safety evaluation supports an update of UFSAR Table 9-13 to revise information regarding pumps. Specifically, the proposed revision changes the UFSAR-listed design pressure for the Component Cooling pumps from 100 psig to 150 psig. Accordingly, UFSAR information becomes consistent with design requirements listed within system flow diagrams and Component Cooler manufacturer drawings.

SAFETY EVALUATION SUMMARY

Correcting or clarifying UFSAR information to more accurately reference the most up to date as-built plant, operating practices, testing or licensing requirements does not in any way adversely affect the design, integrity, operation or function of systems, structures and components. This change does not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This change is largely editorial in nature. This change does not involve an unreviewed safety question and no Technical Specification changes are required. UFSAR Table 9-13 was revised accordingly.

## VIII. CALCULATIONS

### DESCRIPTION

SYSTEM: Nuclear Fuel

This safety evaluation supports the update to the Oconee UFSAR Chapter 15 based on calculation OSC-7676 for Mk-B11 fuel. The UFSAR change are based on methods previously reviewed and approved by the NRC. The associated Technical Specifications changes have also been reviewed and approved by the NRC. These updates to Chapter 15 of the UFSAR do not involve safety concerns or USQs.

### SAFETY EVALUATION SUMMARY

This evaluation has shown that the Mk-B11 fuel does not in any way initiate, affect the mitigation of, or increase the consequences of any SAR described accidents. There is no adverse affect on any SSC and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. This activity does not modify the physical plant. There are no effects on reactivity. The integrity of the fuel is not challenged. This evaluation determined that there were no unreviewed safety questions associated with Mk-B11 fuel used at Oconee. No Technical Specification changes are necessary. UFSAR Chapter 15 was updated accordingly. (Pkg. 00-89)

## CALCULATION

### DESCRIPTION

SYSTEM: Reactor Building Containment

- Revised Calculation OSC-6191, "REANALYSIS OF THE OCONEE HYDROGEN RECOMBINER AND PURGE SYSTEM REQUIREMENTS," Revision 5 presents an analysis that demonstrates if the recombiner is started by 10.0 days post-LOCA, then the containment hydrogen concentration will remain below 4 volume percent. The revision to this calculation includes a more recent calculated containment free volume. In addition, nominal values for the primary dissolved hydrogen, reactor operating time and power level, zirconium mass, and recombiner flow are used in the analysis.
- An ONS UFSAR verification was made to determine the supports of each claim made by this UFSAR Chapter.

### SAFETY EVALUATION SUMMARY

This change is editorial in nature. This activity does not in any way initiate, affect mitigation of, or increase the consequences of any SAR described accidents. No key parameters, namely Reactor Building pressure, will be changed by this revision. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. There are no effects on reactivity. There is no change to plant setpoints, safety limits or design parameters. This activity has no effect on any margins of safety as previously evaluated in the SAR. No Technical Specification changes are required. UFSAR 15.16 was changed accordingly. (Pkg. 00-102)

## CALCULATION

### DESCRIPTION

SYSTEM: Reactor Coolant (RCS)

Calculation OSC-6583 Rev 2 contains a 10CFR50.59 Evaluation for an update to the Oconee UFSAR. UFSAR Chapter 4, specifically, UFSAR Table 4-3 values were revised to include typical values for Mk-B11 fuel.

### SAFETY EVALUATION SUMMARY

This calculation supports the implementation of new accident analyses methods for Oconee Nuclear Station. No new methods were introduced, and no current methodology was revised by the simple UFSAR Section 4 changes. Providing more accurate up-to-date UFSAR accident analyses does not in any way initiate, affect the mitigation of, or increase the consequences of any SAR described accidents. There is no adverse affect on any SSC and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. This activity does not modify the physical plant. There are no effects on reactivity. There are no safety concerns or unreviewed safety questions associated with this update. (Pkg. 00-69)

## CALCULATION

### DESCRIPTION

SYSTEM: Steam Generators (OTSG)

This safety evaluation supports a revision to UFSAR Section 7.5.2.4 based on OSC-7625. The SG level indication is required to be between 0 and 120 inches to be sufficient to restore subcooling margin.

### SAFETY EVALUATION SUMMARY

This change aligns the requirements to the assumption made in all safety analyses that lose subcooling margin and to that, which is documented in the emergency procedures and implicit in the SB LOCA analysis. No Tech Spec changes, procedure changes, or testing requirements need to be changed as a result of this evaluation. This change does not involve a safety concern or USQ. There is no adverse affect on any SSC and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. This activity does not physically modify any plant SSCs or operating procedures. There are no adverse effects on reactivity. There are no safety concerns or unreviewed safety questions associated with this update. UFSAR Section 7.5.2.4 was changed as required. (Pkg. 00-32)

## CALCULATION

### DESCRIPTION

SYSTEM: Nuclear Fuel

Calculation OSC-7756 documents the 10CFR50.59 USQ Evaluation for the O2C19 Reload Design Safety Analysis Review (REDSAR), performed in accordance with the Nuclear Engineering Division workplace procedure NE-102, "Workplace Procedure for Nuclear Fuel Management", serves as the safety review for the unreviewed safety question evaluation.

### SAFETY EVALUATION SUMMARY

The O2C19 core design is generated using NRC approved methods. All physics parameters calculated are bounded by those used in the Chapter 15 UFSAR analyses. All fuel damage limits are verified acceptable. No Technical Specifications changes are required. The unreviewed safety question evaluation concludes no USQs for O2C19 exist. This activity does not in any way initiate, affect mitigation of, or increase the consequences of any SAR described accidents. There is no adverse affect on any SSC, and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. There are no effects on reactivity. There is no change to plant setpoints, safety limits or design parameters. This activity has no effect on any margins of safety as previously evaluated in the SAR. No Technical Specification and no UFSAR changes are required.

## CALCULATION

### DESCRIPTION

SYSTEM: Nuclear Fuel

This safety evaluation supports calculation OSC-7277 for the specific instances of debris in the RCS of Oconee Unit 3 that is assumed to remain in the core during cycle eighteen. Additionally, it provides a general guideline for future instances of non-metallic debris analysis. This calculation summarizes all types of non-metallic debris analyzed in past 50.59 analysis as well as current concerns over paint chips, duct tape and ball bearings.

### SAFETY EVALUATION SUMMARY

This analysis has determined that all debris instances that are bounded by this analysis shall pose no unreviewed safety questions. This change does not affect the design, function or operation of plant SSCs. They do not adversely affect the design, integrity, operation or function of systems, structures and components. These changes do not increase the likelihood of initiation, or adversely affect the mitigation of any SAR described accidents. No new radiological release pathways or failure modes are created. There is no increase in the consequences of any SAR described accident. There is no increase in the probability of a malfunction of equipment important to safety. There are no effects on reactivity. There is no physical change to the plant or procedures. There is no change to plant setpoints, safety limits or design parameters. This activity has no effect on any margins of safety as previously evaluated in the SAR. There are no technical specification limits affected by this activity and no changes are necessary to the UFSAR.

## CALCULATION

### DESCRIPTION

SYSTEM: Nuclear Fuel

Calculation OSC-7567 contains a 10CFR50.59 Evaluation to support the O3C19 Core Reload Analysis. The reload analysis addresses all core physics parameters (required boron concentrations, reactivity, etc.) and changes associated with fuel design for a specific cycle.

### SAFETY EVALUATION SUMMARY

The safety analysis physics parameters method is described in topical report DPC-NE-1002-PA. The reload analysis is a QA Condition 1 engineering calculation used to determine acceptable core physics conditions and parameters for a specific cycle. It also requires a safety evaluation be performed in accordance with Workplace procedure NE-104. Utilizing this methodology does not in any way initiate, affect the mitigation of, or increase the consequences of any SAR described accidents. There is no adverse affect on any SSC and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. There are no adverse effects on reactivity. There are no physical changes to the plant. This evaluation determined that there were no unreviewed safety questions associated with the O3C19 core reload. No Technical Specification or UFSAR changes are necessary.

## XI. TECHNICAL SPECIFICATION BASES

### DESCRIPTION

SYSTEM: High Pressure Injection (HPI)

This safety evaluation supports an ITS Bases 3.7.4 revision to reflect the requirements from the High Pressure Injection (HPI) license amendment 314, 314 & 314. The NRC on 9/6/00 issued HPI License Amendment 314, 314 & 314.

### SAFETY EVALUATION SUMMARY

The ADV flow path for each steam generator is credited as a compensatory measure in Actions B and C of LCO 3.5.2, HPI to permit continued operation with Thermal Power  $\leq 75\%$  RTP: a) For 30 days with an HPI pump or HPI discharge crossover valve(s) inoperable. and b) For 72 hours with an HPI train inoperable. During these times, the ADV flow path is credited for depressurizing the steam generator and enhancing primary-to-secondary heat transfer during certain small break loss of coolant accidents (LOCAs). The changes do not in any way initiate, affect the mitigation of, or increase the consequences of any SAR described accidents. There is no adverse affect on any SSC and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. This activity does not physically modify any plant SSCs. There are no adverse effects on reactivity. There is no change to plant setpoints, safety limits or design parameters. There are no safety concerns or unreviewed safety questions. No Technical Specification changes are necessary. TS bases 3.6 was revised accordingly. No changes to the UFSAR are required.

## TECHNICAL SPECIFICATION BASES

### DESCRIPTION

SYSTEM: High Pressure Injection (HPI)

This safety evaluation supports a revision to ITS Bases 3.6.1 and SLC 16.6.1 bases references for the new UFSAR Chapter 18, Table 18-1, which lists programs, activities, and time-limited aging analysis (TLAA) (topics) required for license renewal. Containment Leak Rate Testing is listed, as a program required for license renewal because it is credited with managing loss of material of steel components of the Reactor Building Containment. The purpose of this evaluation is to determine if the ITS SR and SLC bases changes involve an unreviewed safety question (USQ).

### SAFETY EVALUATION SUMMARY

Clarifying the bases information to more accurately reference the most up to date operating practices and licensing information does not in any way adversely affect the design, integrity, operation or function of any systems, structures and components. This change does not in any way initiate, affect the mitigation of, or increase the consequences of any SAR described accidents. There is no adverse affect on any SSC and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. This activity does not physically modify any plant SSCs or change procedures. There are no adverse effects on reactivity. There is no change to plant setpoints, safety limits or design parameters. There are no safety concerns or unreviewed safety questions. The ITS and SLC bases changes do not result in an USQ or have any impact on public health and safety. The changes do not adversely affect the ability of any system to mitigate any accidents described in the SAR. No changes to the Technical Specifications are required to implement these changes.

## TECHNICAL SPECIFICATION BASES

### DESCRIPTION

SYSTEM: Low Pressure Service Water (LPSW) and ECCW

This revision to Technical Specification Bases 3.4.7, 3.4.8, 3.9.4 and 3.9.5 will add clarifying information with regard to LPSW and ECCW requirements in Modes 5 and 6.

### SAFETY EVALUATION SUMMARY

The LPSW System and ECCW System will continue to be capable of performing their required functions. There are no adverse effects on containment integrity, radiological release pathways, fuel design, filtration systems, MSR/V relief setpoints, or Radwaste systems. Therefore, the consequences of an accident evaluated in the SAR are not increased. The consequences of any malfunction of the LPSW System or ECCW remains the same. No new types of accidents or failure mechanisms are postulated. This change does not change the physical design of the system nor the procedures used for testing, operating, or maintaining the equipment. The systems will continue to be operated within their existing design parameters. No new malfunctions are postulated. This change involves no physical modifications to the plant or changes in operating characteristics or procedures. The change involves no relaxation of seismic, environmental, or QA requirements. There are no concerns associated with reactivity management. The proposed change does not affect any margins of safety defined in the basis for any technical specification. This change only clarifies the current requirements of LPSW/ECCW in support of DHR. The proposed change does not affect any safety limits or limiting safety system settings. No plant safety limits, setpoints, or design parameters are adversely affected. There is no impact to the nuclear fuel, cladding, Reactor Coolant System (RCS), or containment integrity. The changes do not adversely affect the ability of any system to mitigate any accidents described in the SAR. No changes to the UFSAR or Technical Specifications are required.

## TECHNICAL SPECIFICATION BASES

### DESCRIPTION

SYSTEM: High Pressure Injection (HPI)

This evaluation addresses a revision to the bases for ITS SR 3.5.2.2. The change identifies the optimum method by which this surveillance can be met. It further identifies that venting in the manner described will not affect any operating HPI pump.

### SAFETY EVALUATION SUMMARY

This change does not in any way initiate, affect the mitigation of, or increase the consequences of any SAR described accidents. There is no adverse affect on any SSC and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. This activity does not physically modify any plant SSCs or change procedures. There are no adverse effects on reactivity. There is no change to plant setpoints, safety limits or design parameters. There are no safety concerns or unreviewed safety questions. The ITS and SLC bases changes do not result in an USQ or have any impact on public health and safety. The changes do not adversely affect the ability of any system to mitigate any accidents described in the SAR. No changes to the UFSAR or Technical Specifications are required to implement these changes.

## TECHNICAL SPECIFICATION BASES

### DESCRIPTION

SYSTEM: Low Pressure Injection (LPI)

Note 3, Condition B and SR 3.5.3.7 of Technical Specification 3.5.3 refer to the manual operability of the LPI discharge header crossover valves (LP-9 and LP-10). The LPI discharge header crossover valves are non-automatic power operated valves with remote switches in the control rooms. In addition, the LPI discharge header crossover valves have installed handwheels on the valve actuators. This activity revises the bases of Technical Specification 3.5.3 to clarify that the manual operability of the LPI discharge header crossover valves (LP-9 and LP-10) refers to the operation of the valves from the control room as well as locally at the valve.

### SAFETY EVALUATION SUMMARY

This change does not in any way initiate, affect the mitigation of, or increase the consequences of any SAR described accidents. There is no adverse affect on any SSC and no increase in the probability of a malfunction of equipment important to safety. No new radiological release pathways or failure modes are created. This activity does not physically modify any plant SSCs or change procedures. There are no adverse effects on reactivity. There is no change to plant setpoints, safety limits or design parameters. There are no safety concerns or unreviewed safety questions. Based upon the considerations documented in this evaluation and the responses to the seven standard questions, these changes to the Technical Specification 3.5.2 and 3.5.3 bases involve no unreviewed safety question or safety concerns. No UFSAR changes are required.

**X. MISCELLANEOUS**

DESCRIPTION

NONE

Attachment 2

USFAR Revision Tracking System

Contributor	Section Number	Section Owner	Description of Change	Originating Source	Markup Status per NSD 220			To Publishing	Comments
					Date Initiated	Date Approved	Date Impl.		
Steve Perrero	4.5.1	Steve Perrero	Add to the end of the last sentence of 4.5.1 with the exception that the length of the inner cavity of the transfer cask will be 187.43 inches per ONOE-14622.	ONOE-14622	5/16/00	4/30/01	Pre 2000 discrepancy	5/1/01	UFSAR Change # 00-11
<b>Note</b> <b>Changes</b> <b>Below</b> <b>Are for the</b> <b>ONS</b> <b>UFSAR</b> <b>ONLY</b> <b>Above</b> <b>Are</b> <b>for ISFSI (Dry Cask Storage)</b>									
<b>1998</b> <b>Changes</b> <b>Still Open Are</b> <b>Shown Below</b>									
Kevin Dye (DES)	Fig 6-2	Russ Oakley	This change is voided to ONOE-16217 which will have change request for the 2001 rev. Number of RBS nozzles is different per unit. Add note to fig 6-2 to refer to OFD for exact number of RBS nozzles per header.	Accuracy Review PIP 98-4052	10/15/98	VOID	Pre 1998 discrepancy		UFSAR Change #98-51
Kevin Dye (DES)	6.2.2.2.4	Russ Oakley	This change is voided to ONOE-16217 which will have change request for the 2001 rev. Clarify that a minimum of 120 RBS nozzles are available on each header. Also see Chg 98-51	Accuracy Review PIP 98-4052	10/15/98	VOID	Pre 1998 discrepancy		UFSAR Change #98-74
<b>1999</b> <b>Changes</b> <b>Below</b>									
David Lee (DES)	Fig 10-8	Steve Benesole	Revise the figure to meet the plant configuration of the piping from the condenser hot wells to suction of MDEFVWP. See package # 00-94 which replaces this one.	PIP 98-4062	10/27/99		Voided to package # 00 94		UFSAR Change # 99-46
Louis Bohn	Table 4-3	Jay Verbos	Match table to the design documentation for cycle 1 core burnup.	PIP 98-5923	6/13/99	4/30/01	Pre 1999 discrepancy	5/1/01	UFSAR Change #99-164

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									Markup Status: per NSD 220			
Contributor	Section Number	Section Owner	Description of Change	Originating Source	Date Initiated	Date Approved	Date Impl.	To Publishing	Comments			
Louis Bohn	4.2.3.1.1	Jay Verbos	More accurately describe the fuel rod gas press criterion as described in the BAW-10183P-A	PIP 98-5923	6/30/99	4/30/01	Pre 1999 discrepancy	5/1/01	UFSAR Change # 99-165			
Louis Bohn	4.3.2.4.4	Jay Verbos	To be consistent with the original SAR analysis.	PIP 98-5923	5/24/99	4/30/01	Pre 1999 discrepancy	5/1/01	UFSAR Change # 99-167			
Louis Bohn	4.2.2.1.1	Jay Verbos	This change was superseded by 99-182. Change to include the BK-B10L in the sentence that refers to Fig. 4-37.	PIP 98-5923	4/23/99		Pre 1999 discrepancy	VOID	UFSAR Change #99-171			
Louis Bohn	4.3.2.5	Jay Verbos	Corrects the assumed rod group worth from 1.2% to 1.5% delta p.	PIP 98-5923	5/28/99	4/30/01	Pre 1999 discrepancy	5/1/01	UFSAR Change # 99-172			
Louis Bohn	Table 4-1	Jay Verbos	VOIDED to change 99-216 Adds complete information on design parameters of fuel previously used in ONS core.	PIP 98-5923	6/11/99		Pre 1999 discrepancy	Voided	UFSAR Change # 99-173			
	4.2.1.2.1, 4.2.2, 4.3.1 & 4.3.3.2	Gene Sanders Tom Wiggins	Clarifies the design bases of the Doppler coefficient & MTC.	PIP 98-5923	5/16/99	4/30/01	Pre 1999 discrepancy	5/1/01	UFSAR Change # 99-180			
<b>2000 Changes Shown Below</b>												
Glenda Johns	13.5.2.2.2	Ronnie Lingle	Clarify owner of LIT procedures	editorial	5/23/00		Pre 2000 discrepancy	VOID	UFSAR Change # 00-2			
Beau Abellana	6.3.3.2, 6.3.3.3, 15.14.3.3.6,	Oakley/ Rowell/ Swindlehurst	Indicate valves and operators for 1 & 3 LP-17 & 18 were changed out and that stroke	ONOE - 14637 ONOE - 14638 ONOE - 13692	3/16/00	4/16/01	Unit 3 Outage May 00	4/16/01	UFSAR Change # 00-3			
Austin Burns	3.4.1.1.1	Bob Hester	Clarifies the available time during the Turbine Hall flooding.	PIP 00-1278	7/11/00	5/9/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-4			
Bill Rostron	7.6.1.2.1	Bill Rostron	<b>Editorial Non-Technical</b>	Editorial	7/11/00	7/11/00	Pre 2000 discrepancy	7/11/00	UFSAR Change # 00-5			
Allen D Park	3.7.3.9	Peter Chau	Provides guidance for performing evaluations if seismic boundary valves are normally open & remotely operated or auto	PIP O-95-685	7/19/00	8/24/00	Pre 2000 discrepancy	8/24/00	UFSAR Change # 00-6			
P.H. Patel	Figs 6-20,6-21	Robert Burley	<b>Editorial Non-Technical</b> update these figures to match current plant configuration.	Editorial	7/19/00	8/30/00	Pre 2000 discrepancy	8/30/00	UFSAR Change # 00-7			
Bob Cornett	7.2.3.5	Bob Cornett	<b>Editorial Non-Technical</b> clarifies the intent and removes any conflict between related documents.	Editorial PIP 00-942	7/26/00	8/1/00	Pre 2000 discrepancy	8/1/00	UFSAR Change # 00-9			

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Markup Status per NSD 220									
Contributor	Section Number	Section Owner	Description of Change	Originating Source	Date Initiated	Date Approved	Date Impl.	To Publishing	Comments
Libby Wehrman	12.4.5.1	Libby Wehrman	Changes "magnahelic gauge" with "air flow standards"	PIP 00-02880	8/8/00	8/14/00	Pre 2000 discrepancy	8/14/00	UFSAR Change # 00-10
Jason Patterson	9.3.3.2.1	Russ Oakley	Revised to include LPI "series" mode of Operation		8/28/00	8/31/00	Pre 2000 discrepancy	8/31/00	UFSAR Change # 00-11
Rick Burgess	4.5.3 and Table 4-22	Rod Emory	Revise Unit 1 CRDM's are now Type "C"	NSM-13032 Part BM1	8/24/00	8/31/00	Pre 2000 discrepancy	8/31/00	UFSAR Change # 00-12
Rick Burgess	3.1.49, Fig 6-3 & Fig 8-4	Dan Harrelson	RBCU dampers are being changed from motor to gravity	NSM-13041 NSM-33041	8/24/00	5/15/01	Pre 2000 discrepancy	5/15/01	UFSAR Change # 00-13
Bob Hester	Table 3-3 & Table 3-4	Bob Hester	<b>Editorial Non-Technical</b> This revises solution and intermediate step of equation for missile Cat. I	PIP #00-1114 <b>EDITORIAL</b>	8/28/00	8/30/00	Pre 2000 discrepancy	8/30/00	UFSAR Change # 00-14
Robert Burley	6.4.2.5 & 6.4.5	Robert Burley	Update off-site toxic gas evaluation (chlorine is stored in 2000 lb. Cylinders)	PIP 99-3633	5/9/00	8/31/00	Pre 2000 discrepancy	8/31/00	UFSAR Change # 00-15
Jack Wilkinson	6.4.2.2, 6.4.3, 9.4.1.4 & 9.2.5	Robert Burley	Revises these sections for CRVS / water chiller updates.	T.S. Amendment 300	6/26/00	5/8/01	Pre 2000 discrepancy	5/8/01	UFSAR Change # 00-16
Robert Hester	3.8.4.5 & Table 3-14	Robert Hester	Clarifies stress limits to apply only to reinforced concert design & clarifies Table 3-14	PIP # 99-3559	8/24/00	8/31/00	Pre 2000 discrepancy	8/31/00	UFSAR Change # 00-17
Henry Harling	10.3.5.1, 10.4.5.2, 1.6.3.2.1 7 Figure 10-4	Mary Jo Littleton, Scott Manning & Keith Anderson	Adds a discription for the moisture seperator drain through a new heat exchanger & demin. for Unit 3	NSM ON-32980	5/23/00	3/6/01	Pre 2000 discrepancy	3/6/01	UFSAR Change # 00-18
Henry Harling	10.4.7.2, Table 10-2 & Fig 10-8	Steve Benesole	Addition of the suction strainer for Unit 3 MEEFW pumps.	NSM ON-33056	2/10/00	9/7/00	Pre 2000 discrepancy	9/7/00	UFSAR Change # 00-19
Ed Price	Figs 1-2 to 1-9	Jim Weast	<b>Editorial Non-Technical</b> Had these drawings re-drawn to make them more legible.	<b>EDITORIAL</b> PIP 00-2081	5/31/00	9/7/00	Pre 2000 discrepancy	9/7/00	UFSAR Change # 00-20
George McAninc	3.8.1.2	Bob Hester	<b>Historical Information</b>	<b>Historical</b>	9/19/00	1/29/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-21
George McAninc	3.8.1	Bob Hester	<b>Historical Information</b>	<b>Historical</b>	9/19/00	5/8/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-22
George McAninc	3.2.1.2 & 3.2.2	Roy McCoy Tim Brown	<b>Editorial Non-Technical</b> Clarification of equipment & portions of systems that can withstand maximum earthquake.	<b>Editorial</b>	9/19/00	12/14/00	Pre 2000 discrepancy	12/14/00	UFSAR Change # 00-23
George McAninc	2.1.3.3	Austin Burns	<b>Editorial Non-Technical</b> Change the date 2015 to "When"	<b>Editorial</b>	9/19/00	1/4/01	Pre 2000 discrepancy	1/8/01	UFSAR Change # 00-24
George McAninc	3.7.2.7	Bob Hester	<b>Editorial Non-Technical</b> change "Newwark" to "Newmark"	<b>Editorial</b>	9/19/00	1/26/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-25

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Markup Status per NSD 220									
Contributor	Section Number	Section Owner	Description of Change	Originating Source	Date Initiated	Date Approved	Date Impl.	To Publishing	Comments
George McAninc	3.8.1.5.4	Bob Hester	<b>Editorial Non-Technical</b> Typo Change ASME Section II to III	Editorial	9/19/00	1/26/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-26
Ed Price	3.2.2	Tim Brown	<b>Adds:</b> The RCP seal LOCA wasn't a part of the original Licensing basis. <b>Removes:</b> The HPI pump suction from the SFP as it wasn't part of the original Licensing basis. <b>This is for the Tornado issue.</b>	PIP 99-0115	8/28/00	9/22/00	Pre 2000 discrepancy	9/26/00	UFSAR Change # 00-27
Bert Spear	8.3.2.1.1	Joe Stevens	Removes obsolete information and excessive detail relating to the diode system operating procedures.	PIP 98-3896	8/28/00	9/21/00	Pre 2000 discrepancy	9/21/00	UFSAR Change # 00-28
George McAninc	3.8.1.1, 3.8.1.5.3 and Fig. 3-19	Bob Hester	<b>Editorial Non-Technical</b> Revises section 3.8.1.1 & 3.8.1.5.3 to reference fig 3-19a,b,&c	Editorial	9/24/00	5/9/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-29
George McAninc	3.9.3.4.2.1.1	Andy Wells	<b>Editorial Non-Technical</b> Correct Typos ("Kl/r" to "K1/r")	Editorial	9/24/00	9/28/00	Pre 2000 discrepancy	10/2/00	UFSAR Change # 00-30
George McAninc	3.8.1.7.7	Bob Hester	<b>Historical Information</b>	Historical	9/24/00	1/29/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-31
J L Abbott	7.5.2.4	Marlon Dempsey	Change S/G extended startup range level requirement from a fixed range to one based on loss of subcooling margin.	PIP 00-2039	9/5/00	10/4/00	Pre 2000 discrepancy	10/4/00	UFSAR Change # 00-32
Bob Douglas	3.9.3.1.1.1.5, 5.2.3.4, & 15.13.4	Jim Batton Swindlehurst	S/G tube tube loads and crediting the MSLB detection & FDW isolation for runout protection for the TDEFWP.	License Amendment 315/315/315	9/28/00	11/13/00	Pre 2000 discrepancy	11/13/00	UFSAR Change # 00-33
Ken Grayson	1.2.2.10	Jim Weast	<b>Editorial Non-Technical</b> Change the hot shutdown to the Mode 3.	Editorial	10/10/00	10/10/00	Pre 2000 discrepancy	10/10/00	UFSAR Change # 00-34
George McAninc	2.1.3, Tables 2-1,2-2,2-3,2-4,2-5,2-6, & Fig 2-6	Austin Burns	<b>Historical Information</b> also correct editorial	Historical & Editorial	10/11/00	1/4/01	Pre 2000 discrepancy	1/8/01	UFSAR Change #00-35
George McAninc	3.8.1.6.5.3	Bob Hester	<b>Editorial Non-Technical</b> adds clarification	Editorial PIP 98-5940	10/27/00	5/8/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-39
George McAninc	3.8.1.6.4	Bob Hester	<b>Editorial Non-Technical</b> Delete the 2nd sentence as it is enveloped in the 1st sentence.	Editorial PIP 98-5940	10/27/00	1/29/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-40
George McAninc	11.6.2.3.2	Mary Jo Littleton	<b>Editorial Non-Technical</b>	Editorial	10/27/00	1/15/01	Pre 2000 discrepancy	1/16/01	UFSAR Change # 00-41

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					Markup Status per NSD 220				
Contributor	Section Number	Section Owner	Description of Change	Originating Source	Date Initiated	Date Approved	Date Impl.	To Publishing	Comments
Russ Oakley	6.3.3.2	Russ Oakley	Change time required for LPI Pumps to reach full speed from 8 sec. To 5 seconds	PIP 00-01031	10/26/00	11/9/00	Pre 2000 discrepancy	11/9/00	UFSAR Change #00-42
Andy Wells	3.9.3.4.2.2.1	Andy Wells	Editorial Non-Technical Correct normal capacity given for size 8 Grinnell snubber to 128k lbs & remove excessive detail concerning the qualification testing.	Editorial	8/23/00	8/24/00	Pre 2000 discrepancy	11/12/00	UFSAR Change # 00-43
Ron Harris	9.5.1.2 & 9.5.1.2.5	Harold Lefthowitz	Changes to take credit for water in buried CCW pipes for fire protection, if CCW & ESV pumps are lost.	ONOE-15541	10/9/00	11/13/00	Pre 2000 discrepancy	11/13/00	UFSAR Change # 00-44
George McAninc	3.7.2.9	Bob Hester	Editorial Non-Technical Clarifies sentence.	Editorial	11/13/00	1/29/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-45
George McAninc	3.8.1.6.1	Bob Hester	Historical Information	Historical	11/13/00	1/29/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-46
George McAninc	3.8.1.6.1.4	Bob Hester	Editorial Non-Technical Corrected the ASME Code number	Editorial	11/13/00	1/29/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-47
George McAninc	3.8.1.6.2.2	Bob Hester	Historical Information	Historical	11/13/00	1/29/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-48
George McAninc	3.8.1.6.5.2	Bob Hester	Editorial Non-Technical Corrects spelling any corrects reference.	Editorial	11/13/00	5/8/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-49
Fred Owens	18.2.4	Jim Batton	Editorial Non-Technical Because of the S/G replacement the lateral lubrite pads will be replaced as well.	Editorial	11/13/00	1/26/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-50
Fred Owens	18.3.17.9	Ted Royal	Editorial Non-Technical Clarify the first sentence to state the frequency of diesel operation	Editorial	11/13/00	1/2/01	Pre 2000 discrepancy	1/2/01	UFSAR Change # 00-51
Fred Owens	18.3.17.7	Jean Robinson	Editorial Non-technical Clarify the third sentence for engineering evaluation to justify continued operation or plugged.	Editorial	11/13/00	4/25/01	Pre 2000 discrepancy	4/26/01	UFSAR Change # 00-52
Fred Owens	18.3.17.12	Dan Harrelson	Editorial Non-Technical clarify / add words to look for leaks needs to be added after vival inspection in the 1st sentence.	Editorial	11/13/00	5/7/01	Pre 2000 discrepancy	5/8/01	UFSAR Change # 00-53
Fred Owens	9.1.2.5	Steve Perrero	This revises the SFP monitoring program for Boroflex by the use of a computer program "Racklife"	Relicensing Editorial	11/13/00	11/21/00	Pre 2000 discrepancy	11/28/00	UFSAR Change # 00-54

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									Markup Status per NSD 220			
Contributor	Section Number	Section Owner	Description of Change	Originating Source	Date Initiated	Date Approved	Date Impl.	To Publishing	Comments			
Reene Gambrell	15.1, 15.14 and Tables 15-27, 15-28, 15-29, 15-30, 15-31, 15-33, 15-34, 15-56 and Fig. 15-45, 15-49, 15-112, 15-174	Greg Swindlehurst / Oakley	Incorporate the supporting LOCA analysis for HPI which includes analyses conducted at 75% RTP.	Amendment 314,314,314	11/29/00	12/27/00	Pre 2000 discrepancy	12/27/00	UFSAR Change # 00-55			
George McAninc	Table 3-12	Bob Hester	Identification of Historical Information	Historical PIP 98-5940	11/29/00	1/26/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-56			
George McAninc	3.8.4 and 3.8.4.1	Bob Hester	Editorial Non-Technical Clarification change the title to 3.8.4.	Editorial PIP 98-5940	11/29/00	1/26/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-57			
George McAninc	11.6.2.2.5	Mary Jo Littleton	Editorial Non-technical Change the verb tense.	Editorial PIP 98-5942	12/4/00	1/15/01	Pre 2000 discrepancy	1/16/01	UFSAR Change # 00-58			
George McAninc	3.8.1.4.1	Bob Hester	Editorial Non-Technical Correct some signs in a math equation.	Editorial PIP 98-5940	12/4/00	1/26/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-59			
Doug Berkshire	11.3.3 & Table 11-7	Doug Berkshire	Reduces manufacturer specific information, while retaining plant specific testing, also adds vendor specified sensitivity to the RIAs in table 11-7	PIP 98-5942	11/16/00	12/4/00	Pre 2000 discrepancy	12/4/00	UFSAR Change # 00-60			
T.E. Sanders	7.2.4	Bob Cornett	Adds references to section 7.2.4 to define Oconee's commitment to GL 83-28.	PIP 00-4015	11/21/00	12/12/00	Pre 2000 discrepancy	12/12/00	UFSAR Change # 00-61			
Scott Manning	3.9.3.3 & 10.3.3	Tim Brown / Scott Manning	Increases the allowed setpoint range for the MSRVs and allows for 4 MSRVs simultaneous actuation & that stresse.	ONOE-15044	9/14/00	5/9/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-62			
George McAninc	3.8.5.2	Bob Hester	Editorial Non-Technical Revise sectin to bring the FSAR into agreement with the License Renewal SER.	Editorial PIP 98-5940	12/11/00	1/26/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-63			
George McAninc	3.8.4.7.2	Bob Hester	Editorial Non-Technical Minor addition	Editorial PIP 98-5940	12/11/00	1/26/01	Pre 2000 discrepancy	1/30/01	UFSAR Change #00-64			
John Beckman	5.2.3.10.5, 5.4.1.1, 9.3.2.2.1, Table 5-5, 5-16, 9-6, Fig 5-17, 9-18	Mike Leighton / Gerry Ottman / Bob Leatherwood	Replacement of Unit one RCP Pump Seals.	ON-13066	1/16/01	1/25/01	Pre 2000 discrepancy	1/25/01	UFSAR Change # 00-65			

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Contributor	Section Number	Section Owner	Description of Change	Originating Source	Markup Status per NSD 220			To Publishing	Comments
					Date Initiated	Date Approved	Date Impl.		
Fred Owens	18.3.21	Bruce Jarret / Basil Carney	<b>Editorial Non-Technical</b> Removes bronze from this section since there isn't any bronze in the raw water system.	Editorial	12/14/00	5/15/01	Pre 2000 discrepancy	5/17/01	UFSAR Change # 00-66
Fred Owens	18.3.17.13	Dan Harrelson	<b>Editorial Non-Technical</b> Changes when we are required to clean the heat exchangers.	Editorial	12/14/00	12/14/00	Pre 2000 discrepancy	12/14/00	UFSAR Change # 00-67
Scott Manning	10.3.2	Scott Manning	Add a new paragraph to section 10.3.2 to describe the requirement for ADV & EFW to support Tech Spec 3.5.2.	ONOE-15619	12/12/00	12/18/00	Pre 2000 discrepancy	12/18/00	UFSAR Change # 00-68
J.M. Sanders	Table 4-3	Roger StClair	Table 4-3 was revised to reflect the fuel upgrade to B-11, based on the revision of OSC-6583.	OSC-6583, Rev. 2	11/2/00	12/27/00	Pre 2000 discrepancy	12/27/00	UFSAR Change # 00-69
Basil Carney	5.3.1, 18.3.4, Table 5-11	Rod Emory	Revised these sections because of the 8 Thermocouples being removed on Unit 1 reactor head.	ONOE-15722	12/14/00	2/12/01	Pre 2000 discrepancy	2/12/01	UFSAR Change # 00-70
George McAninc	3.8.4.4	Bob Hester	<b>Editorial Non-Technical</b> Delete the last 2 paragraphs & replace with aa paragraph from UFSAR Section 15.11.2.5.2.	PIP 98-5940 Editorial	12/27/00	1/26/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-71
George McAninc	3.8.1.6.2.3 & Figure 3-36	Bob Hester	<b>Editorial Non-Technical</b> Correct Typos	Editorial PIP 98-95940	12/31/00	1/26/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-73
George McAninc	3.7.3.3.1	Peter Chau	<b>Editorial Non-Technical</b> Made three non technical clarifications to this section.	Editorial PIP 98-5940	12/31/00	2/19/01	Pre 2000 discrepancy	2/20/01	UFSAR Change # 00-74
Russ Oakley	6.1.3 & Table 6-33	Russ Oakley	Changes the modelling description for section 6.1.3 and changes flow, NPSHr and NPSHa for BS & LPI.	OSC-7480	12/28/00	1/2/01	Pre 2000 discrepancy	1/2/01	UFSAR Change # 00-75
Russ Oakley	6.2.2.4	Russ Oakley	Revises this section to ensure that BS-1 & 2 are opened either by electrically or manually, because the EP have been changed.	ONOE-15763 PIP 99-4420	12/27/00	1/26/01	Pre 2000 discrepancy	1/29/01	UFSAR Change # 00-76
Libby Wehrman	12.4.7	Doug Berkshire	<b>Editorial Non-Technical</b> Responsibilities have ben changed and the system Radiological Environmental lab has taken over from the Chemistry Dept.	Editorial	1/8/01	1/16/01	Pre 2000 discrepancy	1/16/01	UFSAR Change # 00-77

USFAR Revision Tracking System

Contributor	Section Number	Section Owner	Description of Change	Originating Source	Markup Status per NSD 220				Comments
					Date Initiated	Date Approved	Date Impl.	To Publishing	
Reene Gambrell	18.4	Rod Emory	Editorial Non-Technical Change the committed date from 12/31/00 to 7/1/01.	Editorial	12/28/00	1/16/01	Pre 2000 discrepancy	1/16/01	UFSAR Change # 00-78
Basil Carney	5.3.1	Rod Emory	Revise section because of the repair of reactor vessel head thermal couple nozzels.	ONOE-15722	12/29/00	2/12/01	Pre 2000 discrepancy	2/12/01	UFSAR Change # 00-79
Basil Carney	5.3.1, 18.3.4 & Table 5-11	Rod Emory	VOID see package # 00-70 Revise section because of the repair of reactor vessel head thermal couple nozzels.	ONOE-15722	12/14/00	2/12/01	Pre 2000 discrepancy	VOID 2/12/01	UFSAR Change # 00-80
Vance Bowman	18.3.11	Graham Davenport	Revised to clarify that the LPSW system does not supply the SSF HVAC coolers.	PIP 00-3536	1/26/01	1/30/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-81
Ron Harris	9.2.2.2.1	Ron Harris	Editorial Non-Technical Add a sentence to clarify that restart of a CCW pump after a LOOP is not required.	Editorial License ammendment # 229,230 & 226 Dated 4/24/98	1/26/01	1/26/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-82
Russ Oakley	9.3.7.1	Russ Oakley	Change time required for establishing continous concentration from 30 minutes to 90 minutes.	PIP 99-5201	12/12/00	1/30/01	Pre 2000 discrepancy	1/30/01	UFSAR Change # 00-83
Bob Hester	3.10.1 & 8.3.1.4.6.1	Bob Hester Ray McCoy	revise sections to require the use of the methods and criteria established for cable tray supports in GIP-2 for seismic verification developed by SQUG.	PIP 99-1144 & PIP 98-2635	1/29/01	2/22/01	Pre 2000 discrepancy	2/26/01	UFSAR Change # 00-84
Julian Davis	Figure 8-6	Joe Stevens	Modification not done yet. Change the name on breaker 2DL in Keowee DC Distribution Center 2DA.	OE-15641	1/31/01	ON HOLD	Pre 2000 discrepancy		UFSAR Change # 00-85
Mary Jo Littleton	Table 11-6	Mary Jo Littleton	Historical Information for Table 11-6 cannot be varified and the pumps are no longer used.	Historical PIP 98-5942	1/31/01	1/31/01	Pre 2000 discrepancy	2/1/01	UFSAR Change # 00-86
Dan Harrelson	3.1.63	Dan Harrelson	Editorial Non-Technical The penetration Room Ventilation System can't be pressure tested as stated. NRC granted a relief exemption but we failed to remove this statement from the FSAR at that time.	PIP 98-5940 Editorial	2/1/01	2/1/01	Pre 2000 discrepancy	2/1/01	UFSAR Change # 00-87

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Contributor	Section Number	Section Owner	Description of Change	Originating Source	Markup Status per NSD 220				Comments
					Date Initiated	Date Approved	Date Impl.	To Publishing	
Leland Hawthorn	9.2.2.1	Leland Hawthorne	ESV is now installed for unit 1. Remove sentence that states only units 2&3 have ESV.	NSM-13000	2/6/01	2/6/01	Pre 2000 discrepancy	2/13/01	UFSAR Change # 00-88
J.M.Sawyer	Section 15, part of 6 & 10	Greg Swindlehurst Allen Park	Most of the changes are due to the new fuel type (MK-B11)	OSC-7676 & PIP 00-157 & 00-709	11/30/00	2/19/01	Pre 2000 discrepancy	2/19/01	UFSAR Change # 00-89
George McAninc	Table 3-68	Ray McCoy	Editorial Non-Technical changes / updates with the correct information and adds some information.	Editorial	2/14/01	2/22/01	Pre 2000 discrepancy	2/26/01	UFSAR Change # 00-90
Tim Brown	Tables 3-60 & 3-61	Tim brown	Editorial Tables 3-60 & 3-61 are the same as tables 5-18 & 5-19 and therefore tables 3-60 & 61 should be deleted to reduce duplication of the same material.	Editorial PIP 97-3724	2/14/01	2/15/01	Pre 2000 discrepancy	2/15/01	UFSAR Change # 00-91
Donna Moser	11.6.7.2.2	Mary Jo Littleton	Clarifies the differences between radiation zones contained in the UFSAR, EQCM and NRC correspondence and list these zones as Historical Information.	Historical PIP 98-6942	2/19/01	2/22/01	Pre 2000 discrepancy	2/22/01	UFSAR Change # 00-92
Chris Miller		Jeff Rowell	Change the removable bolted flexible link symbol to an isolated phase bus disconnect switch. Void this change to 00-108 which covers Unit 1 & 2.	NSM-13026	6/8/00	2/21/01	Pre 2000 discrepancy	2/22/01	UFSAR Change # 00-93
Henry Harling	Fig. 10-8, Table 10-2 & 10.4.7.2	Steve Benesole	These mods have added a suction strainer to the EFW pumps. Supersedes 99-46 package.	NSM-33056, NSM-13056 & NSM 23056	6/8/00	2/26/01	Pre 2000 discrepancy	5/8/01	UFSAR Change # 00-94
Jeff Edgar	Table 3-68	Bob Hester	Need to add to table 3-68 the seismic qualification report for the I & C control batteries.	NSM-32998, 22998 & 12998	7/29/00		Pre 2000 discrepancy		UFSAR Change # 00-95
Bob Leatherwo	6.3.2.2.1, 6.3.2.8 & 6.3.5	Bob Leatherwood Russ Oakley Chris King	Removes inoperable statements for ECCS ES valve operators that creates confusion in its current context in the UFSAR.	PIP 98-3893	2/19/01	4/9/01	Pre 2000 discrepancy	4/17/01	UFSAR Change # 00-97
Phil Thomas	9.6.5	Ken Grayson	Editorial Non-Technical Clarification on testing of electrical pwr systems to current accepted methods as per NSDs.	Editorial PIP 00-4080	2/26/01	3/1/01	Pre 2000 discrepancy	3/1/01	UFSAR Change # 00-98

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									Markup Status per NSD 220		
Contributor	Section Number	Section Owner	Description of Change	Originating Source	Date Initiated	Date Approved	Date Impl.	To Publishing	Comments		
Tim Brown	Tables 5-18 & 5-19	Gerry Ottman	Editorial Non-Technical Because of editorial discrepancies in Tables 5-18 & 5-19 (OSC-1812) input to these tables was reviewed and table 5-19 will be deleted. 5-18 was revised & formatting changes.	Editorial PIP 97-3724	2/28/01	5/8/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-99		
Bill Esiter	9.5.2.2	Bill Esiter	Editorial Non-Technical - Clarify a technical discrepancy in that the instrument air is shared by all units and the Radwaste facility.	Editorial PIP 98-5942-19	3/5/01	3/5/01	Pre 2000 discrepancy	3/5/01	UFSAR Change # 00-100		
Ron Harris	3.4.1.1.1	Bob Hester	Delete mention of HPSW pumps in paragraph that discusses reverse gravity flow during a TB flood.	PIP 00-2123	2/12/01	5/8/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-101		
Bill Esiter	15.6, Tables 15-17, 15-18, & 15-24. Fig. 15-82, 15-84, 15-85, 15-86 & 15-87	Bill Esiter	OSC-6191, Revision 5 includes a more recent calculated containment free volume & more nominal values for dissolved O2, Rx op time, pwr level, zirc mass, & recombiner flow.	PIP 99-4236 PIP 98-3893 PIP 98-6054	4/26/00	3/6/01	Pre 2000 discrepancy	3/6/01	UFSAR Change # 00-102		
Bob Leatherwool	6.3.2.6.1 & 6.3.3.1	Bob Leatherwood	Adds a statement while at full power operation we need two HPI pumps one per train.	PIP 98-6070 (CA3500) LAR 314,314	3/14/01	3/14/01	Pre 2000 discrepancy	3/14/01	UFSAR Change # 00-103		
Bill Pursley	12.3.1	Eddie Brown	Delete the allowable dose rates and the associated description from section 12.3.1, because it is obsolete information.	PIP 98-5948	3/15/01	3/15/01	Pre 2000 discrepancy	3/19/01	UFSAR Change # 00-104		
Russ Oakley	3.11.1, 3.11.1.1, 3.11.1.2, 3.1.1.3, 3.11.7, & 6.3.2.8	Frank Eppler & Russ Oakley	replaced references to Duke response to NRC IE Bulletin 79-01B in section 3.11. Revises wording to reflect current EQ Program scope and content for section 6.3.2.8.	PIP 98-3893	3/14/01	4/9/01	Pre 2000 discrepancy	4/9/01	UFSAR Change #00-105		
Ken Grayson	9.6.3.6	Ken Grayson	Revises the SSF diesel support system DBD to list CCW-312/313 with an active to close function and a statement that part of the sump system are seismically restrained.	ONOE-16006	3/13/01	3/26/01	Pre 2000 discrepancy	4/5/01	UFSAR Change # 00-106		

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									Markup Status per NSD 220			
Contributor	Section Number	Section Owner	Description of Change	Originating Source	Date Initiated	Date Approved	Date Impl.	To Publishing	Comments			
Bob Leatherwo	Table 9-13	Bob Leatherwood	Change the listed design pressure for the CC pumps in Table 9-13	PIP 98-2055	3/27/01	4/5/01	Pre 2000 discrepancy	4/5/01	UFSAR Change # 00-107			
Chris Miller	8.1.2 & Fig 8-1	Jeff Rowell	Change the removable bolted flexible link symbol to an isolated phase bus disconnect switch for Units 1 & 2 in Fig 8-1 and change the sentence in 8.1.2 for Units 1 & 2 for this change as well.	NSM -23026 NSM-13026	3/26/01	4/11/01	Pre 2000 discrepancy	4/12/01	UFSAR Change # 00-108			
Renee Gambrell	Table 1-1, 3.11.1.2, 5.2.1.6 & 5.2.1.9	J. Weast, Frank Eppler & M. Leighton	Changes the sections/table for clarifying conforming notes to reflect an extended 20 year operation.	Amendment 311,311,311	4/2/01	5/8/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-109			
Russ Oakley	Table 6-2, 6.1.3	Russ Oakley	<b>EDITORIAL</b> Revised to differentiate between descriptive information and design basis limits on leakage from Engineered Safeguards System. SLC 16.6.4 requires LPI leakage less than 2 gph by hydrostatic testing.	PIP 98-3893	3/29/01	4/13/01	Pre 2000 discrepancy	4/16/01	UFSAR Change # 00-110			
Russ Oakley	3.1.52	Reed Severance	<b>Editorial Non-Technical</b> Add wording to state that RB Cooling System isn't credited in the short term containment peak pressure analysis. This section will then agree with section 6.2.1.1.3.1.	PIP 98-5940 Editorial	3/26/01	4/16/01	Pre 2000 discrepancy	4/16/01	UFSAR Change # 00-111			
Reene Gambrell	3.2.1.1.1, 3.2.1.1.2, & 3.8	Bob Hester	A note was added for class 1 & 2 civil structures are included in the scope for license renewal.	Amendment 311,311,311	3/26/01	5/8/01	Pre 2000 discrepancy	5/9/01	UFSAR Change # 00-112			
Reene Gambrell	18	Jim Weast	Delete the current "effective, but not implemented" to read: Aging management Programs & Activities are being implemented as of 7/1/01.	Amendment 311,311,311	3/26/01	4/12/01	Pre 2000 discrepancy	4/12/01	UFSAR Change # 00-113			
Steve Newman	9.1.5	Rod Emory	<b>Editorial Non -Technical</b> Reference # 13 referenceneeds to be corrected to read Branch Technical Position APCS 9-2.	Editorial	4/16/01	4/16/01	Pre 2000 discrepancy	4/16/01	UFSAR Change # 00-114			
Janet D Bailey	5.2.3.10.3	Mike Leighton	The UFSAR was changed by 99-61. Revises the Unit 3 LDST low level alarm setpoint.	ONOE-13906	11/3/99		Pre 2000 discrepancy	VOID	UFSAR Change # 00-115			

USFAR Revision Tracking System

Markup Status per NSD 220									
Contributor	Section Number	Section Owner	Description of Change	Originating Source	Date Initiated	Date Approved	Date Impl.	To Publishing	Comments
Greg Saxon	7.5.2.36	Marlon Dempsey	Revise 7.5.2.36 to correctly state the quench tank rupture disc pressure and corresponding saturation temperature. This corrects conflicting information on the rupture tank.	PIP 00-4590	4/17/01	4/26/01	Pre 2000 discrepancy	4/26/01	UFSAR Change # 00-116
Sreve McSwain	Fig 8-4 Table 3-68	Ray McCoy	Adds more accurate notes to number 7 of table 3-68, because of the modification.	ONOE-12847	8/16/00	5/1/01	Pre 2000 discrepancy	5/8/01	UFSAR Change # 00-117
W A Salsgiver	Fig 9-24	Robert Burley	Correctly labels the booster fans F3-8 and F3-9 in the correct train.	ONOE-13663	1/6/00	5/8/01	Pre 2000 discrepancy	5/8/01	UFSAR Change # 00-118
EJ Witman	Figure 8-6	Joe Stevens	Revised to change the THKM information for the breakers to be replaced & the details about the number 500 MCM cables.	NSM ON-52985	9/10/99	5/10/01	Pre 2000 discrepancy	5/10/01	UFSAR Change # 00-119

# FOR INFORMATION ONLY

OMP 4-1

ENCLOSURE 5.4

## ACRONYMS AND ABBREVIATIONS

Absolute	Abs
Anticipated Transients Without Scram	ATWS
Accumulator	Accum
ATWS Mitigation System Actuation Circuitry	AMSAC
Acknowledge	Ack
Active	Act
Administration	Admin
Air circuit breaker	ACB
Air compressor	Air Comp
Air conditioner (ing)	A/C
Air handling unit	AHU
Alarm	Alm
Alternate	Alt
Alternating current	AC
Amperes	Amps
Approximate (ly)	≈ or - (Approx)
As Low As Reasonably Achievable	ALARA
Atmosphere	Atmos
Automatic	Auto
Auxiliary	Aux
*Auxiliary Instrument Air System	AIA
Auxiliary oil pump	AOP
Auxiliary service water	ASW
*Auxiliary steam system	AS
Auxiliary transformer	Aux Xformer
Average	Avg (av)
*Valve designator for that system	

:
   
OMP 4-1
   
ENCLOSURE 5.4
   
ACRONYMS AND ABBREVIATIONS

Average temperature	$T_{AVE}$ (Tave)
Backup	BKUP
Basement	BSMT
Battery	Batt
Battery charger	Batt chgr
Bearing	Brng
Bearing lift pump	BLP
Blanket	BLKT
Bleed	BLD
Bleed holdup tank	BHUT
Block	BLK
Block valve	Blk Vlv
Blower	BLWR
Borated water storage tank	BWST
Boric acid mix tank	BAMT
Boron 10	$B_{10}$
Breaker	BKR (Bkr)
*Breathing air system	BA
British thermal unit	BTU
Building	Bldg
*Building spray system	BS
Bypass	Byp
Cabinet	CAB
Carbon dioxide	$CO_2$
Carbon monoxide	CO
Center line	$C_L$

\*Valve designator for that system

OMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Change	Chng (chg)
Channel	CH
Charger	chgr
Check valve	CHK VLV
Chemical	Chem
*Chemical addition system	CA
Chloride	Cl
Circuit	CKT
Circulating	Circ
Closed	CLSD
Column	COL
*Component cooling system	CC
Compressor	Comp
Computer	Comptr
Concentrate	Conc
Concentrated boric acid storage tank	CBAST
Condensate booster pump	CBP
Condensate monitor tank	CMT
Condensate steam air ejector	CSAE
Condensate storage tank	CST
*Condensate system	C
Condensate test tank	CTT
*Condenser circulating water system	CCW
Conductivity	Cond
Containment	CONT
Control	CTRL
*Valve designator for that system	

OMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Control rod drive	CRD
Control rod drive mechanism	CRDM
Control Room	CR
Control valve	CV
Coolant	CLNT
*Coolant storage system	CS
*Coolant treatment system	CT
Cooldown Procedure	CP
Cooler	CLR
Cooling	CLNG
Core exit thermocouples	CETCs
*Core flood system	CF
Core flood tank	CFT
Correction	CORRT
Corridor	CORRD
Counts per minute	CPM
Counts per second	CPS
Crisis Management Center	CMC
Crossconnect	XCONN
Crossover	X-OVER
Cubic feet	ft <sup>3</sup>
Cubic feet per minute	cfm
Current transformer	CT
Damper	Dmper

OMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Decades per minute	DPM
Decay heat removal	DHR
Decontamination (ate)	Decon
Degree	Deg
Degrees Centigrade	°C (Deg C)
Degrees Fahrenheit	°F (Deg F)
Dehumidifier	Dehum
Delta	Δ
*Demineralized water system	DW
Demineralizer	Demin
Desuperheater	Desuphtr
Detector	Det
Diameter	Dia
Diesel generator	DG (D/G)
Differential	DIFF
Differential pressure	ΔP (D/P)
Direct current	DC
Discharge	Disch
Diverse Scram System	DSS
Dose Equivalent Iodine	DEI
Double pole double throw	DPDT
Double pole single throw	DPST
Down	DWN
Downcomer	DNCOMR
Drain valve	Drn Vlv
Drawing	DWG (DWG)

\*Valve designator for that system

OMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Dry Storage Canister	DSC
Effluent	EFF
Electrical	ELEC
Electro hydraulic control	EHC
*Electro hydraulic control system	HO
Elevated water storage tank	EWST
Elevation	ELEV
Emergency	EMER
Emergency bearing oil pump	EBOP
Emergency core cooling systems	ECCS
Emergency feedwater	EFDW
Emergency feedwater pump	EFDWP
Emergency feedwater pump turbine	EFDWPT
Emergency power switching logic	EPSL
Emergency seal oil pump	ESOP
Enclosure	Encl
Engineering safeguards	ES
Engineering safety feature actuation system	ES (ESFAS)
Equipment	Equip
Evacuation/ate	EVAC
Evaporator	EVAP
Exchanger	EXCHNGR
Exhaust	Exh
Exhauster	EXHTR
Expansion	EXPN
Expansion joint	EXPJT

\*Valve designator for that system

OMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Extended SG SU Range

XSUR

External

EXT

Feeder

FDR

Feedwater pump

FDWP (FWP)

Feedwater pump turbine

FDWPT

\*Feedwater system

FDW

Feet

ft (')

Feet per second

fps

Filter

FLTR

\*Fire hydrant system

FH

First, second, third

1st, 2nd, 3rd,  
etc

First stage reheater

FSRH

First stage reheater drain tank

FSRHDT

Flow transmitter

FT

Forced draft fan

FD FAN

Forward

FWD

Frequency

FREQ

Fuel Assembly

FA

\*Fuel oil system

FO

Full Power

FP

Gallon

gal

Gallons per hour

gph

Gallons per minute

gpm

\*Gaseous waste disposal system

GWD

Gaseous waste disposal tank

GWD TK

Gaseous waste release

GWR

\*Valve designator for that system

TOMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Generator	GEN (Gen)
Governor	GOV
Governor valve	GOV VLV
Ground	GND
Header	HDR (Hdr)
Heater	HTR
Heater drain pump	HDP
*Heater drains system	HD
*Heater vent system	HV
Heating, ventilation and air conditioning	HVAC
High	HI
High activity waste tank	HAWT
High efficiency particulate air	HEPA
*High pressure extraction system	HPE
High pressure injection pump	HPIP
High pressure injection system	HPI
*High pressure injection system	HP
*High pressure service water system	HPSW
High range	HR
Holdup	HU
Horizontal	Horiz
Horizontal Storage Module	HSM
Hotwell	HW
Hotwell pump	HWP
Hour	Hr
Hydraulic	HYDR

\*Valve designator for that system

OMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Hydrazine	NH <sub>2</sub>
Hydrogen	H <sub>2</sub>
Hydrogen ion concentration	pH
*Hydrogen system	H
Inactive	IN/ACT
Inadequate Core Cooling	ICC
Inadequate Core Cooling Monitor	ICCM
Inboard	I/B
Inch	in.
Inches of water	in.H <sub>2</sub> O
Inches of mercury	in Hg
Incore Thermocouples	CETC
Incorporated	INC
Independent Spent Fuel Storage Installation	ISFSI
Indication & Control	IC
Inhibit	INHIB
Injection	INJ
Inlet	INLT
Instrument	INST
*Instrument air system	IA
Instrument and Electrical Department	I&E
Instrument Root Valve	IRV
Insulation	INSUL
Integrated Control System	ICS
Integrated Leak Rate Test	ILRT
Interim rad waste	IRW

\*Valve designator for that system

OMP 4-1.  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Intermediate Range neutron detector	IR
Inverter	INVTR
Ion exchanger	IX
Irradiated Fuel Assembly	IFA
Isolation (ate) (ed)	Isol (ISOL)
Junction	JCT
Kilovolt	kV
Kilovolt-ampere	kVA
Kilovolt-ampere reactive	KVAR
Kilowatt	kW
Kilowatt-hour	kWH
Laundry and hot shower tank	LHST
Lead	Pb
*Leak rate test system	LRT
Letdown	L/D
Letdown storage tank	LDST
Level	LVL
Level transmitter	LT
Limiting Condition of Operation	LCO
Liquid	LIQ
*Liquid waste disposal	LWD
Liquid waste release	LWR
Lithium hydroxide	LiOH
Load center	LDCTR (LC)
Load frequency control	LFC
Locked closed	L.C.

\*Valve designator for that system

OMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Locked open	L.O.
Loss of coolant accident	LOCA
Low activity waste tank	LAWT
*Low pressure extraction system	LPE
Low pressure injection	LPI
Low pressure injection pump	LPIP
*Low pressure injection system	LP
*Low pressure service water	LPSW
Low Range	LR
Lube oil purifier	LOP
Main Computer	MC
Main feeder bus	MFB
Main feeder bus monitoring panel	MPBMP
Main feedwater	MFDW
Main feedwater pump	MFDWP
Main seal oil pump	MSOP
*Main steam	MS
Main steam control valve	MSCV
Main steam intercept valve	MSIV
Main steam relief valve	MSRV
Main steam stop valve	MSSV
Main Turbine	MT
Main turbine oil tank	MTOT
Make up	M/U
Manual	MAN
Maximum	MAX

\*Valve designator for that system

OMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Maximum Permissible Concentration	MPC
Mechanical	MECH
Megavolt ampere reactive	MVAR
Megawatt	MW
Megawatt electrical	MWe
Megawatt thermal	MWt
Mezzanine	MEZZ
Microcuries per milliliter	$\mu\text{Ci/ml}$
Minimum	MIN
Minute	Min
Miscellaneous	Misc
Miscellaneous waste holdup tank	MWHUT
Moisture separator drain tank	MSDT
Moisture separator drain pump	MSDP
Moisture separator reheater	MSRH
Moisture separator reheater drain tank	MSRHDT
Monitor	MON
Motor	MTR
Motor control center	MCC
Motor driven emergency feedwater pump	MD EFDWP
Motor gear unit	MGU
Motor operated	MO
Motor operated disconnect	MOD
Motor operated valve	MOV
Motor speed changer	MSC
Mulsifyre	MLSFYR
Narrow range	NR

\*Valve designator for that system

OMP 4-1  
ENCLOSURE 5.4  
ACRONYMS AND ABBREVIATIONS

Negative	Neg
Net positive suction head	NPSH
Neutral	NEUT
Nil ductility temperature	NDT
Nitrogen	N <sub>2</sub>
*Nitrogen system	N
Non Licensed Operator	NLO
Non-Nuclear Instrumentation	NNI
Normally	Norm
Normally closed	N.C.
Normally open	N.O.
Nuclear instruments	NI
Nuclear Policy Manual	NPM
Oconee Nuclear Station	ONS
Oil circuit breaker	OCB
Oil lift pump	OLP
Operate	Oper
Operating Range	OR
Operations	Ops
Operations Management Procedure	OMP
Operations Support Center	OSC
Operator aid computer	OAC
Outboard	O/B
Outlet	OTLT
Overflow	OVF
Overhead	OVHD

\*Valve designator for that system

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Overload	OVL D
Oxygen	O <sub>2</sub>
Package	PKG
Panel	PNL
Panel board	PNLBD
Particulate, absolute, charcoal filter	PAC filter
Parts per billion	ppb
Parts per million	ppm
Parts per million boron	ppmb
Penetration	Pen(t)
Penetration room	Pen(t) Rm
Penetration room ventilation	PRV
*Penetration room ventilation system	PR
Phase	ø
*Plant heating steam system	PH
Pneumatic	PNEU
Pneumatic circuit breaker	PCB
Polishing	POL
Polishing demineralizer system	POWDEX
Position	POSN
Positive	POS
Potential	Pot
Potential transformer	PT
Pounds mass per hour	lbm/hr
Pounds per hour	LB/HR (lb/hr)
Pounds per square inch	psi

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Pounds per square inch absolute	psia
Pounds per square inch differential	psid
Pounds per square inch gauge	psig
Power	PWR
Power factor	PF
Power operated relief valve	PORV
Power range	PR
Power supply	PS
Pressure	Press
Pressure & Temperature	P/T
Pressure gauge	PG
Pressure transmitter	PT
Pressurizer	PZR
Preventative maintenance	PM
Primary	PRI
Problem Investigation Report	PIR
Public address system	PA
Pump	pmp (P)
Purge	PRG
Purifier (cation)	Purif
Quality assurance	QA
Quantity	QTY
Quench tank	QT
Radial	RADL
Radiation monitor	RIA

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Radiation Protection	RP
Radioactive Waste Facility	RWF
Reactor	RX
Reactor building	RB
Reactor building cooling unit	RBCU
Reactor building normal sump	RBNS
Reactor building spray	RBS
Reactor building vent	RBV
Reactor coolant average temperature	$T_{avc}$ (Tave)
Reactor coolant bleed holdup tank	RC BHUT
Reactor coolant cold leg temperature	$T_c$
Reactor coolant hot leg temperature	$T_h$
Reactor coolant inventory monitoring system	RCIMS
Reactor coolant makeup	RCMU
Reactor coolant pump	RCP
Reactor coolant system	RCS
*Reactor coolant system	RC
Reactor Operator	RO
Reactor protective system	RPS
Reactor vessel	RXV
Reactor vessel level instrumentation system	RVLIS
Recirculating (ate)	Recirc
*Recirculating cooling water system	RCW
Recirculating seal oil pump	RSOP
Recorder	RCDR
Rectifier	Rect

\*Valve designator for that system

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Reference	Ref
Reflash	R/F
Refrigeration	Refrig
Regenerative	REGEN
Reheat stop valve	RSV
Reheater	RHTR
Relay	RLY
Relief valve	RV
Required	REQD
Resistance temperature detector	RTD
Return	RIN
Revision	REV
Revolutions per minute	RPM
Room	Rm
Sample	SMPL
Saturation pressure	$P_{sat}$
Saturation temperature	$T_{sat}$
Schematic	SCHEM
*Seal oil system	SO
Seal oil vacuum pump	SOVP
Second	Sec
Second stage reheater	SSRH
Second stage reheater drain tank	SSRHDT
Secondary	SEC
Section	SECT

\*Valve designator for that system

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Senior Reactor Operator	SRO
Sequence	SEQ
*Service air system	SA
Shield wall	SH
Shielding	SHLD
Shut down	SD
Single pole double throw	SPDT
Single pole single throw	SPST
Small break loss of coolant accident	SBLOCA
Source range neutron detector	SR
Spare	SPR
*Spent fuel cooling system	SF
Spent fuel pool	SFP
Spent resin storage tank	SRST
Standard cubic centimeter per minute	SCCM
Standard cubic feet per minute	SCFM
Standard cubic feet per second	SCFS
Standby	Stby
Standby Shutdown Facility	SSF
Start up	SU
Startup range	SUR
Stator	STATR
*Stator coolant system	SC
Stator cooling water	SCW
Stator cooling water pump	SCWP
*Valve designator for that system	

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Steam	Stm
*Steam drain system	SD
Steam generator	SG
Steam generator (restricted usage)	OTSG
Steam generator Operating Range level	O.R.
Steam generator tube rupture	SGTR
Steam packing exhausts	SPE
*Steam seal system	SSH
Stop valve	SV
Strainer	STRNR
Structure	STRUCT
Subcooling margin	SCM
Suction	SUCT
Superheater	Suphtr
Switch	SW
Switch board	SWBD
Switch gear	SWGR
Switch yard	SWYD
Synchronize	SYNC
System	SYS
Tank	Tk
Technical Specifications	T.S. (Tech Specs)
Technical Support Center	TSC
Temperature	Temp (T)
Temperature change	ΔT

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Temperature transmitter	TT
Thermal shock operating region	TSOR
Thermocouple	TC (T/C)
Thrust	THR
Transfer	Xfer
Transformer	Xformer
Transmitter	Xmitter
Tritium	H <sub>3</sub>
Trouble	TRBL
Turbine	Turb
Turbine building	Turb Bldg (TB)
Turbine building sump	TBS
Turbine bypass valves	TBVs
Turbine driven EFDWP	TD EFDWP
Turbine generator	Turb Gen (T/G)
*Turbine lube oil system	TO
Turning gear	TG
Turning gear oil pump	TGOP
Unbalanced	UNBAL
Under voltage	UV
Uninterrupted Power Source	UPS
Upper surge tank	UST
Vacuum	Vac
Vacuum Drying System	VDS
*Vacuum system	V

\*Valve designator for that system

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Valve	Vlv (VLV)
Ventilation	Vent
Vibration	Vib
Volt	v
Volt ampere	VA
Volt ampere reactive	VAR
Voltage alternating current	VAC
Voltage direct current	VDC
Voltage regulator	VREG
Volume	Vol
Waste disposal	WD
Waste gas filter	WG filter
Waste monitor	WM
Water	WTR (H <sub>2</sub> O)
Wide range	WR
Winding	WDNG
Withdrawal	WITHDRWL

\*Valve designator for that system