OCONEE NUCLEAR STATION

Summary of Nuclear Station Modifications
and Exempt Change Variation Notices
Completed under 10CFR 50.59

A-47
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ON-0557

DESCRIPTION: This modification makes the input relays in the Control Rod Drive Gate Drive Assemblies redundant.

SAFETY EVALUATION: This modification will prevent a single relay failure from causing ratchet trips of control rods. The addition of redundant relays will in no way impact the ability of the control rods to trip when required. As such, this modification poses no unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	Complete	Complete	N/A

ON-0821

DESCRIPTION: This modification adds permanent radiation monitors to the Turbine Building sumps. The monitors will detect high sump radiation levels and terminate discharge from the sumps in the event high radiation levels are detected.

SAFETY EVALUATION: No safety system will be impacted by installation of this modification. The radiation monitors will preclude inadvertent discharge of radioactive materials from the sumps. No unreviewed safety question is created as a result of this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	N/A	N/A	Complete

ON-1003

DESCRIPTION: This modification provides flow instrumentation in Low Pressure Service Water System piping. This permits flow measurement during pump testing per ASME Boiler and Pressure Vessel Code, Section XI requirements.

SAFETY EVALUATION: This modification allows testing per ASME Code requirements. This modification does not pose any unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	Complete	Complete	N/A

ON-1426

DESCRIPTION: This modification installs a dedicated fuse block for the load shed trip initiate coils in 4160 V switchgear TC, TD, and TE. It also installs a computer alarm relay to the dedicated fuse block and a power indication light on the switchgear cubicle.

SAFETY EVALUATION: This will allow each local load shed trip - initiate relay on the TC, TD, and TE switchgear to remain operational with the breaker cubicle in which it is located de-energized. Alarms will now indicate loss of switchgear control voltage, thus detailed surveillance will not be required. This modification will pose no unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	Complete	Incomplete	N/A

ON-1524

DESCRIPTION: This modification replaces thermowells TH3 and TH26 on the Pressurizer Steam Space Line to the Chemical Addition and Sampling System with upgraded thermowells.

SAFETY EVALUATION: No safety system will be degraded by the implementation of this modification and no functional changes to any system will be made. No unreviewed safety question will be created as a result of this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	Complete	Complete	N/A

ON-1550

DESCRIPTION: This modification adds isolation valves and a vent tap to the Demineralized Water System downstream of the Borated Water Storage Tank tie in.

SAFETY EVALUATION: This modification was performed so Penetration #55 would comply with 10CFR50, Appendix J Type A leak tes venting and draining requirements. No unreviewed safety questions are posed by this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	Complete	Complete	N/A

ON-1603

DESCRIPTION: This modification provides additional fire protection in personnel hatch areas (Room Nos. 300, 304, 337, 338, 339, 347, and 376). Previously, material stored in these areas during an outage may have exceeded fire loading as specified during non-outage times.

SAFETY EVALUATION: This modification ensures that the fire loading is not exceeded. No unreviewed safety questions are posed by this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	Complete	Complete	N/A

ON-1782

DESCRIPTION: This modification provides throttling capability for valves HP409 and HP410. Throttling capability is needed to balance the flow in the emergency injection lines. This modification also provides control room indication of the flow in the HPI cross connect headers.

SAFETY EVALUATION: The flow balancing capability for the valves HP409 and HP410 is required by station procedures to prevent pump cavitation as the system pressure decreases. This modification enhances the performance of HPI pumps for a small break LOCA. This modification does not have any adverse safety implication and does not pose any unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Incomplete	Complete	Incomplete	N/A

ON-1875

DESCRIPTION: This modification replaced all General Electric Type HFA51A relays used in safety-related applications located on Engineered Safeguards load centers and 230KV switchyard control circuits with General Electric Century Series HFA relays.

SAFETY EVALUATION: This modification is a result of IE Notice 81-01. Replacement relays have demonstrated reliable through a qualification test program. No unreviewed safety questions are posed by this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	N/A	N/A	Complete

ON-1983

DESCRIPTION: This modification provides for independent indication of Hydrogen Purge Unit heater operation and revises the relief valve setpoint. This will allow rapid repair of non-redundant wiring, indication of heater operation, and will prevent unacceptable operator exposure during accident conditions.

SAFETY EVALUATION: This modification does not affect Hydrogen Purge Unit Controls. No unreviewed safety questions are judged to be created as a result of this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	N/A	N/A	Complete

ON-2257

DESCRIPTION: The purpose of this modification is to reroute some 1" piping which was found to be overstressed during review of NSM-1664. The new piping route is designed to relieve the stress. The area of piping in question is an overlap area between Class C (High Pressure Injection Seal Supply filter line) and Class G (Gaseous Waste Disposal Line) piping.

SAFETY EVALUATION: This modification involves a piping reroute only. No system functional changes will occur and system reliability will be improved. No unreviewed safety questions are posed by this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	Complete	N/A	N/A

ON-2330

DESCRIPTION: This modification provides for a door over the annulus area in the Reactor Building Basement/Cavity Area. The control of access to this area would eliminate the possibility of inadvertent radiation exposure to personnel.

SAFETY EVALUATION: In response to IE Notice 82-51, this modification will reduce the potential for serious overexposure to radiation in the annulus area of the Reactor Building. This modification does not pose any unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	Complete	Complete	N/A

ON-2398

DESCRIPTION: This modification provides an annunciator in the Unit 3 Control Room for the Radwaste Facility Fire Detection System.

SAFETY EVALUATION: No safety system will be degraded by the implementation of this modification and no functional changes to any system are made. No unreviewed safety questions are created as a result of this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	N/A	Complete	N/A

ON-12437

DESCRIPTION: This modification provides a longer type grapple finger to allow handling of B-4 and B-5 component/fuel assembly combination by the Unit 1 and 2 Spent Fuel Pool Bridge Fuel Hoist.

SAFETY EVALUATION: The probability of a malfunction of equipment important to safety is not increased. The probability or consequences of a fuel handling accident would not be increased. No unreviewed safety questions are created as a result of this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	N/A	N/A	N/A

ON-12493
22493
32493

DESCRIPTION: This modification extends the suction piping of the Motor-Driven Emergency Feedwater Pumps to near the bottom of the hotwell. This will provide approximately 115,000 gallons of water in the condenser available for these pumps based on normal hotwell level of 63 inches and a minimum level of 12 inches. Additionally, with proper control of a partial condenser vacuum, adequate NPSH is available for these pumps during operation of the turbine bypass system.

SAFETY EVALUATION: This modification will provide additional condensate (feedwater for the Motor-Driven Emergency Feedwater Pumps during an emergency. No unreviewed safety questions are judged to be created as a result of this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	Complete	Complete	N/A

ON-12494
22494
32494

DESCRIPTION: Motorola ES Wide Range Reactor Coolant Pressure Transmitters 1PT-21P, -22P, -23P and 2PT-21P, -22P, -23P were replaced with Rosemont Model #1153GD9RB transmitters to conform to the Environmental Qualifications Program.

SAFETY EVALUATION: These transmitters are needed to conform to the Environmental Qualifications Program. This modification poses no unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	Complete	Incomplete	N/A

ON-22438

DESCRIPTION: This modification installed an inspection hole in the shell of the 2A Once Through Steam Generator (OTSG). The inspection hole is a standard handhole opening with a "J" bolted closure on the shroud opening. This new opening does not affect the function of the shell of the OTSG.

SAFETY EVALUATION: The OTSG shell provides emergency feedwater to the tube bundle (secondary side). The inspection handhole is similar to the 15 existing handhole closures in the OTSG. As such, this modification does not pose an unreviewed safety question.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	Complete	N/A	N/A

ON-22622

DESCRIPTION: The control circuits of Limitorque and Rotork valve actuators were modified to utilize the "torque bypass switch". The torque switch is defeated for 0 to 25% of valve stroke, which is the high load portion of the open cycle due to unseating and operation against high flow and differential pressure.

SAFETY EVALUATION: This modification eliminates the potential for Limitorque and Rotork motor operators to "torque out" during the high load portion of the open cycle. This modification does not pose any unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	Complete	N/A	N/A

OE-599

DESCRIPTION: This modification swaps relays in 4160V Switchgear B1T and B2T with 1TE-1 and 1TE-14, thus allowing designated settings for B1T and B2T to be used.

SAFETY EVALUATION: This change will increase the reliability of the 4.16KV Auxiliary. No unreviewed safety questions are judged to be created.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	N/A	N/A	N/A

OE-690

DESCRIPTION: This modification removes valve 1LPSW-36 from the system and caps the pipe using a 1" pipe plug. This valve is regarded as unnecessary by design engineering.

SAFETY EVALUATION: This modification concerns a class F component which is no longer required for safe operation. This valve was inadvertently installed. This modification does not pose an unreviewed safety question.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	N/A	N/A	N/A

OE-691

DESCRIPTION: This modification removes valve 1LPSW-38 from the system and caps the pipe using a 1" pipe plug. This valve is regarded as unnecessary by design engineering.

SAFETY EVALUATION: This modification concerns a class F component which is no longer required for safe operation. This valve was inadvertently installed. This modification does not pose an unreviewed safety question.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	Complete	N/A	N/A	N/A

OE-929

DESCRIPTION: This modification disconnects heaters on Limitorque Safety-related environmentally qualified valve operators to prevent burn damage to internal wiring.

SAFETY EVALUATION: This modification was performed following identification of problems with Limitorque operators in IE Notice 86-71. No unreviewed safety questions will result from this modification.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	Complete	N/A	N/A

OE-969

DESCRIPTION: This modification upgrades Reactor Coolant Pump 3B1 bearings, integral wear ring/suction piece, and the stuffing box bearing bore. The suction piece adapter had come loose and came in contact with the running pump during Cycle 10.

SAFETY EVALUATION: This modification repairs pump damage and will improve Reactor Coolant Pump performance and reliability. This modification does not pose any unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	N/A	Complete	N/A

OE-970

DESCRIPTION: This modification upgrades Reactor Coolant Pump 3B2 bearings, suction piece capscrew, wear ring capscrew, and thermal barrier plug. The bearing was found loose during an inspection following Cycle 10.

SAFETY EVALUATION: This modification will improve Reactor Coolant Pump performance and reliability. This modification does not pose any unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	N/A	Complete	N/A

OE-971

DESCRIPTION: This modification upgrades Reactor Coolant Pump 3A1 bearings, suction piece capscrew, wear ring capscrew, and stuffing box bearing bore.

SAFETY EVALUATION: This modification will improve Reactor Coolant Pump performance and reliability. This modification does not pose any unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	N/A	Complete	N/A

OE-1013

DESCRIPTION: This modification upgrades Reactor Coolant Pump 3A2 suction piece capscrew and wear ring capscrew.

SAFETY EVALUATION: This modification will improve Reactor Coolant Pump performance and reliability. This modification does not pose any unreviewed safety questions.

STATUS:	Unit 1	Unit 2	Unit 3	Station
	N/A	N/A	Complete	N/A

OCONEE NUCLEAR STATION
RADWASTE FACILITY
10CFR 50.59 SAFETY EVALUATION

The 10CFR 50.59 evaluation of the new radwaste facility (excluding the incinerator) at Oconee Nuclear Station will not require changes to Technical Specifications in order to process radwaste through the facility. The incinerator was licensed pursuant to 10CFR 20.302.

There are no new types of equipment being utilized in the new facility from equipment currently utilized in the Auxiliary Building and Interim Radwaste Building. In addition, there are no new processes to be utilized in the new facility from processes currently being used to process radwaste. Source terms computed in Chapter 11 of the Oconee FSAR have been examined with respect to operation of the new Radwaste Facility. Source terms will not be increased or impacted by the new facility since Radioactive Waste quantities generated (FSAR Table 11.1-1) will not be increased.

The maximum activity concentrations in liquid and gaseous effluents, assuming one percent defective fuel (Table 11.1-3) will not change due to operation of the new radwaste facility since no new types of equipment will be utilized, no new processes will be utilized, and the quantity of radioactive waste generated will not be altered.

In addition, each accident analysis addressed in Chapter 15 of the Oconee FSAR has been examined with respect to operation of the new Radwaste Facility. The probability of any Design Basis Accident (DBA) is not affected by this change, nor are the consequences of DBA affected by this change.

Operation of the new facility will not create the possibility of a new or different kind of accident from any kind of accident previously evaluated since the same type of equipment and same type of processes as those currently utilized will be utilized in the new facility.

A significant reduction in any margin of safety will not result from operation of the new facility since equipment and processes utilized are not related to the margin of safety of any Technical Specifications.

In summary, no changes to Technical Specifications will be required to support operation of the new radwaste facility since:

- o No new types of equipment will be utilized
- o No new processes will be utilized
- o Source terms used in accident analyses will not be increased
- o Radwaste quantities generated will not increase
- o Effluent releases to unrestricted area does not change
- o The probability or consequences of previously evaluated accidents will not increase
- o There will not be a reduction in any margin of safety

As a result, an unreviewed safety question is not involved in the operation of the new Radwaste Facility.

OCONEE NUCLEAR STATION
SUMMARY OF PROCEDURE CHANGES COMPLETED
UNDER 10CFR 50.59

HIGH PRESSURE INJECTION SYSTEM

OP/3/A/1104/02

This revision of the procedure requires that radiation monitor 3RIA-36 remain isolated until station modification NSM-2272 (replacement of rotometers) is implemented. This will be at slight variance with FSAR Section 9.3.2.2 (till the rotometers are replaced) which states that one to two gallons per minute of letdown flow is diverted through 3RIA-36 and monitored for gamma activity. The radioactivity of the reactor coolant is also monitored by several other means. This revision does not have any safety implications. This procedure revision does not pose any unreviewed safety question.

THE WATER-SLAP CLEANING OF 1A AND 1B ONC THROUGH STEAM GENERATORS

TT/1/A/425/2

This new procedure is used to remove magnetite deposits from the tube support plates and the tube support waterways (holes) inside a Once Through Steam Generator (OTSG).

The water contained in a partially filled OTSG is sloshed around at high speeds by releasing large bubbles of compressed Nitrogen in pulses at the bottom of the tubes. The accelerated water "slaps" the tube support plate and loosens the magnetite deposits on this structure. Reduction of the pressure drop across the OTSG due to cleaning of the waterways is the major benefit of this procedure. This procedure is used to clean the secondary side of steam generator and does not have any adverse safety implications. This procedure is a temporary test procedure and it does not pose any unreviewed safety question.

SPENT FUEL ASSEMBLY INSPECTION BY ULTRASONIC TESTING

TT/O/A/0124/05

This new procedure is developed to determine the location of failed fuel rods in a used fuel assembly. The procedure consists of transferring a fuel assembly to the test station using the spent fuel pool bridge crane. Two plate probes are inserted on either side of a row of the fuel pins. The ultrasonic examination can clearly identify a failed fuel pin due to its very different response to the ultrasonic probing signal. The purpose of this examination is to determine the location of fuel rod's failure, validation of computer codes used to predict failed fuel rods on the basis of water chemistry measurements and suitability of a partially used fuel assembly for reinsertion into the core. Capability of replacing defective fuel rods would also be provided in the future. This testing provides data to improve fuel performance. This procedure is currently being used on spent fuel to determine the accuracy and reliability of the ultrasonic examination. This procedure has been found to give accurate and useful results and has no safety implications.

FIRE DETECTION SYSTEM ACCESSIBLE DETECTOR FUNCTIONAL TEST

IP/1&2/A/250/5A

This revision of the procedure includes fire detectors located in the return air ducts of the Unit 1 and 2 equipment rooms to the "Smoke Detector Checkout Data Sheet". These detectors are located in Zone C2 and C3 of the Honeywell System. Inclusion of some additional fire detectors for regular functional testing would enhance reliability of the fire detection system at Oconee.

This revision of the procedure affects FSAR section 9.5.1.5.1 and FSAR Table 9.5.1. This revision of the procedure does not pose any unreviewed safety questions.

POWDEX BACKWASH PROCEDURE

CP/O/B/3002/04

This revision of the procedure reflects the additional Backwash Receiving Tank now available in the new Radwaste Facility. The new Radwaste Facility will be described in FSAR Section 11.6.

This revision reflects as built plant conditions and does not pose any unreviewed safety questions.

RADWASTE CONDENSATE MONITOR TANKS

CP/O/B/5200/06

This revision of the procedure reflects the current practice of routing the Condensate monitor tanks to the waste monitor tanks in the new Radwaste Facility. The contents of the Condensate monitor tanks are no longer routinely released to the Keowee Tailrace. The processing or releasing of the contents of the condensate monitor tanks is now done via the waste monitor tank. The information on the new Radwaste Facility will be incorporated in FSAR Section 11.6. This revision of the procedure does not have any safety implications and does not pose any unreviewed safety questions.

SPENT FUEL POOL VENTILATION TEST

PT/0/A/110/01

This revision of the procedure changes the flow capacity acceptance value for the Unit 1 and Unit 2 Spent Fuel Pool Exhaust Fans to between 13,050 to 15,950 CFM. The design flow rate for this system has been revised to 14,500 CFM. The design flow rate has been revised based on the performance experience of this system. The design flow rate information affects FSAR Table 9.4-1. This procedure has been revised to reflect as built conditions. The acceptance range of the flow capacity as revised in the procedure meets all design requirements. This revision of the procedure does not pose any unreviewed safety questions.

REACTOR BUILDING PURGE FILTER TEST

PT/O/A/110/05C

This revision of the procedure changes the flow capacity acceptance range of the Unit 1 and Unit 2 Spent Fuel Pool Exhaust Fans to 13,050 - 15,950 CFM because the design flow for this system has been changed to 14,500 CFM. The design flow rate has been revised based on the performance experience of this system. This revision reflects as built plant conditions. The range of acceptable values selected for the Spent Fuel Pool Exhaust Fans flow capacity meets all design requirements and has no adverse safety implications. This revision of the procedure does not pose any unreviewed safety questions.

HYDROGEN RECOMBINER OPERABILITY TEST

PT/0/A/0160/05

This test verifies that the Hydrogen Recombiner System can reach and maintain recombination temperature while operating at design flow rate. This is a new procedure and testing the Hydrogen recombiner equipment would increase reliability of equipment required to operate after a severe accident. Inclusion of this new procedure in the masterlist of plant procedures enhances plant safety. Further, it does not have any adverse safety implications or pose any unreviewed safety question.

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July 1, 1987

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

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

Gentlemen:

Please find attached a description of Oconee facility changes in the form of nuclear station modifications, exempt change variation notices, and procedure changes which were completed subject to the provisions of 10CFR 50.59 between January 1, 1986 and December 31, 1986. This report is submitted pursuant to the requirements of 10CFR 50.59(b).

Very truly yours,

Hal B. Tucker

Hal B. Tucker

PJN/190/jgm

Attachment

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