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NewYorkPower Authority

Michael J. Colomb
Site Executive Officer

December 29, 1999
JAFP-99-0328

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, D.C. 20555

Subject: **James A. FitzPatrick Nuclear Power Plant**
Docket No. 50-333

Supplement to Annual Summary of Plant Changes, Tests, and Experiments as Required by 10 CFR 50.59

Dear Sir:

Attached is a summary of the changes, tests, and experiments approved at the James A. FitzPatrick Nuclear Power Plant.

This report provides the Nuclear Safety Evaluation number (e.g., JAF-SE-95-001), revision number, title, modification number, if applicable, followed by a brief description of the corresponding change, test, or experiment and safety evaluation summary as required by 10 CFR 50.59(b)(2).

The summary contained in this report is comprised of Nuclear Safety Evaluations which were inadvertently omitted in previous annual reports.

If you have any questions, please contact Mr. G. Tasick of my staff at (315) 349-6572.

Very truly yours,

MICHAEL J. COLOMB

MJC:JJC:las

Attachment: as stated

Cc: next page

IE47

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Attachment 1

Supplement to Annual Summary of Changes, Tests, and Experiments

List Of Acronyms

ADS - Automatic Depressurization System
AOV - Air Operated Valve
APRM - Average Power Range Monitor
ATTS - Analog Transmitter/Trip System
CAD - Containment Atmosphere Dilution
CAS - Central Alarm Station
CRD - Control Rod Drive
CS - Core Spray
CST - Condensate Storage Tank
ECCS - Emergency Core Cooling System
EDG - Emergency Diesel Generator
EPA - Electrical Protection Assemblies
EPIC - Emergency Plant Information Computer
ESF - Engineered Safety Feature
ESW - Emergency Service Water
FSAR - Final Safety Analysis Report
HCU - Hydraulic Control Unit
HELB - High Energy Line Break
HPCI - High Pressure Coolant Injection
HWC - Hydrogen Water Chemistry
IGSCC - Intergranular Stress Corrosion Cracking
LLRT - Local Leak Rate Test
LOCA - Loss of Coolant Accident
LPCI - Low Pressure Coolant Injection
LPRM - Local Power Range Monitor
MG - Motor Generator
MOV - Motor Operated Valve
MSIV - Main Steam Isolation Valve
QA - Quality Assurance
RBCLCW - Reactor Building Closed Loop Cooling Water
RCIC - Reactor Core Isolation Cooling
RHR - Residual Heat Removal
RPIS - Rod Position Information System
RPS - Reactor Protection System
RPV - Reactor Pressure Vessel
RTD - Resistance Temperature Detector
RWCU - Reactor Water Clean Up
SAS - Secondary Alarm Station
SBGTS - Standby Gas Treatment System
SLC - Standby Liquid Control
SDV - Scram Discharge Volume
SIV - Scram Instrument Volume
SRV - Safety Relief Valve
TBCLC - Turbine Building Closed Loop Cooling
TIP - Traversing Incore Probe
TLD - Thermoluminescent Dosimeter
UPS - Uninterruptible Power Supply
UT - Ultrasonic Testing
VMS - Valve Monitoring System

Attachment 1

Supplement to Annual Summary of Changes, Tests, and Experiments

Introduction to the Supplement to the Annual 10 CFR 50.59 Report

10 CFR 50.59 (a)(1) states in part:

> The holder of a license...may (i) make changes in the facility as described in the safety analysis report, (ii) make changes in the procedures as described in the safety analysis report, and (iii) conduct tests or experiments not described in the safety analysis report, without prior Commission approval, unless the proposed change, test or experiment involves a change in the technical specifications incorporated in the license or an unreviewed safety question.

10 CFR 50.59 (b)(2) states in part:

> The licensee shall submit...a report containing a brief description of any changes, tests, and experiments, including a summary of the safety evaluation of each.

Unless otherwise noted, each safety evaluation listed concluded that it's subject change, test, or experiment did not:

- Increase the probability of occurrence or the consequences of an accident or malfunction of structures, systems, or components important to safety previously identified in the FSAR;
- Create the possibility of an accident of or malfunction of a different type than any preciously evaluated in the FSAR;
- Reduce the margin of safety as defined in the basis for technical specifications;

And therefore, do not involve an unreviewed safety question as defined in 10 CFR 50.59.

Attachment 1

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-81-032, REV. 0: **HIGH DENSITY SPENT FUEL RACK INSTALLATION**

MODIFICATION: **F1-78-032**

The installation of the high density spent fuel storage racks in two phases separated by a refueling outage does not increase the probability of occurrence or consequences of an accident evaluated in the FSAR or other safety analysis report.

The potential for dropping a heavy load over the spent fuel pool has been minimized by implementing the interim actions described in NUREG-0612. In the unlikely case of a load drop, the pool liner may be breached but the predicted penetration, for the worst case, of the concrete pool slab is expected to be within the compression zone of the slab; therefore, gross leakage is not anticipated. Installation of bridge plates over weld seams reduces the potential of future problems with weld failure due to be localized high stress points.

This modification has no affect on the margin of safety as defined in the Technical Specification.

Implementation of this modification does not constitute an unreviewed safety question pursuant to 10CFR50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-81-059, REV. 0: **MODIFICATION TO SYSTEM 03 CRD INSERT AND WITHDRAWAL PIPING SUPPORTS**

MODIFICATION: **F1-81-022**

This modification consists of the addition of new pipe supports, modification of some existing supports, and the deletion of other supports form the CRD insert and withdrawal lines. This modification effort will take place during the 1981 refuel outage.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-81-077, REV. 0: **CONTAINMENT HYDROGEN INDICATION**

MODIFICATION: **F1-80-020 (PARTIAL)**

The Containment Hydrogen Indication System utilizes the Monitoring Analysis Panel (27MAP). This partial modification is intended to allow the mounting of the panel's components and the completion of the internal wiring. External connections shall not be permitted under this partial modification. Also included shall be the installation of four (4) conduits into the panel.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-82-002, REV. 0: **RECIRCULATION MOTOR GENERATOR SET LUBRICATING OIL COOLER TEMPERATURE CONTROL**

MODIFICATION: **F1-76-049**

This modification installs a temperature control scheme for the recirculation motor generator set lubricating oil coolers.

The present method of controlling the MG set oil temperature has led to a variety of problems:

1) Eroding of the valves used to throttle and therefore the eventual replacement of the valve plugs.
2) Continual changes in the valve opening as the cooler load varies by operating personnel.

The installation of the temperature control valves will eliminate the above concerns by making the temperature controlling process automatic.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-82-003, REV. 0: **UPGRADE OF SIGNAL CONDITIONER OF VALVE MONITORING SYSTEM (02VMS-71)**

MODIFICATION: **MM-11257**

The Babcock and Wilcox valve monitoring system (VMS) associated with the Safety Relief Valves is comprised of an acoustic sensing unit integrated with an analysis module which generates auto and visual information indicating the status of valve position and function.

The VMS is comprised of Unholtz-Dickie signal condition (Model P22MHA-1) for signal conditioning and amplification, and other components for providing indications of valve status.

The signal conditioners presently installed in the VMS units have provided mis-indications of valve status due to a component defect on the bias alarm card in the signal conditioners. The bias alarm card presently responds to spurious low alarm conditions.

The reference modification upgrades the bias alarm card in the VMS by a replacement of the card with a new one supplied by the manufacturer and an associated wire change in the signal conditioner.

An additional change to the VMS covered by this modification converts the low alarm indicator from a latching to a non-latching operation. This modification will enhance the performance of the VMS by eliminating the need to manually reset the system when a spurious or temporary low alarm condition occurs.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-82-033, REV. 0: **SECURITY DOOR CHANGES**

MODIFICATION: **F1-82-011**

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Modification F1-82-011 installed card reader at Heater Bay Door HB-272/1 (209) and removed card readers and provided access by R-key for doors R-272/13 (203) and R-272/14 (216).

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-82-039, REV. 0: **EMERGENCY DIESEL GENERATOR A-D STATOR WINDING SPACE HEATER MODIFICATION**

MODIFICATION: **F1-80-027**

This modification will correct wiring errors found within the existing power feed circuitry from distribution panels 71ACA4 and 71ACB4 to the Emergency Diesel Generator A, B, C, & D Stator Winding Space Heaters. It has been determined that both breakers #13 and #14 in panels 71ACA4 and 71ACB4 were incorrectly wired and only supplying 120VAC instead of 240VAC. The contactor coils within panels 93EGP-A-D will also be replaced with 240VAC coils. All drawing inconsistencies will be corrected during the modification closeout.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-82-051, REV. 1: **TEMPORARY REPLACEMENT OF AN OFFSITE POWER SOURCE**

MODIFICATION: **F1-82-029**

This change will be implemented to allow Niagara Mohawk to continue to work preventive maintenance at FitzPatrick-Lighthouse hill #3 line, and to permit plant operation to ensure that off-site power requirements within the allowable limits set forth in the plant Technical Specifications. Therefore, this change does not increase the probability of occurrence or consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR.

The changes implemented conforms to the Plant Technical Specifications, FSAR, and IEEE requirements. It is, therefore, concluded that the probability of an accident or malfunction of a different type than any previously evaluated has not been created.

No margin of safety as defined in the bases of any Technical Specification has been reduced.

This temporary replacement of an offsite power source does not constitute an unreviewed safety question pursuant to 10CFR50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-82-065, REV. 0: **INSTALL DATA COMMUNICATIONS LINK BETWEEN SECURITY COMPUTER SYSTEM AND DATA COLLECTION TERMINAL**

MODIFICATION: **M1-82-091**

Install Data Communications link between the Security Computer via modem connected to data output channel on the Security Computer. This will allow for data transfer generated within the Security Computer to the Data Collection terminal.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-82-067, REV. 0: **SECURITY FENCE BRACING**

MODIFICATION: **M1-82-086**

This modification includes adding bracing to the outside perimeter security fence. The additional weight from the fence height extensions is causing the fence to lean.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-82-069, REV. 0	**RELOCATION OF AUTO BALL DRIP IN FIRE PROTECTION SYSTEM IN FOAM ROOM**
MODIFICATION:	**M1-82-079**

This modification includes the relocation of the Auto Ball Drip. This change enhances the reliability of the component by no longer subjecting it to freezing.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-83-012, REV. 0: **CONTROL ROD GRAPPLE MODIFICATION**

MODIFICATION: **F1-82-090**

This modification involves the fabrication and installation of a stop block for the control rod grapple.

The modification is needed to help prevent grappling a control rod with misoriented alignment which in turn will help prevent a control rod drop incident.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-83-017, REV. 0: **USE OF RADWASTE "KELLY BUILDING" FOR STORAGE OF RADIOACTIVE MATERIAL**

MODIFICATION: **N/A**

The "Kelly Building" is a steel frame fiberglass panel structure, located North of the plant Radwaste Building. It is located between the East Radwaste roll-up door and the extension of the Radwaste truck bay.

The building itself is a free standing structure and does not require support from the existing Radwaste Building.

All containers stored in the building containing radioactive material are packaged for shipment. These containers meet all Department of Transportation (DOT) packaging specifications and are ready for shipment in an appropriate vehicle. The containers have been surveyed for external contamination and are within the site limits for release.

The building is marked as a high radiation area and is locked when unattended.

Handling of the containers represents no greater risk than normal loading of a transport vehicle.

The average activity of the containers stored in the building this year has been 100 millicuries. This is typical of the material awaiting shipment.

There is no free standing liquid (less than 1% liquid by volume) in the containers. This precludes the possibility of a liquid release.

The material in the containers is typically compacted and non-compacted trash. The compacted trash is made up of cloth, paper, wood, rubber, plastic, filters and other miscellaneous material. The non-compacted material is made up of wood, conduit, tools, pipes, valves, solid, and other miscellaneous material. Because of the mixture and type of material in the containers, it is unlikely that an airborne or gaseous release could occur.

Based on the above information, the use of the "Kelly Building" for storage of material awaiting transportation does not involve an unreviewed safety question.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-83-019, REV. 0	**INCREASED SPENT FUEL STORAGE MODIFICATION - REVISION TO ORIGINAL SAFETY EVALUATION TO REFLECT "AS BUILT" CONFIGURATION**
MODIFICATION:	**F1-78-032**

This safety evaluation revises the original safety evaluation for modification F1-78-032 forwarded to the NRC by PASNY letter NRC-78-31 dated 7/26/78, to reflect the actual "as-built" conditions set forth.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-83-020, REV. 0: **INSTALLATION OF STIFFENING KIT IN SRV ACOUSTICAL MONITORING SYSTEM CABINET**

MODIFICATION: **M1-83-007**

This modification consists of the installation of a set of Babcock and Wilcox supplied steel rails and braces inside the Hoffman cabinet. This cabinet now uses the VMS signal conditions and other VMS components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-83-067, REV. 0: **MODIFICATION AND REPAIR OF SPALLING OF CONCRETE IN SCREENWELL PUMPHOUSE BUILDING**

MODIFICATION: **M1-83-031**

This modification provides retaining devices i.e., plates to hold any loose concrete in the fill area at the 5 beam pockets located on the west wall of the Screenwell Building to prevent any drop of spalled concrete to the floor level. The design of the retaining device is as shown on drawing FC-38E, Rev. 5A.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-83-068, REV. 1: **TURBINE – GENERATOR STATOR WINDING RTD'S**

MODIFICATION: **F1-79-005**

The water-cooled generator unit instrumentation now in service at the JAF plant does not monitor and alarm generator temperature on a continuous basis. There have been cases where General Electric generators have experienced major failures due to starvation of the internal liquid cooling paths. In order to decrease the possibility of additional similar occurrences, General Electric has recommended that continuous monitoring and alarming be implemented as specified in Technical Information Letter 854 and the accompanying GEK-45937D. A datalogger system will meet both continuous operation monitoring and the startup requirements as specified in these documents. It will also alarm on exceeding the limit of preset temperatures. The datalogger will also provide the capability of retrieving and printing the past 30 minutes of data at 1 ½ minute intervals.

This modification will replace existing monitoring and instrument equipment. The existing instrumentation requires numerous man-hours for monitoring and recording the RTDs and TCs temperatures and it does not have the capability of retrieving and printing the past 30 minutes history as recommended by General Electric Instructions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-83-080, REV. 0: **MAIN STEAM ISOLATION VALVE STEM DISK ASSEMBLIES**

MODIFICATION: **M1-83-055**

This modification consists of the replacement of existing Main Steam Isolation Valve (MSIV) stem disk assemblies with factory modified stem disk assemblies. The new stem disk assemblies are modified by:

1. The addition of Belleville washer between stem and stem disk.
2. A larger disk thread engagement.
3. A material substitution in the stem disk and stem.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-002, REV. 0: **H_2 CHEMISTRY TEST - PHASE I**

MODIFICATION: **F1-83-061**

Phase I of this modification shall include the modifications necessary to install system tie-ins only for the proposed "mini-test.

The specific system tie-in points to be installed as part of Phase I are listed below:

1. O_2 Injection

   Injection of O_2 gas (to lower the H_2 concentration) shall be performed upstream of the first stage recombiner preheater eductor (ED-5A) in the steam supply piping to ensure proper dilution.

   Modifications include installation of a 1" S. W. coupling/valve assembly for later connection to the O_2 supply system.

2. Autoclave Connection
   (Electro-Chemical Potential Measurement)

   A representative sample of reactor water shall be taken off the Reactor Water Clean-Up System pump discharge routed through an autoclave located just outside the RWCU pump room on 300' elevation, and returned to the pump suction.

   Modifications include the following:

   a) Tie-in to the RWCU pump discharge high point vent and tubing installation from the vent through penetration S-572.
   b) Tie-in to the RWCU pump suction via 12-PI-114 (installation of a tee/valve assembly only).

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-003, REV. 0: **ADDITIONAL STEAM LEAK DETECTORS FOR ACTUATION OF RWCU AND HPCI ISOLATION VALVES (PARTIAL CABLE INSTALLATION OF ABOVE)**

MODIFICATION: **F1-83-053**

The modification consists of the installation of six steam leak detectors. This safety evaluation covers the partial installation of the above. Two cables will be installed through each of two spare floor sleeves into control room cabinet 9-21.

The partial installation of the cables for the steam leak detector modification will not impact any plant systems or functions. The modification does not require changes to the FSAR nor the Technical Specifications.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-007, REV. 4: **PERFORMANCE OF WELD OVERLAY**

MODIFICATION: **F1-83-060**

Weld overlay is a process by which weld metal is deposited circumferentially around the outside diameter of a pipe in a predetermined axial length and radial thickness. This provides sufficient supplemental strength to a weld area with a flaw of known size to re-establish the original structural design margin and allow continued operation.

The weld metal is deposited either via remotely operated automatic welding machines or by manual welders with the affected piping being maintained full of water. A seal layer may be applied without water backing if there is a concern that "steam "blow outs"" may occur during the weld overlay process application (i.e. IGSCC cracks going through wall during the welding process). The effective cross section of the affected area is increased to replace that lost due to the presence of cracking in accordance with the rules of 1983 Edition, Winter 1985 Addenda of ASME Section XI. The temperature differential across the pipe wall thickness creates a stress state which acts to reduce future crack propagation. The weld metal is considered a resistant material to IGSCC.

All weld overlays installed have been designed to the current criteria after application of surface finishing to enhance inspectability.

The design basis of the weld overlays is discussed in the original and current design basis. All welds have been reanalyzed to the current design basis.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-022, REV. 0: **AUX BOILER SYSTEM-DEARATOR TANK STEAM PRESSURE CONTROL VALVE SENSING LINE REROUTE**

MODIFICATION: **M1-84-044**

To facilitate maintaining auxiliary boiler dearator temperature at 240°F, the pressure sensing for 87PCV-100 will be rerouted to the top of the dearator tank using an existing plugged tee of the mercoid switch piping.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-048, REV. 0: **CONDENSATE RECEIVER VENT LINE REROUTE**

MODIFICATION: **F1-82-037**

This pre-operational test shall be conducted to ensure the proper cooling function of the newly installed Radwaste Condensate Cooler 20-E-685.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-050, REV. 0: **BULLET-PROOF DOOR SUPPORT CASTERS**

MODIFICATION: **M1-84-028**

The heavy bullet-proof doors are sagging at the hinges. The design of the hinges does not permit replacement of hinge bearings. This design adds caster wheels to the door to take the load off the hinges.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-060, REV. 0	**LIFTING OF "A" EMERGENCY SERVICE WATER PUMP, MOTOR, AND FLOOR PLUG**
MODIFICATION:	**N/A**

The safety evaluation reviewed the evolution associated with lifting the "A" Emergency Service Water (ESW) pump and motor from its base, 255'-0" elevation to the 272'-0" elevation, screenwell building. In addition, the corresponding 272'-0" elevation floor plug will be removed. These lifts will be performed with the "B" loop of ESW operable.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-063, REV. 0: **LIFTING OF STEAM TUNNEL FLOOR PLUGS LOCATED IN THE MG SET ROOM**

MODIFICATION: **N/A**

This safety evaluation is written to evaluate the removal and installation of the main steam tunnel floor plugs located in the MG set room. This lift will be performed while the reactor is in a cold shutdown condition.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-065, REV. 0: **TELEMETERING CALIBRATION CHANGE (345 KV)**

MODIFICATION: **M1-84-052**

This modification will change telemetering transducer calibration to agree with Power Systems Operation's request. The calibration will be changed as follows:

Generator Gross Megawatts - RFL to ECC 0-1000 MW
Generator Gross Megawatts - ECC to RTU 0-1000 MW
Generator Gross Megavars - ECC to RTU -1000 to +1000

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-087, REV. 1: **TEMPORARY DRYWELL COOLING**

MODIFICATION: **F1-84-069**

This modification is required to facilitate lower drywell temperatures during outage periods. This temperature is needed to support the work on the IHSI program and reduce individual radiation exposure by providing a more habitable working environment.

This modification, which adds piping and fittings to the RBCLCW system, provides penetrations in the reactor building exterior wall, and provides for temporary set up for drywell cooling.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-090, REV. 0: **HEAT TRACING FOR POST-ACCIDENT SAMPLING SYSTEM FOR RADIOIODINES & PARTICULATES**

MODIFICATION: **F1-82-050**

This modification consists of removing the existing heat tracing system from the sampling line outside the main stack from El. 292'-6" to El. 480'-8" and replacing it with two heat tracing cables which provide 100% redundancy, should one heat tracing cable fail. The failure of heat tracing cable shall be annunciated on the local heat tracing panel with a common trouble alarm in the main control room.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-090A, REV. 0:	**HEAT TRACING SYSTEM FOR STACK IODINE SAMPLE LINE, PRE-OPERATIONAL TEST PROCEDURE**
MODIFICATION:	**N/A**

The scope of this pre-operational test procedure covers checking out and functionally testing the new heat tracing circuits for the stack iodine sample line. Two redundant heat tracing circuits have been installed for the stack iodine sample line. Also included is a circuit using heat tracing tape for the sample line inside the monitoring panel. This procedure covers:

1. Functional testing of the stack iodine sample line heat tracing circuit 1A.
2. Functional testing of the stack iodine sample line heat tracing circuit 1B.
3. Functional testing of the heat tracing circuit for sample line inside the monitoring panel.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-091, REV. 1: **RADWASTE SYSTEM PUMP MECHANICAL SEAL REPLACEMENT**

MODIFICATION: **M1-84-074**

This modification replaces the packing and the stuffing box gland with a mechanical seal cartridge. Replacement seals to be Sealol #611AQC SBC 307-30 or #611ABC SBD 307-30 with Carpenter 20 rotary head.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-099, REV. 0: **SECURITY SYSTEM - INTRUSION DETECTION**

MODIFICATION: **F1-83-039**

This modification involved the installation of Omni Spectra microwave intrusion detection sensors on the roof of the Primary Access Control Building.

The purpose of this safety evaluation was to review and assure the implementation of this modification did not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-104, REV. 0: **REPLACEMENT G.E. HFA100 CENTURY SERIES AUXILIARY RELAYS FOR SAFETY-RELATED APPLICATIONS**

MODIFICATION: **M1-84-080**

This modification was generated to option either to replace existing General Electric (GE) Type HFA multicontact auxiliary relays with GE Type HFA100 Century Series relays having long-life electrical coils; or, upgrade existing GE Standard type HFA multi-contact auxiliary relays to Type HFA100 Century Series by replacing the original electrical coil with a long-life Century Series coil. This conversion is accomplished using a GE Century Series Conversion Kit.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-108, REV. 0: **CRIMPED SPLICES IN JUNCTION BOXES IN DRYWELL AND STEAM TUNNEL - SAFETY-RELATED JUNCTIONS**

MODIFICATION: **M1-84-019**

The purpose of this test is to verify the correct installation of crimped splices in junction boxes containing junctions for safety-related equipment in the drywell and in the steam tunnel.

The verification is done by exercising the associated equipment and checking for proper operation of indicator lights, interlocks, and other signals which are carried through the affected junctions.

A large number of junctions for safety-related equipment have been changed from terminal board connections to crimped connections in previous modifications, therefore, only junctions which have been crimped per Installation Procedure M1-84-019, IP #1 will be tested per this procedure. The plant shall be in cold shutdown for this test.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-111, REV. 0: **SUBSTITUTION OF CROSBY RELIEF VALVES FOR 20RV-777A&B, 20RV-783A&B, AND 27SV-113**

MODIFICATION: **M1-84-082**

Valve manufacturer, Crosby, no longer makes JRU-C relief valves for steam service. The new product line made by Crosby is the JMBU-C relief valves.

The purpose of this safety evaluation is to review and assure there exists no unreviewed safety questions with the substitution of referenced above in a QA Category II application.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-115, REV. 1: **SERVICE WATER SYSTEM DISCHARGE INSERT CHECK VALVE REPLACEMENT 46SWS-1A, B, & C**

MODIFICATION: **M1-84-084**

The installation of the replacement insert type check valVe for use in the Service Water System is acceptable since:

The modification does not increase the probability of occurrence or consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR because the replacement valve meets all applicable design code requirements stated in the FSAR and this is a non-safety related modification.

This modification does not create the possibility of an accident or malfunction of a type other than any evaluated previously in the FSAR because the replacement valve meets or exceeds the design requirements stated in the original valve procurement specification (APO-78) and this is a non-safety related modification.

This modification does not reduce the margin of safety as defined in the basis for Technical Specifications because this modification is not safety related and the replacement valve meets the design requirements for the Service Water System.

This modification does not involve a change in the Technical Specifications (nuclear or environmental) because the subject modification meets the design requirements of the system and the modification does not affect the function of any safety system governed by the Technical Specifications.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-122, REV. 0: **FIRE PROTECTION FOR NEW ADMINISTRATION COMPLEX ADDITION**

MODIFICATION: **F1-84-021**

This modification will provide the new administration complex addition with a sprinkler system which will tie into the existing area "A" sprinkler system into the administration complex. The administration complex sprinkler system is supplied by plant fire protection line 6"-WF-2-137. The supply to the sprinkler system can be isolated by a gate valve and valve box.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-128, REV. 0: **PERFORMANCE OF HYDROGEN WATER CHEMISTRY MINI TEST**

MODIFICATION: **F1-83-001 (PHASE 2)**

This safety evaluation reviews the Hydrogen Water Chemistry (HWC) test, storage of bulk hydrogen and oxygen and plant interfaces to the GE test equipment.

The test will be conducted in two different phases, the mini-test and the CERT test. The mini-test will consist of 3-4 days of injection with different hydrogen flow rates during backshifts. The CERT test will consist of a steady state 14-day injection period following the mini-test.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-132, REV. 5: **SAFETY-RELATED PIPE SUPPORT MODIFICATIONS AS A RESULT OF THE JAF PIPE SUPPORT PROGRAM**

MODIFICATION: **F1-84-091**

The purpose of this modification entails performing stress analysis and subsequent drawing revision to accept the as-built configuration of pipe supports as a result of the JAF Pipe Support Inspection Program. A total of approximately 2850 pipe supports are included.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-134, REV. 0: **TEMPORARY RELOCATION OF PERIMETER SECURITY DEVICES**

MODIFICATION: **F1-84-092**

This modification consists of temporarily installing perimeter intrusion detection devices and a closed circuit television along the new section of perimeter fence temporarily erected for the construction of the Interim Waste Storage Facility.

The changes required by this modification are intended to maintain perimeter intrusion detection and television surveillance along the temporarily relocated fence during construction of the Interim Waste Storage Facility.

All changes resulting from this modification will be temporary. When construction of the Interim Waste Storage Facility is completed, the newly created intrusion detection zones (along with all the related conduit and cabling) will be removed.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-139, REV. 1: **REPLACEMENT OF LEVEL SWITCH 23LS-90**

MODIFICATION: **M1-84-100**

This modification replaces the HPCI turbine steam inlet drain pot level switch (23LS-90) (QA Cat. II/III) along with associated vent and drain valves.

This modification is consistent with the High Pressure Coolant Injection System instrumentation design requirements as detailed in the JAF FSAR Section 7.4. The QA Category II/III level switch and associated vent and drain valves are adequately supported to maintain the integrity of the connections to the QA Category I safety-related HPCI steam inlet line.

JAF Technical Specifications are not affected by this modification because the function of the level switch is not safety-related and is not changed.

In conclusion, this modification to the JAF HPCI system will not conflict with the objectives and design bases as stated in the JAF FSAR nor result in changes to the Technical Specifications. Safety-related structures, systems, or components are not adversely affected by this modification.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-84-155, REV. 0:	**METEOROLOGICAL MONITORING AND RADIOLOGICAL ASSESSMENT SYSTEM (MMRAS) COMPUTER CHECKOUT AND FUNCTIONAL TEST (MOD F1-83-058)**
MODIFICATION:	**F1-83-058**

The purpose of this preoperational test is to check all new power and instrumentation data cable, switches, panels, and associated equipment installed for modification F1-83-058.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-84-157, REV. 0: **REPLACEMENT OF TYPE 4174 PYROMATIC DOOR CLOSURES WITH TYPE 4053 CLOSERS**

MODIFICATION: **M1-84-108**

The purpose of this modification is to replace spring-weight driven pyromatic door closers (type 4174) with weight type door closers (type 4053).

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-014, REV. 0: **UPS EQUIPMENT SETTING PROCEDURE IP-2D01**

MODIFICATION: **F1-82-022 (PARTIAL)**

This partial modification consists of the following work associated with the EPIC uninterruptible power supply (UPS) equipment:

1. Preparation of floor area,
2. Transportation of the equipment from warehouse to designated location, and
3. Placement and anchoring of the equipment.

Interconnections between individual EPIC UPS equipment, connection to plant systems, and connection to the EPIC system are included under another partial modification.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-027, REV. 1:	**CABLE ENTRANCE MOISTURE SEALS FOR SAFETY-RELATED INSTRUMENTATION COMPONENTS**
MODIFICATION:	**M1-85-003**

The purpose of this modification is to seal cable entrance openings with two-component silicone elastomer for safety-related instrumentation sensors. The seals will prevent the intrusion of moisture into the sensors during postulated HELB accidents in Reactor Building, and is required to ensure environmental qualification of the components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-029, REV. 0: **MAIN GENERATOR REVERSE POWER RELAY - HOLDING COIL BYPASS**

MODIFICATION: **M1-85-012**

The purpose of this minor modification is to bypass the use of the internal holding coil (HC) of the GE Power Directional Relay. This will be done by transferring the connection to terminal 10 (ten) of the relay. The holding coil is used to assist the directional unit and hold its contacts closed when the relay is operating near pickup in a location where physical vibration is present. Per G.E. Instruction Manual GEI-33891B, for relay type GGP53B: "If the vibration at the relay location is not too severe then the holding coil can be shorted out and the holding action eliminated entirely." Elimination of the holding action will reduce the frequency of turbine/generator trips experienced due to synchronization of the transmission grid with the project main generator.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Attachment 1

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JAF-SE-85-035, REV. 0:	**PRE-OPERATIONAL TEST #20-H CONCENTRATED WASTE TANK DECANT SYSTEM**
MODIFICATION:	**F1-93-020**

This pre-operational test is being performed to demonstrate the proper functioning of the Concentrated Waste Tank Decant System modification components and circuitry prior to placing the system in operation.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-039, REV. 0: **MODIFICATION OF END CONNECTIONS OF PLATFORM BEAMS IN CRESCENT AREA**

MODIFICATION: **F1-84-087**

This modification consists of the following:

1. Stiffened seat connections will be added to the inside and outside wall connections for the 8 inch channel beam marked "4" and at the outside wall connection for the 8 inch channel beam marked "3".

2. A cracked connection angle will be replaced at the inside wall connection for the 14 inch wide flange beam marked "5".

3. The fireproofing at the ends of the 14 inch wide flange beams marked "7" and "8", which was removed to allow the connections to be inspected, will be replace.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-045, REV. 0: **VELAN VALVE SPARE PART MATERIAL SUBSTITUTIONS**

MODIFICATION: **M1-85-013**

The purpose of this safety evaluation is to evaluate whether the Velan valve spare material substitution constitutes any unreviewed safety questions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-062, REV. 1: **HPCI/RCIC LOGIC MODIFICATION CHECKOUT AND FUNCTIONAL TEST**

MODIFICATION: **F1-85-004**

Preoperational Test No. 23B provides a thorough checkout of the wire and fuse changes made in accordance with Plant Modification F1-85-004, Installation Procedure F1-85-004, IP No. 1. Additionally, the following surveillance test and Instrument Surveillance Procedures functionally checked the revised HPCI and RCIC circuits:

F-IPS-3	F-ISP-125A, B
F-ISP-275A,B	F-ISP-150A, B
F-ISP-100A, B, C, D	F-ISP-225A, B
F-ISP-251A, B	F1-ISP-226A, B
F-ISP-75	F-ISP-13
F-ISP-75-1	F-ISP-13-1
F-ISP-22	F-ISP-29
F-ISP-22-1	F-ST-04A, E, F
F-ISP-250A, B	F-ST-24A, D, E

Tests to be performed consist of initially verifying voltages are not present on the portions of logic circuits which have been modified, inserting fuses, and then verifying proper voltage is present on the affected circuits. Voltage tests shall be done when the Plant is in cold shutdown condition.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-066, REV. 0: **VELAN VALVE SPARE PART MATERIAL SUBSTITUTION**

MODIFICATION: **M1-85-023**

This safety evaluation was performed to review and assure that Velan valve spare part material substitution activities identified in modification M1-85-023 did not contain any unreviewed safety questions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-070, REV. 0: **SPECIAL PERFORMANCE TEST HEAT LOSS MONITORING**

MODIFICATION: **N/A**

A temperature monitoring system will be temporarily installed in the condenser bay and steam tunnel areas. Thermocouples will be strapped to selected piping to monitor pipe surface temperatures. A more detailed description of the test is given in JAF-Technical Services Standing Order #11.

This special test is needed to help identify and evaluate thermal cycle leakage flows in order to optimize plant efficiency. There are no regulatory commitments requiring this test.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-071, REV. 0: **SAFETY EVALUATION FOR GE NA-300 LPRM'S**

MODIFICATION: **M1-85-022**

Replacement of currently approved LPRM assemblies with General Electric NA-300 assemblies which, because of improved coating techniques for the sensitive material and a new design connector, are judged to be equal to or better than the current generation of detectors.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-073, REV. 0: **MATERIAL SUBSTITUTION FOR RESIDUAL HEAT REMOVAL PUMP IMPELLER**

MODIFICATION: **M1-85-026**

The material substitution identified in modification M1-85-026 has been recommended by the original pump manufacturer for the impeller of the residual heat removal pump.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-074, REV. 0: **VELAN VALVE SPARE PART MATERIAL SUBSTITUTION**

MODIFICATION: **M1-85-027**

Valve manufacturer Velan, no longer furnishes the Valve Disc in SA 216 Gr. WCB Stellited Material on Drawing P35711-2 (JAF #6.37-171). The disc is now furnished in SA 105 C.S. material.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-076, REV. 0: **REPLACEMENT OF EDG AIR START BALL VALVES**

MODIFICATION: **M1-85-028**

There are 600# class ball valves for the EDG Air Start System. The original valve, manufactured by C.M. & Co., are of brass construction with TFE Seals. These valves are no longer available. The valves were originally purchased under AP9 from Bruce GM Diesel (now M-K, Power System) as standard commercial grade. The proposed replacements are Whitey 60 series ball valves.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-077, REV. 0: **REPLACEMENT OF EDG AIR START RELIEF VALVES**

MODIFICATION: **M1-85-029**

Replace existing obsolete relief valves (Teledyne Farris Model 1875-OL). This minor modification affects 3/4" x 1 1/4" valves (RV-101 & RV-102) and 1" x 1 1/2" valves (RV-100). This change is concurred with by the original equipment vendor.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-079, REV. 0: **REPLACEMENT 3/4" - 2 INCH STAINLESS STEEL Y-GLOBE VALVES FOR MISCELLANEOUS PLANT APPLICATIONS (MARK NO. VOS-150D)**

MODIFICATION: **M1-85-030**

Provide a replacement 3/4" - 2" stainless steel Y-globe valve for JAF Mark No. VOS-150D when required for plant maintenance reasons. Original VOS-150D valves provided by Velan were Y-patterned globe valves and are no longer manufactured. Also, due to maintenance problems with the original VOS-150D valves (Velan), a better designed and maintainable valve is required. The replacement VOS-150D valves will be conval, Inc. Clampseal Valves (Type 12G2). The Conval Clampseal (Type 12G2) stainless steel Y-globe design will be used for BOS-150D sizes 3/4" - 2" where piping configuration permits for manually operated valves.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-080, REV. 0: **MATERIAL SUBSTITUTION FOR VELAN 3" 900# PRESSURE SEAL GATE VALVES**

MODIFICATION: **M1-85-031**

The following material substitution has been proposed for non-pressure retaining components by the valve manufacturer.

	Current Material	New Material
Stem:	A276, SS410	A479, SS410
Junk Ring:	A276, SS416	A479, SS410
Gland Flange	A216, WCB	A108, CS1020
Seat	A216, WCB	A108, CS1020

Plant drawings to be changed to allow use of either material.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-081, REV. 0: **JUMPER OF ONE ROD PERMISSIVE REFUEL INTERLOCK FOR UNLOADED FUEL CELLS**

MODIFICATION: **N/A**

This safety evaluation discussed the steps necessary to bypass the one rod permissive refuel interlock to permit withdrawal of more than one control rod while in the refuel mode. Before bypassing this interlock, the fuel must be removed from the cell containing the rod (and this verified by a licensed operator and a member of the Reactor Analyst Department) and the rod withdrawn. The interlock will be bypassed by inserting a jumper in the Rod Position Information System (RPIS) which simulates a full-in signal from the position indicating probe. Specifically, the jumper will be between connections "G" (logic common) and "V" (full-in) on the receptacle for the Amphenol plug coming from the position indicating probe. This will provide a full-in signal through RPIS to the Reactor Manual Control System analogous to that normally provided by the position indicating probe.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-083, REV. 0: **VELAN VALVE SPARE PART MATERIAL SUBSTITUTION**

MODIFICATION: **M1-85-034**

Valve manufacturer, Velan, no longer furnishes the Valve Wedge in ASTM A 216, Gr. WCB stellited material and the Valve Seat in ASTM A 106 CSI Gr. B stellited material, on drawing P34711-5 (JAF #6.37-175). The wedge and seat are now furnished in SA105 CS material.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-084, REV. 0:	**INCORE INSTRUMENTATION DRY TUBE REPLACEMENT**
MODIFICATION:	**N/A**

Due to the possibility of existing cracks in the pressure boundary, dry tubes at core locations 36-9, 36-25, 28-33, and 12-9 will be replaced prior to returning to power. The dry tube at location 28-25 will also be replaced, since it has been displaced laterally and could cause fuel loading problems.

The five replacement dry tubes will be of the same material and design as the existing dry tubes.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-091, REV. 0: **SBGTS - REMOVAL OF AIRSTREAM HEATER SCR CONTROL UNIT**

MODIFICATION: **M1-85-036**

The airsteam heater control unit was removed in July 1978, due to failure, and jumpers were installed in its place. This change causes the heaters to be ON whenever the fan is ON. The purpose of this modification is to document the permanent removal of the SCR control unit and to close-out the License Event Reports 78/010, dated July 21, 1978, and 83/002 dated January 24, 1983.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-092, REV. 0: **VELAN VALVE SPARE PART MATERIAL SUBSTITUTIONS**

MODIFICATION: **M1-85-037**

Valve manufacturer, Velan, no longer furnishes the Valve Flange Gland in ASTM A216 Gr. WCB material on drawing P34711-7D (JAF #6.37-105) and the Valve Stem in ASTM A276 SS410 material on drawing P34711-7D (JAF #6.37-105). The Gland Flange is now supplied in ASTM A108 CS Gr. 1020 material and the Stem is now furnished in ASTM A479 SS410 material.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-096, REV. 0:	**GENERAL HEAVY LOAD EVALUATION FOR REACTOR BUILDING NORTHWEST EQUIPMENT HATCH**
MODIFICATION:	**F1-83-036**

The purpose of this safety evaluation is to assess the impact of lifting heavy (5000 lb. each) hatch cover sections from the reactor building track bay at elevation 272'-0" to the refueling floor, elevation 369'-0", across the refueling floor to the Northwest corner of the building and thru the hatch to be deposited over the hatchway at elevation 326'. The placement of the hatch covers are in response to the requirement of Appendix "R" to 10CFR50.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-104, REV. 1: **WATER SHIELD PLACEMENT - DRYWELL 272' EQUIPMENT HATCH**

MODIFICATION: **F1-85-019**

Six 4', six 6' and three 8' water shields of fiberglass construction manufactured by Nuclear Power Outfitters, Inc. will replace the concrete block and steel shield now in place. The shields will be strapped to lessen possibility of toppling.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-105, REV. 0: **CONTROL ROD SYSTEM HYDRAULIC TRANSIENT IN-PLANT TEST**

MODIFICATION: **N/A**

There are three purposes of this test:

1. To measure individual CRD scram waterhammer forces, deflection, and pressure in two pairs of CRD lines near the Hydraulic Control Unit (HCU) by instrumentation of two insert (I) and two withdraw (W) lines.
2. To measure the combined waterhammer forces on two bundle restraints outside containment during full operating scram from approximately 20 percent.
3. To measure piping dynamic response to several CRD insert and withdraw pipe segments to determine the damping of the CRD piping system.

These tests will provide data for future analytic evaluations and comparison with previous calculations. These evaluations and comparisons are not part of this scope of work.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-106, REV. 0: **HWC MINI-TEST INSTALLATION**

MODIFICATION: **F1-83-061, PHASE 2**

In preparation for the 17-day Hydrogen Water Chemistry Mini-Test to be performed in the third quarter of 1985, various modifications to the plant are required including the following:

1. Installation of a 5/8" SS continuous sample line (autoclave) from 02-2AOV-39 and 40 to the RWCU suction line.
2. Extension of existing sample line for Feedwater, Main Steam, and Recirculation System inside the Reactor Building Sample Station on 300' elevation.
3. Routing of temporary cabling, placement and hookup of GE equipment, and temporary modification to P connections on the Condensate Booster Pump Suction Line.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-107, REV. 0: **RCIC PUMP PACKING GLAND INSTALLATION**

MODIFICATION: **M1-85-046**

This modification consists of the replacement of the RCIC pump gland rings. The replacement glands are 316 stainless steel. The original and now obsolete glands were made from carbon steel.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-109, REV. 0: **VELAN VALVE SPARE PART MATERIAL SUBSTITUTIONS**

MODIFICATION: **M1-85-047**

The purpose of this safety evaluation is to review and determine whether the Velan valve spare part material substitution contained in Modification M1-85-047 contains any unreviewed safety questions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-112, REV. 0: **VELAN VALVE SPARE PART MATERIAL SUBSTITUTION**

MODIFICATION: **M1-85-050**

The purpose of this safety evaluation is to review and determine whether the Velan valve spare part material substitutions contained in Modification M1-85-050 contains any unreviewed safety questions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-114, REV. 0: **TURBINE BUILDING CLOSED LOOP COOLING HEAT EXCHANGER REPLACEMENT**

MODIFICATION: **M1-85-052**

The existing Turbine Building Closed Loop Cooling (TBCLC) Heat Exchanger will be replaced with a larger heat exchanger, manufactured by Perfex Energy Systems. Existing heat exchangers have an unsupported tube length of 48" at shell inlet and outlet. These heat exchangers have experienced vibration damage at these locations. The new heat exchangers are of a "no tube in the window" design which limits unsupported tube length to 24". These heat exchangers have been designed to withstand a shell side flow, twice that specified for the original exchangers.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-117, REV. 0: **FIRE DAMPER CLOSURE SPRING INSTALLATION**

MODIFICATION: **M1-85-058**

The existing 15 3/4" x 15 3/4" fire damper will not close fully under air flow conditions. Install a spring closure kit per manufacturer's instructions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-120, REV. 0: **MODIFICATION OF CONDENSATE SYSTEM PIPE SUPPORT PFSK-1621**

MODIFICATION: **F1-81-045**

This modification entails replacing the existing flexible baseplate with a rigid baseplate, new concrete anchor bolts and anchor bolt pattern on condensate system pipe support PFSK-1621. The pipe support provides horizontal (axial) restraint for the condensate booster pump suction line to the "A" pump minimizing operational vibrations and axial displacement due to water hammer.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-124, REV. 0: **INSTALLATION OF ORIFICES ON FASV'S FOR TURBINE CV-1 THROUGH 4 AND TURBINE SV-2**

MODIFICATION: **M1-85-062**

As the result of several plant scrams during routine Turbine Control Valve tests, General Electric Company has proposed installation of five (5) orifices to be located in the Fast Acting Solenoids for all four Turbine Control Valves and the No. 2 Turbine Stop Valve in order to stabilize Emergency Trip Supply pressure during the evolution of a Turbine Valve test.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-128, REV. 1: **REPAIR OF FEEDWATER SUPPORTS H34-26, H34-28, H34-31, AND PFSK-1278**

MODIFICATION: **M1-85-064**

During a routine investigation, feedwater pipe supports H34-28 and PFSK-1278 located on line #18-WFP-902-3B were found to have been damaged during a recent abnormal operating condition, possibly involving water hammer which rendered these two supports inoperable. In order to return the system to its original design condition and allow plant start-up, it is necessary to repair these two supports.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-129, REV. 0: **ADEQUACY OF THE CONDENSATE PIPING HANGER H33-137 AS-BUILT CONDITION**

MODIFICATION: **M1-85-067**

During a routine inspection, condensate piping spring hanger (H33-137) was found to have a bent rod. Subsequent inspection revealed that the support was not installed as required by support drawing 6.21-33-137. The drawing called for a two (2) bolt baseplate; the existing baseplate has four (4) anchor bolts and is larger. The damaged rod was replaced and the drawing will be revised to incorporate the as-built condition.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-130, REV. 0: **UPGRADED FIRE BARRIER DESIGN FOR SPARE PENETRATION SLEEVES**

MODIFICATION: **M1-85-066**

The purpose of this modification is to upgrade the fire rating of existing floor and wall penetration sleeves. The upgraded fire stop design has been tested and provides a 3-hour fire rating. The fire stop consists of filling the sleeve with a minimum of 6 inches of rolled ceramic fiber blanket and a steel plug inserted on each end of the sleeve.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-131, REV. 1: **FIRE WRAPPING OF SELECTED ELECTRICAL CONDUITS AND CABLES, APPENDIX R**

MODIFICATION: **F1-85-065**

The specific conduits (cables) requiring wrapping are:

1. Separation for Blue Armored Cable I CT-1 (Red Tunnel)

   1AH114BE (1HOEBBH001) - Approximately 58' of armored cable (Feeds 600V switchgear 16)

2. Association of Red Conduits (cables) in CT-2 (Blue Tunnel)

   a. 1CC20NA6 (1CDNNC561) - Approximately 17' of conduit - 3/4"

   b. 1CC230RD1 (1TBVARC630) - Approximately 14' of conduit - 2"

   c. 1CC767NQ (1FPSNNC690) - Approximately 20' of conduit - 3/4"

   d. 1CK205RF (1HOEARK002, 1ESWARK001, 1RHRCRK120, 1RHRARK120, 1L2EARK001) - Approximately 15' of conduit - 2"

The above listed conduits (cables) will be wrapped with four (4) layer of 1/2" thick U.L. tested and ANI approved Babcock and Wilcox's kaowool blanket FP-60 1-hour fire rated barrier materials.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-85-132, REV. 0: **VELAN AND POWELL VALVE AND SPARE PART MATERIAL SUBSTITUTIONS**

MODIFICATION: **M1-85-068**

The purpose of this safety evaluation is to review and assure the activities associated with modification M1-85-068 did not involve any unreviewed safety questions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-136, REV. 0: **VALVE STEM PACKING REPLACEMENT**

MODIFICATION: **M1-85-077**

Valve stem packing will be replaced in all valves containing graphite impregnated fabric or mineral filled asbestos. The new packing will be a high-purity graphite, containing no resin binders or inorganic filler.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-141, REV. 0: **MODIFICATION TO THE TRANSMITTER VOLTAGE REGULATOR BOARDS FOR CRANES 88CR1 AND 88CR2**

MODIFICATION: **M1-85-083**

This modification includes the installation of 0.5 amp fuse (part no. 0101-0460) and Zenar diode (part no. 0030-0830) on Control Chief Corporation transmitter voltage regulator boards TVR-150 per Control Chief Corporation field service bulletin FSB-84-03, per C.C.C. drawing 0921-0690-G, and C.C.C. letter dated April 4, 1985 to H. Boenning (NYPA).

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-142, REV. 0: **STANDBY LIQUID CONTROL PUMPS PACKING REPLACEMENT**

MODIFICATION: **M1-85-080**

The stuffing box of the Standby Liquid Control Pumps will be modified to accommodate spring loaded, vee-ring packing. Existing packing is square ring, non-spring loaded.

The gland follower material will be changed from glass filled Teflon or glass filled PPS to ASTM B-505, Alloy No. C95400, aluminum bronze.

The aforementioned changes were designed by the original pump manufacturer, Union Pump Co., to eliminate packing leakage problems.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-143, REV. 0: **LPCI INVERTER SUBCOMPONENT "FUSE" SUBSTITUTION**

MODIFICATION: **M1-85-082**

This modification includes replacing existing General Electric Cat. #GF8B15, 15 amp, 600 volt, fuse with Shawmut Amp Trap Cat. #A4J15, 15 amp, 600 volt fuse.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-151, REV. 0: **MODIFICATION OF CONDENSATE SYSTEM PIPE SUPPORTS PFSK-1635 & PFSK-120**

MODIFICATION: **F1-81-045**

This modification involves the reinforcement and end connections of condensate system pipe support PFSK-120 and the replacement of a rod hanger with a rigid strut with the addition of stiffener plates to building steel on condensate system pipe support PFSK-1635. Both supports are located on the suction piping to the booster pumps.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-154, REV. 0: **29AOV-86 (A-D) HYDRAULIC CYLINDER SEAL SUBSTITUTION**

MODIFICATION: **M1-85-096**

This modification consists of the replacement of the existing hydraulic cylinder seal assembly (Item 24, 25A, and 25B on Sheffer Corporation Drawing SA-A011) with an upgraded single seal at each location with new Hiller Company P/N 182-523-0350-0300.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-160, REV. 0: **PORTABLE RADWASTE SOLIDIFICATION SYSTEM**

MODIFICATION: **N/A**

This change entails placement of a portable skid-mounted Radwaste Solidification System inside the Radwaste Building (West) Truck Bay and placement of ancillary, non-nuclear, material supply system equipment adjacent to the Truck Bay door. The skid mounted system will receive liquid slurries and sludge from the plant's radwaste tanks and solidify them in process liners inside radiation shields (transport casks).

This change has been reviewed with respect to the guidance of the NRC and the requirements of the FSAR and the Technical Specifications.

With respect to design and quality assurance requirements and provisions for controlling any release of radioactive liquids, this change is found to be in accordance with applicable guidelines of Regulatory Guide 1.143.

The implementation of this change is consistent with the safety design bases described in the FSAR and the requirements contained in the Operational and the Radiological Effluent Technical Specifications.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-85-162, REV. 0: **REVISE POWER SUPPLY FOR 27TI-101A, B AND 76-CP-136**

MODIFICATION: **F1-85-057**

The power supply for torus temperature indicators 27TI-101A & B will be revised frm the UPS bus, 71ACUPS-2, to Division I safety-related bus, distribution panel 71ACA2. o Also, the power supply for fire protection panel 76-CP-136 will be revised from Division I distribution panel 71ACA2 to Division II distribution panel 71ACB4. To accomplish this modification, new raceway and cable will be installed as required.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-001, REV. 1: **71INV-3A, B LPCI INDEPENDENT POWER SUPPLY CHARGER-INVERTER ELECTRONIC SUB-COMPONENT SUBSTITUTION**

MODIFICATION: **M1-85-082**

This modification includes the replacement of various LPCI independent power supply charger-inverter electronic sub-components with upgraded components. Replacement is required to improve equipment reliability and availability by substitution of higher quality components and components with longer operating life times.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-010, REV. 0:	**STACK ISOKINETIC SAMPLE PROBE RELOCATION (PARTIAL MODIFICATION INSTALLATION)**
MODIFICATION:	**F1-85-101**

This modification consists of prefabricating a support for installation of a new isokinetic probe and core boring partially through the concrete floor at stack elevation 306'-6".

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-011, REV. 0: **VELAN VALVE MATERIAL SUBSTITUTION**

MODIFICATION: **M1-86-014**

Valve manufacturer, Velan, no longer furnishes the valve seat in ASTM A-216 C/S WCB stellited material on drawing 6.37-168B. The valve seat is now furnished in ASTM A-105 C/S.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-012, REV. 0: **VELAN VALVE SPARE PART MATERIAL SUBSTITUTION**

MODIFICATION: **M1-86-015**

Valve manufacturer, Velan, no longer furnishes the Valve Disc Nut in ASTM A-104 C/S, Gr. 2H material and valve hinge pin in ASTM A-479 SS 410 material listed on drawing 6.37-125, Rev. D. The valve disc nut is furnished in SA-194, Gr. 2H, and the valve hinge pin is furnished in ASTM A-276 SS440C.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-017, REV. 0: **RECIRC MG SET SPEED CONTROL HI/LOW SIGNAL LIMITER CONVERSION**

MODIFICATION: **N/A**

Preoperational Test No. 02-2B requires the temporary conversion of two electronic high limiter units in the A and B speed control loop of the recirculation system to hi/low limiters. These limiters are intergral to the existing GE/MAC limit stations (2-184-100A,B) installed as part of JAF Modification F1-84-062.

The existing power supply to the limiter shall also be revised such that on loss of Reactor Feed Pump (A or B) and low reactor water level, AC power shall be isolated to the limiters, thus allowing the automatic runback. Test switches shall also be added between the hot side of the 2A-K46A, B relays and the limiters to provide for limiter isolation and subsequent flow adjustment utilizing the M/A station.

This procedure shall also be utilized for testing and restoration of the speed control system back to normal per Modification F1-84-062.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-020, REV. 1:	**TEST OF THE PERMALI SHIELDING IN RECIRCULATION SYSTEM PENETRATIONS IN THE BIOLOGICAL SHIELD**
MODIFICATION:	**N/A**

This Test is to determine the neutron and gamma dose rates associated with the N-2 (recirculation system inlet risers) nozzle openings in the biological shield and to evaluate the effectiveness of the Permali shielding currently in place.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-021, REV. 0: **INSTALLATION OF NEW STACK ISOKINETIC PROBE**

MODIFICATION: **F1-85-101**

This modification involves the addition of a new stack isokinetic sampling probe, sampling tube to the SAI Particulate and Iodine Monitor and associated heat tracing and insulation changes to provide a more reliable system than exists currently.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-032, REV. 0: **EPIC MODIFICATION: COMPUTER ROOM NON-UPS LIGHTING AND POWER**

MODIFICATION: **F1-82-022**

This nuclear safety evaluation report covers the arrangement and installation of computer room lighting and receptacle power. This installation will distribute commercial power to lighting and receptacles in the EPIC Computer Room.

This is a modification that involves interconnection with plant commercial electrical lighting systems. This modification will not modify the operation or the specifications of the plant as defined in the FSAR and Technical Specifications.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-033, REV. 1: **REPLACEMENT OF TED136015 MOLDED CASE CIRCUIT BREAKER IN MOTOR CONTROL CENTER C-152 COMPT. AA3**

MODIFICATION: **M1-86-032**

Replace existing General Electric Molded Case Circuit Breaker Type TED136015 (E150 Line) with a General Electric Molded Case Circuit Breaker Type THED136015 (E150 Line). The replacement breaker shall meet the required environmental qualification envelope for Motor Control Center No. C-152. The GE part number for the replacement THED breaker is DD213A6385P049.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-065, REV. 0: **TARGET ROCK SRV BOLTING MATERIAL SUBSTITUTION AND BOLT LENGTH CHANGE (02RV-71A-L)**

MODIFICATION: **M1-86-052**

This modification allows the use of ASTM A-194 Grade 2H nuts in lieu of ASME SA-194 Grade B7 nuts (TRC Part Nos. 114 and 115) and allow use of 1 3/8" x 6 UNC x 11 1/2 bolts in lieu of using 1 3/8" x 6 UNC x 10" bolts (TRC Part No. 105) for Target Rock Safety Relief Valves. These valves were procured as ASME valves by General Electric (GE).

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-075, REV. 2: **UPGRADE OF SUPPRESSION POOL WATER TEMPERATURE MONITORING SYSTEM FOR R.G. 1.97, REV. 2**

MODIFICATION: **F1-82-021**

This modification includes upgrade to the Suppression Pool Water Temperature (SPWT) Monitoring System.

This system has been upgraded to include sixteen (16) dual element resistance temperature detectors mounted in thermopiles spaced at equal intervals around the inner periphery of the Suppression Pool, providing input to redundant process instrument systems. The thermowells are submerged in the water contained in the Suppression Pool to assure that the sensors properly monitor the pool temperature.

This redundant monitoring system serves two important purposes, namely:

- The requirements of NRC Regulatory Guide 1.97, Rev. 2, are met by providing Suppression Pool Water Temperature as an indication of the operation of various plant cooling systems during and following an accident.
- Mark I Program Acceptance Criteria are met by providing a redundant system measuring "bulk" Suppression Pool Water Temperature (SPWT) in order to prevent plant operation when SPWT is too high for stable condensation of steam either from Safety Relief Valve (SRV) discharge or from a LOCA.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-086, REV. 0: **COOLING WATER TEMPERATURE TO ESF SYSTEM COMPONENTS AND RHR SERVICE WATER SYSTEM TEMPERATURE FOR R.G. 1.97, REV. 2**

MODIFICATION: **F1-82-021**

This safety evaluation covers the impact of implementing Preoperational Test Procedure POT-46C. Preoperational Test Procedure encompasses a check to verify the integrity of the RTD configuration located in the inlet of the intake water structure for the plant.

The existing RTD and its support have been replaced/modified to meet seismic requirements in accordance with Plant Modification F1-82-021-F6 and Installation Procedures IP-6 an dIP-6M.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-103, REV. 0: **OIL STORAGE ROOM, PARTITION WALL, DOORWAY ENLARGEMENT**

MODIFICATION: **M1-86-073**

A concrete wall acts as a partition in the Turbine Building oil storage room. This modification will enlarge the doorway, in that wall, by 12" in height and width to accommodate new barrel handling equipment. The doorway will be increased in size to 48" by 92".

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-106, REV. 0: **EPIC UPS PREOPERATIONAL TEST POT-71Q**

MODIFICATION: **F1-82-022**

This procedure describes the functional tests required to verify that the installed uninterruptible power system (UPS) for EPIC modification F1-82-022 is operating properly. Each function of the UPS will be tested as will the ability of the UPS to support the EPIC system while operating from batteries for one hour. Battery testing will be accomplished by using a portable load bank connected to the UPS.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-108, REV. 0: **PREOPERATIONAL TEST PROCEDURE FOR EPIC COMPUTER ROOM HALON VENT SYSTEM AND SYSTEM CONTROLS POT-72D**

MODIFICATION: **F1-82-022**

This procedure describes the functional tests required to demonstrate that the EPIC Computer Room Halon ventilation system responds properly to inputs from its control panel (72CP-1) and simulated input from the fire protection system. The test demonstrates the ability of the Halon vent system to isolate the EPIC Computer Room from the rest of the TSC ventilation system, exhaust Halon and smoke from the EPIC Computer Room, and all of the Halon vent system self-test functions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-109, REV. 0: **EPIC COMPUTER ROOM FIRE PROTECTION SYSTEM PREOPERATIONAL TEST POT-76W**

MODIFICATION: **F1-82-022**

This procedure describes the functional tests required to verify that the installed EPIC Computer Room fire protection system will demonstrate the ability to detect smoke/fire/products of combustion and flood the Computer Room with Halon gas; also verify interfaces to other systems and alarms and integrity of piping system and supports. The tests and inspections will be performed by a factory representative using a factory acceptance test procedure under the supervision of the Test Supervisor and Fire Protection Supervisor.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-123, REV. 0: **JUMPER TO RESTORE F APRM TO OPERABLE STATUS**

MODIFICATION: **N/A**

This safety evaluation provides the justification for installing jumper 86-196 which will replace the inputs to Average Power Range Monitor Channel F (APRM F) from failed Local Power Range Monitors (LPRMs) 12-37C and 44-37C with operable LPRMs 12-13C and 44-13C from LPRM Group A. As part of the jumper, the inputs to the Rod Block Monitor (RBM) circuits for the reassigned LPRMs will be bypassed. The inputs of the reassigned LPRMs to the process computer will be maintained through the use of appropriate jumpers in the analog input cabinets.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-128, REV. 1: **JAF SEWAGE TREATMENT PLANT AND SANITARY SEWER SYSTEM**

MODIFICATION: **F1-85-091**

The Sewage Treatment Plant (STP) will be located in the northeast corner of the protected area on the JAF Site, just north of the Interim Waste Storage Facility. This on-site plant and corresponding Sanitary Sewer System will collect and process all sanitary sewer waste generated from the existing JAF plant and future Site Master Plan facilities. The treatment plant will be capable of treating design flows ranging from 25,000 gal./day, under normal effluent loading, to 60,000 gal./day; peak loading, resulting from increased site occupancy occurring during JAF plant maintenance and refueling outages. The treatment plant will be an extended aeration secondary treatment facility with flow equalization. The effluent will be disinfected by chlorination prior to discharge through an outfall constructed to the existing drainage ditch along the east side of the site. The STP consist of a rectangular concrete and masonry structure of plan dimensions approximately 40 ft. x 72 ft. which includes the Control Building, tankage and process equipment.

The Sanitary Sewer System (SSS) of the project will consist of approximately 1,750 feet of gravity sewer, 1,850 feet of force main, modifications to the existing sewage pumping station and a new sewage pumping station. The SSS will route all current sanitary sewage effluent to the new STP and will accommodate new facilities planned for the JAF site.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-132, REV. 2: **JAF TEMPORARY RELOCATION OF SECURITY PERIMETER FOR THE TRAINING FACILITY AND INTERIM WASTE STORAGE FACILITY**

MODIFICATION: **F1-86-081**

The changes required by this modification are intended to maintain perimeter intrusion detection and television camera surveillance along the temporarily relocated fence during construction of the training facility and inclusion of the Interim Waste Storage Facility into the protected area.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-133, REV. 0: **SITE UTILITIES EXPANSION PROJECT PORTABLE WATER & FIRE PROTECTION SYSTEM**

MODIFICATION: **F1-86-003 (TASK "A")**

This modification included the installation of a complete potable water main system and a new fire main including hydrants, to serve those facilities of the JAF site covered in the Site Master Plan. This installation will complete the potable water portion of the Site Utilities project and will complete the fire main portion of fire protection work for the Site Utilities project.

The potable water main system will consist of approximately 2,700 feet of buried new 6" diameter pipe with minimum of 4.5 feet ground cover. This 6" diameter pipe will connect and will draw water from the existing 8" diameter yard city water piping (system no. 78), located at the south-west corner of the site.

The fire main portion of fire protection work will consist of approximately 2,100 feet of buried new 12" diameter pipe with minimum of 6 feet ground cover. This 12" diameter pipe will be a closed loop connected by two tie-ins to the existing plant fire protection system: No. 76.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Attachment 1

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-86-139, REV. 0:	**ADS PNEUMATIC SUPPLY SYSTEM UPGRADE PHASE I**
MODIFICATION:	**F1-84-072**

The purpose of this modification is to ensure 100 day operability of the ADS system. This will be done in two efforts. First, the existing ADS supply line will be seismically upgraded to ensure that it retains its integrity following a seismic event. Second, a redundant supply from the CAD system will be installed. Included in this work is the installation of containment isolation valves in the existing and new supply lines, and the installation of valves to isolate safety-related piping from non-safety related piping.

This phase of the modification entails the installation of a new one inch line from the CAD Building to new valve 27SOV-145 near drywell penetration X-57c. Also included in this phase are a new penetration into the Reactor Building and a new penetration in the CAD Building roof to facilitate pipe routing.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-140, REV. 1: **REPLACEMENT OF 23MOV-58 VALVE ACTUATOR MOTOR WITH HIGHER TORQUE-RATED MOTOR**

MODIFICATION: **M1-86-100**

This modification provides a replacement motor for Limitorque valve actuator 23MOV-58 which has failed. The replacement motor meets all design requirements, however, it has a higher design minimum torque rating. The installed motor on 23MOV-58 has failed and must be replaced. An exact requirement is not available in stock.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-147, REV. 0: **ATTS CABINETS EXTERNAL/INTERNAL WIRING CHANGES, PREOPERATIONAL TEST**

MODIFICATION: **F1-86-055**

The scope of this test is to ensure that each Analog Transmitter/Trip System (ATTS) instrument loop affected by Modification No. F1-86-055-IP-2 operates to accurately monitor the parameter being sensed, to supply a "trip" output to RPS logic at the desired setpoint, and to indicate certain conditions which result in inoperable status.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Attachment 1

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JAF-SE-86-152, REV. 0:	**OFF-GAS SAMPLE CHAMBER TEMPORARY OPERATING PROCEDURE (TOP-76)**
MODIFICATION:	**N/A**

The scope of this test will be to complete Temporary Operating Procedure (TOP) Number 76 for the off-gas sample chamber (17-104) and associated equipment. This procedure consists of establishing temporary monitoring, isolating and measuring status head on the line from the air ejectors to the sample chamber, completely isolating the system, waiting 30 minutes for the off-gas to settle out, draining and measuring the volume of water in the sample chamber, ultrasonically testing the sample chamber before and after draining, and installing a jumper to measure flow exiting the condensate pot liquid drainer.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-154, REV. 0: **13AOV-22 SPARE PARTS MATERIAL SUBSTITUTION**

MODIFICATION: **M1-86-086**

Valve manufacturer, Rockwell, no longer furnishes the valve indicator cam in ASTM A-182 Gr. F6 material or the valve disk pin and valve indicators rod in ASTM A-276 T410HT material listed on drawing 6.44-21B, sh. 2. The valve disk pin, valve indicator cam and valve indicator rod is furnished in A-182 Gr. F6A Class 4 material.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-155, REV. 0:	**TEMPORARY SUPPLY OF ELECTRICAL POWER FOR STANDBY LIQUID CONTROL (SBLC) SYSTEM TANK HEATER**
MODIFICATION:	**N/A**

The purpose of this temporary modification is to disconnect and insulate supply side (line) conductors at breakers (OB2) on Bus 116200, (MCC 162), remove breaker OA3 on Bus 114300 (MCC 143) and replace with a TFJ90 breaker, and using three size AWG #4 conductors, supply temporary power to breaker (OB2) on Bus 116200 from mounted breaker.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-157, REV. 0: **FIRE PROTECTION LOOP POST INDICATOR AND HOSE GATE VALVE REPLACEMENTS (SYSTEM 76)**

MODIFICATION: **M1-86-092**

76-PIV-24 is presently broken and in need of replacement. The original equipment is no longer manufactured and must be replaced by similar equipment of a different manufacturer.

The hose connection gate valve on Hydrant #11 must be replaced also due to corrective maintenance requirements.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-169, REV. 0: **HEAT TRACING FOR STACK PROBE SAMPLE LINES (PREOP 01-107-D)**

MODIFICATION: **N/A**

This preoperational test will consist of applying power to three separate heat tracing circuits, verifying heat-up and temperature control of associated sample lines through the use of thermostatic controllers and annunciation of simulated component failures in the Control Room.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-176, REV. 1:	**CONTINUED PLANT OPERATION WITH CHANNELS 5 AND 10 OF TIP MACHINE C INOPERABLE**
MODIFICATION:	**N/A**

The purpose of this safety evaluation is to provide justification for continuing plant operation with indices five and ten on Traversing Incore Probe (TIP) Machine C inoperable. This evaluation will also explain why no additional conservatism is required in the application of core thermal limits as a result of this mode of operation.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-183, REV. 1: **RWCU RECIRCULATION 12P-1A PUMP REPLACEMENT**

MODIFICATION: **F1-86-001**

This modification consists of replacing one 50% design capacity Reactor Water Cleanup (RWCU) Recirculation pump (12P-1A) with a zero leakage, canned rotor, 100% design capacity pump. This pump design eliminates the mechanical seal failures of the current design and increases the flow capacity of the RWCU system, which is currently 70% with one pump running. The original system design provided two 50% capacity pumps, however, with one pump running, 70% system flow capacity can be achieved.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-186, REV. 0: **87-AHB-23, -66, -67, & -133 REPLACEMENT (OUTAGE AND NON-OUTAGE PORTION)**

MODIFICATION: **F1-85-072**

The subject modification consists of replacing the existing inlet isolation valve for PCV-101 (AHB-23), and bypass valve for TCV-119A & B (AHB-133) and steam seal supply check valves AHB-66 and AHB-67 in the Auxiliary Boiler System (Sys. 87). The solid wedge gate valves will be replaced with flex wedge gate valves (Powell Fig. 3003N WE). The check valves will be replaced with check valves of a similar design (swing check). The new valves were procured to technical and QA requirements which are equal to or exceed the technical and quality requirements of the original procurement specification APO-13B.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-200, REV. 3: **INSULATION REPLACEMENT ON MST, FW, RHR, CS, HPCI, RCIC AND RWCU SYSTEMS**

MODIFICATION: **F1-86-058**

The Insulation Replacement Program will be implemented during RO-13 and may extend beyond RO-13. The calculations recommended by NRC Generic Letter 85-022 have been completed for Power Uprate and the NSE for lake temperature increase to 85 degrees. Calculations completed in accordance with Regulatory Guide 1.82, Revision 1, show there is adequate NPSH margins for RHR and Core Spray Pump operation.

In addition, the Power Uprate calculations were reviewed for compliance with the design basis as discussed in FSAR, Section 6.5.1. These calculations were found to be bounding for the original design basis as stated in the FSAR, Section 6.5.1, and GE Design Specification 22A1472 which includes 50% debris blockage.

The new insulation weight has been evaluated for its affect on the Piping Seismic Analysis. The calculations show that the new insulation would not significantly change the system response for seismic load. The new insulation is lighter than the replacement insulation, consequently, the replacement insulation will not increase the deadweight stress.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Supplement to Annual Summary of Changes, Tests, and Experiments

JAF-SE-86-211, REV. 1: **FLOOR LOADING OF TURBINE TRACK BAY DUE TO 250 TON LOAD TEST OF THE TURBINE BUILDING CRANE (88CR-1)**

MODIFICATION: **N/A**

The purpose of this safety evaluation is to show that a failure of the turbine track bay floor due to dropping of a 250 ton test load by the Turbine Building Crane will not affect safety-related structures or equipment in the plant.

The test weight will be assembled by placing 40,000 lb. weights on a frame. The 40,000 lb. weights will be lifted off trailers, located directly west of the crane, and set onto the frame. The analysis of the assembled 250 ton test weight is assumed to envelope the movement of the 40,000 lb. test weights.

During the load test, the test weight will be raised and lowered, through each crane speed, over the test weight assembly area. The 250 ton test weight will not be transferred outside the assembly area and will not be raised more than six feet above the 272' elevation. This lift will be performed with the load centered over the track bay rails. A NYPA test supervisor will be present at all times during the lift and will direct the lift as per written instructions attached to the work request.

Prior to initial operation of this crane, following completion of plant construction, a 250 ton load test was performed.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-213, REV. 0: **REPLACEMENT OF 14FIS-45A BARTON MODEL NO. 289 WITH BARTON 289A**

MODIFICATION: **M1-86-141**

The purpose of this modification is to replace a flow indicating switch GE Part No. 145C 3008-P05 (Barton Mod 289), with GE Part No. 145C 3008-P12 (Barton Mod 289A). The calibrated ranges and scales are:

Dwg. 145C 3008-P05	Range: 10.3" WG, Scale 0-1030 GPM
Dwg. 145C 3008-P12	Range: 10" WG, Scale 0-10"

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-86-214, REV. 1: **TEMPORARY HPCI CRANE EXTENSION AND GENERAL HEAVY LOAD EVALUATION**

MODIFICATION: **N/A**

The present monorail crane for HPCI is to be extended to facilitate disassembly and reassembly of the pump and turbine. The extension is an I-beam supported by two I-beam cross members which are fastened to concrete using expansion bolts. It will be assembled when the plant is shut down for refueling and will be disassembled completely before startup.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-003, REV. 0: **GENERAL HEAVY LOAD EVALUATION FOR HPCI EQUIPMENT IN REACTOR BUILDING**

MODIFICATION: **N/A**

NUREG-0612 defines a "heavy load" as the combined weight of a single spent fuel assembly and its handling tool (greater than 750#). This safety evaluation addresses NUREG-0612 heavy load concerns associated with the inspection/overhaul of the HPCI pump and turbine, east crescent elevation 227'. All lifts associated with the inspection/overhaul of the HPCI pump and turbine will be accomplished with the HPCI monorail crane. The lifts will be performed with the plant in the cold condition.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-016, REV. 0: **JACKING POSTS FOR GENERATOR ALIGNMENT - TURBINE BUILDING ELEVATION 300'-0"**

MODIFICATION: **M1-87-012**

Eight (8) jacking posts used to align the generator during construction were cut off two (2) inches below the elevation 300'-0" floor of the Turbine Building after plant construction was completed and the floor was finished over them. The low pressure (B) turbine rotor will be replaced during the 1987 refuel outage, the generator will have to be realigned. To do this, concrete will be chipped out to expose the remaining steel sections of six (6) of the eight (8) jacking posts and new I-beam sections will be welded to them. These posts will remain in place after alignment of the generator is complete for any future alignment work.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-018, REV. 0: **GENERAL HEAVY LOAD EVALUATION FOR 23MOV-19 LIMITORQUE REMOVAL/REINSTALLATION**

MODIFICATION: **N/A**

This safety evaluation addressees NUREG-0612 heavy load concerns associated with the removal/reinstallation of the Limitorque actuator of 23MOV-19, located in the Torus Room, elevation 262'-0". NUREG-0612 defines a heavy load as "the combined weight of a single spent fuel assembly and its handling tool (greater than 750 lb.". The Limitorque actuator on 23MOV-19 is a model SMB-3 which weighs approximately 1200 pounds. Associated with this lift, a temporary W4 x 13 beam will be installed for rigging the actuator.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-021, REV. 0: **TEMPORARY STORAGE OF PACKAGED RADIOACTIVE MATERIAL LSA IN THE CONDENSATE STORAGE TANK AREA**

MODIFICATION: **N/A**

Reactor recirculation system piping is to be stored in the Condensate Storage Tank (CST) area (west of the reactor building) pending final disposition. The final disposition will be shipment to a disposal site or to a reclamation site.

The CST area is a posted radiation area. Access is controlled with a locked gate. The area is adjacent to the reactor building and close to the reactor building track bay which will be the egress point for the LSA boxes containing the contaminated material.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Attachment 1

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JAF-SE-87-033, REV. 0: **SPECIAL RCIC MOV CYCLING**

MODIFICATION: **N/A**

This safety evaluation covers the performance of TOP-83 for the RCIC System. The RCIC Motor Operated Valves (MOV's) listed in Appendix A will be stroke tested under hydrostatic test pressure in accordance with TOP-83. TOP-83 tests the applicable RCIC MOV as follows: 1) Under hydrostatic test pressure with MOV open, stroking valve closed. 2) Under hydrostatic test pressure with dP (differential pressure) across closed MOV, stroking valve open.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-036, REV. 0: **BACKFEED OF NORMAL STATION SERVICE TRANSFORMER T4 FROM 345KV SYSTEM**

MODIFICATION: **F1-87-018**

The modification consists of installing the following devices on System Backup Relay Panel RU-3 located in the control room.

The devices will provide the necessary ground protection that will allow the 345KV system to backfeed the normal station service transformer when the main generator has been disconnected from the isolated phase bus.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-038, REV. 0: **HPCI/RCIC SYSTEM MOTOR-OPERATED VALVE TORQUE SWITCH AND OPEN BYPASS SETPOINT CHANGES**

MODIFICATION: **M1-87-035**

This modification deals with revising the setpoints for HPCI/RCIC Limitorque valve actuators as follows:

1. Change actuator torque switch settings to be consistent with recalculated actuator thrust values as a result of NRC IE Bulletin 85-03 analyses.

2. Revise open torque switch bypass position switch setting or jumper open torque switch to ensure valve opening under design differential pressure and flow conditions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-040, REV. 0: **SPECIAL HPCI MOV CYCLING**

MODIFICATION: **N/A**

This safety evaluation addresses the performance of TOP-84 for the HPCI System. The HPCI Motor-Operated Valves (MOV's) listed in Appendix A will be stroke tested under hydrostatic test pressure in accordance with TOP-84. TOP-84 tests the applicable HPCI MOV as follows: 1) Under hydrostatic test pressure with MOV open, stroking valve closed. 2) Under hydrostatic test pressure with dP (differential pressure) across closed MOV, stroking valve open.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-042, REV. 0: **FUNCTIONAL TEST OF EQUIPMENT DISASSEMBLED AND REASSEMBLED DURING HPCI TURBINE AND PUMP MAINTENANCE OVERHAUL**

MODIFICATION: **F1-87-023**

This test covers the functional check of equipment that was removed and re-installed under Procedure MP-23.12. These are as follows:

VD-1	23DPS-1
VD-2	23DPS-I
23TE-105A	23PS-II
23TE-114A	SD-141
23TE-121	SD-142
23TE-122	23LS-1
23TE-124	23LS-2
23TIS-100	SV-102
EGR Gov. Actuator	TH-149
Magnetic Pick-Up Gear	

Additionally, this test will functionally verify the wiring for the above devices affected by the installation of Junction Box 23TU-2 installed by Modification F1-87-023.

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JAF-SE-87-051, REV. 0: **BACKFEED OF THE MAIN AND NORMAL STATION SERVICE TRANSFORMERS FROM THE 345KV SYSTEM**

MODIFICATION: **F1-87-018**

The 345KV system can be used to supply an alternate source of off-site power to plant auxiliaries through the two main transformers T1A and T1B and the normal station service transformer T4.

When backfeeding, the 345KV system voltage is stepped down to 24KV by the main transformers to supply power through the isolated phase bus to normal station service transformer T4. The 24KV isolated phase bus voltage is stepped down by normal station service transformer T4 to 4160V to supply power through the enclosed non-segregated bus duct to the Plant AC Power Distribution System described in FSAR Section 8.5. The main transformers and normal station service transformer ratings and connections are described in FSAR Sections 8.3.1.2 and 8.4.1.2. All seven 4160V buses (10100 through 10700) may be energized while backfeeding AC power from the 345KV system.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-052, REV. 0: **OPERATION WITH REPORTED FLAWS IN REACTOR RECIRCULATION SYSTEM WELD NUMBERS 12-4, 12-61, 28-48, 28-53, 28-56, 28-112, & 28-113**

MODIFICATION: **F1-84-067**

Ultrasonic testing (UT) of these welds of the Reactor Recirculation System Piping revealed indications evaluated to be Intergranular Stress Corrosion Cracking.

The crack lengths/depths used in the analyses were determined by EBASCO and General Electric personnel certified in IGSCC crack sizing. This certification for sizing was conducted by the Electric Power Research Institute/Boiling Water Reactor Owners Group Program under NRC approved guidelines. The procedures have been reviewed and approved by the JAF Quality Assurance Level III Ultrasonic Examiner. The ultrasonic examination results were used as the final crack size.

This analysis methodology has been accepted by the NRC via NUREG-0313, Draft, Rev. 2. The conservative methods of this analysis plus the conservatisms added to the crack length estimates ensure that the structural margins of this piping are maintained for both the normal and accident conditions for the balance of plant life.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-053, REV. 0: **GENERAL HEAVY LOAD EVALUATION FOR 10MOV-34B LIMITORQUE REMOVAL/REINSTALLATION**

MODIFICATION: **N/A**

This safety evaluation addresses NUREG-0612 heavy load concerns associated with the removal/reinstallation of the Limitorque actuator of 10MOV-34B, located in the East Crescent, elevation 256'-0". NUREG-0612 defines a heavy load as "the combined weight of a single spent fuel assembly and its handling tool (greater than 750 lb.)". The Limitorque actuator on 10MOV-34B is a model SMB-3 which weighs approximately 960 pounds.

The load path of this lift consists of a short horizontal distance (approximately 3'-0"), traveled by the actuator as it is removed from the valve stem, followed by a 14'-0" descent to the grating surface below at elevation 242'-0".

The Limitorque actuator will remain on the grating during valve maintenance activities and reinstalled via the same load path.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-054, REV. 0: **TURBINE GENERATOR ROTOR TORSIONAL TEST (MPT-94.30)**

MODIFICATION: **N/A**

This temporary procedure provides instructions for installation of special monitoring equipment and performance of a Torsional Excitation Test on the JAF Turbine Generator.

Performance of this test requires instrumentation of the turbine and generator rotors at a few bearing locations. This unit must be completely disconnected from the power grid to conduct the major portion of the test, with the turbine start-up rate, speed controls and field excitation control under direction of a NYPA test director. The procedure affects the Main Turbine Generator, Transformer T1A, and the 345KV switchyard.

Measurement of the torsional natural frequencies requires that an appropriate torsional stimulus be applied to the unit. The test plan involves making selected mechanical and electrical measurements under the following conditions:

1. During a slow acceleration ramp from approximately 100 to 1980 RPM.
2. During selected turbine speed hold points.
3. During an intentional synchronization out-of-phase at a small angle.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-059, REV. 0: **DRYWELL VENTILATION DUCT FAILURE**

MODIFICATION: **N/A**

This safety evaluation addresses the affects on the Drywell Cooling System performance and the adjacent safety-related components associated with the failure of a portion of Drywell ventilation duct, and its temporary storage on the Drywell floor.

The duct, as detailed on plant drawings FB-7A, -7B, and -9A, is approximately 7 feet in length, weighs 200 pounds, fell from its installed location on the underside of "B" Drywell Cooler assembly to the Drywell floor elevation 256'-6", a distance of approximately 8 feet. The duct was supported by a single mounting bracket located at the underside of the "B" Cooler supply plenum.

Storage of the duct will consist of securing it with chain to the adjacent missile shields at floor elevation 256'-6".

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-066, REV. 1: **DBX (DIGITAL BRANCH EXCHANGE) TELEPHONE SWITCH**

MODIFICATION: **F1-85-078**

This modification will replace the existing Dimension 500 telephone switch and its associated hardware with a Executone DBX (Digital Branch Exchange) switch. Although this modification will require new cabling throughout the site, existing cabling located within vital safety-related areas will be purchased from New York Telephone to alleviate the installation of cable and conduit within these areas. The new installation will receive power from 208/120 VAC distribution panel 71ADM-1. This distribution panel will be fed from non-safety related MCC-342/MCC-332 via Cyberex 71UPS-5. In addition to the DBX switch, a backup free standing air conditioner will also be installed within the telephone room. This installation is necessary as the room temperature should not be higher than 75°F to assure reliable system operation. Power for the new air conditioner will be supplied from transformer 71PT-80TR through disconnect switch 71DS-81.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-067, REV. 0: **MOVING HYDROLASER FROM REFUEL FLOOR**

MODIFICATION: **N/A**

Pursuant to NUREG-0612, this evaluation addresses the safety concern for lowering the 80 HP hydrolaser from the refuel floor (369'-6" elevation) to the 272' elevation through the equipment hatch. The consequences of dropping the hydrolaser from the refuel floor elevation is shown to be within acceptable limits by maintaining a safe load path.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE--87-071, REV. 1: **HEAVY LOADS TRANSPORTATION OF 66FN-13A**

MODIFICATION: **N/A**

Pursuant to NUREG-0612, this evaluation addresses the safety concern for removing and reinstalling the Reactor Building Ventilation Exhaust Fan (66FN-13A) Motor from above the northeast corner of the refuel floor (417' elevation) to the Reactor Building's 272' elevation. The load path (load path drawings are supplied with the work package) consists of the following:

1. Unbolting the fan housing from the ventilation system.

2. Sliding the fan housing across the supporting mezzanine on the support leg feet after breaking the tack weld on the feet.

3. Removing the motor from the fan housing utilizing chainfalls, comealongs and slings supported by existing I-beams (14 WF 43) with beam clamps or nylon wraps.

4. Lowering motor to portable cart or equivalent and transporting the motor to the east side of the mezzanine away from the spent fuel pool so that no heavy load lift is performed over spent reactor fuel.

5. Lowering motor again utilizing chainfalls and slings supported by existing I-beams (14 WF 61) with trolley type beam clamps to the portable cart on the northeast corner of the refuel floor (369'-6" elevation).

6. Transporting motor on the cart to the elevator on the southeast corner of the refuel floor and lowering to the reactor building 272' elevation.

The above steps will be done in reverse order to reinstall the fan motor.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-073, REV. 0: **CONTINUED PLANT OPERATION WITH C TIP INDEXER INOPERABLE**

MODIFICATION: **N/A**

The purpose of this safety evaluation is to provide justification for continuing plant operation with an inoperable indexer connected to Traversing Incore Probe (TIP) Machine C. This evaluation will discuss the effects of loss of this indexer on system function, and any resultant limitations on plant operation.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Attachment 1

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JAF-SE-87-075, REV. 0: **REPLACE PERIMETER DETECTION SYSTEM ALONG ZONES 121, 122, AND 123**

MODIFICATION: **F1-86-091**

This test procedures consists of the following:

1. Functional testing of intrusion detector zones 121, 122, & 123 and verification of zone "breaks" at CAS and SAS.
2. Functional testing and verification of the bypass switch for the first two sections of Zone 122, E-field and main gate microwave during main gate operation.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Attachment 1

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JAF-SE-87-076, REV. 0: **REMOVAL OF DRAIN-OFF BYPASS FLOW CONTROL LINE ON 23HOV-1**

MODIFICATION: **M1-87-103**

This modification consists of the removal of the drain-off bypass flow control line in the hydraulic system of high pressure coolant injection turbine stop valve 23HOV-1. Two threaded pipe plugs shall be installed in its place.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-078, REV. 1: **PLANT OPERATION WITH ONE MAIN STEAM ISOLATION VALVE OUT OF SERVICE AND ONE STEAM LINE ISOLATED (CYCLE 8)**

MODIFICATION: **N/A**

The purpose of this evaluation is to assess the affects of conducting reactor and plant operations with one Main Steam Isolation Valve (MSIV) out of service and its associated main steam line isolated. With one MSIV inoperable and closed, plant operation is conducted with reactor steam being supplied to the plant main turbine and auxiliary systems via three (3) main steam lines instead of the normal four (4) lines. This evaluation addresses the acceptability of plant operations at reactor thermal power levels greater than 75% which results in greater than normal steam flow through the three operable main steam lines. This evaluation will address the impact of three main steam line operation on Cycle 8 reactor thermal parameters, plant transient analyses, LOCA/ECCS analyses, and the effects on protection systems, process systems, and individual components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-080, REV. 0: **MAIN STEAM LINE ISOLATION VALVES 29AOV-80A-D & 29AOV-86A-D HYDRAULIC ACTUATOR UPGRADE**

MODIFICATION: **M1-87-059**

This modification consists of upgrading the design of the actuators on the MSIV's 29AOV-80 (A-D) and 29AOV-86(A-D). The new valve manifolds are larger and mounted further apart on the manifold. The hydraulic charging port has been relocated to the accumulator end cap. This modification will be performed on all eight MSIV's.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-082, REV. 1: **SOLENOID PILOT VALVE SUBSTITUTION FOR AIR OPERATED DAMPERS, SYSTEMS 66, 67, & 69**

MODIFICATION: **M1-86-129**

This is a generic substitution for the fan damper solenoid pilot valves that are energized when their respective fans are started, opening the associated discharge dampers.

The solenoid valves furnished with the original equipment (Honeywell Model RP403D) are no longer manufactured.

The replacement model, recommended by the manufacturer, Honeywell Model RP418A-1107, identical to Skinner Model EPT004J, did not work properly upon installation (Ref. WR-67/64483). The orifice size was determined to be too small to permit sufficient air flow. Automatic Switch Company (ASCO) Catalog Number 8320A97 was determined to be a suitable substitute on the basis of orifice size and watt rating.

Technical information for the new solenoid valves will be added to the plant drawing system.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-085, REV. 0: **ADDITION OF PIPE SUPPORT ON RFP SEAL WATER LINE 2"-WFP-401-22**

MODIFICATION: **M1-87-106**

In order to eliminate excessive lateral movements caused by system flow induced vibrations, a lateral restraint was installed on RFP Seal Water Line Number 2"-WFP-401-22 per Work Request 33/14941. This modification documents the technical and safety evaluation associated with the addition of this pipe support.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-098, REV. 0: **STANDBY LIQUID CONTROL SYSTEM (SBLCS) FUSE COORDINATION SPECIAL TEST**

MODIFICATION: **N/A**

This test will verify that the fuse electrical coordination in the control system for the Standby Liquid Control System (SBLCS) is correct. The control power circuit is designed such that in the event a fault develops as a result of squib explosive valve firing, the 2 amp fuses for the explosive valves clear before the 10 amp control power transformer fuse. To verify the coordination of the control circuit fusing, during plant shutdown, this test will intentionally short the squib "hot" leads (pin 1 and pin 3) to ground and attempt a firing signal. This test will verify that the 2 amp squib fuses blow first, leaving the motor control center main control power 10 amp fuse intact.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-101, REV. 0: **MAIN GENERATOR FIELD GROUND MONITORING/TROUBLESHOOTING PROCEDURE**

MODIFICATION: **N/A**

This procedure shall outline the plant parameters which should be monitored, during plant startup and power ascension, for the purpose of identifying and specifically locating a ground on the main generator field or excitation system. Also outlined are the methods for monitoring these parameters and the operational hold points which will assist in collecting data.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-111, REV. 0: **POWELL GATE AND CHECK VALVE PARTS MATERIAL SUBSTITUTIONS**

MODIFICATION: **M1-87-115**

The current William Powell Co. valve drawings that are contained in the plant drawing system provide material specification requirements for the various valve parts. Since the time the original valves were ordered for the JAF Plant, the valve manufacturer has revised material requirements for certain valve types and models.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-114, REV. 0: **FLANGE AND SETSCREW SUBSTITUTION FOR HPCI MAIN PUMP (23P-1) MECHANICAL SEAL ASSEMBLY**

MODIFICATION: **M1-87-033**

The mechanical seal assembly flange (JAF S/N 33104) for the subject component has been changed from ASTM A-276 TP 316 stainless steel to type 304 stainless steel or A-743 grade CF8 stainless steel. The mechanical seal assembly cap screws (JAF S/N 721108) and set screws (S/N 721107) have been changed for cadmium plated steel to 18-8 stainless steel.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-115, REV. 1: **RADIOACTIVE MATERIAL STORAGE ON-SITE (FAB SHOP)**

MODIFICATION: **N/A**

The "Fab Shop" structure is located inside the protected area in the southeast corner of the plant site and on the east side of Training Building. This structure will be used specifically for staging low level radioactive materials (wood planks, metal parts, scaffoldings, maintenance tools, equipment, hepa trunk hose, etc.). These materials may be contaminated with radioactive material. This "Fab Shop" is adjacent to the shop (sharing a common wall) where paints and solvents are stored for on-site use.

A fire-retardant drywall partition wall (2 hr. fire rated) on both sides of the common wall between the "Fab Shop" and Paint Shop will be erected. These walls will be constructed with 2 layers of 5/8" sheetrock brand FIRECODE "C" Gypsum panels on steel studs. This fire retardant partition wall will permanently close the existing doorway between "Fab Shop" and Paint Shop. The existing unit heaters for the paint shop mounted on the wall of Fab Shop will be removed and the wall opening will be closed to provide an enclosed painting room. The other existing unit heaters inside the Fab Shop will also be removed.

A heat detection system will be installed and a large revolving annunciator light will be installed outside the "Fab Shop" (new low-level radioactive storage facility) for early detection of any fire. A sign will be posted to contact the Control Room when annunciator light is activated.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-117, REV. 0: **REACTOR RECIRCULATION PUMP PRESSURE REDUCING CELL MATERIAL SUBSTITUTIONS**

MODIFICATION: **M1-87-116**

Pump manufacturer, Byron-Jackson, no longer furnishes the Pressure Reducing Cell (PRC), a subcomponent assembly of the Reactor Recirculation Pump, to the material standards under which the original PRC in the plant was furnished. During the process of ordering spares, the manufacturer has advised NYPA that the material specification for the PRC has been revised from ASTM A-362 Gr. CF8 to one of the following materials: 1) ASTM A-351 Gr. CF8, or 2) A-351 Gr. CF8M, 3) A-182 Gr. F304, 4) A-182 Gr. F316.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-126, REV. 0: **REINFORCE BASE OF EDG ENGINE CONTROL PANELS**

MODIFICATION: **F1-87-113**

The modification will add a full bearing baseplate under each of the four EDG Engine Control Panels. The control panels are currently mounted off-set on steel frame support foundations in such a way that the rear portion of the control panels overhang the foundation. The new baseplate will be positioned directly beneath the control panel and will be welded to the existing foundation plate. The control panel will then be bolted through the new baseplate and existing foundation plate.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-128, REV. 0: **HYDROGEN AND OXYGEN INJECTION SYSTEM PRE-OPERATIONAL TEST PROCEDURE**

MODIFICATION: **F1-85-102**

This safety evaluation addresses the execution of the pre-operational tests of the Verification Subsystem which includes the Crack Arrest Verification (CAV) System supplied by General Electric and the Portable Sample Panel provided by J. M. Chemical Feed and Control System. The scope of the preoperational tests consists of testing the valves, instruments and controls and equipment components as covered in No. POT-89B. The equipment which is to be tested is a subset of the Hydrogen Addition System (HAS).

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-134, REV. 0: **LIFTING OF THE REACTOR WATER CLEAN-UP FILTER/DEMINERALIZER DOME, TUBE SHEET**

MODIFICATION: **N/A**

The lifts will be performed using the 20 ton auxiliary hook on the Reactor Building Crane.

The "unused" Failed-Fuel Rack is currently stored on its side approximately 10'-0" east of the spent fuel pool. This aluminum assembly will be lifted using a sling at each end. The rack will be lifted in its present orientation, only sufficient height (approximately 6") to clear the floor, and will be carried southward toward the southeast equipment hatch area for laydown.

The concrete floor plug (wt. 12,700#) that provides crane access to the RWCU Filter/Demineralizer will be removed in accordance with the requirements of Maintenance Procedure MP-17.2. This lift has been previously analyzed and addressed in Tera Report #1 (Evaluation of Heavy Load Handling Operations at the JAF Plant - Interim Actions and Guidelines).

The RWCU Filter/Demineralizer Dome is the upper portion of the RWCU Filter/Demineralizer assembly. This Dome will be unbolted from the main assembly, several flanged pipes will be disconnected, and the item will be lifted directly upward through the service hatch opening using existing lifting lugs that are on the item. Once the Dome is just above the 369' floor elevation, it will be carried eastward approximately 10'-0" to increase the distance with the spent fuel storage pool and temporarily laid down. The RWCU Filter/Demineralizer Tube sheet, now accessible, will be lifted using existing lifting lugs on the item in the same manner as the Dome, using the same load path.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-138, REV. 0:	**UPGRADE OF RHR HEAT EXCHANGER OUTLET/INLET TEMPERATURE INSTRUEMTNAITON (10TE-94B) PREOPERATIONAL TEST**
MODIFICATION:	**F1-82-021**

This safety evaluation reviews the safety impact of implementing pre-operational test procedure POT-10H. This preopertional test procedure encompasses a thorough check to verify the integrity of the RHR heat exchanger outlet temperature transmitter, thermocouple, signal converter, and wiring associated with the "B" RHR Heat Exchanger outlet thermocouple (10TE-94B). The thermocouples, temperature transmitters, and signal converters have been added in accordance with US Regulatory Guide 1.97, Rev. 2 requirements and Plant Modification F1-82-021-F2 and Installation Procedure IP-5.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-146, REV. 1: **CONTROL ROOM AND RELAY ROOM DOOR LATCH MECHANISM**

MODIFICATION: **M1-84-101**

Due to frequent failures of the door latching mechanism and the constant maintenance required, it is necessary to perform this modification. Often, the unlatch handle is used to push the subject doors open. The large force placed on these handles has caused premature failure of the latching mechanism. The new push bars will protect the handles and the existing pushbutton switches will unlatch the doors.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-148, REV. 1: **EVALUATION OF THE RADWASTE BUILDING FLOOR, EL. 272'-0", DUE TO THE ADDITION OF A SOLID WASTE COMPACTOR**

MODIFICATION: **F1-87-090**

This safety evaluation addresses the structural adequacy of a floor slab and beam at elevation 272'-0" of the Radwaste Building, subject to the effects of the installation of a 30,000 pound solid waste compactor.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-151, REV. 0: **REMOVAL OF HIGH VIBRATION TRIP FROM FEEDWATER PUMP TURBINE (34P-1A)**

MODIFICATION: **N/A**

The Feedwater Pump Turbine (34P-1A) is equipped with vibration monitors on the inboard and outboard bearings with an alarm setpoint of 3 mils and a trip setpoint of 5 mils. The jumper being evaluated deletes the high reactor feed pump turbine vibration trip function and resets the alarm to 5 mils.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-154, REV. 0: **EVALUATION OF POWER OPERATION WITH CRD 22-39 FULLY INSERTED AND ELECTRICALLY DISARMED**

MODIFICATION: **N/A**

The purpose of this safety evaluation is to provide documentation of the reasons that plant operation with control rod drive 22-39 uncoupled from its control rod blade is permissible, provided that the drive is fully inserted and electrically disarmed.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-156, REV. 0: **STANDBY GAS TREATMENT SYSTEM (SBGTS) CENTRIFUGAL EXHAUST FAN (01-125FN-1A/B) BEARING REPLACEMENT**

MODIFICATION: **M1-87-158**

The Standby Gas Treatment System (SBGTS) centrifugal exhaust fans (01-125FN-1A/B) were originally supplied with Link-Belt LP/LPE-331 split ball bearing pillow blocks which are no longer available. The LP-331 bearing is fixed whereas the LPE-331 bearing is floating. Buffalo Forge Co. originally recommended SKF roller bearing series 22500 as a suitable replacement. However, these proposed bearings are not the same dimension as the original bearings and would require a 3/4" space to make up for the center height difference on each bearing. In addition, the bearing mounting bolts would also require modification.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-163, REV. 0: **TESTABLE CHECK VALVE 13AOV-22 TEMPORARY REPAIR**

MODIFICATION: **N/A**

Reactor Core Isolation Cooling (RCIC) testable check valve, 13AOV-22, will be temporarily repaired. This repair will consist of drilling 3/16" diameter holes, no more than four and no less than 90° apart, installing fittings and injecting a leak repair sealant. The holes will be drilled in the body neck of the check valve just below the pressure seal.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-87-164, REV. 3: **REACTOR VESSEL WATER LEVEL INSTRUMENTATION**

MODIFICATION: **F1-87-014**

The purpose of this change is to modify the existing reference leg sensing lines for the wide range and fuel zone instruments to reduce level indication errors caused by potential high drywell temperatures under accident conditions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-002, REV. 1: **FIRE PROTECTION AND RESIDUAL HEAT REMOVAL SERVICE WATER REMOVABLE CROSS-CONNECTION**

MODIFICATION: **F1-86-094**

The subject modification provides an alternate method for injecting water into the reactor pressure vessel (RPV) or primary containment for containment cooling by utilizing a Fire Protection (FP) system fire pump as the motive force. This will be accomplished with a removable cross-connection between the FP system and the Residual Heat Removal Service Water (RHRSW) system. The removable cross-connection consists of a 4" high volume fire hose dedicated for this application only, utilizing sexless, quick-connect fittings. This hose will be stored in a lockable storage cabinet nearby. The cabinet shall also contain tools and equipment necessary to secure the cross-connection. Butterfly valves will be utilized as isolation valves for each system. In addition, quickconnect blind caps will be installed after each isolation valve. Connections will be made with weldolets mounted on top of the FP header and the RHRSW discharge line. This will prevent sediment buildup during normal plant operation and facilitate welding during installation in the event water is present in the line. Piping connections shall be performed in accordance with ANSI B31.1 1967. Isolation valves shall normally be locked in the closed position with blind caps thus maintaining each individual system inteqrity.

The use of this system would allow a diesel fire pump to provide approximately 1000 gallons per minute (GPM) of low pressure cooling water to the reactor via the RHRSW unlimited make-up cross-connection to RHR in the event of a sustained loss of all AC power (Station Blackout). This configuration will also allow a diesel or electric fire pump to be used for other events that disable RHRSW. A pre-operational test will be conducted to demonstrate the ability of the diesel driven pump (76P-1) to provide water to the RHRSW simulating injection into the vessel.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-013, REV. 0: **RCIC MAGNETIC SPEED PICKUP COVER**

MODIFICATION: **M1-88-005**

This modification consisted of installing a protective cover over the RCIC Magnetic Speed Pickup to protect the instrument from breakage due to site personnel stepping on the instrument. Cover to be fabricated from one-quarter inch thick aluminum sheet. Total weight of the cover to be less than fifteen pounds. Cover to be bolted onto the bearing pedestal, to a reinforcing plate on the back of the governor control box and to the top of the turbine casing eye bolt. All support bracket bolting to have flat washers and lock nuts except the bolting to the turbine eye bolt which will be maintained by the existing eye bolt and nut.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-015, REV. 0: **RWC RECIRCULATION PUMP 12P-1A REPLACEMENT PREOPERATIONAL TEST**

MODIFICATION: **F1-86-001**

The purpose of this test is to:

- adjust the RBC pressure drop across RWC Pump I2P-IA to assure adequate cooling,
- test the pump trip logic on high pump motor stator temperature,
- verify correct pump rotation direction,
- check pump performance characteristics, and
- instrument the pump for long-term monitoring of key pump parameters.

Since this pump is subject to pump motor failures, additional precautions are being taken to assure that motor failure does not occur. The pump motor will not be run at a temperature higher than that witnessed during the initial vendor performance test, without consulting the vendor first.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-020, REV. 0: **RWM EPIC SIGNAL INSTALLATION PREOPERATIONAL TEST**

MODIFICATION: **F1-82-022**

This pre-operational teat procedure, POT-03F, encompasses a thorough functional test of the Rod Worth Minimizer (RWM) program on the EPIC system. Thc performance of this teat follows the final termination of the RWM digital outputs. These digital outputs will be installed in accordance with Plant Modification F1-82-022. The fulfillment of the requirements of this test will prove the operability of the EPIC RWM software and digital outputs.

The Preoperational Test includes:

a. Signal verification of the newly installed RWM digital outputs.
b. The logic functions according to the RWM Elementary 791E451.
c. Verification that RWM operation is satisfactory:
    1. between 100% and 50Z rod density
    2. between 50% rod density and the Low Power Set Point
    3. between the LPSP and the Low Power Alarm Point
    4. and, above the LPAP.
d. Verification that all indications are correct for given conditions.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-023, REV. 1: **PRIMARY CONTAINMENT ISOLATION VALVE POSITION FOR R.G. 1.97, REV. 2**

MODIFICATION: **F1-87-045**

Regulatory Guide 1.97, Revision 2, Table 2, identified Primary Containment Isolation Valve Position Indication as a Type. B, Category 1 variable. Paragraph 1.5.f states "To the extent practicable, monitoring instrumentation inputs should be from sensors that directly measure the desired variables. An indirect measurement should be made only when it can be shown by analysis to provide unambiguous information." This modification revises the circuitry and installs the required hardware necessary to bring the plant into compliance with Reg. Guide 1.97.

Also included with this modification is the replacement of two existing air operated valves (02-2AOV-39 and 40) in the recirculation Sample Lines. These valves have exhibited an increasing need for maintenance due to wear and aging. Replacement valves will be solenoid operated valves (02-280V-39 and 40) equipped with position switches for positive valve position indication.

Also performed as part of this modification was the deletion of the old Beckman Analyzers and their associated valves and tubing. Among the valves to be deleted are four containment isolation valves (27SOV-121A, B and 27SOV-124A, B. As part of the sample line reconfiguration, the sample returns from SSC-SS1 and SSC-LSC will now tie in upstream of 27SOV-124E1 and 27SOV-124E2. These valves will be resized to 1" valves and are relocated to allow for proper system drainage. The sample supply line to SSC-SS1 and SSC-LSC will also be reconfigured by adding a new solenoid valve (27SOV-137) which allows for the elimination of six existing containment isolation valves (27SOV-119A, B, 27SOV-120A, B and 27SOV-122A, B). The removal of some of the sample lines will require the capping of some sample lines.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-031, REV. 0: **SEWAGE TREATMENT PLANT PREOPERATIONAL TEST**

MODIFICATION: **F1-85-091**

The purpose of this test is to verify conformance of the sewage treatment plant with the requirements of the discharge permit issued by the New York State Department of Environmental Conservation.

The sewage treatment plant process is primarily biological. Proper treatment will not be achieved until the organisms in the activated sludge process are established. Certain analyses will be performed as a part of this test procedure to verify that a healthy microbial population is present.

The test should be conducted after both the east and west pumping stations are operational and the scheduled sewer connections to existing buildings have been completed.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-043, REV. 0: **ALLIS-CHALMERS MANUALLY-OPERATED BUTTERFLY VALVE REPLACEMENTS (APO-29) FOR JAF MARK NO. VVI-15B**

MODIFICATION: **M1-87-065**

JAFNPP Modification F1-85-097, "Resolve All Operational Problems With TBC, SW Systems" replaced twenty (20) worn-out, discontinued Allis-Chalmers Streamseal Butterfly valves with Jamesbury Wafer-Sphere Butterfly valves. Unfortunately, other valves are also deteriorating and are in need of replacement. Jamesbury butterfly valves have been chosen on the basis of good operational experience within the NYPA organization.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-065, REV. 0: **CONTROL ROD DRIVE (CRD) RETURN NOZZLE (N-9) CAP REPLACEMENT**

MODIFICATION: **F1-86-097**

This safety evaluation addresses the replacement of the existing Control Rod Drive (CRD) Return Nozzle Cap with a configuration more resistant to Intergranular Stress Corrosion Cracking (IGSCC). This replacement consists of removing the existing Inconel 600 cap, the Inconel 182 cap-to-nozzle weld, the Inconel 182 nozzle butter and a portion of the nozzle ID cladding followed by the installation of a SA508 C1. 2 carbon steel cap using compatible filler materials and post-weld heat treatment.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-069, REV. 0: **CONTROL SWITCH REPLACEMENT FOR MAKEUP WATER TREATMENT SYSTEM AIR OPERATED VALVES 42AOV-111A&B**

MODIFICATION: **M1-87-082**

The purpose of this modification is to replace the existing control switch for air-operated valves 42AOV-111A and B with a three (3) position cylinder lock selector switch (key lock type switch).

The existing switch lacks the capability of preventing inadvertent discharge from the Makeup Water Treatment System Waste Sump Neutralizing Tanks 9A and 9B. The replacement of the aforementioned switch with a (3) three position cylinder lock selector switch (key lock type switch) would prevent inadvertent discharge from the Waste Sump Neutralizing Tanks.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-080, REV. 0: **20 CE-610 MATERIAL SUBSTITUTION**

MODIFICATION: **M1-88-090**

The scope of this minor modification to the plant involves the material substitution from bronze and brass to 316 stainless steel for conductivity cell 20CE-610 in line 2"-CS-151-257 at elevation 272'-0", line H, column 25 in the Radwaste Building. This component monitors conductivity levels of the Auxiliary Boiler steam condensate between the waste concentrator, 20EV-648A, and condensate receiver, 87CR-35.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-086, REV. 1: **MAIN GENERATOR EXCITER BRUSH RIGGING SUPPORT**

MODIFICATION: **M1-88-092**

The scope of this modification is the installation of a support between the main generator exciter brush rigging and the turbine deck.

The brush rigging is overhung from the exciter bearing and is subject to vibration. Any vibration of the brush rigging is transferred to the brushes and this has an adverse affect on brush performance. The support is intended to eliminate this vibration.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-093, REV. 1: **HYDROGEN ADDITION SYSTEM PREOPERATIONAL TEST PROCEDURE**

MODIFICATION: **F1-85-102**

This safety evaluation addresses the execution of the preoperational test of the Hydrogen Addition System. The system includes the hydrogen and oxygen supply piping, the storage tanks, the hydrogen and oxygen injection racks and associated controls and instrumentation up to the condensate, feedwater, and offgas injection points. Controls and alarms for the injection system to be tested include both those at the local Hydrogen Addition System (HAS) Control Panel 98HAP-1, and those on the Main Control Board. Additional instrumentation for offgas oxygen monitoring is located in the offgas analyzer cabinet 01-1070GA-HAC in the east electric bay. The scope of the tests consists of testing the valve, instruments and controls, interlocks and equipment components as covered in Preoperational Test Procedure POT-89C.

The test will also verify the flow rates of hydrogen and oxygen required to reach the non-IGSCC region for the primary system piping.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-099, REV. 0:	**PREOPERATIONAL TEST OF SAMPLE PANEL SP-7 REACTOR BUILDING SAMPLE CONDITIONING PANEL**
MODIFICATION:	**F1-85-102**

This preoperational test encompasses the verification of the functionality of the control and support system of the new Reactor Building Sample Conditioning Panel SP-7 installed under Modification F1-85-102F. It involves testing the panel's components individually and integrally while the plant is operating normally.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-100, REV. 0:	**PREOPERATIONAL TEST OF SAMPLE PANEL SP-8 RADWASTE BUILDING SAMPLE CONDITIONING PANEL**
MODIFICATION:	**F1-85-102**

This preoperational test encompasses the verification of the functionality of the control and support system of the new Sample Panel SP-8 installed under Modification FI-95-102F. It involves testing the panel's components individually and integrally, while the plant is operating normally.

This safety evaluation concluded that this activity did not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-107, REV. 0: **RECONFIGURATION OF PERIMETER DETECTION SYSTEM FOR RER INSPECTION**

MODIFICATION: **N/A**

The preoperational test procedure tests the perimeter intrusion detection system, which was installed and/or modified during Plant Modification F1-88-091. This will include verification at the CAS and SAS panel of zone "breaks".

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-109, REV. 0: **UPGRADE OF PTZ CCTV SYSTEM FOR RER INSPECTION AND INSTALLATION OF CAMERAS 11, 12**

MODIFICATION: **F1-88-102**

This safety evaluation reviews the functional testing and verification of the operability and coverage of all cameras, lenses, pan and tilt units, monitors and control system from both the CAS and the SAS.

The test is being performed to verify the operability of the new CCTV equipment which was installed under Modification F1-88-102.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-115, REV. 0: **LONG LENGTH CONTROL ROD HANGER IN SPENT FUEL POOL**

MODIFICATION: **N/A**

The Control Rod Hanger Assembly is a two-part aluminum servicing tool that will be used for the transfer and storage of irradiated control rods in the Spent Fuel Pool. The assembly consists of a curb bracket that is clamped to the curb along the top of the Spent Fuel Pool wall and a hanger which is used for the transfer and storage of the control rod from the Control Rod Storage Rack on the floor of the Spent Fuel Pool to the location on the wall of the Spent Fuel Pool. Additional control rods will be removed from the reactor vessel during the 1988 refueling outage and will be stored utilizing the hanger assemblies. The hanger assemblies will provide a normal water cover of approximately 24'-0" over the control rod.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-136, REV. 0: **REPLACEMENT OF AIR SUPPLY COMPRESSOR/MOTOR (COMP. NO. 8-58-AC) ON REFUELING BRIDGE**

MODIFICATION: **M1-88-150**

This modification involves replacement of the existing refueling bridge air compressor/motor with a new unit of greater air flow. The existing refueling bridge air compressor is damaged. A new replacement air compressor/motor is required to improve refueling bridge reliability.

The purpose of this modification and safety/engineering evaluation is to provide a technical review of this change and revise the applicable technical manual to allow use of the new air compressor/motor.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-144, REV. 2: **STANDBY GAS TREATMENT ROOM FLOOR LOADING DUE TO PLACEMENT OF TEMPORARY CHEMICAL DECONTAMINATION EQUIPMENT**

MODIFICATION: **F1-87-166**

The Final Safety Analysis Report for the JAF Nuclear Power Plant, Table 12.4-6 defines Structural Design Stress Levels for Class I and Class II structures at the plant. This table specifies the Working Stress Design method (WSD) of the American Concrete Institute (ACI-318-1963) for the evaluation of stresses in reinforced concrete. This code was the current industry code in effect at the time of JAF design and construction.

This safety evaluation addresses the utilization of the Ultimate Strength Design method (USD) of the ACI-349-1985 code in lieu of the Working Stress Design method (WSD) of ACI-318-1963 as specified in the FSAR, which is a deviation to Table 12.4-6 of the Final Safety Analysis Report.

This utilization of the USD methodology of ACI-349-1985 will enable the proper evaluation of the SBGT building floor loading due to the placement of temporary chemical decontamination equipment.

ACI-349-1985 is the current accepted design and installation code applicable to nuclear safety-related concrete structures.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-148, REV. 0: **REMOVAL OF TEMPERATURE INTERLOCKS 87-TIS-127 & 128**

MODIFICATION: **F1-82-077**

This modification consists of the removal of two temperature indicating switches, 87TIS-127 and 128, and their associated relays and wiring from the plant auxiliary boiler system plus the installation of wiring to permanently jumper the functions of the two switches.

The purpose of temperature switch 87TIS-127 was to switch from operation with winter circulation pumps 87P-23A and 23B to summer circulation pump 87P-40 whenever outside temperature was above 55°F. The purpose of temperature switch 87TIS-128 was to switch from operation with winter glycol-water circulation pumps 87P-25A and 25B to summer circulation pump 87P-33 when outside temperature was above 55°F.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-149, REV. 0: **ISOLATION VALVES LOGIC CHANGE 20AOV-83, 95**

MODIFICATION: **F1-81-002**

The purpose of this modification is to change logic for drywell equipment and floor drain isolation valves (20-AOV-83, 20-AOV-95) such that when containment isolation logic is reset, valves will not automatically re-open. Modification will require deliberate operator action to open valves after isolation signal is cleared.. Switches must be taken to close, isolation reset, then valve may be opened.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-150, REV. 0: **RADWASTE SYSTEM OUTBOARD ISOLATION VALVE ISOLATION LOGIC PRE-OPERATIONAL TEST**

MODIFICATION: **F1-81-002**

The purpose of this preoperational test procedure is to demonstrate proper operation of the Radwaste primary containment isolation logic following modification F1-81-002.

The revised logic interlocks will be tested to demonstrate proper operation following modification to prove that 20AOV-95 will not open with control switch in the OPEN position when isolation logic is reset and 20AOV-83 isolation logic is reset.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-165, REV. 0: **INSTALLATION OF BRANCH CONNECTIONS TO THE RPV JET PUMP INSTRUMENTATION DRAIN LINES**

MODIFICATION: **F1-88-181**

This safety evaluation addresses the addition of a branch connection and isolation valve to each of the 3/4 inch diameter RPV jet pump instrumentation nozzle drain lines located in the Drywell (Line Numbers 3/4"-I-1504-103 and 3/4"-I-1504-104).

The purpose of the addition of the branch connections to the jet pump instrumentation drain lines is to accommodate the future installation of a flow path into or from the subject nozzle assembly. This flowpath is required to reduce the possibility of IGSCC in these nozzles by eliminating the current stagnation conditions within the nozzles by providing the benefits of hydrogen water chemistry to this area.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-167, REV. 0: **INSTALLATION OF MAINTENANCE VALVE TO SERVICE WATER SYSTEM (SWS-112)**

MODIFICATION: **F1-87-039**

The subject modification will install a 6 inch butterfly isolation valve in the service water supply header to the Makeup Water Treatment System.

The purpose of the addition of this valve is to permit isolation of one line in the Service Water System during operation. Without this valve, the entire Service Water System must be removed from service to isolate and drain this line.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-168, REV. 0: **RHR B AND D SERVICE WATER PUMP MOTORS LOWER SURGE RING BRACKET REDESIGN (P-1A, MOTORS B AND D)**

MODIFICATION: **M1-88-183**

This modification installs redesigned brackets on the lower surge rings of the motors. These surge rings support the end windings. Cracks have been found on the brackets in similar machines and the new design reduces the potential for cracking by using a larger radius on the bracket. The work is to be done per GE Field Disposition Instruction 137-88595, GE Dwg. #112D4383ADG001.

The motor manufacturer, General Electric, has recommended replacement of the lower surge ring brackets. The new brackets will reduce the potential for cracking found in other motors of similar design by having a larger bend radius than the existing brackets have.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-174, REV. 0:	**PREOPERATIONAL TEST FOR TERMINATION OF RPIS DIGITAL OUTPUTS ONTO EPIC SYSTEM POT-03G**
MODIFICATION:	**F1-82-022**

The purpose of this preoperational test is to verify the correct operation of the RPIS digital outputs, as controlled by the EPIC Rod Monitoring Program, following their installation per Plant Modification F1-82-022.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-180, REV. 1: **TRANSFORMER T2, T3, AND T4 4.16KV BUS BAR AND BUS BAR INSULATION REPLACEMENT**

MODIFICATION: **M1-88-193**

Minor Modification M1-88-193 was initiated for the replacement of 4.16KV bus bar insulation connecting station transformers T2, T3, and T4 with switchgear 10100, 10200, 10300, 10400, and 10700. The Noryl sheathing insulation on the T4 bus bars outside the plant will be replaced with Bayblend sheathing. The Noryl sheathing insulation on the T2 and T3 bus bars and T4 bus bars inside the plant will be replaced with 3M-BBPS Heat Shrinkable sleeves. In addition, the T4 bus bar supports within the non-segregated bus ducts outside the plant will be upgraded with the addition of porcelain insulators between each bar and each support plate. Also, the corresponding aluminum T4 bus bars will be replaced with copper bus bars.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-194, REV. 0: **TEMPORARY INSTALLATION OF A PORTABLE DEMINERALIZER UNIT IN THE TURBINE BUILDING CLOSED LOOP COOLING (TBC) SYSTEM**

MODIFICATION: **N/A**

The purpose of this temporary modification is to temporarily install a portable demineralizer (ion exchanger) in the TBC system to reduce the TBC water conductivity below 1.0 micromho, at which time the demineralizer will be removed. The demineralizer unit will be installed between TBC heat exchanger (37E-3A) vent 37TBC-406 and TBC pump (37P-2A) suction tap 37TBC-605A.

The new portable demineralizer will be used in place of a rental demineralizing system previously used. The new demineralizer is on wheels and can easily be moved to a resin disposal area. The demineralizer vessel has a valve at the bottom to remove spent resin and a flange connection on top to install new resin. This new design should facilitate the task of maintaining TBC water conductivity at an acceptable level.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-197, REV. 0: **VIKING PRESSURE SWITCH SUBSTITUTION IN FIRE PROTECTION SYSTEM APPLICATIONS (SYS. 76)**

MODIFICATION: **M1-88-197**

The purpose of this modification is to replace Viking pressure switch model A-1, part 03922A with Barksdale E1H-B15-P6-U Econ-O-Trol pressure switch. Barksdale Controls manufacturers Viking's pressure switches and both units have identical operating characteristics. The difference between the units is the pressure connection material. The Viking unit utilizes polysulfone material whereas the Barksdale units is supplied with a die-cast aluminum base. Both units are listed in the U.L. Directory for fire protection equipment. Only the Viking unit is Factory Mutual (FM) approved.

Barksdale E1H-B15-P6-U Econ-O-Trol pressure switches will be placed into stock and installed on an as-needed basis.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-199, REV. 0: **UPGRADE OF RHR HEAT EXCHANGER OUTLET/INLET TEMPERATURE INSTRUMENTATION (10TE-94B) PREOPERATIONAL TEST**

MODIFICATION: **M1-88-195**

This safety evaluation reviews the safety impact of implementing preoperational test procedure POT-10K. This preoperational test procedure encompasses a thorough verification of the integrity of the RHR Heat Exchanger outlet temperature transmitter, thermocouple, signal converter, and wiring associated with the "B" RHR Heat Exchanger outlet thermocouple (10TE-94B) that was relocated per minor modification M1-88-195.

The purpose of this preoperational test procedure is to verify the operability of the "B" RHR Heat Exchanger outlet temperature thermocouple (10TE-94B) through a comparison of a known ambient and ice bath temperature with the EPIC computer output reading of 10TE-94B.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-204, REV. 2: **REPLACEMENT OF DAMPER ACTUATOR DA-3200 IN SYSTEMS 72 AND 92**

MODIFICATION: **M1-88-070**

Damper actuator, Johnson Model DA-3200, is obsolete and spare parts and spare actuators of this model can no longer be procured. The damper actuator is an electro-hydraulic device, which operates on 120VAC, and which modulates damper position in response to a 0-16 Volt control signal.

The manufacturer, Johnson controls, Inc., has recommended currently available actuator, Series M130, as a suitable replacement. This actuator is a 24 VAC device which is powered from 120 VAC through a 120/24V transformer, and which can accept either a 4-20 mAmp or a 0-24V max. control signal. The actuator has provisions for both zero and span adjustments for input signal. The actuator can, therefore, be adjusted to a 0-16 volt input signal and serve as a direct replacement in all locations where a model DA-3200 actuator is installed.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-88-206, REV. 1: **REPLACEMENT 3/4 INCH Y-GLOBE VALVES (JAF MARK NO. VOS-150F) FOR 29MST-703A, B, C, D**

MODIFICATION: **M1-88-229**

This modification recommends replacing four original plant 3/4" Y-globe valves utilized for MSIV stem leakoff isolation valves (S&W Mark No. VOS-150F) manufactured by Rockwell International, procured by S&W Specification APO-157, with Conval 3/4" 12G2PJ-105 Clampseal Y-globe valves, procured per S&W Specification APO-15.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-005, REV. 0: **ADDITION OF A REDUNDANT AIR SUPPLY (AIR BOTTLES) TO THE REACTOR BUILDING TRACK BAY DOOR SEALS**

MODIFICATION: **N/A**

The purpose of this temporary modification is to add either an adhesive backed tape to seal the area between the Reactor Building (RB) Track Bay Doors and the door frame, or a redundant air supply to the Reactor Building Track Bay Door (24EOD-IA, IB, 2A, and 2B) seals. The addition of an adhesive tape or air supply will help to satisfy the "no single failure" criteria for the RB Track Bay Doors established in the FSAR Safety Design Bases for Secondary Containment. The redundant air supply consists of a 2000 psi air cylinder with a pressure regulator. The air cylinder will be connected to the service air line to the door seals downstream of the pressure switch (see Figure 1).

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-007, REV. 0: **MODIFICATION AND ADDITION OF VARIOUS TUBING SUPPORTS**

MODIFICATION: **F1-89-021**

During routine maintenance, surveillance, and inspections, various safety-related and non-safety related tubing supports are occasionally found damaged or tubing is found inadequately supported. These problems may arise in part, due to inadequate original support design, inadequate support spacing, or due to input from attached vibrating equipment or piping. The repair or addition of tubing supports will assure the integrity of the tubing is maintained and system operability is maintained.

The scope of this modification is limited, to the modification and addition of supports on existing tubing and the investigation into the root-cause of the problem, when applicable. New tubing and supports will not be installed under this plant modification.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-013, REV. 1: **CONTROL ROOM CHILLER EQUIPMENT ENHANCEMENT (70RWC-2A AND 2B)**

MODIFICATION: **M1-89-031**

This safety evaluation addresses the following enhancements to the Control Room Ventilation System Chillers (70RWC-2A and 2B):

1. The replacement of the inlet/discharge channel of the "A" and "B" condensers.

2. The addition of two 50-ton suction filters and manual isolation ball valves on the refrigeration side for each compressor of chiller 70RWC-2B.

3. The modification of pipe support BFSK-915 to facilitate the retubing of the condenser of 70RWC-2B.

4. The substitution of existing panel instrumentation control switches for chillers 70RWC-2A and 28.

5. Evaluation of vendor supplied material upgrades for chiller condenser subcomponent parts.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-039, REV. 0: **REPLACEMENT OF DRYWELL COOLER FAN MOTORS (68FN-2A THRU 2D, 4A THRU 4D)**

MODIFICATION: **M1-86-011**

Modification M1-86-011 involves the replacement of the existing drywell cooler fan motors 68FN-2A thru 2D and 68FN-4A thru 4D. The original motors are 40 HP, totally enclosed air over (TEAO). The replacement motors are 50 HP TEAO. The fan wheel and housing shall remain unchanged.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-046, REV. 1: **CONSTRUCT NEW WAREHOUSE FACILITIES**

MODIFICATION: **F1-88-191**

CONTAINS SAFEGUARDS INFORMATION

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JAF-SE-89-053, REV. 1: **EVALUATION OF THE USE OF HILTI KWIK BOLT II**

MODIFICATION: **N/A**

The purpose of this evaluation is to evaluate the acceptability of the new Hilti Kwik Bolt II for use in future installations in the plant. The standard Hilti Kwik Bolt currently used is being discontinued by the manufacturer and replaced by the Hilti Kwik Bolt II.

The use of the Hilti Kwik Bolt II in the design of future installations and procedures is acceptable.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-056, REV. 1: **REMOVAL OF RESIDUAL HEAT REMOVAL - FUEL POOL COOLING CROSS-TIE ISOLATION SPECTACLE FLANGE INSERTS**

MODIFICATION: **M1-89-103**

This safety evaluation assesses the effects on plant safety of permanent removal of the Residual Heat Removal (RHR) Assist - Fuel Pool Cooling (FPC) and Cleanup cross-tie isolation spectacle flange inserts.

The normally locked shut manually operated globe valves (19FPC-31, 19FPC-34, 10RHR-09, 10MOV-20) in the RHR-FPC interconnecting piping provide sufficient prevention of inadvertent cross connection of the fuel pool cooling and residual heat removal systems. Therefore, the added protection of spectacle flanges is not necessary and should be permanently removed.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-058, REV. 0: **INSTALLATION OF PRESSURE SNUBBERS FOR 33DPS-101A,B,C,D,E,F,G,H, 33DPI-101A,B,C,D,E,F,G,H, AND 46FIS-102A,B,C,D**

MODIFICATION: **M1-87-151**

The purpose of this evaluation is to review and approve the use of pressure snubbers to reduce system pressure pulsations causing erroneous alarm indications for the following components:

33DPI-101A,B,C,D,E,F,G,H
33DPS-101A,B,C,D,E,F,G,H
46FIS-102A,B,C,D

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-059, REV. 1: **REMOVAL OF TIME DELAY RELAYS IN HPCI & RCIC SYSTEM STEAM LINE LEAK DETECTION & ISOLATION LOGIC (13TDS-103A,B AND 13TDS-104A,B) AND REARRANGEMENT OF AREA HIGH TEMPERATURE INDICATION LIGHTS ON THE 09-21 PANEL**

MODIFICATION: **F1-89-094**

This modification will accomplish the following two objectives in the 09-21 panel.

A. HPCI/RCIC Timer Removal

Modification F1-89-094 will make permanent JAF temporary Modification No. 89-049. The existing time delay relays (13TDS-103A,B and 13TDS-104A,B) from the HPCI and RCIC steam leak detection and isolation circuitry which were previously jumpered out of service on 5/18/89 will be removed from the 09-21 panel. Modification work will consist of physically removing components 13TDS-103A,B and 13TDS-104A,B and associated wiring from the 09-21 panel and making the necessary wiring changes to enable the circuitry to initiate isolation under this new configuration.

B. Area High Temperature Red Indication Lights

The Area High Temperature (AHT) red indication lights on panel 09-21 will be rearranged into a logical system/channel configuration. The rearrangement of the indication lights will be accomplished by internal wiring changes only, the ET-16 lights will remain in place. New nameplates will be installed which group the AHT lights by system. When the rearrangement is complete, the Division I section of AHT lights will be demarcated with red and the Division II AHT lights with blue plastic strips. This will result in a human factors improvement identified as part of the Control Room Design Review (CRDR) effort.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-061, REV. 0: **AIR COMPRESSOR LOAD MONITORING**

MODIFICATION: **N/A**

The purpose of this evaluation is to demonstrate the acceptability of the Temporary Operating Procedure TOP-103 in developing a profile of the plant's air system through the temporary installation of an electrical recorder and its accessories. This NSE also evaluates the impact on the plant and applicable safety issues.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-063, REV. 0: **REPLACEMENT OF EXTRACTION STEAM PIPING AT FEEDWATER HEATERS 2A & 2B**

MODIFICATION: **F1-88-075**

The purpose of this modification is to replace and modify the extraction steam piping at the inlet to Feedwater Heaters 33E-2A and 33E-2B. The present piping arrangement creates turbulent flow patterns which has caused a 40% reduction in the nominal wall thickness due to erosion.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-079, REV. 0: **ADDITION OF RHR PUMP TEST PRESSURE GAGES**

MODIFICATION: **M1-88-093**

The purpose of this modification is to improve the accuracy of suction and discharge pressure measurement during the RHR Pump Flow Rate and Inservice Test (ST-2A). High accuracy, narrow range pressure gauges will be added at the suction and discharge of each RHR pump. The test gauges on the discharge sides will replace existing pressure indicators 10PI-107A1, B1, C1, D1 which measure pressure downstream of flow restricting orifices 10RO-107A, B, C, D. This measurement is not a requirement for any test or Technical Specification deletion of the instruments will not affect any safety considerations associated with the Residual Heat Removal System.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-104, REV. 0: **TEMPORARY FILTRATION EQUIPMENT FOR FLOOR DRAIN SAMPLE TANKS 20TK-33A AND 20TK-33B**

MODIFICATION: **N/A**

The purpose of this safety evaluation is to address the addition of a temporary hose and filter component for reducing the level of suspended solids from the floor drain sample tanks prior to discharge in accordance with proposed plant Jumper 89-068.

The Floor Drain Sample Tanks 20TK-33A and 20TK-33B collect liquid radwaste for sampling, filtering, and eventually discharge, reuse or further processing. The reinforced rubber hoses will be connected to the existing branch line and temporary filter using screw-type hose clamps. The hose will open end into the respective tank and will maintain a flow of approximately 5 gpm. The operation of these plant jumpers will be performed on one tank at a time.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-106, REV. 0: **STANDBY LIQUID CONTROL TANK LEVEL ALARM SETPOINT CHANGE (11LT-45, 11LS-70)**

MODIFICATION: **M1-89-122**

Because the high/low level alarm band on the Standby Liquid Control tank is so narrow (5 in. H_2O or 4.12 volume), it is difficult to maintain level between the alarm settings. To increase the band to 22 in. H_2O (18.1% volume), the high level alarm setpoint will be increased to 117.0 in. H_2O (96.3% volume) and the low level alarm setpoint will be decreased to 95.0 in. H_2O (78.1% volume). The high level alarm setpoint will maintain a safe margin between alarm high level and tank overflow; the low level alarm setpoint will maintain a safe margin between low level and the minimum required volume (as defined in Technical Specifications 3.4, 4.4. and FSAR 3.9).

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-111, REV. 1: **NITROGEN SUPPLY TO THE RBCLCW CONTAINMENT ISOLATION VALVES**

MODIFICATION: **F1-89-129**

The purpose of this modification is to ensure the long term operability of the air-operated Reactor Building Closed Loop Cooling Water System (RBCLCWS) containment isolation valves. These valves are provided with safety-related accumulators and check valves to maintain a pneumatic supply to the valves upon a loss of the non-safety related instrument air system. These containment isolation valves are required to remain closed for a minimum of 30 days to meet long term operation requirements. Accordingly, a new more reliable source of pneumatic supply is being provided to supply constant make-up to the valve actuators. The modification consists of installing a safety-related (QA Category I, Seismic Class 1) pneumatic supply line from the nitrogen (CAD) supply system to the RBCLCW containment isolation valve accumulators.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-89-116, REV. 1: **VELAN SPARE PARTS MATERIAL SUBSTITUTIONS**

MODIFICATION: **M1-88-247**

This modification allows for the use of various Velan valve spare parts which are now supplied in materials not originally specified. The new parts are manufacturer's standard replacements for the original parts. Technical reviews have been performed comparing the new materials to the existing materials to assure acceptability of the various materials for plant applications. The vendor has certified that these new materials do not affect the spare parts' form, fit, or function.

This modification does not constitute an unreviewed safety question as defined in 10CFR50.59.

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JAF-SE-89-156, REV. 2: **CRESCENT AREA UNIT COOLER IMPROVEMENTS**

MODIFICATION: **F1-89-049**

This evaluation is being performed to demonstrate that the proposed changes to the Crescent Area Unit Coolers (66UC-22A through 22K) described by this modification do not affect overall plant safety.

The purpose of this modification is to reduce the accumulation of silt and to improve the accuracy of heat transfer performance monitoring of the Crescent Area Unit Coolers.

The scope of this modification includes changing the operation of 8 of the 10 Crescent Area Unit Coolers (66UC-22A through 22K excluding E and F) by placing their fans in a standby mode, removing their Temperature Control Valves (TCV) and allowing the design basis flow rate of 24 gpm to flow through these coolers at all times. Temperature switches which will be installed will start eight of the ten fans whenever a high temperature is reached in the Crescent Areas such as during a design basis LOCA or steam line rupture. Highly accurate flow meters will be installed at the removed TCV locations to measure cooling water flow rate for the purpose of performance monitoring.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-90-027, REV. 4:	**VIBRATION MONITORING SYSTEM FOR RECIRCULATION PUMPS & MOTORS (VMSRPM) PHASE III**
MODIFICATION:	**F1-88-028**

Revision 4 of this Safety Evaluation addresses the entire modification, i.e., Phase I, Phase II and Phase III.

Modification F1-88-028 will replace the existing vibration switches 02-2VBS-1A & 1B with probes. In addition, a remote on-line vibration monitoring system will be installed in cabinet O9VMS-1 in the relay room. This system will continuously monitor the recirculation pump, motor, and sub-components. The new instrumentation will allow more detailed analysis and diagnosis of pump/motor assembly condition and hence provide early warning of component degradation. Continuous vibration monitoring will also provide advance notice for planning pump/motor inspections and maintenance. The new system also does not automatically activate any safety-related component and, as with the existing system, it is up to the Control Room operator to investigate the cause of high vibration and take action if necessary.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-90-032, REV. 1:	**FEEDWATER FLOW TEST USING RADIOACTIVE Na-24 TRACER**
MODIFICATION:	**N/A**

This test involved injecting a known mass flowrate of radioactive Na-24 in a NaNO3 carrier solution into each feedwater (FW) train. The measured dilution yielded the actual flow through each train within a minimum 00.5% accuracy.

This safety evaluation demonstrated that injecting a radioactive tracer into the feedwater stream does not involve an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-90-040, REV. 1: **EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PUMPS CONTROL RELAYS PREOPERATIONAL TEST (93LS-3AX, BX, CX, DX, & 93LS-5AX, BX, CX, DX)**

MODIFICATION: **D1-90-034**

A Pre-operational Test is necessary to verify that control circuitry and logic has not been changed by implementation of modification D1-90-034. Modification D1-90-034 replaces Agastat GP series relays in the Emergency Diesel Generator Fuel Oil Transfer Pumps (FOTP) (93P1- A1, A2, B1, B2, C1, C2, D1, D2) control circuits with Agastat EGP series relays. The original GP relays were Q.A. Category I qualified and have an energized life of 4.5 years. Agastat EGP relays are Q.A. Category I replacements. They are similar in all technical attributes. The components that will be tested by these Pre-operational tests are relays 93LS-3AX, 3BX, 3CX, 3DX and 93LS-5AX, 5BX, 5CX, 5DX.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Attachment 1

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JAF-SE-90-056, REV. 0:	**ADDITION OF TEST CONNECTIONS FOR RAW WATER CHECK VALVES**
MODIFICATION:	**M1-90-077**

Plant Modification M1-90-077 will provide for the installation of test connections for various raw water check valves. This action will allow the verification of check valve operability, the exercising of the check valve, and the flushing of sediment and corrosion products from the check valve internals. There will be no changes to the design function of the raw water piping systems as a result of adding the check valve test connections. This modification does not affect postulated radiological releases, and has no affect on the QA, Fire Protection, Security, or EQ Programs. There is no change to the FSAR nor is the margin of safety reduced.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-90-074, REV. 2: **TEMPORARY CHLORINE WATER TREATMENT SYSTEM FOR THE JAF SERVICE WATER SYSTEMS**

MODIFICATION: **F1-90-038**

The purpose of this modification is to provide a temporary water treatment system to protect the raw water systems from zebra mussel fouling. The four systems to be protected are Normal Service Water, Emergency Service Water, Residual Heat Removal Service Water, and Fire Protection. These systems will be protected by treatment of the water using a 12.5% by weight solution of sodiumhypochlorite.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-90-077, REV. 1:	**PREOPERATIONAL TEST PROCEDURE FOR TEMPORARY CHLORINE WATER TREATMENT SYSTEM FOR THE SERVICE WATER SYSTEMS**
MODIFICATION:	**N/A**

The purpose of Preoperational Test Procedure 42C is to verify the proper operation of the equipment installed under Modification F1-90-038, Temporary Chlorine Water Treatment System for the Service Water Systems.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-004, REV. 0: **GENERIC LIFTING EYE DETAIL**

MODIFICATION: **M1-89-160**

Implementation of this modification will involve a pre-engineered, generic lifting eye plate assembly anchored to concrete structures at approved locations. These lifting eyes will be loaded only during rigging of various Category I, or II/III components, which have been temporarily removed from service.

These rigging structural attachments are designed to meet the requirements of NUREG-0612 for handling of heavy loads (greater than 750 lbs. at JAFNPP), and other applicable rigging standards. Accordingly, conservative safety factors in the design qualification ensure against an uncontrolled drop of the lifted load over any safety-related components within the rigging load path.

The actual rigging activities and selection of rigging components are not within the scope of this modification. This modification shall be implemented in conjunction with the plant Maintenance Procedure (MP 17.2.

This proposed structural modification does not affect the JAF Technical Specifications and does not constitute an unreviewed safety question pursuant to 10CFR50.59

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JAF-SE-91-013, REV. 0: **TEMPORARY SURVEILLANCE TEST TST-08, "10AOV-68A SEATING TEST"**

MODIFICATION: **N/A**

Temporary Surveillance Procedure TST-08 is intended to seat the RHR testable check valve 10AOV-65A. Performance of this test will provide a general indication of the leaktightness of 10AOV-68A. This will be accomplished by creating a differential pressure across the 10AOV-68A valve disk. The differential pressure is created by having reactor operating pressure downstream of the valve and depressurizing the piping immediately upstream of the check valve. This procedure will require the manipulation of the RHR LPCI injection valves and several small diameter test and instrument valves.

The purpose of this safety evaluation is to verify that performance of TST-08 does not involve an unreviewed safety question nor change to the Technical Specifications.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-026, REV. 2: **TEMPORARY INSTALLATION OF STEAM BOILER TO PROVIDE STEAM TO THE NITROGEN VAPORIZER**

MODIFICATION: **N/A**

The purpose of this temporary modification is to provide a temporary boiler to supply steam to the non-safety related nitrogen purge steam vaporizer, while the auxiliary boiler is inoperable. Steam to the nitrogen vaporizer is only required for containment inerting in support of plant startup.

The temporary modification provides a trailer-mounted boiler, associated piping and required electrical supply in the area of the nitrogen storage enclosure. The design and installation complies with relevant codes, standards, criteria and environmental requirements.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-028, REV. 1: **REASONABLE ASSURANCE OF SAFETY: EVALUATION OF THE CIRCULATING WATER SYSTEM REVERSE FLOW GATE BLOCKAGE DUE TO SAND ACCUMULATION**

MODIFICATION: **N/A**

During the 1991 Maintenance Outage, divers inspected the Circulating Water System reverse flow tunnel and gate (36GATE-4) in preparation for a reverse flow test per OP-4, Circulating Water System. The reverse flow tunnel is 11 feet high by 13 feet wide and connects the discharge tunnel to the intake structure. Inspection of the reverse flow tunnel revealed it to be virtually full of sand and silt for approximately two-thirds the length of the tunnel (20 feet) to within 3" from the top of the tunnel. This condition prevents the plant from using the reverse flow tunnel if it were required.

This safety evaluation will show that plant operation with the blocked reverse flow tunnel was acceptable and the deviation from the operating description in Section 12.3.7 of the FSAR has no adverse impact on plant safety. The tunnel was cleaned during the 1992 Refuel Outage.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Attachment 1

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JAF-SE-91-045, REV. 0: **MANUAL ADVANCING OF OFFGAS DRYER TIMER**

MODIFICATION: **M1-91-126**

This operation change for the offgas drying towers from automatic 24 hour cycles to 8 hour manual cycles does involve a change to FSAR Section 11.4.4.1. This section describes the various components which make up the Offgas System, and also includes many component details which are unimportant to the design basis of the system. This change to the FSAR will remove these non-essential details. Examples include:

Chilled water temperature requirements,
Drying tower timer, and
Thermostat setpoints.

This modification does not constitute an unreviewed safety question, require a change to the Technical Specifications, or reduce the margin of safety as described in the basis for the Technical Specifications. This modification is acceptable for installation at JAF.

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JAF-SE-91-046, REV. 0: **SUPPORT AND ADMINISTRATION FACILITY SECURITY MODIFICATION**

MODIFICATION: **F1-90-013**

Existing Control Room cabinets were not adequately anchored to the concrete floor, possibly due to lack of proper details on the drawings. This was discovered when anchorage for cabinet 25-9 was being investigated for replacement of a recorder in the cabinet.

This modification provides additional welding to restore the cabinets to meet the original design basis requirements.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-048, REV. 0: **CORE SPRAY AND RHR PUMP AGASTAT SERIES 2400 RELAY REPLACEMENT (BUS 10500 AND 10600)**

MODIFICATION: **D1-88-145**

Modification D1-88-145 replaces existing 2400 series Agastat relays with Agastat E7000 series. The replacement relays will be installed in the control circuit for Core Spray Pumps 14P-1A and 14P-1B and RHR pumps 10P-3A, 10P-3B, 10:P-3C, and 10P-3D. A preoperational test is necessary to verify that the relay function in the control circuit (interlock and time delay function for annunciator circuit) has not been altered.

The test will be performed after modification activities are completed to verify operability of the replacement relay in the control logic circuit. The test will be performed with plant conditions in accordance with Technical Specification Sections 3.5.a, 3.5.b, and 3.9.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-051, REV. 0: **THERMAL OVERLOAD CONFIGURATION FOR MOTOR OPERATED VALVES (MOVs)**

MODIFICATION: **M1-90-174**

This design change affects all Appendix R MOVs by adjusting the thermal overload setpoint such that the valve motors can be protected from overload conditions without degrading design basis safety function response (Category A) and where motor protection is not possible, this modification will eliminate the thermal overload relay contacts from the starter circuit since in their present configuration they do not provide any motor protection (Category B). For Category A MOVs, this design change will have no effect on equipment response during a deign basis fire because it will not interfere with valve operation. The expected system conditions during a fire are bounded by those encountered under accident conditions. For Category B MOVs, elimination of the motor protection in its entirety will not affect the basis of Appendix R compliance because no motor protection existed previously and none was credited in the 1992 Appendix R re-evaluation. Where MOV loss could not be tolerated, modification M1-82-209 was implemented to ensure MOV operability.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-074, REV. 0: **REMOVAL OF 66PCV-101, 66PCV-101(OP), 66PC-101 AND 39IAS-2308**

MODIFICATION: **M1-91-197**

This modification involves the replacement of pressure control valve 66PCV-101 with a spool piece. The affected service water system piping and subject valve is Quality Assurance Category I, Seismic I, Q-class none. The removal of 66PCV-101 has been evaluated and does not affect system requirements. Therefore, there are no unreviewed safety questions.

This modification has been evaluated for its technical acceptability and for its impact on the safe operation of the plant. This modification meets the technical requirements for the application. This modification does not constitute an unreviewed safety question, require a change to the Technical Specifications nor does this modification impact the Security or Fire Protection Systems at JAF. This modification is acceptable for installation at JAF.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-082, REV. 3: **REPAIR AND UPGRADE OF APPENDIX R FIRE DAMPERS**

MODIFICATION: **M1-91-198**

The 1991 draft Fire Protection Reference Manual Section 4.17 which was prepared by ABB Impell Corporation listed 11 recommendations, including the inspection of all dampers passing through fire barriers. NYPA inspections of all plant dampers produced twenty-six fire dampers that do not allow room for thermal expansion and therefore do not comply with the manufacturer's and the UL approved method of installation. All dampers will be replaced with 3-hour dampers. It was determined that two additional dampers needed to be upgraded from 1-1/2 hour Appendix A dampers to a 3-hour Appendix R damper (72FD-5) and a 3-hour Appendix A damper (67FD-17).

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-093, REV. 1: **REMOVAL OF AUXILIARY BOILER 87AB-1B**

MODIFICATION: **F1-91-178**

This safety evaluation addresses the demolition and removal of Auxiliary Boiler 87AB-1B from the currently inoperable Auxiliary Boiler System. A separate safety evaluation JAF-SE-91-095 has been prepared that addresses the unavailability of the Auxiliary Boilers, and the replacement of the Auxiliary Boiler system with one Hot Water Boiler.

The purpose of this modification is to demolish (remove from the Auxiliary Boiler Building) Auxiliary Boiler 87AB-1B, and also the removal/abandonment of equipment, piping and accessories which interfere with the removal of the boiler. Removal of Auxiliary Boiler 87AB-1B is required as the boiler is radioactively contaminated. A portion of the auxiliary steam system, which is the heating medium for the hot water heaters, is also contaminated.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

Attachment 1

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JAF-SE-91-104, REV. 0: **MONORAIL STRUCTURES FOR CRD PUMPS**

MODIFICATION: **M1-91-259**

The structure installed per this modification is QA Category II/III per JAF FSAR Section 12.2. This modification does not adversely affect any safety-related equipment in the plant, nor does it affect the JAF Technical Specification. This modification does not affect the JAF FSAR.

The newly added structure meets all requirements of NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants". The structure has been designed in accordance with AISC Manual of Steel Construction (8th edition), and has safety factors for all components in accordance with NUREG-0612 requirements.

This design has a large safety margin per NUREG-0612 in which case there is a low probability of rigging failure. Rigging failure and consequences are not required to be evaluated.

Based on this evaluation, this modification does not constitute an unreviewed safety question pursuant to 10CFR50.59.

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JAF-SE-91-106, REV. 0: **STORM SEWER OUTFALL MODIFICATION**

MODIFICATION: **M1-91-121**

The installation of the two water-tight scuttle doors to stop the release of ground water at the lake outfalls when there is a radioactive release or contaminated spill will not increase the occurrence of, or create a different type of, an accident or malfunction of equipment than previously analyzed. This modification will not affect the Technical Specifications or FSAR since the Storm Sewer System is outside the operating plant and does not affect any safety system. The security plan will be maintained since security bars will be installed to the required maximum opening dimensions.

The operation and design of the Quality Assurance Program, Fire Protection System and all other components or systems, as described in the FSAR, will not be altered by this modification.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-111, REV. 0: **ADDITION OF FLANGED SPOOL PIECES TO EMERGENCY AND NORMAL SERVICE WATER LINES 46-2"-WES-151-117, -118, AND 67-3"-WS-151-17, -23**

MODIFICATION: **M1-91-035**

The installation of removable piping spool pieces in accordance with this minor modification is an acceptable technique to allow access for cleaning and or replacement of important piping sections in the Emergency and Normal Service Water piping systems. The implementation of this modification will not cause any accidents as described in chapter 14 of the JAF FSAR, and no new accidents could be created by this modification.

The new removable piping spool pieces will not reduce the pressure integrity or leaktightness of either the Emergency or Normal Service Water piping systems since the replacement spool pieces will be fabricated and installed so that the spool pieces meet both the original and the current piping specification for Class 151 piping systems which is applicable to both the Emergency and Normal Service Water systems. The structural integrity of the affected piping systems is ensured since the removable spool pieces are analyzed consistent with the original design criteria used for the Emergency and Normal Service Water piping systems.

There will be no changes to the design function of the affected Emergency and Normal Service Hater piping systems as a result of the installation of the removable spool pieces.

This proposed modification does not affect the JAF Technical Specifications and does not constitute an unreviewed safety question pursuant to IOCFR50.59.

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JAF-SE-91-113, REV. 1: **CONTROL ROOM ANNUNCIATOR WINDOW BRIGHTNESS**

MODIFICATION: **F1-87-061**

Modification F1-87-061 was issued to replace the existing annunciator display light bulbs with higher wattage bulbs for panels located in the Control Room. Along with replacing the bulbs, additional power supplies and wiring were required to be installed in the 09-43 panel to compensate for the increased wattage. After the installation of the additional power supplies and wiring had been completed, Engineering Change Notice F1-87-061-130 was issued, deleting the work steps required for the installation of the higher wattage bulbs. This action was taken due to the fact that the increased load of the new bulbs would adversely affect the isolation transformers that supply the power for the annunciator display assemblies. NSE JAF-SE-91-113, Rev. 1, will reflect the changes in F1-87-061.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-114, REV. 1: **CHEMICAL CLEANING OF THE SERVICE WATER SYSTEM (SYSTEM 46)**

MODIFICATION: **N/A**

Small bore piping in the Service Water System (SWS) and Emergency Service Water (ESW) System has corrosion in the form of nodules which results in reductions of the piping cross-sectional area This reduces the flow of water to system equipment being supplied. To correct this problem, on-line chemical cleaning of the service water system will be performed. Various chemicals will be injected at the normal service water pump forebays, taken into the system by the SWS pumps, pass through the service water system, and then be discharged to the lake. These chemicals are absorbed by the corrosion nodules which are then dissolved and dispersed into the service water flow and then to the lake. This process will be performed during all plant operating modes.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-118, REV. 1: **TEMPORARY STORAGE OF THE RADIOACTIVELY CONTAMINATED AUXILIARY BOILER (87-AB-1B) ON SITE**

MODIFICATION: **N/A**

This safety evaluation was performed to document whether the temporary storage of a contaminated auxiliary boiler on site constitutes an unreviewed safety question.

The radioactive material stored within the auxiliary boiler is located within the protected area. The radioactive material contained within the boiler is sealed, and thus is not readily transported to the environment.

Radiation exposure to the public and workers is being controlled by posting the area and by situating the material within the protected area of the site. The radiation level at the boundary of the auxiliary boiler location is less than or equal to 400 :R/hr and loose contamination is less than one thousand (1000) dpm/100 cm^2.

The auxiliary boiler will remain in the protected area until proper shipping and disposal is arranged. The boiler is expected to be shipped to a disposal facility near the end of 1991.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-137, REV. 0: **OFFGAS TREATMENT SYSTEM - EVALUATION OF HIGH SYSTEM FLOW RATES**

MODIFICATION: **N/A**

Greater-than-design condenser air inleakage at the JAF plant has led to Offgas System flow rates with inleakage flows in excess of the 20 scfm value used in the FSAR for holdup time and radionuclide release calculations. In reviewing the radiological impact of this in-leakage, it was also noted that deviations exist between the FSAR descriptions and the current configuration and operation of the Offgas System.

The purpose of this safety evaluation is to determine the safety impact of operating the Offgas System at higher air inleakage than was previously analyzed in the FSAR. It also provides the bases for updating the FSAR sections dealing with description of the Offgas System and associated radiological evaluations to reflect its current configuration and its operation with an upper-limit of 60 scfm condenser air inleakage.

Condenser air inleakage flow rates of 60 scfm, which are in excess of the 20 scfm value used in the FSAR, have been analyzed to determine their radiological consequences. Results show that site boundary doses increase slightly, but are well within 10 CFR 20 limits for all operating modes.

For a postulated system failure, the radiation exposures at the site boundary were determined to be only a small fraction of the exposure criteria of 10 CFR 100.

Site boundary exposure criteria from 10 CFR 50, Appendix I are not met at the design basis 0.1 Ci/sec. Stack release rate for either the 60 scfm or 20 scfm inleakage flow rates. However, Appendix I criteria are operational limits and hence not part of the design basis. The JAF ODCM, which implements the RETS, ensures compliance with Appendix I criteria.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-91-142, REV. 0: **EMERGENCY DIESEL GENERATOR FUEL OIL MODIFICATION PREOPERATIONAL TEST**

MODIFICATION: **M1-88-244**

The scope of this preoperational test (POT-93L) is to verify correct installation and operation of the emergency diesel generator (EDG) fuel filter modification (M1-88-244). Performance of preoperational test POT-93L will ensure that the EDG fuel oil modification (M1-88-244) functions as designed.

The test will not require a change to the FSAR or Technical Specifications, or involve an unrevealed safety question and there is acceptable.

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JAF-SE-92-002, REV. 0: **SUPPORT AND ADMINISTRATION FACILITY SECURITY MODIFICATION**

MODIFICATION: **F1-90-013**

CONTAINS SAFEGUARDS INFORMATION

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JAF-SE-92-007, REV. 7: **SUPPORT AND ADMINISTRATION FACILITY**

MODIFICATION: **F1-90-013**

This modification for a new Support and Administration Facility provides a 120,000 square foot building that is to house administrative offices; maintenance shops; locker rooms; a dining room and kitchen; and miscellaneous support shops and offices at the James A. FitzPatrick Nuclear Power Plant. The facility is a new two-story structure with a partial third floor (mezzanine) located adjacent to the east side exterior wall of the Heater Bay. The facility is connected to the main plant by corridors at elevations 272'-0" and 300'-0".

This modification does not impact systems critical to the safe shutdown of the plant because the facility is located outside the main power building. The structure of the facility has been evaluated as a Class II structure to assure that it does not affect the performance of any Class I structures during a seismic event.

The modification only impacts safety-related structure at the Control Room access door. The door has been designed to maintain the tornado pressure, fire protection and security boundaries at the Control Room boundary. The tornado missile protection for the QA Category Control Room door will be provided by the QA Category II/III Access Bridge which was designed to withstand all applicable tornado missiles and earthquakes.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-043, REV. 1: **EVALUATION OF 10MOV-16A/B AS NORMALLY OPEN VALVE**

MODIFICATION: **N/A**

This safety evaluation is written to document changes to the list of containment isolation valves in the Final Safety Analysis Report (FSAR) Section 7.3 and Administrative Procedure (AP) 1.16. Specifically, the Residual Heat Removal pump minimum flow valves (10MOV-16A/B) will be listed as normally open vice normally shut containment isolation valves in both FSAR Section 7.3 and AP 1.16.

The Residual Heat Removal (RHR) pump minimum flow valves (10MOV-16A/B) will be maintained in the normally open position vice closed position while the RHR system is in the LPCI standby mode. Administrative Procedure 1.16 and FSAR Section 7.3 will be revised to reflect this procedure change.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-062, REV. 0: **10MOV-15C TEMPORARY MOD TO FACILITATE USE OF "A" SIDE RHR FOR ST-9C TEST AND MOV TESTING**

MODIFICATION: **TEMPORARY MODIFICATION 92-114**

The purpose of this temporary modification is to allow the completion of ST-9C and MOV testing with the motor operator removed from 10MOV-15C for maintenance. The motor maintenance is to be followed by valve maintenance work, reinstalling the motor operator for the required operation is not practical. Temporary modification 92-106 ensures the valve is held closed. This temporary modification provides closed indication to the RHR interlocks. This evaluation assesses the safety significance of simulating the RHR interlock in the current plant condition.

The installation of this temporary modification does not constitute an unreviewed safety question and are acceptable for installation provided the restrictions listed for each temporary modification are complied with. Adequate reduction of risk and precautions have been taken to ensure the continuous safe condition of the plant.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-083, REV. 0: **USE OF ABB CR-82M CONTROL ROD**

MODIFICATION: **M1-92-128**

The purpose of this evaluation is to address the use of CR-82M design control rod relative to the previously NRC approved CR-82 design. This design change involves changing the number of absorber holes, diameter, and pitch. This results in a different ligament distance between holes and wall thickness of the holes in the CR-82M relative to the CR-82. All other parameters (e.g. envelope dimensions, guide button dimensions, velocity limiter, handle, weight, etc.) are identical. The purpose of these changes is to increase the mechanical lifetime of the CR-82M as compared to that of CR-82. In this way, the CR-82M can achieve a mechanical lifetime greater than the nuclear end-of-life, even if used in heavy control cell duty.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-095, REV. 1: **ISOLATION OF SRVs FOR APPENDIX R FIRES**

MODIFICATION: **F1-92-078**

This preoperational test (POT-02L) verifies that the eleven Safety Relief Valves (02RV2-71A, -71B, -71C, -71D, -71E, -71F, -71G, -71H, -71J, -71K, and -71L) can be operated from the Control Room Panel 09-4 and can be isolated from the Control Room by operating the Isolation Switches on the Auxiliary Shutdown Panel 25ASP-5 and bring the SRVs to a close position in the event of a Control Room fire. The test is conducted during the refueling mode of the plant, when the reactor is depressurized in order to verify the operability of the SRVs. This procedure does not conflict with or degrade the design basis or function of any other plant system or components and can be performed without compromising the safety of the plant.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-102, REV. 1: **REFUEL INTERLOCK CONTROL ROD BLOCK BYPASS**

MODIFICATION: **M1-92-199**

The refuel interlock control rod block signal associated with the Refuel Service Platform and Jib Crane will be bypassed as a result of this modification. With the Refuel Service Platform and Jib Crane removed from service, this signal serves no required function. Permanent bypass of this signal will allow the control rod block functions of the Reactor Manual Control System (RMCS) to operate safely and as intended in the absence of the Refuel Service Platform and Jib Crane. This change does not affect any other part of the RMCS and will have no adverse effect on any vital structures, systems, or components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-111, REV. 1: **HPCI/RCIC TORUS SUCTION VALVES REMOTE MANUAL CLOSE**

MODIFICATION: **M1-92-214**

This modification involves the installation of two (2) key lock switches and two (2) white lights in the valve control circuits to the HPCI and RCIC torus suction valves.

The addition of the key lock switches is intended to provide the operator with the ability to remotely "close" the valves from the control room, should primary containment isolation be required, when the automatic signals to open the valves are present. The automatic feature for the HPCI and RCIC torus suction valves will perform their intended ECCS function with the key lock switch in the "Normal" position. When the switch is in the "Bypassed" position as directed by system operation procedures, this feature will provide for primary containment isolation and will be indicated in the control room, and will also "block" each torus suction valve from manually and automatically opening. Therefore, the "Administrative Controls" required for these key lock switches will be incorporated into the plant system operating procedure. All existing indication displays for both the HPCI and RCIC will remain unchanged.

The design change to the HPCI and RCIC torus suction valve is designed to minimize the plant operator interface with the automatic transfer function for either the HPCI or RCIC system. Minimal operator interface and testing ensures each system operation and the additional feature capability to remotely close these valves under any accident condition to ensure that primary containment can be obtained. Therefore, the proposed minor modification does not increase the probability of occurrence or consequences of an accident or malfunction of equipment important to safety, does not create the possibility of an accident or malfunction of a different type, does not reduce the margin of safety as defined in the basis for any Technical Specification and does not involve an unreviewed safety question.

This added change to the modification involves the installation of two (2) key lock switches and two (2) white indicating lights in the valve control circuits for the Core Spray System "A" and "B" outboard injection valves. The above statements as to the position of the key lock switches and the design change to the Core Spray outboard injection valves is basically the same, except that the valves have an automatic open function.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-112, REV. 2: **EPIC LOOP MODIFICATION**

MODIFICATION: **F1-88-185**

This modification will alter the EPIC Plant Computer System by relocating the I/V conversion resistors from the surge protect interface cards in the DAS cabinets to terminal blocks in the same cabinet. Completion of this modification package will allow the surge protect interface cards to be removed without defeating up to eight (8) plant signal current loops associated with each card. This modification will not increase the probability of occurrences or consequence of an accident or malfunction of structures, systems or components important to safety previously evaluated in the FSAR. In addition, this modification will improve the EPIC Plant Computer System by allowing continued operation of the analog control and indication circuits during EPIC Computer maintenance.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-115, REV. 1: **REMOVAL OF STANDBY LIQUID CONTROL SYSTEM PUMP DISCHARGE ACCUMULATORS**

MODIFICATION: **M1-92-207**

This modification was initiated to remove the SLC pump discharge accumulators thereby eliminating the possibility of a SLC system outage due to a loss of nitrogen precharge. The removal of the SLC accumulators in accordance with the proposed design and plant procedures will not pose a safety concern since the SLC system has been designed to preclude the adverse affects of system pressure spikes resulting from the use of positive displacement pumps.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-129, REV. 0: **REPLACEMENT AND REPOWERING OF EDG SPEED CONTROLLERS**

MODIFICATION: **F1-92-194**

The purpose of this modification, classified as QA Category I, is to replace the existing Woodward EG-M speed controllers associated with each of the Emergency Diesel Generators, EDG-A, EDG-B, EDG-C, and EDG-D with a Woodward model 2301A speed controller. The existing hydraulic actuators, model EGB-10C for EDGs A, B, and C and model EGB-13C for EDG D, which work in conjunction with the EG-M speed control system will each be replaced with a model EGB-13P hydraulic actuator that is compatible with the 2301A speed control system. The plant's 125VDC system, which is converted to 48VDC via an isolated power supply installed by Modification M1-92-210, will remain the source of power. However, a preregulator will need to be installed between the output of the 28VDC power supply and the input to the 2301A speed controller to regulate the voltage at an acceptable level for the 2301A speed controller.

Replacement of the existing EG-M speed control system, which is 25 years old and scheduled for retirement by Woodward, with a model 2301A will provide increased noise immunity, ground loop protection, more responsive engine control during startup and while under load, in addition to reduced maintenance and better availability of replacement parts.

At present, there are no spare EG-M speed controllers and only one load signal box available in JAF stock. Installation and procurement schedules shall be deferred until the Material Control Department determines that no spares for the EG-M speed control system are obtainable.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-159, REV. 0: **EYEWASH STATIONS**

MODIFICATION: **M1-77-077**

The purpose of this modification is to install eyewash stations in various locations in the plant. Eyewash stations are required in areas that present a possible eye hazard per OSHA Subpart 1910.151 and ANSI Z358.1-1990, Section 5.

This modification adds equipment that is not addressed in the FSAR. The installation of these eyewash stations will not affect safety-related equipment.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-185, REV. 2: **REACTOR WATER LEVEL CONDENSING CHAMBER TEMPERATURE MONITORING SYSTEM**

MODIFICATION: **M1-92-338**

This proposed modification will install a Reactor Water Level Condensing Chamber Temperature Monitoring System consisting of ten (10) thermocouples, two (2) per condensing chamber, in the Drywell Area. This system will monitor differential temperature (steam vapor/condensation) to ascertain condensing chamber performance.

The components have no safety function and are not listed in the Technical Specification. This modification is classified as QA Category II/III, Seismic Class 2.

A material component evaluation has determined that the non-nuclear grade components to be utilized in this modification will survive the normal temperature, radiation and nitrogen environments of the drywell area for the duration of the installation stay.

Calculations have determined that the components and their associated devices will not affect other safety related components in the drywell area. Cabling outside the drywell will be installed in existing conduit and cable trays.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-211, REV. 0: **INSTALLATION OF CABLE TRAY COVERS TO PROVIDE ELECTRICAL SEPARATION**

MODIFICATION: **M1-92-346**

The purpose of this generic modification is to install cable tray covers at various locations throughout the plant, except east and west cable tunnels, where minimum separation distance between redundant safety divisions of electrical circuits is not maintained in accordance with the plant design separation criteria. The installation of cable tray covers will enhance existing separation and thereby it will improve redundancy, isolation and independence of electrical circuits of both safety divisions. The primary intent of physical separation is to protect safety-related cables of one safety division from damage, as a result of electrical faults or failures internal to electrical circuits of the other redundant safety division. The cable tray cover, fabricated from galvanized sheet metal steel, is suitable to provide physical separation since it will intercept an electrical arc and confine any potential fire damage to the affected safety division only. The detailed design precludes any adverse interaction with other safety-related systems/equipment. The requirements such as cable derating, supports, grounding, etc., are appropriately addressed in the detailed design. This modification does not change function of any equipment or system. This modification enhances the existing separation between cables of redundant safety divisions.

There is no unreviewed safety concern regarding installation of cable tray covers and hence this modification can be performed without any detrimental effect on any plant system or equipment.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-237, REV. 0: **CO_2 VENTING IN RELAY ROOM AND HVAC CONTROL LOGIC**

MODIFICATION: **F1-92-377**

This safety evaluation will address Preoperational Test POT-70E performed to ensure that the CO_2 venting in Relay Room and HVAC Control Logic modification installed as Modification F1-92-377 performs its intended function.

This Preoperational Test will verify that the Relay Room ventilation system and dedicated vent path circuit are operating properly providing a dedicated Relay Room CO_2 vent path and isolate the Relay Room ventilation system to prevent intrusion of CO_2 into the Control Room via the Control Room supply intake during a Relay Room CO_2 system discharge. This POT will also ensure that control logic changes made to minimize the postulated effect of single failure in the Relay Room ventilation system are operating properly.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-92-248, REV. 0: **NON-DESTRUCTIVE TEST REQUIREMENTS**

MODIFICATION: **N/A**

This safety evaluation analyzes the Non-Destructive Examination (NDE) requirements utilized at the James A. FitzPatrick (JAF) Nuclear Power Plant in order to detect surface and sub-surface discontinuities in materials, welds, and fabricated parts and components.

The changes made to the NDE procedures, to utilize the ANSI/ASME B31.1 1980 edition, are acceptable. This change is equivalent to, or more conservative than, the requirements in the updated FSAR and consistent with industry standards, Plant Technical Specifications, the Security Plan, and the Fire Protection Program are not affected by these changes.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-003, REV. 1: **ELIMINATION OF RADWASTE BUILDING FLOOR DRAIN TRENCHES**

MODIFICATION: **F1-90-253**

This modification which (1) demolishes the existing pipe lines within the Radwaste Building floor drain trenches; (2) decontaminates the drain trenches and sumps; (3) adds new 316L stainless steel piping in the drain trenches; (4) fills the drain trenches with concrete; and (5) re-routes radwaste pump/tank overflow and drain lines above the trenches to different headers within the trench, will not affect any safety-related or environmentally qualified components or systems, or affect overall plant safety. In addition, the modification complies with the overall safety design bases contained in the FSAR

The modification will be performed on elevation 250'-0" of the Radwaste Building, which has controlled access provisions for limiting radiation hazards to plant personnel. Design and installation complies with relevant codes, standards and criteria.

In conclusion, the implementation of this modification will not conflict with the design basis of the Radioactive Liquid Waste System, as stated in, the FSAR, nor result in changes to the Technical Specifications, nor impact on any safety-related or environmentally qualified structures, systems or components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-010, REV. 1: **SAFETY-RELATED N_2 PRESSURE BOUNDARIES**

MODIFICATION: **M1-93-020**

This modification will install a QA Category I solenoid valve in the nitrogen supply to the drywell cooling system outlet dampers. The modification will isolate the nitrogen to the inlet dampers as well as fix the inlet dampers in their full open position. This change will improve the function and reliability of the N_2 supply system and will not degrade the operation of the Drywell Cooling System.

The Core Spray and RHR Systems pneumatic operated testable check valve supply isolation valves will be changed to normally closed. The closed position of the isolation valves will provide the pressure boundary for separation between the safety-related nitrogen supply system and the non-safety related operator. The operator is not required for plant operation as the pneumatic operator is used for IST and Technical Specification required check valve testing. There is no safety function for the operator portion of the testable check valve associated with the Core Spray and RHR Systems.

The modification to the Reactor Vessel Head Vent SOV's will not affect the operation of the Nuclear Boiler System because the design, function, failure mode and operating time of the valves will not be changed by this modification.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-014, REV. 0: **RADWASTE SUMP LEVEL INSTRUMENTATION AND SUMP PUMP PIPING MODIFICATION**

MODIFICATION: **F1-89-015**

The installation of this modification, which replaces Radwaste Building sump level instrumentation, and adds bypass piping with a strainer at the sump pumps, will not have impact on any safety-related or environmentally qualified components systems, or affect overall plant safety. In addition, this modification complies with the overall systems design criteria contained in the FSAR.

The purpose of this modification is to minimize maintenance on sump level instrumentation and pump servicing, thus this modification, sump pumps needed frequent maintenance due to pipe blockage high dP, as well as existing mechanical linkage type level instruments. Also, sumps had a potential for overflow, when either of the pumps failed.

This modification will install new sump level instrumentation system, which has no moving parts, does not get affected by build-up or material coating on a sensing element, which is connected to a multipoint control unit with relay contacts needed to operate alarms and pumps. New pipe mounted strainers will present sump pump clogging. Bypass lines at the pump suction side will enable suction from either sump by either of the pumps the level transfer unit enclosures will be provided with a window, which will enable Radwaste Control Room operators to identify a sump pump operating status, using the area cameras.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-032, REV. 1 **EPIC UPS BATTERY REPLACEMENT**

MODIFICATION: **M1-93-033**

This modification approves the replacement of the EPIC UPS batteries. This change will improve the function and reliability of the EPIC system and will not degrade the operation of the EPIC computer system.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-037, REV. 0: **GENERIC INSTRUMENT SNUBBER**

MODIFICATION: **M1-91-232**

The instrument snubbers that are identified in the modification meet the requirements for the tubing classes that are specified in the original JAF Piping Specifications. The JAF FSAR does not specifically address instrument snubbers. However, a review of FSAR Section 16.5, related to piping design, was performed and confirmed that the addition of instrument snubbers complies with this section.

Instrument snubbers will be added to plant indicators. These instruments do not perform system control function. Therefore, the operation of plant systems will not be degraded by this modification.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-039, REV. 1: **EVALUATION OF CONTINUED OPERATION OF THE JAFNPP DURING INSTALLATION OF THE NEW CONTROL ROOM ACCESS DOOR**

MODIFICATION: **F1-90-013**

This safety evaluation demonstrates the Control Room exposure to the effects of a tornado is very limited during the installation of the New Control Room Access Door and the safety and operation of the plant will be unaffected.

The only FSAR deviation that will exist during the installation of the Control Room Access Door is Item C of FSAR Section 12.4.5. Due to the very low probability of a tornado occurrence at the James A. FitzPatrick site and the short duration period of the Control Room exposure, the safety of the plant should not be compromised. The Security and Fire Protection Systems will not be degraded because watches will properly compensate for them. All cutting and installations will be performed QA Category I. If, incredibly, a tornado does occur, the Control Room is fully protected from the more damaging tornado missiles by the Access Bridge. If a design basis tornado pressure drop occurs before the installation of the doors is complete, then damage to the HVAC airlock pressure boundary can occur. If required, the plant can be safely shutdown from outside the Control Room in accordance with AOP-43.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-040, REV. 0: **INSTALLATION OF BRANCH CONNECTIONS FOR HYDROLASE PIPING DECONTAMINATION (GENERIC)**

MODIFICATION: **M1-91-297**

Hydrolase connections consisting of a small bore (1 or 1 1/2 inch diameter) pipe nipple with a blank flange will be installed on existing plant piping to allow decontamination. These lines will be designed with capacity equivalent to the existing pipe. There is no change in system function or operation.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-043, REV. 0: **RWCU FILTER DEMINERALIZER PRECOAT OPTIMIZATION TEST PROGRAM**

MODIFICATION: **N/A**

The proposed resin enriched precoat formulations and application techniques are very well suited for the new RWCU F/D septa. The new septa have a smaller absolute particle retention rating and are superior in structural integrity. The new septa do not require a resin-fiber premix underlay which is used on the old septa for the purpose of minimizing resin leakage and irreversible septa plugging. The objective of the test program is to select a precoat formulation and application method to be used for normal power operation.

The test program will involve performing side-by-side tests using the specific precoat formulations. For each test all of the precoat material will be added via the resin feed tank. The elimination of adding precoat material to the precoat tank simplifies the precoat process and reduces the frequency of personnel and general area radioactive contamination. The use of resin enriched precoats will result in lower radwaste volumes and lower radwaste costs.

The RWCU does not function as a safety-related system. The RWCU filters are not safety-related and are classified QA Category II/III. The design basis of the RWCU system is to provide a means of removing soluble and insoluble species from the reactor coolant, thus maintaining high water quality. The system also provides means of blowing down water during reactor heat-up.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-048, REV. 0: **10MOV-89A IN-SITU DESIGN BASIS DIFFERENTIAL PRESSURE TEST**

MODIFICATION: **N/A**

This Nuclear Safety Evaluation allows performance of differential pressure testing with flow of 10MOV-89A. The purpose of Special Test STP-10AN is to approximate design basis differential pressure conditions across the valve during stroking to address recommendations from NRC Generic Letter 89-10 for motor operated valves (MOVs). Valve operator characteristics will be monitored and recorded using Liberty Technologies' "VOTES" test equipment. Performance of STP-10AN has no adverse affects on the Residual Heat Removal System, its components, or other plant safety-related structures, systems, and components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-052, REV. 0: **VOLTAGE CONVERTER RETIREMENT**

MODIFICATION: **M1-90-162**

This design changes circuits and devices which are included in the current Appendix R safe shutdown analysis. The changes do not create a conflict with this analysis because the power supply connections required by the current to voltage converters (TICC's), unison amplifiers (TICR's) and signal selector/limiters (HSS's) are being removed. This is a conservative change to the current analysis since the current analysis includes the failure mechanism which is being removed. The control circuit cables remain unchanged because the modification will utilize the existing cables to interconnect the field devices in the same manner that they were connected when analyzed by the Appendix R safe shutdown analysis. Although safe shutdown components are deleted by this modification, the Safe Shutdown Capability Reassessment (10CFR50 Appendix R) is not an affected document since all changes are internal to these control panels and the deleted TICC's, TICR's and HSS's are not specifically listed in the analysis. The Fire Hazards analysis is not affected since this change only deletes combustible material.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-055, REV. 0: **13MOV-131 IN-SITU DESIGN BASIS DIFFERENTIAL PRESSURE TEST**

MODIFICATION: **N/A**

This Nuclear Safety Evaluation allows performance of differential pressure testing with flow of 13MOV-131. The purpose of Special Test STP-13I is to approximate deign basis differential pressure conditions across the valve during stroking to address requirements from NRC Generic Letter 89-10 for motor operated valves (MOVs). Valve operator characteristics will be monitored and recorded using Liberty Technology's "VOTES" test equipment. Performance of STP-13I has no adverse affects on the RCIC system, its components or other plant safety-related structures, systems, and components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-057, REV. 0: **13MOV-16 IN-SITU DESIGN BASIS DIFFERENTIAL PRESSURE TEST**

MODIFICATION: **N/A**

This Nuclear Safety Evaluation allows performance of differential pressure testing with flow of 13MOV-16. The purpose of Special Test STP-13J is to approximate design basis differential pressure conditions across the valve during stroking to address requirements from NRC Generic Letter 89-10 for motor operated valves (MOVs). Valve operator characteristics will be monitored and recorded using Liberty Technology's "VOTES" test equipment. Performance of STP-13J has no adverse affects on the RCIC system, its components, or other plant safety-related structures, systems, or components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-058, REV. 0: **13MOV-18 IN-SITU DESIGN BASIS DIFFERENTIAL PRESSURE TEST**

MODIFICATION: **N/A**

This Nuclear Safety Evaluation allows performance of differential pressure testing of 13MOV-18. The purpose of Special Test STP-13K is to approximate design basis differential pressure conditions across the valve during stroking to address requirements from NRC Generic Letter 89-10 for motor operated valves (MOVs). Valve operator characteristics will be monitored and recorded using Liberty Technology's "VOTES" test equipment. Performance of STP-13K has no adverse affects on the RCIC system, its components, or other plant safety-related structures, systems, and components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-059, REV. 0: **10MOV-26B IN-SITU DESIGN BASIS DIFFERENTIAL PRESSURE TEST**

MODIFICATION: **N/A**

This safety evaluation reviews and determines that the performance of static differential pressure testing to test procedure STP-10AQ does not involve any unreviewed safety questions. The purpose of STP-10AQ is to establish static design basis differential pressure conditions across RHR System motor operated valve 10MOV-26B during stroking of the valve.

This safety evaluation determined that the performance of ST-10AQ does not involve any unreviewed safety questions pursuant to 10 CFR 50.59.

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JAF-SE-93-062, REV. 4: **SPENT FUEL POOL CLEAN UP**

MODIFICATION: **M1-90-162**

The purpose of this safety evaluation is to address all the safety concerns for work associated with the clean up of the FitzPatrick Spent Fuel Pool (SFP) in preparation for installation of spent fuel storage racks, Modification No. F1-85-069. This includes equipment installation, process log, cask and liner handling per NUREG-0612 and radiation protection/ALARA issues.

The scope of this work involves volume reduction (processing), packaging, shipping and disposal of irradiated components currently in the spent fuel pool. This includes 51 control blades, 16 intact LPRM's, 6 IRM/SRM dry tubes, 4 IRM strings, 3 SRM strings, 36 shroud head bolts, 20 jet pump hold down beam bolts and fuel pool filters, including 10 currently in the SFP and additional filters generated during the vacuuming of the pool. Additional components may be added depending on volume and the waste characterization per 10 CFR Part 61 being performed by WMG Inc., which will take into account the curie content, dose rate and isotopic analysis.

Irradiated materials shall be loaded into liners and put into casks, transported and disposed. Maneuvering and handling of casks and liners shall be in compliance with NUREG 0612. Miscellaneous equipment and velocity limiters may be temporarily secured to the equipment railing in the SFP before being put into liners.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-063, REV. 0: **MISCELLANEOUS PLATFORMS AND LADDERS**

MODIFICATION: **M1-91-181**

This generic modification for platforms, ladders, and miscellaneous access structures will have individual design checklist evaluations to ensure that all pertinent technical criteria is addressed. The proposed structures will be designed such that they do not obstruct existing fire suppression systems, emergency lighting, nor essential egress vital to plant safety. These QA Category II/III structures will be analyzed for seismic and other applicable loads in accordance with FSAR Section 12.4, and therefore will have no adverse effect on any safety-related components in the area. Evaluation of this generic modification has determined that no change to the Technical Specifications is required.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-071, REV. 0: **10MOV-89B IN-SITU DESIGN BASIS DIFFERENTIAL PRESSURE TEST**

MODIFICATION: **N/A**

This Nuclear Safety Evaluation allows performance of differential pressure testing with flow of 10MOV-89B. The purpose of Special Test STP-10AP is to approximate design basis differential pressure conditions across the valve during stroking to address recommendations from NRC Generic Letter 89-10 for motor operated valves (MOVs). Valve operator characteristics will be monitored and recorded using Liberty Technologies' "VOTES" test equipment. Performance of STP-10AP has no adverse affects on the Residual Heat Removal System, its components, or other plant safety-related structures, systems, and components.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-072, REV. 5: **REACTOR VESSEL WATER LEVEL BACKFILL MODIFICATION**

MODIFICATION: **F1-93-075**

This modification will be implemented by installing backfill system components in three phases. Phase 1 (IP#1), as discussed by Revision O of this NSE, will address installation of system related components, except for system to plant operating tie-in points, (i.e., CRD charging header and reference legs). Phase 2 (IP#2) as discussed by Revisions 1, 2 and 3 of the NSE, will install CRD system and reference leg system tie-ins and perform all backfill system functional testing. Phase 3, as discussed by Revision 4 of this NSE, reroutes condensing chamber piping to eliminate thermal stratification and rapid cycling fatigue. Revision 5 to this NSE removes a statement describing the implementation of connection to a high speed recorder to monitor backfill system flowrates via a separate revision to this package or a separate modification. Analyses related to the seismic and electrical adequacy of the installation have been completed as part of Phase 1. Analysis related to the operability of the backfill system and impact on the CRD and reference legs have been completed as part of Phase 2. Analysis related to the reroute of condensing chamber piping have been completed as part of Phase 3.

This modification will install a reactor vessel water level backfill system for connection to the five (5) reference legs. The connection of these systems is expected to provide reference legs which are free from significant amounts of gas saturated water and which are maintained at a constant level. This modification will not increase the probability of occurrences or consequences of an accident or malfunction of structures, systems or components important to safety previously evaluated in the FSAR. In addition, this modification will not create an accident or malfunction of a different type than any evaluated previously in the FSAR. This modification will improve the reliability of the reactor vessel water level reference legs, ensuring that they can perform their intended function.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-075, REV. 0: **ORGANIZATION CHANGES IN THE NUCLEAR GENERATION DEPARTMENT**

MODIFICATION: **N/A**

The purpose of this safety evaluation is to evaluate proposed changes to the Nuclear Generation Department, as described in the Final Safety Analysis Report (FSAR). The organizational changes specifically affected the Nuclear Support Division and the Nuclear Operations Division, both of which operate out of the White Plains headquarters office.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-114, REV. 2: **PIPE REPLACEMENT MODIFICATION FOR EROSION CORROSION**

MODIFICATION: **M1-92-118**

This pre-engineered pipe replacement modification will be used to replace deteriorated pipe with pipe of equal or greater erosion resistant properties. There is no change in system function or operation. All piping replacements done under this modification will be evaluated with ANSI B31.1 (1967 Edition) and will be installed and inspected in accordance with approved plant procedures. Evaluation of this modification has determined that no unreviewed safety question exists and no changes to the JAF Technical Specifications are required.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-93-115, REV. 0: **PLANT EQUIPMENT SAFETY GUARDS**

MODIFICATION: **M1-92-221**

Protective safety guards shall be installed over rotating parts on various Category I, Category M and Category II/III equipment throughout the plant. All guards installed on Category I equipment shall be Seismic Class II. All guards shall be designed and installed with sufficient clearance so as not to affect the equipment's function and operation and shall meet the design stress requirements in Section 12.4.9 of the FSAR.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-019, REV. 1: **UTILIZATION OF THE ABOVEGROUND FUEL OIL STORAGE TANK FOR STORAGE OF NO. 2 FUEL OIL AND REMOVAL OF THE UNDERGROUND FUEL OIL TANK**

MODIFICATION: **F1-92-146**

The purpose of this modification is to utilize the aboveground storage tank that will be converted from storage of No. 6 fuel oil to storage of No 2 fuel oil.

This modification will not impact any safety related or environmentally qualified components or systems, or affect overall plant safety.

This modification includes a leak detection system, alteration to fuel oil supply and return lines, addition of an in-line fuel oil heater, conversion of the aboveground fuel oil tank, removal of the underground storage tank, removal of retired equipment, addition of an impermeable barrier in the enclosure between the dike wall and the tank, and the addition of a high/low level alarm during filling operations. The design and installation complies with applicable codes, standards, plant criteria and environmental requirements.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-036, REV. 0: **CONTROL CIRCUITRY MODIFICATION FOR SERVICE AIR COMPRESSORS**

MODIFICATION: **M1-94-048**

This proposed modification will install undervoltage (W) relays in switchgear 71L23, 71L24 and 71L33. The new W relays will 1) provide trip functions for the Service Air Compressor feed breakers in the case of an undervoltage condition and 2) disable the remote closure (control room) capability of the service air compressor feed breakers until power is restored. This modification will ensure that the service air compressor lock out circuitry is not initiated, requiring local pushbutton reset, during an undervoltage condition. The compressor lock out circuitry will still be initiated on an abnormal condition (second stage air temp > 300°F, cooling water discharge temp > 130°F or bearing oil pressure <4 psig) during compressor operation.

Installation activities shall be performed such that only one service air compressor is out of service at one time. Once modified and tested, the subject compressor shall be declared operable before the next is removed from service.

Review of section 9.11 of the FSAR and the Technical Specifications has revealed that no changes to the FSAR or technical specifications are required as a result of this minor modification. It is further noted that this modification does not involve an unreviewed safety question, will not degrade the design basis or function of any plant equipment, and can be performed without compromise to safety.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-056, REV. 0: **PERFORMANCE OF WELD OVERLAYS**

MODIFICATION: **M1-94-085**

The weld overlay process is an approved method for the repair of IGSCC in stainless steel piping welds. The designs maintain structural margins as defined in ASME Section XI and no ECCS systems are impacted.

Additionally, the application of weld overlay acts similar to last pass heat sink welding and IHSI, and retards crack growth due to the compressive residual stress pattern developed on the inner diameter of a pipe. The overlay is applied with the pipe filled with water and the temperature differential developed across the pipe wall causes a compressive stress state to be developed on the inside portion of the pipe wall. The inside diameter of the piping at the weld overlay experiences only negligible deformation that will not adversely affect the piping flow characteristics. Finally, the duplex weld metal (i.e., containing both austenite and ferrite grains) deposited by weld overlay is effectively immune to IGSCC due to its high Ferrite, grain structure and low carbon content.

The weight of the weld metal deposited during an overlay is insignificant when compared to the weight of the piping and fluid, and therefore does not require stress reanalysis.

Finally, the possibility of through-wall IGSCC repaired by weld overlay experiencing further propagation either through the overlay itself, or along the overlay/pipe interface has been considered and is not a safety issue. As stated earlier, the duplex nature of the overlay weld metal containing both ferrite and austenite, is highly resistant to IGSCC. Additionally, the growth of a stress corrosion crack axially at the overlay/pipe interface is unlikely due to the limited sensitization that occurs during weld overlay due to the rapid heat transfer as a result of the water inside the pipe and the low welding heat impute.

The use of weld overlay as a repair for flawed piping does not constitute an unreviewed safety question. The application of the overlay reduces the chance for stress corrosion to grow by imparting a compressive residual stress on the inner portion of the pipe wall. The added weld metal structurally reinforces the pipe in the area of the flaw to restore the pipe wall design margin. The application of overlay does not reduce the margin of safety as defined in the JAF FSAR nor does it involve a change to the Technical Specifications.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-059, REV. 1: **REPLACEMENT OF CONDENSATE DEMINERALIZER RINSE VALVE**

MODIFICATION: **F1-91-043**

This modification to the Condensate System will replace the existing condensate demineralizer air operated butterfly valve (33AOV-D-1), used during bed rinsing operations, with a motor operated angle body globe valve. The new valve and operator will allow for control of the opening and closing speed of the valve, as well as better flow control during condensate demineralizer bed rinsing operations. This will minimize the disturbance of the resin beds, reduce resin intrusion into the reactor water systems and improve water chemistry.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-062, REV. 0:	**BATTERY ROOM VENTILATION, MOD M1-90-162 INSTALLATION, EXHAUST DAMPER JUMPER**
MODIFICATION:	**N/A**

This safety evaluation is performed to assess the acceptability of temporarily opening one of the Battery room exhaust ran dampers and manually taking temperature measurements while modification M1-90-162 is being installed in each Battery room.

This installation will be performed one at a time for both the A&B Battery Rooms. As a contingency, a second jumper will be written for the back up battery exhaust fan for each Battery Room should the operating fan fail. In the unlikely event of an exhaust fan failure, the modification will be stopped and the system will be restored.

Ventilation to the Battery room being modified will be provided by the AHU of the other Battery room and one of the exhaust fans in the Battery room which is having the modification installed. Fire protection will be provided by the fire damper in the inlet ductwork. Once the modification is complete and has been verified the second Battery room will be started.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-066, REV. 0: **PERMANENT INSTALLATION OF ZEBRA MUSSEL MONITORS**

MODIFICATION: **M1-92-404**

The permanent installation of the zebra mussel monitor tanks in accordance with this modification will enable plant personnel to test the effectiveness of the chlorine injection on the service water system. The implementation of this modification will not cause any accidents as described in Chapter 14 of the JAF FSAR, and no new accidents could be created by this modification.

The zebra mussel monitor tanks, supply and discharge piping will not affect the function of the existing normal service water piping system including the supply piping 46-24"-WS-151-9 and 46-1"-WS-151-11OC, nor will it affect the circulating water piping system defishing line 36-14"-WCW-151-5 clean out connection. The integrity of the new supply piping and supports is ensured since these components will be designed and installed in accordance with the original construction code, ANSI B31.1.0, 1967 Edition through 1969 Addenda. Power Piping Code.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-073, REV. 0: **MOV ACTUATOR REPLACEMENT**

MODIFICATION: **M1-93-101**

Valve operators 1OMOV-16A (OP), 1OMOV-16B (OP), 1OMOV-18 (OP), 12MOV-15 (OP), 12MOV-18 (OP), 13MOV-15 (OP), 23MOV-14 (OP), 23MOV-15 (OP), 23MOV-16 (OP), and 29MOV-74 (OP) are being replaced by this modification to comply with the requirements of NRC Generic Letter 89-10. The motor for valve operator 23MOV-21 (OP) will be upgraded. The logic in valve operators 1OMOV-25A (OP) and 1OMOV-25B (OP) will be changed to prevent motor cycling, and the logic in valve operators 23MOV-15 (OP) and 23MOV-16(OP) will be changed to more accurately control valve/operator stem forces.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-074, REV. 0: **10MOV-34A, 12MOV-31, AND 23MOV-60 VALVE REPLACEMENT**

MODIFICATION: **M1-93-102**

This modification replaces one valve (10MOV-34A) and two valve/operator assemblies (12MOV-31 and 23MOV-60).

Valve 10MOV-34A (Reactor Building column A3, elevation 254') will be replaced with a 16" Valtek Channelstream control valve to minimize the degrading effects of cavitation. The existing SMB-3 operator will be reused.

Valve 12MOV-31 (Drywell column T6, elevation 263') will be replaced with a 2" Anchor/Darling gate valve with a live load packing. The 12MOV-31 operator is replaced with a new operator sized for system conditions.

Valve 23MOV-60 (Reactor Building column W3, elevation 272') will be replaced with a 1" Anchor/Darling non-rotating stem globe valve designed to comply with the requirements of NRC Generic Letter 89-10. The 23MOV-60 operator is replaced with a new operator sized for system conditions. The 23MOV-60 valve stem will be non-rotating to allow for Votes testing.

No changes to the Technical Specification are required as a result of this modification. A minor change to the FSAR will be made to remove the two pipe reducer fittings depicted in Figure 7.4Ă7, based on the increased size change to 10MOV-34A.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-085, REV. 1: **NITROGEN PURGE VAPORIZER REPLACEMENT**

MODIFICATION: **F1-92-145**

The purpose of this modification is to replace the existing steam nitrogen vaporizer (27NV-8), used for initial containment inerting, with an ambient heated vaporizer with electric trim heaters. The existing steam heated vaporizer is being replaced because the Auxiliary Steam Boiler was retired and a permanent steam service is no longer available.

This modification will replace the existing steam nitrogen vaporizer with two ambient vaporizers and two trim heaters. The modification will only effect the non-safety related portion of the Primary Atmosphere Control and Dilution System. This evaluation has addressed the subject modification regarding its effect on plant safety-related and important to safety systems, and has concluded no impact or concerns.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-086, REV. 0: **CUT AND CAP POTENTIAL RADIOACTIVE INPUTS TO AUXILIARY BOILER FLOOR DRAINS**

MODIFICATION: **M1-93-055**

On March 18, 1991 radioactive material entered and contaminated the steam and condensate side of the Auxiliary Boiler System. As a result of this incident, the Boiler Room floor drains and equipment drains were plugged to prevent radioactive materials from leaving the Auxiliary Boiler Room. The Auxiliary Steam Boiler (87AHB-1B) was replaced with a hot water boiler (87HWB-1B) in Modification F1-91-138. This removed the steam system from operation.

The Auxiliary Boiler Steam Supply System was rendered inoperative in Modification F1-91-178. This modification removes portions of piping and equipment to eliminate potential radiological inputs to the Auxiliary Boiler Room. This will allow the floor drain system to be restored to normal operation.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-119, REV. 0: **TEMPORARY OPERATING PROCEDURE TO ALLOW SHUTDOWN OF RELAY ROOM VENTILATION SYSTEM FOR SPECIAL TESTING**

MODIFICATION: **F1-92-377**

The purpose of this safety evaluation will be to address the consequences and acceptability of shutting down the relay room ventilation system in accordance with a new Temporary Operating Procedure (TOP-190) to allow specific test activities of STP-76AK to be performed.

This safety evaluation determined the TOP provides adequate direction and compensatory actions to Operations necessary to temporarily shutdown and restore the Relay Room ventilation system while ensuring the required system functions are maintained as stated in the applicable FSAR sections.

The safety evaluation concluded that the subject TOP to allow temporary relay room ventilation system shutdown for performance of the identified testing activities is acceptable.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-130, REV. 1: **CONTROL ROOM EMERGENCY VENTILATION DAMPER AND INSTRUMENTATION MODIFICATION**

MODIFICATION: **M1-94-195**

To eliminate the single failure concerns addressed in DER-93-0833, this modification permanently disables the modulating controls for the Control Room Emergency Ventilation System supply and recirculation dampers (70MOD-113 and 70MOD-114). In lieu of utilizing the dampers' modulating controller, the subject dampers have been left in their fail safe positions. Disabling the modulating capabilities of 70MOD-113 & 114, and capping the inlet to 70MOD-114, will have no effect on the charcoal filter effectiveness relative to humidity control. Current licensing basis takes credit for 90% charcoal effectiveness which is irrespective of relative humidity. These permanent changes will provide maximum fresh air and serve to maintain a positive Control Room pressure sufficient to minimize in-leakage, thereby protecting the operators. Also, this modification relocates the low pressure "reference" leg for 70dPT-100 from the chiller room to the outside atmosphere and adds an outdoor static pressure sensor to allow for proper differential pressure monitoring, from the CR instrumentation 70dPIC-100, of the Control Room atmospheric conditions relative to the outside atmosphere. With this modification all Plant FSAR, Technical Specifications and Environmental requirements are maintained and no unreviewed safety questions will exist. This modification package permanently installs the plant changes performed under Temporary Mod. No. 93-152 and completes a portion of the overall repairs of the Control Room Ventilation System, as described in NSE JAF-SE-94-042, Rev. 1, that are required to return the system to its normal mode of operation.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-94-131, REV. 0: **AUXILIARY BOILER ROOM FLOOR DRAIN PLUGS**

MODIFICATION: **TEMPORARY MODIFICATION 94-267**

The purpose of this safety evaluation is to evaluate the acceptability of plugging each of the ten (10) floor drains in the Auxiliary Boiler Room per Temporary Modification 94-267. The intention of plugging the floor drains is to prevent further contamination of the floor drains and oil water separator due to a moderate release of liquid waste in the Auxiliary Boiler Room. Drainage capability will be provided by equipment drains in the room in the event of a significant release of liquid waste in the room. This drainage path will eliminate the potential for equipment damage resulting from liquid buildup in the room.

The scope of temporary modification 94-267 consists of installation of plugs in the ten floor drains in the Auxiliary Boiler Room. The purpose of plugging the floor drains is to prevent the transfer of potentially contaminated liquid wastes to the oil water separator due to a moderate leak in the Auxiliary Boiler Room.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-96-009, REV. 0: **IMPROVE RCIC STARTUP TO PREVENT TURBINE OVERSPEED**

MODIFICATION: **M1-94-031**

Valve 13MOV-131 has been changed from a Flex Wedge Gate Valve to a Globe Valve in order to enhance turbine throttling during initial valve opening. The new valve will limit the turbine speed to 1000-2000 RPM for three seconds. After this time period the turbine shaft mounted hydraulic oil pump will develop sufficient oil pressure for the turbine governor valve to control the turbine acceleration using the ramp generator.

The turbine control system and valve 13MOV-131 control circuitry will be unchanged.

Fire Protection/Appendix R compliance is unaffected.

The modified steam admission system will be tested at high and low motive steam pressure conditions and under full steam flow conditions to verify system operability and Generic Letter 89-10 requirements.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-96-025, REV. 0: **INSTALL LLRT BOUNDARY FLANGE UPSTREAM OF 10MOV-34A**

MODIFICATION: **M1-96-016**

The purpose of this modification is to ensure that a leak tight boundary exists while performing a LLRT of 10MOV-38A and 10MOV-39A. Since 10MOV-34A is the present LLRT boundary and it has a past history of leaking by, pipe flanges with the capability of being blanked will be installed and become the new LLRT boundary. The Residual Heat Removal Torus Cooling System function and design will not be changed as a result of this modification. Therefore, the operation of the RHR Torus Cooling System will not be negatively impacted.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-96-039, REV. 4: INSTALLATION AND ACCEPTANCE TESTING OF THE DECAY HEAT REMOVAL SYSTEM

MODIFICATION: F1-95-121

The proposed activity is installation and acceptance testing of a non-safety related Decay Heat Removal (DHR) system. This proposed DHR system will provide an alternate means of removing heat from both the Spent Fuel Pool (SFP) and the reactor cavity, and will be independent of the existing Fuel Pool Cooling and Cleanup System and the Residual Heat Removal System. Within the limits of this SE, DHR testing will be performed without connection to the SFP and circulation of radioactive fluid.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.

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JAF-SE-96-057, REV. 0: **REPAIR OF CORE SPRAY INTERNAL PIPE**

MODIFICATION: **F1-96-063**

Recent inspection experience with operating BWR plant internal core spray piping indicated the need to perform inspection of the JAF internal core spray piping to an enhanced level. Experience also suggests that there is a significant probability that indications will be reported as a result of these inspections. In the event that indications are found which must be repaired, three contingency repairs have been selected and developed for possible use in JAF. These repairs have been designed to interface with the other JAF reactor internals and previous modifications. Analysis has shown that these repairs meet the licensing basis as documented in the FSAR. Installation plans, tooling and procedures have been developed to ensure that these contingency repairs can be installed in a safe manner. Based on analysis and thorough review of all the design and installation documentation for these repairs, it is concluded that these repairs can be safely installed at JAF.

This safety evaluation concluded that this activity does not constitute an unreviewed safety question pursuant to 10 CFR 50.59.