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 Conducted W/o Prior Approval for Aug 1992 - Jul 1993." W/
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ROCHESTER GAS AND ELECTRIC CORPORATION & E&E-57

December 3, 1993

U.S. Nuclear Regulatory Commission
Document Control Desk
ATTN: Allen R. Johnson, Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Washington, D.C. 20555

Subject: Annual Report of Facility Changes, Tests, and Experiments
Conducted Without Prior Commission Approval
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Johnson:

The subject report is hereby submitted as required by 10 CFR 50.59(b). Enclosed are the original and one copy of the report containing descriptions and summaries of the safety evaluations conducted in support of changes to the facility and procedures described in the UFSAR and special tests, from August 1992 through July 1993.

Very truly yours,

Robert C. Mecredy
Robert C. Mecredy
Vice President
Ginna Nuclear Production

RCM/lms
Enc.

xc: Mr. Allen R. Johnson (Mail Stop 14D1)
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1993 REPORT
OF
FACILITY CHANGES, TESTS AND EXPERIMENTS
CONDUCTED WITHOUT PRIOR APPROVAL
FOR AUGUST 1992 THROUGH JULY 1993

SECTION A	COMPLETED ENGINEERING WORK REQUESTS (EWR) AND TECHNICAL STAFF REQUESTS (TSR)
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R.E. GINNA NUCLEAR POWER PLANT
DOCKET NO. 50-244
ROCHESTER GAS AND ELECTRIC CORPORATION

DATED DECEMBER 3, 1993

...9312150158

SECTION A - COMPLETED ENGINEERING WORK REQUESTS (EWRs)
AND TECHNICAL STAFF REQUESTS (TSRs)

This section contains a description of modifications in the facility as described in the safety analysis report, and a summary of the safety evaluation for those changes, pursuant to the requirements of 10 CFR 50.59(b).

The basis for inclusion of an EWR or TSR in this section is closure of the completed modification package in the Document Control Department.



EWR-3881

SAFETY INJECTION PUMP RECIRCULATION

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSING THE SAFETY INJECTION (S.I.) PUMP RECIRCULATION SYSTEM MODIFICATIONS AT GINNA STATION.

REVISION OF THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES THE FOLLOWING CHANGES:

- 1) INCLUDE EVALUATION OF EXISTING FLOW TRANSMITTERS FT-924 AND FT-925.
- 2) EVALUATION OF LOOP A COLD LEG SI FLOW BASED UPON V878E THROTTLING OR REMOVAL.
- 3) S.I. RECIRCULATION SYSTEM SIZED FOR NOMINAL DESIGN FLOW.
- 4) INSTALLATION OF LOCAL Δ P GAUGES FOR FT-924 AND FT-925 FLOW VERIFICATION.
- 5) EVALUATION OF V878E REMOVAL AND THE EFFECT ON LOW TEMPERATURE OVERPRESSURE PROTECTION SYSTEM.
- 6) WITH V878E REMOVED BOTH SI PUMPS B&C MUST BE PULL-STOPPED WHEN OVERPRESSURE PROTECTION SYSTEM REQUIRED TO BE OPERABLE.

THE MODIFICATION INVOLVES THE UPGRADING OF THE S.I. PUMP RECIRCULATION SYSTEM. THE PURPOSE OF THE UPGRADE IS TO PROVIDE GREATER ASSURANCE THAT THE MINIMUM FLOW REQUIREMENTS, IN TERMS OF PUMP PROTECTION, OF EACH OF THE THREE S.I. PUMPS CAN BE ACHIEVED WHENEVER ONE OR MORE PUMPS ARE IN OPERATION. THE MODIFICATIONS SHALL BE DESIGNED SUCH THAT THE ABOVE REQUIREMENTS DO NOT ADVERSELY AFFECT THE S.I. SYSTEMS ABILITY TO DELIVER THE REQUIRED FLOW TO THE REACTOR COOLANT SYSTEM (RCS). IN ADDITION, THE INCREASED MINIMUM FLOW WILL REDUCE PUMP WEAR AND ENABLE PERIODIC PUMP TESTING TO BE PERFORMED WITH A TOTAL PUMP FLOWRATE CONSISTENT WITH THE PUMP MANUFACTURERS RECOMMENDATION FOR CONTINUOUS OPERATION.

A REVIEW HAS BEEN MADE OF THE DESIGN BASIS EVENTS TO DETERMINE THOSE RELATED TO THE PROPOSED MODIFICATION. THE EVENTS ASSOCIATED WITH THIS WORK ARE:

- A) FIRES
- B) SEISMIC EVENTS
- C) INCREASE IN REACTOR COOLANT INVENTORY
- D) DECREASE IN REACTOR COOLANT INVENTORY
- E) SPECTRUM OF STEAM SYSTEM PIPING FAILURES

THE FOLLOWING ASSESSMENT IS MADE:

THE PROBABILITY AND CONSEQUENCES OF A FIRE HAVE BEEN ADDRESSED IN SECTION 27.0 OF THE MODIFICATION DESIGN CRITERIA. AS DESCRIBED IN THE CRITERIA: FIRE BARRIERS WILL NOT BE DEGRADED, NONCOMBUSTIBLE AND HEAT RESISTANT MATERIALS WILL BE USED WHENEVER PRACTICAL, AND ELECTRIC CABLES AND SPLICES UTILIZED WILL MEET IEEE FLAME TEST REQUIREMENTS. IN ADDITION, THE MODIFICATIONS WILL BE REVIEWED AGAINST THE ASSUMPTIONS OF 10CFR50 APPENDIX R. DEVIATIONS WILL BE ANALYZED TO ASSURE CONTINUED COMPLIANCE WITH APPENDIX R. THEREFORE, THE MODIFICATIONS WILL NOT SIGNIFICANTLY ALTER THE AREA FIRE LOADING, THE SOURCES OF FIRE INITIATION, NOR THE ACCEPTABILITY OF THE CONSEQUENCES OF A FIRE.

NEW AND EXISTING SAFETY RELATED PIPING AND PIPE SUPPORTS INVOLVED IN THE MODIFICATION WILL BE EVALUATED, IN REGARD TO A SEISMIC EVENT, TO CRITERIA CONSISTENT WITH THE SEISMIC UPGRADE PROGRAM. THIS WILL ENSURE THAT MODIFICATIONS WILL BE DESIGNED SUCH THAT THE SYSTEM'S CAPABILITY TO WITHSTAND A SEISMIC EVENT IS NOT DEGRADED.

INADVERTENT ACTUATION OF THE EMERGENCY CORE COOLING SYSTEM (ECCS) COULD POTENTIALLY LEAD TO AN INCREASE IN REACTOR COOLANT INVENTORY. INADVERTENT ACTUATION OF THE EMERGENCY COOLING SYSTEM (ECCS) AT FULL OPERATING PRESSURE CANNOT RESULT IN FLOW INTO THE RCS BECAUSE THE PUMPS' SHUTOFF HEAD IS BELOW THE RCS OPERATING PRESSURE. FOR THE CASE DURING LOW PRESSURE OPERATIONS, THE MODIFICATION WILL NOT ADVERSELY AFFECT THE EXISTING ANALYSIS FOR THE MASS INPUT CASE, BECAUSE THE INJECTION FLOW TO THE RCS WOULD ACTUALLY BE DECREASED DUE TO THE MODIFICATION. THEREFORE, THE MODIFICATIONS WILL NOT ADVERSELY AFFECT THE PLANT'S RESPONSE TO THE ECCS CONTROL SYSTEM TRANSIENTS.

THE S.I. SYSTEM IS PART OF THE ECCS WHICH IS REQUIRED TO MITIGATE THE EFFECTS OF AN INCIDENT WHICH RESULTS IN A DECREASE IN REACTOR COOLANT INVENTORY. THE INTENT OF THE MODIFICATION IS TO INCREASE THE RELIABILITY OF THE SYSTEM THROUGH PROVIDING GREATER ASSURANCE THAT THE S.I. PUMPS ARE PROTECTED FROM POSSIBLE DAMAGE. ADDITIONALLY, SECTIONS 1.3 AND 15.0 OF THE DESIGN CRITERIA REQUIRES THAT THE MODIFICATIONS NOT HAVE AN ADVERSE AFFECT ON THE PERFORMANCE CHARACTERISTICS OF THE S.I. SYSTEM SUCH THAT THE DELIVERY CURVE SHOWN IN FIGURE 2 OF THE DESIGN CRITERIA CAN STILL BE ACHIEVED. A HYDRAULIC ANALYSIS WILL BE PERFORMED TO SUPPORT THIS CONCLUSION. THEREFORE, THE MODIFICATIONS WILL NOT AFFECT ANY PREVIOUS ANALYSIS FOR A DECREASE IN REACTOR COOLANT INVENTORY.

THE S.I. SYSTEM IS PART OF THE ECCS WHICH IS REQUIRED TO MITIGATE THE EFFECTS OF A BREAK IN THE STEAM SYSTEM PIPING INSIDE OR OUTSIDE CONTAINMENT. THE INTENT OF THE MODIFICATION IS TO INCREASE THE RELIABILITY OF THE SYSTEM THROUGH PROVIDING GREATER ASSURANCE THAT THE S.I. PUMPS ARE PROTECTED FROM POSSIBLE DAMAGE. ADDITIONALLY, SECTIONS 1.3 AND 15.0 OF THE DESIGN CRITERIA REQUIRES THAT THE MODIFICATIONS NOT HAVE AN ADVERSE AFFECT ON THE PERFORMANCE CHARACTERISTICS OF THE S.I. SYSTEM SUCH THAT THE

REQUIRED QUANTITY OF 12% BORIC ACID CAN BE DELIVERED TO THE RCS AND THE DELIVERY CURVE SHOWN ON FIGURE 2 OF THE DESIGN CRITERIA CAN STILL BE ACHIEVED. A HYDRAULIC ANALYSIS WILL BE PERFORMED TO SUPPORT THESE CONCLUSIONS AND A PERFORMANCE TEST WILL BE REQUIRED FOLLOWING THE MODIFICATION. THEREFORE, THE MODIFICATIONS WILL NOT AFFECT ANY PREVIOUS ANALYSIS FOR A BREAK IN THE STEAM SYSTEM PIPING.

BASED ON THE ABOVE ANALYSIS, IT HAS BEEN DETERMINED THAT:

- A) THE MARGINS OF SAFETY DURING NORMAL OPERATION AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.
- B) THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.

THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY, PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT ARE NOT INCREASED.

THE POSSIBILITY OF AN ACCIDENT OR MALFUNCTION OF A TYPE DIFFERENT FROM ANY PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT HAS NOT BEEN CREATED.

THE MARGIN OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION IS NOT REDUCED.

THEREFORE, THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION. CHANGES TO THE TECHNICAL SPECIFICATIONS ARE REQUIRED AS THE RESULT OF THE PROPOSED MODIFICATION TO MAINTAIN THE PRESENT MARGINS OF SAFETY. THE ACCEPTABLE LEVEL OF PERFORMANCE OF THE HIGH HEAD SAFETY INJECTION PUMPS LISTED IN SECTION 4.5.2.1 (REF. 2.2.2) WILL BE REVISED TO REFLECT THE HIGHER RECIRCULATION FLOWRATE. THE REQUIRED BORIC ACID STORAGE TANK VOLUME WILL BE INCREASED, SECTION 3.3 TO ACCOMMODATE THE HIGHER RECIRCULATION FLOW.

EWR 4322

STATION SERVICE TRANSFORMERS #13 AND #15 FANS

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE ADDITION OF COOLING FANS TO STATION SERVICE TRANSFORMERS #13 AND #15. AN EVALUATION OF THE LOADING OF STATION SERVICE TRANSFORMERS #13 AND #15 USING RECORDING AMMETERS REVEALS THAT THE TRANSFORMERS ARE OPERATING AT 98% TO 99% OF RATED CAPACITY ON A CONTINUOUS BASIS. THESE RECORDINGS WERE TAKEN AS A SPOT CHECK AND MAY NOT HAVE RECORDED THE MAXIMUM TRANSFORMER LOAD. IT IS THEREFORE DESIRABLE TO PROVIDE INCREASED CAPACITY TO INSURE FULL TRANSFORMER LIFE.

THIS MODIFICATION WILL INCREASE THE RATED CAPACITY OF THE TRANSFORMERS THROUGH THE ADDITION OF FANS WHICH WILL PROVIDE FORCED VENTILATION OF THE TRANSFORMERS. WHEN COMPLETED THE TRANSFORMERS RATED CAPACITY WILL BE INCREASED BY 33%. THIS WILL INSURE THAT THE TRANSFORMERS WILL OPERATE AT LESS THAN RATED CAPACITY. THE SERVICE LIFE OF THE TRANSFORMERS WILL BE INCREASED DUE TO COOLER OPERATION.

THE ORIGINAL MODIFICATION ADDS SIX FANS WITH ASSOCIATED CONTROLS TO EACH TRANSFORMER TO PROVIDE THE NECESSARY FORCED VENTILATION.

REVISION 1 TO THE DESIGN CRITERIA AND SAFETY ANALYSIS ADDS NEW THERMOSTAT CONTROLS ON BUS #13, #14, #15, AND #16.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA UFSAR AND THE EVENTS REQUIRING ANALYSIS BY THE USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE:

- 1) LOSS OF ALL AC POWER
- 2) NATURAL EVENTS/FIRE AND EARTHQUAKE

THE FIRST EVENT ANALYZED IS THE LOSS OF ALL AC POWER. THE MODIFICATION WILL INCREASE THE CAPACITY OF THE TWO TRANSFORMERS, REDUCING THE PROBABILITY OF A TRANSFORMER FAILURE. THIS MODIFICATION WILL NOT AFFECT CLASS 1E SYSTEMS SINCE THE FANS ARE INSTALLED ON AND SUPPLIED FROM NON-CLASS 1E TRANSFORMERS.

THE NEW THERMOSTAT CONTROLS WILL BE MOUNTED ON NON-SAFETY RELATED PORTIONS OF BUS #14 AND #16 AND DO NOT AFFECT 1E SYSTEMS. BUS #13 AND #15 ARE NOT SAFETY RELATED. THEREFORE, THE THERMOSTAT CONTROLS MOUNTED ON THESE BUSES DO NOT AFFECT SAFETY RELATED SYSTEMS.

NEW WIRING AND CABLE REQUIRED FOR THIS MODIFICATION COULD ADD TO THE FIRE LOADING OF THE PLANT. THEREFORE, THE DESIGN CRITERIA REQUIRES THAT ALL SUCH CABLE MEET IEEE-383-1974 FLAME TEST REQUIREMENTS. ALL WIRING AND CONTROLS WILL BE WITHIN THE TRANSFORMER ENCLOSURES. THEREFORE, THERE WILL BE NO INCREASE IN FIRE LOADING OR FIRE HAZARD FROM THIS MODIFICATION.

THE FANS WILL BE INSTALLED PER WESTINGHOUSE ELECTRIC CORPORATION SPECIFICATIONS WITHIN THE EXISTING TRANSFORMER ENCLOSURES. THE #13 AND #15 TRANSFORMERS ARE NOT REQUIRED FOR SAFE SHUTDOWN OF THE PLANT. THEREFORE, THERE IS NO POSSIBLE DAMAGE IN A SEISMIC EVENT TO CLASS 1E COMPONENTS BY THE INSTALLATION OF THIS MODIFICATION.



BASED UPON A REVIEW OF THE UFSAR AND THE STRUCTURAL RE-ANALYSIS PLAN (SRP), IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR-4375

BORIC ACID FLOW CONTROL

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODIFICATION WHICH INVOLVES THE FOLLOWING:

- A. REPLACING EXISTING CHECK VALVE 355.
- B. REPLACING TRIM (INTERNAL) OF CONTROL VALVE FCV 110A WITH NEW TRIM OF BETTER PERFORMANCE CHARACTERISTICS.
- C. ADDING AN ISOLATION VALVE 109 UP STREAM OF B.A. BLENDER.
- D. ADDING AN INTERLOCK TO ASSURE FCV 110A CLOSURE WHEN BORIC ACID TRANSFER PUMPS ARE NOT OPERATING.
- E. REPLACING SELECTED DIAPHRAGM VALVES WITHIN THE SCOPE OF THE PIPING MODIFICATION AS REQUIRED BY MAINTENANCE WITH LIKE FOR LIKE REPLACEMENT.
- F. REPLACING EXISTING HEAT TRACE THAT COVERS VALVES FCV 110A AND 355 WITH NEW HEAT TRACE WHICH DOES NOT REQUIRE THE USE OF CEMENT.
- G. ANY REPLACEMENT PIPING REQUIRED FOR THIS MODIFICATION SHALL BE SCHEDULE 40S.

REVISION 2 OF THE DESIGN CRITERIA/SAFETY ANALYSIS REVISES THE HYDROSTATIC TEST PRESSURES IN COMPLIANCE WITH SECTION XI OF THE ASME CODE.

THE PURPOSE OF THIS MODIFICATION IS TO REDUCE BACK-LEAKAGE FROM THE REACTOR WATER MAKEUP SYSTEM TO THE BORIC ACID STORAGE TANKS.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION FSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE:

- 1) CHEMICAL AND VOLUME CONTROL SYSTEM MALFUNCTION THAT RESULTS IN A DECREASE IN THE BORON CONCENTRATION IN THE REACTOR COOLANT.
- 2) DECREASE IN REACTOR COOLANT INVENTORY.
- 3) DECREASE IN HEAT REMOVAL BY SECONDARY SYSTEM.
- 4) FIRE EVENT
- 5) SEISMIC EVENT

THE POTENTIAL TO CAUSE A MALFUNCTION OF THE CHEMICAL AND VOLUME CONTROL SYSTEM THAT COULD RESULT IN A DILUTION OF BORON CONCENTRATION IN THE REACTOR COOLANT SYSTEM IS UNCHANGED. THE VALVES CONNECT THE CHEMICAL VOLUME CONTROL SYSTEM WITH WATER CONTAINING A HIGHER CONCENTRATION OF BORIC ACID. FAILURE IN THE OPEN POSITION COULD INCREASE BUT NOT DECREASE BORIC ACID CONCENTRATION. FAILURE IN THE CLOSED POSITION WOULD NOT IMPACT THE BORIC ACID CONCENTRATION OF THE CHEMICAL AND VOLUME CONTROL SYSTEM.

THE POTENTIAL TO DECREASE THE REACTOR COOLANT INVENTORY BY LEAKAGE OF MAKEUP WATER BACK THROUGH THE VALVE TO THE BORIC ACID STORAGE TANKS IS REDUCED. THE REPLACEMENT VALVES SHALL BE TIGHTER SEALING. THE INTERLOCK WHICH WILL KEEP FCV 110A CLOSED EXCEPT WHEN A BORIC ACID TRANSFER PUMP IS OPERATING INCREASES THE CONTROL OF WATER LEAVING THE CVCS SYSTEM.

THE CAPABILITY TO BORATE THE RCS BY DRAWING BORIC ACID AT HIGHER CONCENTRATION FROM THE BAST IN RESPONSE TO A REDUCTION OF SECONDARY SYSTEM HEAT REMOVAL OF OTHER CAUSE IS NOT REDUCED BY THIS MODIFICATION. THE "FAIL OPEN" FAILURE POSITION OF THE FLOW CONTROL VALVE HAS NOT BEEN CHANGED. THE VALVE CV SHALL BE SELECTED SUCH THAT THE FLOW WILL NOT BE REDUCED FORMATS CURRENT CAPACITY. THE ALTERNATE BORATION PATHS ARE UNAFFECTED BY THIS CHANGE.

THE DESIGN CRITERIA REQUIRES THE INSTALLATION OF ELECTRICAL INTERLOCKS BETWEEN THE BORIC ACID TRANSFER PUMPS AND FCV-110A SUCH THAT THE VALVE WILL CLOSE OR REMAIN CLOSED WHEN BOTH PUMPS ARE OFF. A NORMALLY CLOSED AUXILIARY CONTACT (B SWITCH) FROM EACH BORIC ACID TRANSFER PUMP CIRCUIT BREAKER WILL BE CONNECTED IN SERIES AND ADDED TO THE EXISTING FCV-110A CONTROL LOGIC TO ACHIEVE THE DESIRED INTERLOCK. IF ONE PUMP IS STARTED AND ITS AUXILIARY CONTACT FAILS TO OPEN (SINGLE FAILURE), BORATION CAN STILL BE ACHIEVED BY STARTING THE OTHER TRANSFER PUMP, OR THROUGH THE ALTERNATE BORATION PATHS.

THE RESPONSE OF THE CVCS SYSTEM AND THE BORIC ACID SYSTEM TO THE FIRE EVENT IS UNCHANGED. THERE ARE ESSENTIALLY NO COMBUSTIBLES INVOLVED IN THIS MODIFICATION WITH THE EXCEPTION OF THE CABLE INSULATION. THE REQUIREMENTS OF THE DESIGN CRITERIA SECTION 27 RESULT IN THE POTENTIAL FOR A FIRE NOT BEING INCREASED. THUS, ADVERSE CONSEQUENCES OF A FIRE HAVE NOT BEEN CHANGED.

THE VALVES BEING INSTALLED AS PART OF THIS MODIFICATION ARE SEISMICALLY QUALIFIED AND DESIGNED TO ASME CODE SECTION III CLASS 3 STANDARDS. THE PIPING SHALL BE ANALYZED AND SUPPORTS ADDED OR MODIFIED AS REQUIRED BY EWR 2512, THE RG&E SEISMIC UPGRADE PROGRAM. AS SUCH, THE RESPONSE OF THE BORIC ACID SYSTEM OR CVCS SYSTEM TO A SEISMIC EVENT IS UNCHANGED.

THEREFORE, IT HAS BEEN DETERMINED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN DETERMINED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS WILL NOT BE AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR-4531

METEOROLOGICAL TOWER UPGRADE

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE METEOROLOGICAL TOWER UPGRADE.

THE EXISTING INSTRUMENTATION ON THE 250' METEOROLOGICAL TOWER (MET TOWER) ALONG WITH ASSOCIATED SIGNAL CONDITIONING AND RECORDING EQUIPMENT IS APPROACHING THE END OF ITS USEFUL LIFE. THE INSTRUMENTATION LISTED BELOW WILL BE REPLACED WITH, AS A MINIMUM, COMPARABLE EQUIPMENT:

250' LEVEL: 1 WIND SPEED, 1 WIND DIRECTION
 2 TEMPERATURE SENSORS (RTD TYPE).

150' LEVEL: 2 WIND SPEEDS, 2 WIND DIRECTIONS,
 2 TEMPERATURE SENSORS (RTD TYPE).

33' LEVEL: 2 WIND SPEEDS, 2 WIND DIRECTIONS,
 2 TEMPERATURE SENSORS (RTD TYPE).
 1 DEWCELL

AT SHANTY: 1 PRECIPITATION GAUGE.
 (TIPPING BUCKET TYPE).

ALL SIGNAL CONDITIONERS AND RECORDERS ASSOCIATED WITH THE ABOVE SENSORS WILL ALSO BE REPLACED.

IN ADDITION TO REPLACEMENT OF THE ABOVE SENSORS, SIGNAL CONDITIONERS AND RECORDERS, COMMUNICATION OF SIGNALS TO THE PLANT PPCS AND CONTROL ROOM WILL BE UPGRADED TO DIGITAL TRANSMISSION.

THE ICE STORM OF MARCH 1991 SHOWED THAT THE OFF-SITE AC POWER SUPPLY TO THE MET. TOWER WAS VULNERABLE TO OUTSIDE ENVIRONMENTAL CONDITIONS. A STAND ALONE, AUTOMATIC START, AUTOMATIC THROWOVER POWER SUPPLY WILL BE INSTALLED TO RECTIFY THIS SITUATION.

SURGE SUPPRESSION WILL BE PROVIDED FOR ALL SENSOR AND COMMUNICATION CABLES.



A REVIEW HAS BEEN MADE OF THE DESIGN BASIS EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS AS DESCRIBED IN USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE:

- A) FIRES
- B) SEISMIC EVENTS
- C) RADIOLOGICAL RELEASE FROM A SUBSYSTEM OR COMPONENT

THE IMPACT OF THIS MODIFICATION WITH RESPECT TO FIRE HAS BEEN ADDRESSED IN SECTION 28 OF THE DESIGN CRITERIA (REF. 2.1). AS DESCRIBED IN THIS SECTION, EXISTING CABLE WITHIN THE PLANT WILL BE RE-USED. THESE CABLES WERE ALREADY IN PLACE AND IN USE WHEN THE ORIGINAL APPENDIX R REVIEW WAS PERFORMED AND WERE ACCOUNTED FOR IN THAT DOCUMENT. THEREFORE, THE MODIFICATION WILL NOT ALTER THE AREA FIRE LOADING, THE SOURCES OF FIRE INITIATION, NOR THE ACCEPTABILITY OF THE EFFECTS OF A FIRE.

THE NEW GENERATOR AND ASSOCIATED FUEL SUPPLY WILL BE LOCATED OUTSIDE THE PLANT AND WILL, THEREFORE, NOT IMPACT PLANT FIRE LOADING.

METEOROLOGICAL INSTRUMENTATION IS DESIGNATED NON-SEISMIC CATEGORY 1 (REFERENCE 2.1, SECTIONS 1.5, 3.0, AND 2.6). IN ADDITION, THE MET TOWER IS LOCATED A LARGE DISTANCE FROM THE PLANT ITSELF. NEW RECORDER AND DISPLAYS IN INCORE RACK # 5 WILL BE SEISMICALLY MOUNTED. THEREFORE, THIS MODIFICATION WILL NOT AFFECT THE ABILITY OF ANY SAFETY-RELATED PLANT SYSTEM TO PERFORM ITS INTENDED FUNCTION DURING OR FOLLOWING A SEISMIC EVENT.

THE USE OF ENHANCED DIGITAL COMMUNICATIONS FOR SIGNAL TRANSMISSION HAS NO ADVERSE EFFECTS ON THE METEOROLOGICAL MONITORING SYSTEM. IN FACT, SYSTEM ACCURACY AND RELIABILITY WILL BE ENHANCED.

INSTALLATION OF A BACK-UP AC POWER SUPPLY AT THE TOWER SITE WILL HAVE NO ADVERSE AFFECT ON PLANT SYSTEMS. THIS SUPPLY IS ISOLATED FROM ALL PLANT POWER SUPPLIES (REF 2.1, SECTIONS 5.3 AND 17.1.1). INSTALLATION OF THE BACK-UP POWER SUPPLY WILL ENHANCE THE METEOROLOGICAL MONITORING SYSTEM RELIABILITY.

THE METEOROLOGICAL MONITORING SYSTEM IS REQUIRED TO ASSIST IN CALCULATING RELEASE PLUMES AND DOSE ASSESSMENT DURING AND FOLLOWING RADIOLOGICAL RELEASE FROM A SUBSYSTEM OR COMPONENT. THE PROPOSED MODIFICATION WILL HAVE NO ADVERSE EFFECTS ON THE SYSTEM. IN FACT, ACCURACY AND RELIABILITY WILL BE ENHANCED.

BASED ON THE ABOVE ANALYSIS, IT HAS BEEN DETERMINED THAT:

- A) THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED.



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- B) THE ADEQUACY OF STRUCTURES, SYSTEMS AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND FOR THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED.

THE PROPOSED MODIFICATION WILL NOT INCREASE THE PROBABILITY OF OCCURRENCE OF AN ACCIDENT PREVIOUSLY EVALUATED IN THE UFSAR. THE MODIFICATION ONLY ADDRESSES THE REPLACEMENT OF OBSOLETE EQUIPMENT WITH MODERN, HIGH RELIABILITY COMPONENTS. THERE IS NO CHANGE IN SYSTEM FUNCTION, NOR A REDUCTION IN THE SYSTEM RELIABILITY. THE METEOROLOGICAL MONITORING SYSTEM WILL REMAIN WITHIN ITS DESIGN LIMITS.

THE PROPOSED MODIFICATION WILL NOT INCREASE THE CONSEQUENCES OF AN ACCIDENT PREVIOUSLY EVALUATED IN THE UFSAR. THE MODIFICATION DOES NOT IMPACT OR INCREASE THE CALCULATED RADIOLOGICAL DOSE TO THE GENERAL PUBLIC FOR ANY EVENT EVALUATED IN THE UFSAR. IN FACT, THE MODIFICATION WILL ENHANCE THE ABILITY OF THE SYSTEM TO ASSIST IN RELEASE PLUME AND DOES ASSESSMENT CALCULATION.

THE PROPOSED MODIFICATION WILL NOT INCREASE THE PROBABILITY OF OCCURRENCE OF A MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE UFSAR. THE MODIFICATION DOES NOT DEGRADE THE PERFORMANCE OF THE METEOROLOGICAL MONITORING SYSTEM. IN FACT, THE SYSTEM RELIABILITY AND ACCURACY ARE ENHANCED.

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THE PROPOSED MODIFICATION WILL NOT INCREASE THE CONSEQUENCES OF A MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE UFSAR. THE MODIFICATION DOES NOT IMPACT OR INCREASE THE CALCULATED RADIOLOGICAL DOSE TO THE GENERAL PUBLIC FOR ANY EVENT EVALUATED IN THE UFSAR. IN FACT, THE METEOROLOGICAL MONITORING SYSTEM RELIABILITY AND ACCURACY ARE ENHANCED.

THE PROPOSED MODIFICATION WILL NOT CREATE THE POSSIBILITY OF AN ACCIDENT OF A DIFFERENT TYPE THAN ANY PREVIOUSLY EVALUATED IN THE UFSAR. THE MODIFICATION ADDRESSES THE REPLACEMENT OF OBSOLETE EQUIPMENT WITH MODERN, HIGH RELIABILITY COMPONENTS. THERE ARE NO ADVERSE AFFECTS UPON OTHER SYSTEMS, NOR ANY NEW FAILURE MODES INDUCED.

THE PROPOSED MODIFICATION WILL NOT CREATE THE POSSIBILITY OF A DIFFERENT TYPE OF MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY THAN ANY PREVIOUSLY EVALUATED IN THE UFSAR. THE SYSTEM DOES NOT DEGRADE THE METEOROLOGICAL MONITORING SYSTEM. IN FACT, SYSTEM RELIABILITY AND ACCURACY ARE ENHANCED.

THE PROPOSED MODIFICATION WILL NOT REDUCE ANY MARGIN OF SAFETY AS DEFINED IN THE BASIS OF ANY TECHNICAL SPECIFICATION. THE FUNCTIONS AND CHARACTERISTICS OF THE METEOROLOGICAL MONITORING SYSTEM REMAIN UNCHANGED.

IT HAS BEEN DETERMINED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR 4538

1B DIESEL GENERATOR UPGRADE

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF THE EXISTING REVERSE POWER RELAYS (32X) ON BOTH THE 1A AND 1B DIESEL GENERATOR EXCITER CABINET AND CONTROL PANELS.

THE PRIMARY REASON FOR REPLACING EXISTING AUXILIARY RELAYS (32X) IS BECAUSE THE INDICATING CONTACT SWITCH (ICS) ON IT'S ASSOCIATED PROTECTIVE RELAY DOES NOT OPERATE. THE INDICATING CONTACT SWITCH IS FOR INDICATING TARGETS AND PROVIDE INDICATION ONLY. AS PRESENTLY DESIGNED, THESE TARGETS CANNOT OPERATE AS INTENDED BECAUSE OF THE HIGH RELAY IMPEDANCE OF THE AUXILIARY RELAY, WHICH IS CONNECTED IN SERIES WITH IT'S ASSOCIATED ICS COIL.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY NRC REGULATORY GUIDE 1.70. THE EVENTS RELATING TO THIS MODIFICATION ARE:

- (1) LOSS OF ON SITE AC POWER.
- (2) NATURAL EVENT, FIRE, AND EARTHQUAKE.

THE FIRST EVENT THAT HAS BEEN ANALYZED FOR THIS MODIFICATION ARE THE CONSEQUENCES OF A LOSS OF ON SITE AC POWER AND FOR A DEGRADED AC POWER SOURCE. THE 1A AND 1B DIESELS PROVIDE REDUNDANT PROTECTION AGAINST LOSS OF AC POWER TO STATION AUXILIARIES.

INSTALLATION OF THE NEW QUALIFIED REVERSE POWER AUXILIARY RELAY (32X) WILL NOT EFFECT THE OPERATION OF THE DIESEL GENERATORS OR THE DIESEL GENERATOR PROTECTIVE RELAY SCHEMES. HOWEVER, THEY WILL PERMIT THE OPERATION OF THE PROTECTIVE RELAY TARGETS, THAT ARE CURRENTLY INOPERABLE. RELAY TARGETS PROVIDE A VISUAL INDICATION ON EACH PROTECTIVE RELAY, THEREFORE, IF A FAULT CONDITION EXISTS, THE ASSOCIATED RELAY TARGET WILL OPERATE.

THE LAST EVENT TO BE EVALUATED IS THE EFFECT OF A NATURAL EVENT, FIRE, AND EARTHQUAKE ON THE AVAILABILITY OF THE EXISTING SYSTEMS.

THE IMPACT OF THIS MODIFICATION ON MAJOR AND MINOR FIRES HAS BEEN ANALYZED AND IT HAS BEEN DETERMINED THAT THE PROPOSED REPLACEMENT RELAYS WILL NOT INCREASE THE POSSIBILITY OF A FIRE, BECAUSE THEY ARE A REPLACEMENT.



ADDITIONAL WIRING WILL BE ADDED IN THIS MODIFICATION WHICH COULD ADD TO THE FIRE LOADING OF THE PLANT. THEREFORE, ALL CABLE SHALL MEET THE IEEE-383-1984 FLAME TEST REQUIREMENTS. THEREFORE, THERE WILL BE NO SIGNIFICANT INCREASE IN THE FIRE LOADING DUE TO THIS MODIFICATION.

ALL NEW AUXILIARY RELAYS ARE SEISMICALLY QUALIFIED TO ASSURE AVAILABILITY DURING AND FOLLOWING AN SSE.

THEREFORE, BASED UPON THE ABOVE ANALYSIS, IT HAS BEEN DETERMINED THAT:

- (A) THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED AND
- (B) THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDE FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.

THE PROBABILITY OF OCCURRENCE AND THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT ARE NOT INCREASED.

THE POSSIBILITY OF AN ACCIDENT OR MALFUNCTION OF A TYPE DIFFERENT FROM ANY PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT HAS NOT BEEN CREATED.

THE MARGIN OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION IS NOT REDUCED.

EWR-4668

FIRE PROTECTION SYSTEM FIRE RELAY PANEL

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES A MODIFICATION TO THE FIRE RELAY PANEL. UPON INSTALLATION OF THE "SUPERWALL" (EWR 1836) ON THE TURBINE BUILDING NORTH WALL, THE VESTIBULE WAS BUILT AT PRESSURE DOOR S43 DUE TO FIRE PROTECTION CONCERNS. THE EXISTING FRP LOCATION WAS INTENDED TO BE A TEMPORARY MODIFICATION AND AT A LATER TIME RELOCATE THE FIRE RELAY PANEL (FRP) FLUSH AGAINST THE BLOCK (NORTH) WALL OF THE RELAY ROOM.

CABLES ENTERING THE EXISTING FIRE RELAY PANEL (FRP) FROM CABLE TRAY 197 IMMEDIATELY EAST OF THE RELAY ROOM DOOR S43 ARE SUPPORTED BY ROPE IN A DROPPED CABLE CONFIGURATION. ALL CABLES NOW ENTERING THE FRP SHALL BE ROUTED AND TERMINATED TO PZ-42. FROM PZ-42 NEW CABLES SHALL THEN BE ROUTED TO A NEW FRP TO BE INSTALLED AS PART OF THIS EWR.

THIS EWR WILL REMOVE THE TEMPORARY MODIFICATION AS A RESULT EWR 1836 AND ELIMINATE THE EXISTING DROPPED CABLE CONFIGURATION.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA UFSAR AND THE EVENTS REQUIRING ANALYSIS BY THE USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE:

- 1) SEISMIC EVENTS
- 2) FIRES
- 3) INADVERTENT SUPPRESSION SYSTEM ACTUATION

THIS MODIFICATION DOES NOT INSTALL ANY NEW OR MODIFY ANY EXISTING EQUIPMENT NECESSARY FOR THE SAFE SHUTDOWN OF THE PLANT. ANY COMPONENTS OR EQUIPMENT THAT CAN POTENTIALLY EFFECT SAFETY RELATED EQUIPMENT SHALL BE INSTALLED SEISMICALLY. THE NEW FIRE RELAY PANEL WILL BE LOCATED IN AN AREA THAT CONTAINS SAFETY RELATED EQUIPMENT. THEREFORE, THE NEW FIRE RELAY PANEL SHALL BE INSTALLED SEISMICALLY.

THIS MODIFICATION INVOLVES THE INSTALLATION OF NEW EQUIPMENT IN A GINNA FIRE AREA. AN APPENDIX R EVALUATION IS, THEREFORE, REQUIRED.

BASED ON CAR 1869 RESPONSE, GINNA IS ADEQUATELY DESIGNED SO THAT AN INADVERTENT FIRE SUPPRESSION SYSTEM ACTIVATION/DELUGE WILL NOT DETRIMENTALLY AFFECT SAFE SHUTDOWN. CAR 1869 RESPONSE ALSO DOCUMENTS THAT:

- 1) THE POSSIBILITY OF AN INADVERTENT ACTUATION WAS ACCEPTABLY LOW.
- 2) GINNA CAN BE SAFELY SHUTDOWN IN THE EVENT OF AN ACTUATION.
- 3) GINNA IS ADEQUATELY PROTECTED AGAINST FLOODING CAUSED BY AN INADVERTENT ACTUATION.
- 4) GINNA IS ADEQUATELY DESIGNED FOR THIS SCENARIO. AN ACTUAL ACTUATION WOULD MOST PROBABLY RENDER SOME SAFETY RELATED EQUIPMENT INOPERABLE.

THE INSTALLATION OF THE NEW FIRE RELAY PANEL RELOCATES THE EXISTING CONTROL FUNCTIONS TO THE NEW PANEL AND DOES NOT CHANGE THOSE CONTROL FUNCTIONS IN ANY WAY. THEREFORE, NO NEW FAILURE MODES EXIST.

ITEMS ABOVE ENSURE THAT THIS MODIFICATION DOES NOT DEGRADE THE CAPABILITY OF ANY SAFETY SYSTEM TO PERFORM ITS FUNCTION. THE ASSUMPTIONS AND CONCLUSIONS OF EXISTING ANALYSES ARE UNCHANGED. NO NEW TYPES OF EVENTS ARE POSTULATED.

THEREFORE, IT HAS BEEN DETERMINED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION HAVE NOT BEEN AFFECTED. IT HAS ALSO BEEN DETERMINED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED.

BASED UPON A REVIEW OF THE UFSAR AND THE REQUIREMENTS OF GINNA STATION TECHNICAL SPECIFICATIONS, IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR-4760

MOV-856 CONTROL POWER

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES MODIFICATIONS TO MOV-856 CONTROL POWER. AN EVALUATION OF THE FUNCTION OF MOV-856 DURING VARIOUS PLANT OPERATIONS REQUIRE THE VALVE TO BE OPERATED IN TWO DIFFERENT MODES: CLOSED OR LOCKED OPEN. DURING NORMAL OPERATION THE VALVE IS OPEN WITH THE 480 VAC SUPPLY BREAKER LOCKED OPEN. WHEN THE PLANT IS SHUTDOWN AND RHR SYSTEM IS IN USE OR A LOSS OF COOLANT ACCIDENT HAS OCCURRED, MOV-856 MUST BE CLOSED. TO CLOSE MOV-856, AN OPERATOR MUST ENTER A CONTROLLED AREA TO UNLOCK AND CLOSED THE 480 VAC SUPPLY BREAKER. THEREFORE, REMOTE OPERATION OF THIS VALVE WILL REDUCE THE POTENTIAL RADIATION DOSE TO PERSONNEL AND HELP OBTAIN THE DESIRED GOALS SET FORTH BY REGULATORY GUIDE 8.8 POSITION C.2.c.3.

THE MODIFICATION WILL INSTALL A KEY SWITCH ON THE MCB IN THE CONTROL ROOM FOR REMOTE CONTROL OF MOV-856'S 125 VDC CONTROL POWER, ELIMINATING THE REQUIREMENT FOR LOCAL OPERATION.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY NRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE:

- 1) SEISMIC
- 2) LOSS OF COOLANT ACCIDENT (LOCA)
- 3) FIRE
- 4) SPURIOUS VALVE OPERATION
- 5) LOSS OF POWER
- 6) EVENTS INITIATING A SAFETY INJECTION SIGNAL

THE FIRST EVENT ANALYZED IS THE EFFECT OF A SEISMIC EVENT ON EQUIPMENT INSTALLED BY THIS MODIFICATION. THE KEY SWITCH WILL BE QUALIFIED TO MEET THE STANDARDS SET FORTH BY IEEE STD. 344-1975 AND THE CABLE WILL BE INSTALLED PER CLASS 1E REQUIREMENTS. THEREFORE, A FAILURE OR MALFUNCTION OF THE SWITCH OR CIRCUITRY DUE TO A SEISMIC EVENT IS MINIMIZED.

THE SECOND EVENT ANALYZED IS A SMALL OR LARGE BREAK LOCA. THE NEW CONFIGURATION WILL ENSURE THE CORRECT VALVE POSITION DURING NORMAL POWER OPERATION AND ENABLE VALVE CONTROL DURING OR AFTER A LOCA FROM THE CONTROL ROOM PROVIDED THAT 480 VAC POWER TO THE VALVE MOTOR IS INTACT. (SEE 3.1.5 FOR LOSS OF POWER EVENT.)

POST LOCA EMERGENCY PROCEDURES REQUIRE THAT WHEN THE RWST LEVEL REACHES 28%, RHR PUMPS ARE STOPPED AND VALVES BE REALIGNED SO THAT THE SUCTION SOURCE OF WATER FOR THE RHR PUMPS IS SWITCHED FROM THE RWST (BY CLOSING MOV-856) TO THE CONTAINMENT SUMP, "B" FOR THEIR NORMAL SOURCE OF WATER. THIS SWITCHOVER PROCEDURE, WHICH REQUIRES MOV-856 TO BE CLOSED, IS INITIATED TO ISOLATE THE RWST FROM ANY POTENTIALLY HIGH RADIOACTIVE SOURCE OF WATER IN THE CONTAINMENT SUMP "B" RELEASED FROM THE RCS FOLLOWING A LOCA.

PRESENTLY CLOSING MOV-856 REQUIRES ENTRY INTO THE AUXILIARY BUILDING TO UNLOCK AND CLOSE THE BREAKER TO RESTORE THE AC POWER TO THE MOTOR. THIS ACTION REQUIRES MORE TIME AND PERSONNEL THAN IF THE VALVE COULD BE COMPLETELY MANIPULATED FROM THE CONTROL ROOM.

PROCEDURES REQUIRE THE RHR PUMP BE RESTARTED FOLLOWING VALVE REALIGNMENT BUT NOT BEFORE RWST LEVEL HAS FURTHER DECREASED TO 15% TO ENSURE ADEQUATE RHR PUMP NPSH. IN THE LIMITING CASE OF A LARGE BREAK LOCA, AN ESTIMATED TIME FOR THE RWST LEVEL TO DECREASE FROM 28% TO 15% COULD BE ON THE ORDER OF 10 MINUTES. THIS WOULD DEPEND ON THE RCS AND CONTAINMENT PRESSURE AND THE NUMBER OF EMERGENCY CORE COOLING SYSTEM (ECCS) PUMPS IN OPERATION. CONSEQUENTLY, TIME IS LIMITED FOR PERSONNEL TO RESTORE POWER TO THE VALVE WITH THE PRESENT VALVE CONFIGURATION. THE ABILITY TO OPERATE THE VALVE FROM THE CONTROL ROOM WOULD PROVIDE ADDITIONAL TIME FOR OPERATORS DURING THE SWITCHOVER TO CONTROL PLANT CONDITIONS. THEREFORE, THIS MODIFICATION WILL SIGNIFICANTLY INCREASE THE OPERABILITY OF THE PLANT AT A TIME WHEN CORE COOLING IS A CRITICAL.

IN ADDITION, THE RISK OF RADIOLOGICAL HAZARDS TO PERSONNEL DURING SUCH AN EVOLUTION IS POTENTIALLY HIGH. BY ELIMINATING THE NEED TO ENTER A CONTROLLED AREA TO RESTORE POWER TO MOV-856 IT WILL REDUCE THE RADIOLOGICAL RISK TO PERSONNEL.

THE THIRD EVENT ANALYZED IS THE EFFECT OF A FIRE ON THE EQUIPMENT INSTALLED BY THIS MODIFICATION OR TO THE PLANT AS A RESULT OF THIS MODIFICATION. THE CONTROL WIRE USED WILL BE REQUIRED TO MEET THE REQUIREMENTS OF IEEE STD. 383-1974, VERTICAL FLAME TEST REQUIREMENTS. THE ADDITIONAL FIRE LOADING IS INSIGNIFICANT. THUS, THE LIKELIHOOD OR SEVERITY, OF A FIRE WILL NOT BE INCREASED.

THE CONSEQUENCES OF A FIRE DUE TO THIS MODIFICATION ARE NOT INCREASED BECAUSE THE ADDITIONAL CIRCUITRY WILL NOT BE INSTALLED IN ANY PLANT AREAS WHICH DO NOT ALREADY CONTAIN MOV-856 POWER AND CONTROL CIRCUITRY. HENCE, THE APPENDIX R ANALYSIS AND SAFE SHUTDOWN CAPABILITY FOLLOWING AN UNMITIGATED FIRE REMAIN UNCHANGED.

THE FOURTH EVENT ANALYZED IS THE SPURIOUS OPERATION OF MOV-856 DUE TO SHORTED CONTACTS IN THE CONTROL OR KEY SWITCHES, BRIDGING OF TERMINALS AND/OR CABLE SHORTING CAUSED BY FIRE OR PENETRATION. THIS MODIFICATION WILL REMOVE THE DC CONTROL POWER WITH A KEY SWITCH AT THE MAIN CONTROL BOARD (MCB). BY UTILIZING THE EXISTING AND ADDITIONAL CABLES FROM THE MOTOR CONTROL CENTER TO THE MCB, THE POSITIVE FEEDS TO BOTH THE OPEN AND CLOSE COILS OF THE VALVE MOTOR CONTACTOR AND THEIR MUTUAL NEGATIVE RETURN WILL BE OPENED/CLOSED BY THE KEY SWITCH. BY PROVIDING A SEPARATE CABLE FROM THE MOTOR CONTROL CENTER TO THE KEY SWITCH AND ISOLATING ALL SOURCES OF CONTROL POWER TO THE VALVE ACTUATOR, THIS MODIFICATION WOULD REQUIRE A HIGHLY IMPROBABLE COMBINATION OF TWO OR MORE FAULTS TO OCCUR TO CAUSE SPURIOUS OPERATION OF THE VALVE. THUS, A SINGLE FAILURE WOULD NOT CAUSE THE VALVE TO CLOSE.

PROVISIONS FOR USE OF KEY OPERATED SWITCHES WHICH REMOVE DC CONTROL POWER HAVE BEEN APPLIED TO OTHER SAFETY RELATED VALVES AT R. E. GINNA. MOV-896A AND B, THE RWST OUTLET VALVES TO HIGH HEAD SAFETY INJECTION PUMPS AND CONTAINMENT SPRAY PUMPS HAVE THE SAME FUNCTIONAL REQUIREMENTS AS MOV-856. THE MOV-896A AND B VALVES WERE PROVIDED WITH KEY SWITCHES IN 1975 AND NRC APPROVAL WAS PROVIDED IN THE NRC SER TO AM. 7 OF THE R. E. GINNA PROVISIONAL OPERATING LICENSE, DATED MAY 14, 1975. THE NRC STATED (PARA. I.B. OF REF. 2.10) THAT ALTHOUGH THE MODIFICATION DOES NOT ELIMINATE ALL POSSIBLE CAUSES FOR SPURIOUS VALVE ACTUATION, IT DOES SIGNIFICANTLY REDUCE THE POTENTIAL (SINGLE FAILURE) PROBLEM.

OPEN CIRCUIT AND SHORT CIRCUIT FAILURE MODES WILL CAUSE THE CONTROL FUSES TO BLOW AND THE VALVE TO FAIL AS IS. MANIPULATION OF THE VALVE IN THIS CASE WOULD REQUIRE MANUAL OPERATION OF THE VALVE, WHICH EXISTS IN THE PRESENT CONFIGURATION.

THE FIFTH EVENT ANALYZED IS THE LOSS OF POWER TO THE VALVE. A LOSS OF POWER COULD BE THE SINGLE FAILURE ASSUMED TO OCCUR CONCURRENTLY WITH OR FOLLOWING A LOCA. THESE EFFECTS WILL NOT BE INCREASED BY THIS MODIFICATION. THE POWER SOURCES TO THE VALVE ARE NOT CHANGED. THE KEY OPERATED SWITCH PROCEDURES A NEGLIGIBLE INCREASE IN THE POSSIBILITY OF A FAILURE TO OPERATE THE CONTROL CIRCUIT.

A LOSS OF POWER TO THE VALVE OR THE CLASS 1E DC VITAL BATTERY "A" WOULD CAUSE MOV-856 TO FAIL AS IS. THUS, THE EMERGENCY CORE COOLING FUNCTION PROVIDED BY THE RHR PUMPS THROUGHOUT THE INJECTION PHASE WOULD NOT BE AFFECTED. IF A SUSTAINED POWER FAILURE OCCURRED WHEN IT BECAME NECESSARY TO ISOLATE THE RWST FROM THE CONTAINMENT SUMP "B", MOV-856 MUST BE MANUALLY CLOSED WITH THE VALVE HANDWHEEL BEFORE THE RHR PUMPS CAN BE RESTARTED. THIS WOULD REQUIRE AN ENTRY INTO THE AUXILIARY BUILDING. THIS REQUIREMENT EXISTS UNDER THE PRESENT CONFIGURATION.



THE SIXTH EVENT ANALYZED IS AN EVENT CAUSING A SAFETY INJECTION SIGNAL. SUCH EVENTS WOULD CAUSE AUTOMATIC STARTING OF THE RHR PUMPS WITH THE SOURCE OF WATER PROVIDED BY THE RWST THROUGH MOV-856. DEPENDING ON THE RCS PRESSURE AT THE TIME OF RHR PUMP INITIATION, FLOW THROUGH MOV-856 WILL VARY. THIS EVENT IS ENVELOPED BY THE EVENTS CONSIDERED IN 3.1.2, 3.1.4, AND 3.1.5. FOR AN INADVERTENT SI ACTUATION, THE RCS PRESSURE WOULD EXCEED THE MAXIMUM DEVELOPED PRESSURE OF THE RHR PUMPS AND ONLY RECIRCULATION FLOW WOULD EXIST IN THE RHRS (I.E. NO INJECTION). HENCE, THERE WOULD BE NO FLOW THROUGH THE RWST DROP LINE THROUGH MOV-856 IN THIS CASE.

BASED UPON A REVIEW OF THE UFSAR AND THE REQUIREMENTS OF GINNA STATION TECHNICAL SPECIFICATIONS, IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR-4968

TRANSFER DC NON-1E LOADS

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES REDUCING VITAL BATTERY LOADS. A VITAL BATTERY SIZING DESIGN ANALYSIS HAS BEEN COMPLETED AND IT WAS CONCLUDED THAT THE VITAL BATTERIES ARE APPROPRIATELY SIZED. HOWEVER, A PLAN TO REDUCE THE D.C. LOADS BY TRANSFERRING NON-CLASS 1E LOADS FROM THE VITAL BATTERIES TO THE TSC BATTERY SHOULD BE ESTABLISHED TO MAINTAIN THE DESIGN LIFE OF THE BATTERIES. THIS MODIFICATION WILL INVOLVE TRANSFERRING THE TURBINE DC LUBE OIL PUMP MOTOR LOAD FROM THE "A" BATTERY, THE AIR SIDE SEAL OIL BACKUP PUMP AND THE TWO CIRCULATING WATER DISCHARGE MOTOR OPERATED VALVES (3150 AND 3151) FROM THE "B" BATTERY TO THE TSC BATTERY.

A REVIEW HAS BEEN MADE FOR ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE: (1) LOSS OF OFFSITE AC POWER, (2) FIRE EVENT, AND (3) SEISMIC EVENT.

LOSS OF OFFSITE AC POWER

THE POTENTIAL TO CAUSE A MALFUNCTION OR LOSS OF OFFSITE AC POWER IS UNCHANGED BY THIS MODIFICATION. THE OPERATION OF THE TURBINE DC LUBE OIL PUMP, THE AIR SIDE SEAL OIL BACKUP PUMP AND THE CIRCULATING WATER DISCHARGE VALVES IS UNCHANGED BY THIS MODIFICATION.



CURRENTLY, THE VITAL BATTERIES ARE CAPABLE OF MEETING THE REQUIREMENTS ESTABLISHED IN 10CFR50.63 "STATION BLACKOUT". HOWEVER, THE "B" BATTERY IS LIMITED IN DESIGN LIFE DUE TO LOADING, THEREFORE, IT IS THE INTENT OF THIS MODIFICATION TO INCREASE THE DESIGN LIFE OF BOTH THE "A" AND "B" BATTERIES BY REMOVING NON-1E LOADS. THE REDUCTION IN LOADING OF THE VITAL BATTERIES WILL ALSO ENHANCE THEIR ABILITY TO PROVIDE DC POWER FOR A "STATION BLACKOUT" OF A DURATION LONGER THAN 4 HOURS.

FIRES

THE RESPONSE TO THE TURBINE DC LUBE OIL PUMP, THE AIR SIDE SEAL OIL BACKUP PUMP AND THE CIRCULATING WATER DISCHARGE VALVES TO THE FIRE EVENT REMAINS UNCHANGED. THE REQUIREMENTS OF THE DESIGN CRITERIA ASSURE THAT THE POTENTIAL FOR FIRE HAS NOT BEEN INCREASED. ADVERSE CONSEQUENCES OF A FIRE HAVE NOT BEEN CHANGED.

EARTHQUAKES

CONSISTENT WITH NRC REG. GUIDE 1.29, THE TURBINE DC LUBE OIL PUMP, THE AIR SIDE SEAL OIL BACKUP PUMP AND THE CIRCULATING WATER DISCHARGE VALVES SHALL BE NON-SEISMIC CATEGORY 1. THE PROPOSED NEW CONDUITS AND THEIR SUPPORT SHALL BE MOUNTED CONSISTENT WITH THE C2 REQUIREMENTS OF REGULATORY GUIDE 1.29. THUS, CONSEQUENCES OF A FAILURE DUE TO A SEISMIC EVENT ARE MITIGATED.

SUMMARY

THE MARGINS OF SAFETY DURING NORMAL OPERATION AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN DETERMINED THAT THE ADEQUACY OF THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED.

BASED UPON A REVIEW OF THE UFSAR AND THE REQUIREMENTS OF GINNA STATION TECHNICAL SPECIFICATIONS, IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.



EWR 5078

INTRUSION DETECTION SYSTEM

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE INSTALLATION, RECONFIGURATION, THE ROUTING AND MOUNTING OF CONDUIT, AND ALL WIRING ASSOCIATED WITH THE ELECTRIC FIELD PERIMETER FOR THE GUARD HOUSE'S SIDES AND ROOF TOP. THIS IS IN RESPONSE TO A SECURITY SITE INSPECTION, 89-08, THAT WAS PERFORMED DURING THE WEEK OF APRIL 17TH TO THE 21ST, 1989 BY THE NUCLEAR REGULATORY COMMISSION (NRC). IT WAS DETERMINED FROM THIS INSPECTION THAT THE CURRENT CONFIGURATION OF THE GUARD HOUSE'S ELECTRIC FIELD REPRESENTED A WEAKNESS IN THE PERIMETER INTRUSION DETECTION DUE TO A LACK OF PROTECTION ON THE EAST AND WEST SIDES OF THE BUILDING. THE PROBLEM IS BASICALLY THE LACK OF VERTICAL OVERLAPPING PROTECTION BETWEEN PERIMETER ZONES. SINCE THE GUARD HOUSE IS MANNED 24 HOURS A DAY, THE PROBLEM WAS NOTED AS ONE THAT SHOULD BE TAKEN CARE OF AS SOON AS PRACTICABLE, BUT THE CONDITION WAS TEMPORARILY ACCEPTABLE, IN REGARDS TO PAST OPERATION. IT SHOULD ALSO BE NOTED THAT THE DESIGN THAT IS TO BE EMPLOYED ON THE GUARD HOUSE SHALL BE OF A SIMILAR CONFIGURATION AS THE OFF-LOADING PORTAL.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA UFSAR AND THE EVENTS REQUIRING ANALYSIS BY NRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE SEISMIC EVENTS AND LOSS OF AC POWER. DURING A SEISMIC EVENT, THE SECURITY SYSTEM MODIFICATION WILL HAVE NO SAFETY FUNCTION AND NEED NOT REMAIN FUNCTIONAL IF THE SAFE SHUTDOWN EARTHQUAKE OCCURS. THE SECURITY SYSTEM SOURCE OF POWER WILL BE FROM A NON-SAFEGUARDS BUS, WITH A STANDBY SOURCE DEDICATED TO THE SECURITY SYSTEM; THEREFORE, THE CLASS 1E ELECTRICAL SYSTEM IS NOT AFFECTED BY THIS MODIFICATION.

NONE OF THE EVENTS ANALYZED IN THE UFSAR RELATE TO THIS MODIFICATION, NOR IS THERE ANY TECHNICAL SPECIFICATION THAT APPLIES TO THE SECURITY SYSTEM. BASED UPON A REVIEW OF THE NRC REGULATORY GUIDE 1.70 AND APPENDIX R ALTERNATIVE SHUTDOWN SYSTEM, IT HAS BEEN DETERMINED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR-5150

V5393 REPLACEMENT AND CIV TEST CONNECTIONS

THIS ENGINEERING WORK REQUEST ADDRESSES THE REPLACEMENT OF V-5393. THE CONTAINMENT BUILDING INSTRUMENT AIR ISOLATION CHECK VALVE V5393 MUST CLOSE TO ENSURE CONTAINMENT BUILDING INTEGRITY DURING A SEISMIC EVENT. V5393 IS A TWO-INCH BRONZE SWING CHECK VALVE. TROUBLE REPORT 89-4165 WAS WRITTEN AGAINST V5393 DUE TO EXCESSIVE REVERSE FLOW LEAKAGE DURING APPENDIX J LEAK TESTING.

MODIFICATIONS TO APPLICABLE CONTAINMENT PENETRATION PROCESS LINES (120b, 123a, 105, 109, 332a) ARE NECESSARY TO ALLOW TESTING OF THE VARIOUS CONTAINMENT ISOLATION VALVES IN THE DIRECTION WHICH THEY WOULD BE EXPOSED TO CONTAINMENT ATMOSPHERE FOLLOWING A DESIGN BASIS ACCIDENT.

THE DESIGN CRITERIA WAS REVISED AS FOLLOWS TO INCORPORATE TESTING OF CONTAINMENT PROCESS LINES.

- 1.1.5 SCOPE DEFINITION FOR PENETRATIONS NOTED ABOVE.
- 1.3.4 PERFORMANCE OF AFFECTED SYSTEMS WILL NOT BE AFFECTED BY ADDITION OF TEST CONNECTIONS.
- 2.1.6 ADDED REFERENCE TO EWR 4218 DESIGN CRITERIA FOR TUBING AND SUPPORTS.
- 3.1.2 ALL CHANGES ARE SEISMIC CATEGORY I.
- 4.1.3 AND 4.1.4
DEFINE CLASS CODE REQUIREMENTS FOR EACH SPECIFIC PROCESS SYSTEM TUBING WORKED ON.
- 7.2 DEFINES DOCUMENTS UPON WHICH ANALYSES ARE/WILL BE PERFORMED FOR PIPE/TUBING SUPPORTS.
- 8.2 DESIGN CONDITIONS FOR MODIFIED PROCESS PIPING WILL BE EQUAL TO THAT OF THE PRESENT PROCESS PIPING.
- 10. ENVIRONMENTAL CONDITIONS FOR ALL AFFECTED PLANT AREAS ARE STIPULATED.
- 15. EXPANDED HYDRAULIC REQUIREMENTS TO COVER THE ADDED PROCESS PIPING.
- 16. EXPANDED CHEMICAL REQUIREMENTS, STIPULATING NO INTRODUCTION OF POTENTIAL CONTAMINANTS.

THE SAFETY ANALYSIS WAS REVISED AS FOLLOWS:

- 1.6 ADDED A STATEMENT THAT ALL SAFETY IMPLICATIONS RESULTING FROM PENETRATION PROCESS PIPING/TUBING MODIFICATIONS WILL FACILITATE APPENDIX J LEAK TESTING.
- 2.1 REFERENCES REV 2 OF THE DESIGN CRITERIA COVERED UNDER THIS SAFETY ANALYSIS.
- 3.1.1 THE MODIFICATIONS WILL NOT DEGRADE THE CAPABILITY OF THE CONTAINMENT ISOLATION PORTION OF ANY OF THE AFFECTED SYSTEMS TO WITHSTAND A SEISMIC EVENT.

3.1.3 ADDED STATEMENT THAT THE NEW TEST CONNECTIONS WILL ENSURE THAT CONTAINMENT ISOLATION BARRIERS WILL BE MAINTAINED FOLLOWING A LOSS OF COOLANT ACCIDENT.

CLARIFIED THAT MATERIALS OF CONSTRUCTION WILL BE EQUIVALENT TO THOSE OF THE ORIGINAL SYSTEMS, THUS NO DEGRADATION DUE TO MODIFICATION OF PROCESS LINES.

4.7b ADDED STATEMENT TO INDICATE THAT CONTAINMENT BUILDING LEAK TIGHTNESS WILL BE IMPROVED, AND TESTABLE PER APPENDIX J REQUIREMENTS.

A REVIEW HAS BEEN PERFORMED OF ALL DESIGN BASIS EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY NRC REGULATORY GUIDE 1.70 TO DETERMINE THOSE RELATED TO THE MODIFICATION. THE EVENTS ASSOCIATED WITH THIS WORK ARE:

- A. SEISMIC EVENTS
- B. FIRES
- C. LOSS OF COOLANT ACCIDENT

BASED UPON A REVIEW OF THE UFSAR AND THE REQUIREMENTS OF GINNA STATION TECHNICAL SPECIFICATIONS, IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF HIS MODIFICATION.

EWR-5165
DISCHARGE STRUCTURE SECURITY

THIS ENGINEERING WORK REQUEST ADDRESSES THE INSTALLATION OF THE DISCHARGE STRUCTURE SECURITY MODIFICATION AS DESCRIBED IN THE "SAFEGUARD" DESIGN CRITERIA AND SAFETY ANALYSIS DOCUMENT. DUE TO THE SAFEGUARD DESIGNATION ON THE DESIGN CRITERIA AND SAFETY ANALYSIS, AN ORAL PRESENTATION ON THE CONTENTS OF THOSE DOCUMENTS WAS PROVIDED AT PORC.

BASED UPON A REVIEW OF THE UFSAR AND THE REQUIREMENTS OF GINNA STATION TECHNICAL SPECIFICATIONS, IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.



EWR-5191

MSIV CABLE PROTECTION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE PROTECTION OF THE CONDUITS THAT CARRY CONTROL POWER WIRING FOR THE MAIN STEAM ISOLATION VALVES (MSIV) FROM EXTREME ENVIRONMENTAL EVENTS.

AS PART OF THE SYSTEMATIC EVALUATION PROGRAM (SEP), IT HAS BEEN DETERMINED THAT IN ORDER TO MINIMIZE THE IMPACT OF A FAILURE OF THE INTERMEDIATE BUILDING NORTH WALL, UPON OPERATION OF THE MSIV'S, THE CONTROL CABLES WILL BE REROUTED. THIS REROUTE WILL ENSURE THAT THESE CABLES WILL BE RELOCATED TO AN AREA THAT IS NOT SUSCEPTIBLE TO DAMAGE FROM FAILED WALLS. IN ADDITION TO PROTECTION FROM WALL FAILURE, THIS CONTROL CABLE WILL BE PROTECTED IN SUCH A WAY THAT ITS FUNCTION WILL NOT BE JEOPARDIZED BY THE EFFECTS OF SEISMIC AND TORNADO LOADINGS.

PRE-PORC REVIEW OF REVISION 0 OF BOTH THE DESIGN CRITERIA AND SAFETY ANALYSIS RESULTED IN THE ISSUANCE OF REVISION 1 TO BOTH DOCUMENTS. TESTING WILL INCORPORATE THE USE OF MAINTENANCE PROCEDURE GUIDELINES FOR EQ SOLENOIDS TO ENSURE THAT INDUCTIVE KICK-BACK DIODES ARE INTACT.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE:

1. EARTHQUAKES
2. PIPE BREAKS OUTSIDE THE CONTAINMENT BUILDING
3. TORNADOES
4. TORNADO MISSILES
5. FIRES

THE CONSEQUENCES OF THE POSTULATED LOADINGS FROM SEISMIC, PIPE BREAK AND TORNADO ARE THAT THE INTERMEDIATE BUILDING/TURBINE BUILDING BLOCK WALL AT THE M.S. HEADER WILL FAIL. MODIFICATIONS HAVE BEEN MADE TO PROTECT THE MSIV'S AND THE SOLENOIDS THAT CONTROL THEM UNDER PREVIOUS EWRS. THIS MODIFICATION COMPLETES THE REQUIREMENTS OF PROVIDING A PROTECTED SAFE SHUTDOWN PATH BY RELOCATING THE CRITICAL POWER CONTROL CABLES SO THEY WILL NOT BE DAMAGED BY THESE POSTULATED EVENTS.

TO THE EXTENT PRACTICAL, ALL MATERIALS USED IN THE MODIFICATIONS COVERED BY THIS DESIGN CRITERIA/SAFETY ANALYSIS WILL BE NON-COMBUSTIBLE.



ALL THE FIRE PROTECTION FEATURES REQUIRED TO MEET THE CONDITIONS OF THE GINNA LICENSE, TO ASSURE COMPLIANCE WITH 10 CFR 50 APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING ALL MODIFICATIONS. NO CHANGES TO THE EXISTING OR PROPOSED FIRE PROTECTION FEATURES OF THE PLANT ARE INCLUDED IN THE SCOPE OF THESE MODIFICATIONS.

BASED UPON A REVIEW OF THE UFSAR AND THE STRUCTURAL RE-ANALYSIS PLAN (SRP), IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR-5277

PERSONNEL ACCESS ENHANCEMENT TO TDAFW PUMP STM. SUPPLY AND S/G
ATMOS. RELIEF VALVES

THIS ENGINEERING WORK REQUEST ADDRESSES A MODIFICATION CONSISTING OF SMALL FIXED ACCESS PLATFORMS OR COMMERCIAL SAFETY LADDERS. THEY WILL BE DESIGNED TO PROVIDE SAFE PERSONNEL ACCESS TO THE MANUAL OPERATORS ON THE TURBINE DRIVEN AFW PUMP STEAM SUPPLY VALVES AND THE S/G ATMOSPHERIC RELIEF VALVES DURING POSTULATED STATION BLACKOUTS, STEAM GENERATOR TUBE RUPTURES, AND OTHER ACCIDENT SCENARIOS.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY THE USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE OPERATING BASE AND SAFE SHUTDOWN EARTHQUAKES AND FIRE. THE NEW PLATFORMS AND LADDERS WILL NOT CHANGE THE OPERATING CHARACTERISTICS OF THE EQUIPMENT IN QUESTION; THEREFORE, NOTHING ASSUMED IN THE ANALYZED EVENTS IN THE UFSAR WILL CHANGE.

THE NEW PLATFORMS, SAFETY LADDERS, AND ANCHORAGE SYSTEMS WILL BE DESIGNED TO WITHSTAND OBE AND SSE LOADS. EXISTING STRUCTURES WILL BE EVALUATED TO ENSURE THAT THEY CAN WITHSTAND THE NEW LOADS INDUCED DUE TO THE ADDITIONS, IF REQUIRED.

THE NEW ACCESS PLATFORMS AND SECURED SAFETY LADDERS WILL BE DESIGNED TO MAINTAIN THEIR STRUCTURAL INTEGRITY DURING OBE AND SSE EVENTS, THE MODIFICATIONS WILL NOT CHANGE (1) THE ASSUMPTIONS IN THE FSAR AND ITS SUPPLEMENTS OR IN THE UFSAR, (2) THE PROBABILITY OF OCCURRENCE OF OBE OR SSE EVENTS, OR (3) THE CONSEQUENCES OF OBE OR SSE EVENTS.

THIS MODIFICATION WILL BE REVIEWED PER ENGINEERING PROCEDURE QE-326 TO ENSURE COMPLIANCE WITH THE APPLICABLE PROVISIONS TO 10 CFR 50 APPENDIX R AND THE FACILITY OPERATING LICENSE.

BASED ON THE EVALUATIONS ABOVE, THERE WILL BE NO CHANGES TO MARGINS OF SAFETY AND ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS WILL NOT BE DIMINISHED.

THE PROPOSED MODIFICATIONS WILL NOT INCREASE THE PROBABILITY OF OCCURRENCE OF AN OBE OR SSE BECAUSE ALL COMPONENTS WILL BE DESIGNED TO REMAIN STRUCTURALLY STABLE. THE NEW PLATFORMS AND LADDERS WILL NOT CHANGE THE OPERATING CHARACTERISTICS OF THE TURBINE DRIVEN AFW PUMP STEAM SUPPLY OR S/G ATMOSPHERIC RELIEF VALVES. THEREFORE, THE PROBABILITY OF OCCURRENCE OF AN ANALYZED EVENT WILL NOT BE INCREASED.

THE PROPOSED MODIFICATIONS WILL NOT INCREASE THE CONSEQUENCES OF AN OBE OR SSE BECAUSE ALL COMPONENTS WILL BE DESIGNED TO REMAIN STRUCTURALLY STABLE AND NOT INTERACT WITH ANY SAFETY-RELATED SYSTEMS OR EQUIPMENT.

THE PROPOSED MODIFICATIONS WILL NOT INCREASE THE PROBABILITY OF OCCURRENCE OF A MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY BECAUSE ALL COMPONENTS WILL BE DESIGNED TO REMAIN STRUCTURALLY STABLE AND NOT INTERACT WITH NEARBY EQUIPMENT.

THE PROPOSED MODIFICATIONS WILL NOT INCREASE THE CONSEQUENCES OF A MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY BECAUSE ALL COMPONENTS WILL BE DESIGNED TO REMAIN STRUCTURALLY STABLE AND THEREBY PRECLUDE ANY INTERACTION WITH NEARBY EQUIPMENT.

VALVE ACCESS PLATFORMS WILL ACTUALLY ENHANCE MANUAL VALVE OPERABILITY IN THE EVENT REMOTE OPERATION CANNOT BE ACHIEVED.

THE PROPOSED MODIFICATIONS WILL NOT CREATE THE POSSIBILITY OF AN ACCIDENT OF A DIFFERENT TYPE THAN PREVIOUSLY EVALUATED IN THE UFSAR BECAUSE ALL COMPONENTS WILL BE DESIGNED TO REMAIN STRUCTURALLY STABLE AND NOT INTERACT WITH NEARBY STRUCTURES, SYSTEMS, OR EQUIPMENT.

THE PROPOSED MODIFICATIONS WILL NOT CREATE THE POSSIBILITY OF A DIFFERENT TYPE OF MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY THAN ANY PREVIOUSLY EVALUATED IN THE UFSAR BECAUSE ALL COMPONENTS WILL BE DESIGNED TO REMAIN STRUCTURALLY STABLE AND THEREBY PRECLUDE ANY INTERACTION WITH NEARBY EQUIPMENT.

THE PROPOSED MODIFICATIONS WILL NOT REDUCE ANY MARGIN OF SAFETY AS DEFINED IN THE BASIS OF ANY TECHNICAL SPECIFICATION BECAUSE ONLY PERSONNEL ACCESS PLATFORMS AND SAFETY LADDERS ARE WITHIN THE SCOPE OF THE MODIFICATIONS. THESE COMPONENTS WILL BE DESIGNED TO REMAIN STABLE DURING ALL POSTULATED EVENTS.

BASED UPON A REVIEW OF THE UFSAR AND THE REQUIREMENTS OF GINNA STATION TECHNICAL SPECIFICATIONS, IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR 5384

RX HEAD VENT SYSTEM QUALIFICATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE ADDITION OF AN ADDITIONAL SUPPORT TO THE REACTOR HEAD VENT SYSTEM. ADDITIONAL ANALYSES PERFORMED TO THE GINNA-SPECIFIC HEAD VENT SYSTEM INDICATE THAT THE STRESSES RESULTING FROM A POSTULATED SYSTEM OPERATION WOULD EXCEED THE CODE ALLOWABLE STRESS LIMITS, LEADING TO PIPE DEFORMATION. THE DEFORMATION WOULD NOT INHIBIT PROPER OPERATION.

THE ADDITIONAL SUPPORT INSTALLATION WILL RESULT IN LOWER PIPING AND PIPE SUPPORT STRESSES WHICH WILL MEET ALL NECESSARY CODE AND DESIGN BASIS REQUIREMENTS FOR ALL POSTULATED LOADING CONDITIONS.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE FIRE, SEISMIC EVENTS AND PIPING BREAKS INSIDE CONTAINMENT.

THIS MODIFICATION WILL:

- 1) BE REVIEWED AGAINST THE ASSUMPTION OF 10CFR50 APPENDIX R TO SHOW CONTINUED COMPLIANCE.
- 2) USE NONCOMBUSTIBLE AND HEAT RESISTANT MATERIALS WHENEVER PRACTICAL.
- 3) NOT DEGRADE EXISTING FIRE BARRIERS OR AFFECT THE PERFORMANCE OF ANY EXISTING FIRE PROTECTION EQUIPMENT.

PIPING AND PIPE SUPPORTS SHALL BE SEISMICALLY DESIGNED AND INSTALLED TO ENSURE RVHVS PRESSURE BOUNDARY INTEGRITY. MODIFICATIONS TO THE SUPPORT AND PIPING SYSTEM WILL BE IN ACCORDANCE WITH ALL APPLICABLE CODE DESIGN, INSTALLATION, INSPECTION AND TESTING REQUIREMENTS. FURTHER, THE MODIFICATION, INVOLVING THE ADDITION OF SUPPORTS, WILL NOT ADVERSELY IMPACT SYSTEMS OR COMPONENTS REQUIRED FOR THE SAFE SHUTDOWN OF THE PLANT. THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) FIRE PROTECTION FEATURES
- 2) EQUIPMENT REQUIRED TO EFFECT A SAFE SHUTDOWN OF THE PLANT DURING AND FOLLOWING SEISMIC EVENTS.

3) REACTOR HEAD VENT SYSTEM INTEGRITY AND OPERABILITY.

BASED UPON A REVIEW OF THE UFSAR AND THE REQUIREMENTS OF GINNA STATION TECHNICAL SPECIFICATIONS, IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT WILL NOT BE REDUCED. IT HAS ALSO BEEN CONCLUDED THAT THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS WILL NOT BE AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

TSR-89-11

AUXILIARY FEEDWATER TEST GAUGES

THIS TECHNICAL STAFF REQUEST (TSR) ADDRESSES THE INSTALLATION OF SEVERAL TEST (PRESSURE) GAUGES, ON BOTH THE SUCTION AND DISCHARGE SIDES OF THE AUXILIARY FEED PUMPS. ISOLATION VALVES WILL BE REQUIRED FOR NEW GAUGES WHERE THEY ARE NOT ALREADY PRESENT. IN EACH CASE, NO NEW PENETRATIONS TO THE MAIN AUXILIARY FEED FLOW LINES WILL BE REQUIRED. SOME PIPING FOR THE NEW GAUGES WILL BE REQUIRED TO MOUNT THEM IN CONVENIENT LOCATIONS. THIS MODIFICATION IS BEING PERFORMED TO MEET THE IN-SERVICE TESTING REQUIREMENTS OF ASME SECTION XI AND 10CFR50.55A.

EACH PORTION OF THE MODIFICATION IS SEPARATED FROM THE AUXILIARY FEED SYSTEM BY AN (EXISTING) NORMALLY CLOSED VALVE. THE CHANGE PROVIDES ONLY PRESSURE INDICATION AND THUS HAS NO INTERFACES OUTSIDE OF THE AFW SYSTEM. SINCE THIS MODIFICATION IS NEAR SAFETY RELATED EQUIPMENT, IT WILL BE DESIGNED TO MEET SEISMIC CRITERIA IN ACCORDANCE WITH REG. GUIDE 1.29 CLASSIFICATION C.2.

ISOLATION VALVES FOR THESE GAUGES WILL BE NORMALLY CLOSED. CHECK VALVE TESTING WILL BE PROCEDURALLY CONTROLLED. THEREFORE, THE DESIGN FUNCTION OF THE AUXILIARY FEED SYSTEM WILL NOT BE DEGRADED BY THIS MODIFICATION.

THE INCORPORATION OF THIS MODIFICATION WILL NOT AFFECT ANY OF THE EVENTS LISTED IN TABLES I AND II OF GINNA PROCEDURE A-303 INCLUDING THE DESIGN BASIS EVENTS OF USNRC REG. GUIDE 1.70. THEREFORE IT WILL NOT CHANGE:

- 1) THE ASSUMPTION OF ANY SAFETY ANALYSIS IN THE UFSAR AND ITS SUPPLEMENTS.
- 2) THE PROBABILITY OF OCCURRENCE OF AN ACCIDENT.
- 3) THE CONSEQUENCES OF AN ACCIDENT.

BASED ON THE EVALUATIONS IN SECTION 3.1 ABOVE, THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION WILL BE UNCHANGED BY THE INSTALLATION OF THIS MODIFICATION; AND, THE ADEQUACY OF STRUCTURES, SYSTEMS AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND FOR THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS WILL BE UNCHANGED BY THE INSTALLATION OF THIS MODIFICATION.

PRELIMINARY SAFETY EVALUATION

THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION SINCE:

- A) THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL NOT BE INCREASED, OR;
- B) THE POSSIBILITY OF AN ACCIDENT OR MALFUNCTION OF A DIFFERENT TYPE THAN ANY EVALUATED PREVIOUSLY IN THE SAFETY ANALYSIS REPORT WILL NOT BE CREATED, OR;
- C) THE MARGIN OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION WILL NOT INVOLVE A CHANGE IN THE TECHNICAL SPECIFICATION SINCE NONE OF THE LIMITING CONDITIONS FOR OPERATION OF THE AUXILIARY FEED SYSTEM WILL BE AFFECTED.

SECTION B - COMPLETED STATION MODIFICATIONS (SMs)

This section contains a description of station modification procedures performed in the facility as described in the safety analysis report. Station modification procedures are written to complete a portion of an Engineering Work Request (EWR) or Technical Staff Request (TSR) identified by the same parent number. Station Modifications are reviewed by the Plant Operations Review Committee to ensure that no unreviewed safety questions or Technical Specification changes are involved with the procedure.

The basis for inclusion of an SM in this section is closure of the SM where portions of the parent EWR or TSR, in the form of other SMs or other documentation, remain to be completed.

SM-88-03.1

FIRE SYSTEM PRESSURE RELIEF VALVE MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF PRESSURE RELIEF VALVE MODIFICATIONS TO VARIOUS FIRE SPRINKLER SYSTEMS.

SM-89-13.1

EQUIPMENT HATCH ROLLUP DOOR - MECHANICAL

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF AN INSULATED ROLLUP DOOR IN THE OPEN END OF THE CONTAINMENT EQUIPMENT HATCH ENCLOSURE. THE PERMANENT ELECTRICAL INSTALLATION OF THE POWER AND CONTROLS WILL BE PERFORMED, AT A LATER DATE, BY A SEPARATE PROCEDURE.

SM-89-13.2

CONTAINMENT EQUIPMENT HATCH ENCLOSURE OVERHEAD DOOR - ELECTRICAL POWER AND CONTROL

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE ELECTRICAL POWER AND CONTROL POWER FOR THE CONTAINMENT EQUIPMENT HATCH ENCLOSURE OVERHEAD DOOR.

SM-89-22.1

BORIC ACID VENT VALVE REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS FOR THE REPLACEMENT OF BORIC ACID FILTER VENT VALVE, V390, WITH DIFFERENT DESIGN.

SM-89-43.1

GAS SERVICE TO SCREENHOUSE SPACE HEATERS

THE PURPOSE OF THIS PROCEDURE IS NATURAL GAS SERVICE AND SUPPLY PIPING TO SCREENHOUSE SPACE HEATERS PER TSR-89-43.

SM-90-36.1

ELECTRO-HYDRAULIC SYSTEM PUMP REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF TWO NEW ELECTRO-HYDRAULIC SYSTEM PUMPS; AND THE REPLACEMENT OF A PORTION OF THE SUCTION AND DISCHARGE PIPING CONNECTED TO THE PUMPS.

SM-91-009.1

SERVICE WATER SYSTEM - 1991 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTIONS, UPGRADES, AND REFURBISHMENT TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRs 90-197 AND 91-009

SM-91-009.2

STANDBY AFW SYSTEM - 1991 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTION, UPGRADES, AND REFURBISHMENT TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRs 90-197 AND 91-009.

SM-91-009.3

CIRCULATING WATER SYSTEM - 1991 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTION, UPGRADES, AND REFURBISHMENT TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRs 90-197 AND 91-009.

SM-91-009.4

MAIN STEAM SYSTEM - 1991 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTION, UPGRADES, AND REFURBISHMENT TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRs 90-197 AND 91-009.

SM-91-009.5

CVCS SYSTEM - 1991 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTION, UPGRADES, AND REFURBISHMENT TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRs 90-197 AND 91-009.

SM-91-009.7

AUX. FEEDWATER SYSTEM - 1991 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTION, UPGRADES, AND REFURBISHMENT TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRs 90-197 AND 91-009.

SM-91-009.8

SAFETY INJECTION SYSTEM - 1991 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTION, UPGRADES, AND REFURBISHMENT TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRs 90-197 AND 91-009.

SM-91-009.9

COMPONENT COOLING WATER SYSTEM - 1991 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTION, UPGRADES, AND REFURBISHMENT TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRs 90-197 AND 91-009.

SM-91-009.10

REACTOR COOLANT SYSTEM - 1991 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTION, UPGRADES, AND REFURBISHMENT TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRs 90-197 AND 91-009.

SM-91-183.1

AUXILIARY FEEDWATER SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTIONS, UPGRADES, AND REFURBISHMENTS TO THE VALVES LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSR 91-140.

SM-91-183.2

COMPONENT COOLING WATER SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTIONS, UPGRADES, AND REFURBISHMENTS TO THE VALVES LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSR 91-183.

SM-91-183.3

CHILLED WATER SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE INSPECTIONS, UPGRADES AND REFURBISHMENTS TO THE VALVES LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSR 90-197.

SM-91-183.4

CONTAINMENT SPRAY SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTIONS, UPGRADES, AND REFURBISHMENTS TO THE VALVES LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSR 90-004.

SM-91-183.5

CHEMICAL AND VOLUME CONTROL SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTIONS, UPGRADES, AND REFURBISHMENTS TO THE VALVES LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSR 91-140.

SM-91-183.6

CIRCULATING WATER SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTIONS, UPGRADES, AND REFURBISHMENTS TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSR 91-140 AND 91-183.

SM-91-183.7

MAIN FEEDWATER SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE INSPECTIONS, UPGRADES AND REFURBISHMENTS TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRS 91-040 AND 91-183.

SM-91-183.8

REACTOR COOLANT SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTIONS, UPGRADES, AND REFURBISHMENTS TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRS 91-140, 91-183 AND 90-197.

SM-91-183.9

STANDBY AUXILIARY FEEDWATER SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTIONS, UPGRADES, AND REFURBISHMENTS TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRS 91-140 AND 91-183.

SM-91-183.10

SAFETY INJECTION SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE INSPECTIONS, UPGRADES, AND REFURBISHMENTS TO THE VALVES AND/OR VALVE OPERATORS LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSRS 91-140 AND 90-197.

SM-91-183.11

SERVICE WATER SYSTEM - 1992 REFUELING OUTAGE VALVE INSPECTIONS, UPGRADES, AND REFURBISHMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE INSPECTIONS, UPGRADES AND REFURBISHMENTS TO THE VALVES LISTED LATER IN THIS PROCEDURE IN ACCORDANCE WITH TSR 91-140.

SM-91-197.1

EH UNLOADER VALVE PILOT PRESSURE INSTRUMENT TUBING MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE PRESSURE SENSING TUBING BETWEEN THE UNLOADER VALVE (V7701 AND V7705) THE EH ACCUMULATOR CONTROL BLOCK.

SM-93-010.1

LEAD SHIELDING SUPPORT INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, AND TURNOVER OF MOUNTING OF UNISTRUT HANGERS ONTO IMBEDDED UNISTRUT, FROM WHICH LEAD SHIELDING CAN BE SUSPENDED FROM CHANNEL HANGER BRACKETS.

SM-1594.15

PRE-OPERATIONAL TEST OF 1B SFP COOLING SYSTEM

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE 1B SPENT FUEL POOL COOLING SYSTEM.

SM-1594.17

RHR PIT ACCESS CAGING AND FLOOD BARRIER RECONSTRUCTION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE REMOVAL, RECONSTRUCTION AND TURNOVER OF THE RHR PIT ACCESS CAGING AND FLOOD BARRIER MODIFICATION.

SM-1660.51

OVERPRESSURE PROTECTION - REPAIR OF SUPPORT PS-9

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF PIPE SUPPORT PS-9 TO MEET THE DISPOSITION REQUIREMENTS OF NCR 91-521.

SM-1660.52

PORV 430 AND 431C INDICATION MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE MODIFICATION TO THE VALVE POSITION INDICATION FOR PORV 430 AND PORV 431C. THIS MODIFICATION WILL PROVIDE DISPOSITION FOR NCR 93-108, PORV LIMIT SWITCHES TRAIN AND NCR 93-109, PORV LIMIT SWITCHES TRAIN B.

SM-2512.145

UPGRADE OF PIPE SUPPORTS ON ANALYSIS LINES SW-1800 AND SW-1850,
SERVICE WATER IN THE DIESEL GENERATOR BUILDING AND ADJACENT TURBINE
BUILDING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND
TURNOVER OF PIPE SUPPORTS TO COMPLY WITH THE DISPOSITION OF NCRS
91-475 AND 91-519 FOR SERVICE WATER PIPING IN THE DIESEL GENERATOR
BUILDING, AND NORTH TURBINE BUILDING BASEMENT.

SM-2512.146

UPGRADE OF PIPE SUPPORT FWU-15 ON ANALYSIS LINE FW-301, FEEDWATER
NEAR THE MAIN STEAM HEADER - INTERMEDIATE BUILDING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND
TURNOVER OF MODIFICATIONS TO FEEDWATER SUPPORT FWU-15 TO COMPLY
WITH THE DISPOSITION OF NCR 91-599 FOR INTERMEDIATE BUILDING
FEEDWATER PIPING.

SM-3100.55

PRESEPARATOR DRAIN HEADER A AND PIPING REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION,
TESTING, AND TURNOVER OF THE REPLACEMENT OF THE A PRESEPARATOR
DRAIN HEADER AND PIPING.

SM-3100.56

PRESEPARATOR DRAIN HEADER B AND PIPING REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION,
TESTING, AND TURNOVER OF THE REPLACEMENT OF THE B PRESEPARATOR
DRAIN HEADER AND PIPING.

SM-3260.20

REWORK OF LOCKING DEVICE FOR MANUAL "A" MSIV VENT VALVES #5471 AND
5473

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION,
OPERATIONAL CHECK, AND TURNOVER OF A REVISED LOCKING DEVICE FOR
"A" MSIV MANUAL VENT VALVES NUMBERED 5471 AND 5473, IN ACCORDANCE
WITH NCR 91-509.

SM-3596.12

DIESEL GENERATOR "A" AIR START SYSTEM MECHANICAL UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE MECHANICAL
UPGRADE AND TURNOVER OF THE AIR START SYSTEM FOR THE "A" DIESEL
GENERATOR.

SM-3596.17

"A" D/G LUBE OIL INSTRUMENT TUBING AND AIR START INSTRUMENT
MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO MODIFY LO AND AIR START INSTRUMENT TUBING PER EWR 3596 (REF. ECN 3596-12, 13).

SM-3596.18

"B" D/G LUBE OIL INSTRUMENT TUBING AND AIR START INSTRUMENT
MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO MODIFY LO AND AIR START INSTRUMENT TUBING PER EWR 3596 (REF. ECN 3596.12, 13).

SM-3990.12

A/B DIESEL GENERATOR ROOM VENTILATION MEASUREMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING OF A AND B DIESEL GENERATOR ROOM VENTILATION SYSTEMS FOR ADEQUACY, FOLLOWING THE BUILDING UPGRADE. SHOULD ADJUSTMENTS BE REQUIRED, THEY WILL BE DOCUMENTED IN THIS PROCEDURE AS WELL.

SM-3990.13

FIRE PROTECTION SYSTEM - PIPING FOR AUXILIARY OPERATIONS OFFICE

THE PURPOSE OF THIS PROCEDURE IS TO DOCUMENT AND CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF ADDITIONAL SPRINKLER PIPING TO AN OFFICE STRUCTURE LOCATED ON THE TURBINE BUILDING OPERATING FLOOR.

SM-4068.10

R-16, CONTAINMENT FAN COOLING RADIATION MONITOR DETECTOR-
MECHANICAL MODIFICATIONS AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MECHANICAL PORTION OF THE NEW R-16, CONTAINMENT FAN COOLING RADIATION MONITOR DETECTOR MODIFICATION.

SM-4068.12

R-17, COMPONENT COOLING WATER RADIATION MONITOR DETECTOR-
MECHANICAL MODIFICATIONS AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MECHANICAL PORTION OF THE NEW R-17, COMPONENT COOLING WATER RADIATION MONITOR DETECTOR MODIFICATION.

SM-4068.16

R-19, STEAM GENERATOR BLOWDOWN RADIATION MONITOR DETECTOR-
MECHANICAL MODIFICATIONS AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MECHANICAL PORTION OF THE NEW R-19, STEAM GENERATOR BLOWDOWN RADIATION MONITOR DETECTOR MODIFICATION.

SM-4068.28

TEMPORARY GRAB SAMPLER INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF AN AIR EJECTOR/GLAND STEAM EXHAUST GRAB SAMPLER. THIS WILL BE A TEMPORARY INSTALLATION.

SM-4068.30

R-16 - CONTAINMENT FAN COOLING RADIATION MONITOR PIPING -
PRIMING VALVE ADDITION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE ADDITION OF A BALL VALVE USED FOR PRIMING THE SAMPLE PUMP DURING SERVICE WATER VALVE/SYSTEM LINE-UP CHANGES.

SM-4112.2

COMPLETION OF AUXILIARY BUILDING OPERATING LEVEL LIGHTING UPGRADE

THE PURPOSE OF THIS PROCEDURE IS TO COMPLETE THE INSTALLATION, TESTING, AND TURNOVER OF NEW LIGHTING FIXTURES ON THE AUXILIARY BUILDING OPERATING LEVEL, WHICH INCLUDES, REPLACEMENT OF CIRCUIT BREAKERS IN PANELS AB-3 AND AB-4, INSTALLATION OF RESTRAINT CHAINS, INSTALLATION OF THREE NEW PENDANT FIXTURES AND ENSURING OPERABILITY OF ALL AUXILIARY BUILDING OPERATING FLOOR LIGHT FIXTURES.

SM-4140.1

SAFW ALTERNATE COOLING WATER SUPPLY MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE STANDBY AUXILIARY FEEDWATER ALTERNATE COOLING WATER SUPPLY MODIFICATION.

SM-4140.2

FWC 77 CIRCUIT REROUTE PER NCR 91-388

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE FWC 77 CIRCUIT REROUTE PER NCR 91-388.

SM-4324.11

ELECTRICAL TESTING FOR THE STEAM GENERATOR BLOWDOWN SYSTEM MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE ELECTRICAL INSTALLATION FOR THE STEAM GENERATOR BLOWDOWN SYSTEM MODIFICATION.

SM-4324.14

"A" STEAM GENERATOR BLOWDOWN PIPING REPLACEMENT IN CONTAINMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE PIPING REPLACEMENT ON THE "A" S/G BLOWDOWN SYSTEM IN CONTAINMENT.

SM-4324.15

STEAM GENERATOR BLOWDOWN HEADER PIPING REPLACEMENT - TURBINE BUILDING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE STEAM GENERATOR BLOWDOWN HEADER PIPING REPLACEMENT IN THE TURBINE BUILDING.

SM-4324.17

"A" STEAM GENERATOR BLOWDOWN ISOLATION VALVES REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS TO ALLOW REPLACEMENT OF "A" S/G BLOWDOWN ISOLATION VALVES AND SAMPLE VALVES.

SM-4492.1

CONTAINMENT EQUIPMENT HATCH AIR LOCK UPGRADE

THE PURPOSE OF THIS PROCEDURE IS TO 1) REBUILD THE MECHANICAL DRIVE SYSTEM WITH UPGRADED COMPONENT MATERIAL AND 2) INSTALL AN ADDITIONAL BEARING SUPPORT TO THE UPPER EXTENSION OF THE MAIN HINGE PIN FOR BOTH AIR LOCK DOORS.

SM-4495.1

AUXILIARY BUILDING CRANE MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS STRUCTURAL UPGRADES TO THE AUX. BLDG. CRANE TO ALLOW FULL LOAD RATINGS OF THE MAIN AND AUXILIARY HOOKS.

SM-4526.22

D/G "B" FUEL OIL SYSTEM MOD. 1989 PRE-OUTAGE AND OUTAGE (MECHANICAL PORTION)

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE D/G "B" FUEL OIL SYSTEM MECHANICAL MODIFICATION.

SM-4526.26

D/G "A" FUEL OIL SYSTEM UPGRADE PHASE 3 - MECHANICAL MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE MECHANICAL PORTION OF THE "A" DIESEL GENERATOR INSTRUMENTATION UPGRADE, INCLUDING THE FOLLOWING: DAY TANK FILL/RECIRC SOLENOID VALVE PIPING, FUEL OIL TRANSFER PUMP DISCHARGE PRESSURE TRANSMITTER, FUEL OIL TRANSFER STRAINER D/P TRANSMITTER, DAY TANK LEVEL TRANSMITTER.

SM-4526.28

D/G "B" FUEL OIL SYSTEM UPGRADE PHASE 3 - MECHANICAL MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE MECHANICAL PORTION OF THE "B" DIESEL GENERATOR INSTRUMENTATION UPGRADE, INCLUDING THE FOLLOWING: DAY TANK FILL/RECIRC SOLENOID VALVE PIPING, FUEL OIL TRANSFER PUMP DISCHARGE PRESSURE TUBING, FUEL OIL TRANSFER STRAINER D/P TUBING, DAY TANK LEVEL TRANSMITTER.

SM-4617.2

HANDRAIL UPGRADE IN THE REACTOR CONTAINMENT

THE PURPOSE OF THIS PROCEDURE IS TO UPGRADE REACTOR CONTAINMENT HANDRAIL TO MEET OSHA STANDARDS. THIS SM COMPLETES THE HANDRAIL UPGRADE PROGRAM WHICH WAS STARTED LAST OUTAGE UNDER SM-4617.1.

SM-4618.6

MAIN FEEDWATER PUMP ROOM HVAC DUCT HOOD MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MODIFIED EXHAUST DUCT WIND SCOOP AND BACKDRAFT DAMPER.

SM-4658.2

"B" COMPONENT COOLING WATER HEAT EXCHANGER TEST INSTRUMENTATION INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE "B" COMPONENT COOLING WATER HEAT EXCHANGER TEST INSTRUMENTATION INSTALLATION.

SM-4658.3

"C" STANDBY AUXILIARY FEEDWATER PUMP ROOM COOLER TEST
INSTRUMENTATION INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE "C" STANDBY AUXILIARY FEEDWATER PUMP ROOM COOLER TEST INSTRUMENTATION.

SM-4658.4

"D" STANDBY AUXILIARY FEEDWATER PUMP ROOM COOLER TEST
INSTRUMENTATION INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE "D" STANDBY AUXILIARY FEEDWATER PUMP ROOM COOLER TEST INSTRUMENTATION.

SM-4658.6

INSTALLATION OF CRFC AND DG INSTRUMENTATION - ECN 4658-02

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW INSTRUMENTATION ON THE CONTAINMENT RECIRC FAN COOLERS SW OUTLET (INT. BLDG) AND THE DG JACKET WATER AND LUBE OIL COOLERS.

SM-4671.8

RCS "B" LOOP LEVEL UPGRADE - SIGHTGLASS INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE MID-LOOP LEVEL SIGHTGLASS.

SM-4671.10

LIT-432A AND LIT-432B REPLACEMENTS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE REPLACEMENT, TESTING, AND TURNOVER OF RCS LOOP LEVEL TRANSMITTERS LIT-432A AND LIT-432B.

SM-4755.5

CVCS LETDOWN SYSTEM - IST TEST CONNECTION, VALVE V-2211

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF A TEST CONNECTION TO PROVIDE A PERMANENT TUBING CONNECTION AT VALVE V-2211.



SM-4773.1

MECHANICAL WORK FOR STEAM GENERATOR "A" LEVEL INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE NEW FOXBORO STEAM GENERATOR "A" WIDE RANGE LEVEL TRANSMITTER AND NEW ROSEMOUNT STEAM GENERATOR "A" LEVEL TRANSMITTERS FOR THE ADFCS MODIFICATION.

SM-4773.2

MECHANICAL WORK FOR STEAM GENERATOR "B" LEVEL INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE NEW FOXBORO STEAM GENERATOR "B" WIDE RANGE LEVEL TRANSMITTER AND NEW ROSEMOUNT STEAM GENERATOR "B" LEVEL TRANSMITTERS FOR THE ADFCS MODIFICATION.

SM-4773.3

MECHANICAL WORK FOR MAIN STEAM FLOW INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF NEW MAIN STEAM FLOW CURRENT TO PNEUMATIC (I/P) TRANSDUCERS AND NEW MAIN STEAM FLOW TRANSMITTERS FOR THE ADFCS MODIFICATION.

SM-4773.4

MECHANICAL WORK FOR FRV, FEEDWATER PRESSURE AND FLOW INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS: FW PRESSURE INSTRUMENTATION FOR ADFCS.

SM-4773.10

REACTOR PROTECTION RACK B1 AND B2 MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE MODIFICATION TO THE REACTOR PROTECTION RACK B1 AND B2, PLP RACK, AND SD RACK. PROJECTS PERSONNEL WILL REMOVE/INSTALL/SPLICE CABLE WHILE I&C PERSONNEL WILL REMOVE OLD FOXBORO MODULES AND INSTALL NEW ISOLATION AMPLIFIERS WITH ASSOCIATED WIRING.

SM-4773.20

MCB CENTER SECTION MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF ADFCS MODIFICATIONS TO THE MAIN CONTROL BOARD CENTER SECTION.

SM-4773.29

ADVANCED DIGITAL FEEDWATER CONTROL SYSTEM PREOPERATIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE PREOPERATIONAL TESTING AND TURNOVER OF MODIFICATIONS PERFORMED UNDER EWR 4473 ADVANCED DIGITAL FEEDWATER CONTROL SYSTEM.

SM-4773.25

CONTROL BUILDING ELECTRICAL WORK FOR ADFCS RACK INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF A PORTION OF THE ADFCS RACK MODIFICATION.

SM-4773.29

ADVANCED DIGITAL FEEDWATER CONTROL SYSTEM PREOPERATIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE PREOPERATIONAL TESTING AND TURNOVER OF MODIFICATIONS PERFORMED UNDER EWR 4473 ADVANCED DIGITAL FEEDWATER CONTROL SYSTEM.

SM-4773.30

ADVANCED DIGITAL FEEDWATER CONTROL SYSTEM STARTUP TEST PROCEDURE

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTS TO BE PERFORMED DURING PLANT POWER ASCENSION TO ENSURE THE PROPER OPERATION AND SETPOINT ADJUSTMENT OF THE GINNA ADVANCED DIGITAL FEEDWATER CONTROL SYSTEM (ADFCS). FOUR TYPES OF TESTING AND DATA ACQUISITION ACTIVITIES WILL BE PERFORMED.

SM-4773.31

FEEDWATER HEADER PRESSURE TRANSMITTER CABLE CONDUIT INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF NEW CONDUIT FOR THE FW HEADER PRESSURE TRANSMITTER (PT501 AND PT502) CABLE.

SM-4773.32

ADFCS ALARM SOFTWARE CHANGES

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF SOFTWARE CHANGES TO ADFCS ALARM LOGIC AND DATABASE VALUES.

SM-4773.33

ADFCS SETPOINT SOFTWARE CHANGES

THE PURPOSE OF THIS PROCEDURE IS CONTROL THE INSTALLATION AND TURNOVER OF SOFTWARE CHANGES TO ADFCS SETPOINTS TO ADDRESS THE CURRENT MAIN FEEDWATER CONTROL VALVE (FCV) CYCLING CONDITION.

SM-4773.35

FEEDWATER REGULATING VALVE INTERLOCK MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MODIFICATION OF THE FW ISOLATION WITH TURBINE TRIP INTERLOCK LOGIC; ELECTRICAL MODIFICATION OF THE FRV SOVS TO SUPPORT EWR 4894; AND MODIFICATION OF THE SECONDARY CHEMICAL ADDITION PUMP AUTO SWITCH SELECTOR.

SM-4773.36

DISABLING REDUNDANT FW ISOLATION RELAYS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MODIFICATION TO DISABLE REDUNDANT FW ISOLATION (FWI) RELAYS IN THE SAFETY INJECTION RACKS.

SM-4795.1

PRESSURE WALL PENETRATION, TBP-34, MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS MODIFICATION TO PRESSURE WALL PENETRATION, TBP-34, PER SM-4795.1.

SM-4833.2

SAS/PPCS NERP COMMUNICATION CABLE FINAL TIE-IN AND TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE SAS/PPCS NERP COMMUNICATION LINK WITH THE GINNA SIMULATOR.

SM-4882.1

FIRE DAMPER, I-411-21P, REPLACEMENT MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE REPLACEMENT OF FIRE DAMPER, I-411-21P. THIS MODIFICATION WILL REPLACE THE EXISTING INOPERABLE FIRE DAMPER WITH A SIMILAR REPLACEMENT.

SM-4892.1

A RHR LOOP ENHANCEMENTS - MECHANICAL

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE INSTRUMENTS AND ASSOCIATED EQUIPMENT IN CONNECTION WITH THE "A" RHR SYSTEM.

SM-4892.5

"A" & "B" RHR DISCHARGE FLOW - MECHANICAL

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TESTING AND INTERIM TURNOVER OF FLOW INSTRUMENTS AND ASSOCIATED EQUIPMENT IN CONNECTION WITH THE RHR SYSTEM.

SM-4892.6

RHR A AND B LOOP INSTRUMENTATION FUNCTIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE NEW A AND B RHR LOOP INSTRUMENTATION.

SM-4930.2

SERVICE WATER PUMP "A" AND "B" DISCHARGE FLOW INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE FLOW INSTRUMENTATION FOR THE "A" AND "B" SERVICE WATER PUMPS DISCHARGE.

SM-4930.4

TESTING OF THE ANNUBAR INSTALLATION ON THE "A" AND "B" SW PUMPS DISCHARGE PIPING

THE PURPOSE OF THIS PROCEDURE IS TO PERFORM TESTING OF THE ANNUBAR INSTALLATION ON THE "A" AND "B" SW PUMPS DISCHARGE PIPING.

SM-4960.2

AGASTAT TIME DELAY RELAY REPLACEMENTS FOR THE 1991 OUTAGE

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF AGASTAT TIME DELAY RELAY REPLACEMENTS SCHEDULED TO BE REPLACED DURING THE 1991 OUTAGE.

SM-4996.1

LOW TEMPERATURE OVERPRESSURE PROTECTION (L.T.O.P) SYSTEM RELIEF VALVE 8615A AND 8615B MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE L.T.O.P. SYSTEM RELIEF VALVES 8615A AND 8615B MODIFICATION WHICH WILL PROVIDE BREAK FLANGES FOR THE REMOVAL OF THE RELIEF VALVES TO FACILITATE RELIEF VALVE SET POINT CHECKS.

SM-5041.1

CONDENSATE MAKEUP AND REJECT HEADER SUPPORTS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF UPGRADED SUPPORTS ON THE PORTION OF THE CONDENSATE MAKE-UP/REJECT LINE LOCATED IN THE INTERMEDIATE BUILDING SUB-BASEMENT.

SM-5043.1

CONTAINMENT TEMPERATURE MONITORING - OUTSIDE CONTAINMENT INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE EQUIPMENT OUTSIDE CONTAINMENT - IRLT PANEL.

SM-5043.2

CONTAINMENT TEMPERATURE MONITORING - INSIDE CONTAINMENT INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE EQUIPMENT INSIDE CONTAINMENT FOR THE REPLACEMENT OF THE CONTAINMENT RTD'S.

SM-5043.3

CONTAINMENT TEMPERATURE MONITORING FUNCTIONAL TEST PROCEDURE

THE PURPOSE OF THIS PROCEDURE IS CONTROL THE TESTING AND TURNOVER OF THE NEW CONTAINMENT RTD'S AND ASSOCIATED EQUIPMENT.

SM-5097.1

UNIT 1D CONTAINMENT RECIRCULATION PLENUM MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF A STRUCTURAL STEEL MONORAIL IN THE UNIT 1D RECIRCULATION PLENUM INCLUDING REWORK TO THE PLENUM AND EXISTING PIPE SUPPORT SWU-44.

SM-5098.1

SERVICE WATER VALVE REPLACEMENT - MOV-4613

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE REPLACEMENT, TESTING, AND TURNOVER OF THE SERVICE WATER VALVE MOV 4613.

SM-5114.1

UPGRADE OF HIGH ENERGY PIPE SUPPORTS ON MAIN STEAM AND FEEDWATER LINES IN THE TURBINE BUILDING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF HIGH ENERGY PIPE SUPPORTS INCORPORATING SPRING CANS FOR MAIN STEAM AND FEEDWATER LINES IN THE TURBINE BUILDING.

SM-5150.2

TEST CONNECTION MODIFICATIONS FOR CNMT PENETRATION LINES AT PENETRATIONS 105, 109, 120B, 123A AND 332A

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF MODIFIED CONTAINMENT PENETRATION LINES ADJACENT TO PENETRATIONS 105, 109, 120B, 123A AND 332A.

SM-5167.1

CONTAINMENT PLATFORM UPGRADE - "B" STEAM GENERATOR AREA

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE UPGRADED PLATFORMS ABOVE THE OPERATING FLOOR NEAR THE "B" STEAM GENERATOR. THIS MODIFICATION WILL INSTALL ADDITIONAL BRACING, STRENGTHEN CONNECTIONS, REPLACE CONCRETE ANCHOR BOLTS, AND ADD A LADDER SAFETY CAGE.

SM-5167.2

"A" AND "B" STEAM GENERATOR PLATFORM UPGRADE

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE "A" AND "B" STEAM GENERATOR PLATFORM UPGRADE AND MAN-SAFE SYSTEM SUPPORT STEEL.

SM-5167.3

'A' AND 'B' STEAM GENERATOR PLATFORM FALL ARREST SYSTEM MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE 'A' AND 'B' STEAM GENERATOR PLATFORM FALL ARREST SYSTEM.

SM-5168.3

SCREENHOUSE SERVICE WATER SUPPLY CHLORINE MONITOR MECHANICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, IN-SERVICE PRESSURE TESTING, AND TURNOVER OF THE MECHANICAL PORTION OF THE SERVICE WATER SUPPLY CHLORINE MONITOR IN THE SCREENHOUSE.

SM-5168.4

AUXILIARY BUILDING SERVICE WATER DISCHARGE CHLORINE MONITOR MECHANICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE MECHANICAL PORTION OF THE SERVICE WATER DISCHARGE CHLORINE MONITOR IN THE AUXILIARY BUILDING.

SM-5168.5

TURBINE BUILDING SERVICE WATER DISCHARGE CHLORINE MONITOR MECHANICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, IN-SERVICE PRESSURE TESTING, AND TURNOVER OF THE MECHANICAL PORTION OF THE SERVICE WATER DISCHARGE CHLORINE MONITOR IN THE TURBINE BUILDING.

SM-5168.6

INTERMEDIATE BUILDING SERVICE WATER DISCHARGE CHLORINE MONITOR MECHANICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, IN-SERVICE PRESSURE TESTING, AND TURNOVER OF THE MECHANICAL PORTION OF THE INTERMEDIATE BUILDING SERVICE WATER DISCHARGE CHLORINE MONITOR.

SM-5168.13

TURBINE BUILDING SERVICE WATER DISCHARGE CHLORINE MONITOR ELECTRICAL TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE ELECTRICAL INSTALLATION OF THE TURBINE BUILDING SERVICE WATER DISCHARGE CHLORINE MONITOR.

SM-5168.15

SCREENHOUSE CHLORINE INJECTION SYSTEM MECHANICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE SCREENHOUSE CHLORINE INJECTION SYSTEM MECHANICAL INSTALLATION.

SM-5168.16

SCREENHOUSE CIRCULATING WATER BIO-BOXES INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE ZEBRA MUSSEL CONTROL CIRC WATER BIO-BOXES INSTALLATION IN THE SCREENHOUSE.

SM-5168.17

TURBINE BUILDING SERVICE WATER BIO-BOXES INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF ZEBRA MUSSEL CONTROL SERVICE WATER BIO-BOXES INSTALLATION IN THE TURBINE BUILDING.

SM-5168.18

SODIUM HYPOCHLORITE TANK AND INJECTION PUMPS CONTAINMENT REPAIR

THE PURPOSE OF THIS PROCEDURE IS TO REPAIR THE SODIUM HYPOCHLORITE TANK BASIN AND INJECTION PUMPS DIKE.

SM-5168.19

ZEBRA MUSSELS CONTROL SYSTEM ELECTRICAL MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO PERFORM ELECTRICAL MODIFICATION FOR THE ZEBRA MUSSELS CONTROL SYSTEM.

SM-5168.20

"A" D/G JACKET WATER HEAT EXCHANGER SERVICE WATER FLUSHING CONNECTION MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO REPLACE A D/G JACKET WATER COOLER CHANNEL HEAD AND CHANNEL COVER WITH FLUSHING CONNECTION.

SM-5168.21

"B" D/G JACKET WATER HEAT EXCHANGER SERVICE WATER FLUSHING CONNECTION MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO REPLACE B D/G JACKET WATER COOLER CHANNEL HEAD AND CHANNEL COVER WITH FLUSHING CONNECTION.

SM-5168.22

"A" TURBINE LUBE OIL COOLER SERVICE WATER FLUSHING CONNECTIONS MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO INSTALL FLUSHING CONNECTIONS ON THE SERVICE WATER INLET AND OUTLET OF THE "A" TURBINE LUBE OIL COOLER.

SM-5168.23

"B" TURBINE LUBE OIL COOLER SERVICE WATER FLUSHING CONNECTIONS
MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO INSTALL FLUSHING CONNECTIONS ON THE SERVICE WATER INLET AND OUTLET OF THE "B" TURBINE LUBE OIL COOLER.

SM-5168.24

ZEBRA MUSSEL CONTROL - PHASE II ELECTRICAL TESTING

THE PURPOSE OF THIS PROCEDURE IS TO PERFORM ELECTRICAL FUNCTIONAL TESTING ON THE ZEBRA MUSSEL CONTROL ELECTRICAL MODIFICATION.

SM-5168.25

CHLORINE MONITOR SAMPLE PUMPS REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE REPLACEMENT OF THE TURBINE BUILDING AND AUXILIARY BUILDING CHLORINE MONITOR SAMPLE PUMPS.

SM-5181.1

I.L.R.T. STRUCTURAL INSTRUMENTS, REPLACEMENT OF DISPLACEMENT SCALES

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF NEW I.L.R.T. STRUCTURAL INSTRUMENTS REPLACEMENT OF DISPLACEMENT SCALES.

SM-5217.1

REPLACEMENT ACCELEROMETER INSTALLATION AND TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF A KINEMETRIC'S MODEL SSA-2 ACCELEROMETER.

SM-5262.1

MAIN GENERATOR VOLTAGE REGULATOR/EXCITER REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS TO REMOVE THE EXISTING MAIN GENERATOR VOLTAGE REGULATOR/EXCITER AND REPLACE IT WITH A NEW GENERATOR EXCITER EQUIPMENT PANEL, MAIN CONTROL BOARD MODIFICATION OF DEVICE AND CIRCUITS AND INSTALLING NEW RELAYS IN THE AUXILIARY BENCH BOARD.



SM-5275.3

INSTALLATION OF TEMPORARY MODIFICATIONS TO SUPPORT SERVICE WATER LOOP "B" OUTAGE

THE PURPOSE OF THIS PROCEDURE IS TO PROVIDE COOLING WATER TO NECESSARY SERVICE WATER SYSTEM LOADS THAT LOSE SERVICE WATER BY A PARTIAL OR FULL LOOP "B" OUTAGE.

SM-5275.4

CONTAINMENT RECIRCULATION AIR TEMPERATURE MONITORING MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE CONTAINMENT RECIRCULATION AIR TEMPERATURE MONITORING MODIFICATION.

SM-5282.1

UNDERVOLTAGE PROTECTION SYSTEM MODIFICATION TO BUS 14

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF NEW COMPONENT UPGRADES TO BUS 14 UNDERVOLTAGE PROTECTION SYSTEM.

SM-5282.2

UNDERVOLTAGE PROTECTION SYSTEM MODIFICATION TO BUS 16

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF NEW COMPONENT UPGRADES TO BUS 16 UNDERVOLTAGE PROTECTION SYSTEM.

SM-5282.3

UNDERVOLTAGE PROTECTION SYSTEM MODIFICATION TO BUS 17

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF NEW COMPONENT UPGRADES TO BUS 17 UNDERVOLTAGE PROTECTION SYSTEM.

SM-5282.4

UNDERVOLTAGE PROTECTION SYSTEM MODIFICATION TO BUS 18

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF NEW COMPONENT UPGRADES TO BUS 18 UNDERVOLTAGE PROTECTION SYSTEM.

SM-5282.5

BUS 14 AND BUS 18 UNDERVOLTAGE PROTECTIVE RELAY REPLACEMENTS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW 27D AND 27D/B RELAY INSTALLATION IN THE UNDERVOLTAGE CABINETS FOR BUS 14 AND BUS 18.

SM-5282.6

BUS 16 AND BUS 17 UNDERVOLTAGE PROTECTIVE RELAY REPLACEMENTS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW 27D AND 27D/B RELAY INSTALLATION IN THE UNDERVOLTAGE CABINETS FOR BUS 16 AND BUS 17.

SM-5393.2

UNITS "C" & "D" CONTAINMENT RECIRCULATION FAN MOTOR COOLER REPLACEMENTS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE REMOVAL, INSTALLATION AND TURNOVER OF THE "C" AND "D" CONTAINMENT RECIRCULATION FAN MOTOR COOLERS.

SM-5424.2

RK-23 - SECONDARY SYSTEM PH CHART RECORDER UPGRADE

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE SECONDARY SYSTEM PH CHART RECORDER (RK-23) ALARM RANGE CHANGES.

SM-5441.1

COMPONENT COOLING WATER PUMP A AUTO START CIRCUIT INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW AUTO START CIRCUIT FOR THE COMPONENT COOLING WATER (CCW) PUMP A. THE EXISTING AUTO START CIRCUIT FOR CCW PUMP B WILL ALSO BE TESTED.

SM-10073.1

TURBINE RUNBACK DELETION MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MODIFICATION TO REMOVE THE ROD DROP TURBINE RUNBACK.

SM-10073.2

TURBINE RUNBACK DELETION TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE MODIFICATION TO REMOVE THE ROD DROP TURBINE RUNBACK.

SECTION C - COMPLETED TECHNICAL EVALUATIONS (TEs)

This section contains a description of changes to the facility as described in the safety analysis report performed as technical evaluations. These are typically small changes that do not require the full controls of a modification. Technical Staff Engineering Evaluations are reviewed by the Plant Operations Review Committee to ensure that no unreviewed safety questions or Technical Specification changes are involved.

The basis for inclusion of a TE in this section is presentation to the PORC, closure of the associated TSR, and submittal to the Document Control Department.



TSR 92-152

WASTE EVAPORATOR HOT WATER CONVERTER CIRCULATING PUMP PIPING ADDITION

TECHNICAL EVALUATION DATED 8/24/92 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF INSTALLING PIPE, FITTINGS AND AN ISOLATION VALVE (V-2642L) IN THE PLACE OF AN PIPE PLUG ON THE PUMP CASING OF THE WASTE EVAPORATOR HOT WATER CONVERTER CIRCULATING PUMP. THE PIPING COMPONENTS ARE INSTALLED IN THE PUMP CASING TO CONTROL THE DRAINING PROCESS AND LIMIT THE SPILL OF WATER.

THE INSTALLATION OF THE PIPING COMPONENTS IN THE EXISTING WASTE EVAPORATOR SYSTEM DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS. THIS ADDITION IS INCONSEQUENTIAL IN THAT PIPING OF THIS SMALL SIZE HAS NEGLIGIBLE MASS IN COMPARISON TO THE COMPONENTS THAT THEY ARE TO BE INSTALLED ON.

TSR 92-158

SI PUMP FAN COOLERS BLANK FLANGE ADDITION

TECHNICAL EVALUATION DATED 7/1/92 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF INSTALLING CARBON STEEL PLATES AT THE UPSTREAM AND DOWNSTREAM BOLTED FLANGE CONNECTIONS OF THE SI PUMP FAN COOLERS, EIN'S AAA03A, AAA03B, AAA03C, IN ORDER TO STOP SERVICE WATER LEAKAGE FROM THE COOLERS.

THE INSTALLATION OF THE STEEL PLATES IN THE EXISTING SERVICE WATER SYSTEM DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS.

TSR 92-171

PIPING PLUG AND CAP ADDITIONS

TECHNICAL EVALUATION DATED 8/19/92 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF INSTALLING PIPING/TUBING PLUGS AND/OR CAPS OF A SUITABLE PRESSURE AND TEMPERATURE RATING TO ANY EXISTING NON-SAFETY RELATED OPEN ENDED PIPE/TUBE CONNECTIONS.

THE INSTALLATION OF CAPS AND/OR PLUG FITTINGS TO OPEN ENDED CONNECTIONS IN EXISTING PLANT SYSTEMS DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS. THIS ADDITION IS INCONSEQUENTIAL

IN THAT FITTINGS OF THIS SMALL SIZE HAVE NEGLIGIBLE MASS IN COMPARISON TO THE PIPING THAT THEY ARE TO BE INSTALLED ON. THIS ADDITION WILL ALSO SERVE TO LIMIT THE UNWANTED LEAKAGE FROM EXISTING SYSTEMS DUE TO MECHANICAL DIFFICULTIES WITH SYSTEM ISOLATION VALVES.

TSR 92-076

GENERATOR HYDROGEN PRESSURE INDICATOR PI-2805 ISOLATION VALVE INSTALLATION

TECHNICAL EVALUATION DATED 8/24/92 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF INSTALLING AN ISOLATION VALVE (V-6991) UPSTREAM OF GENERATOR HYDROGEN PRESSURE INDICATOR PI-2805. IN ORDER TO CALIBRATE AT THE PRESENT TIME, THE CORE CONDITION MONITOR MUST BE TAKEN OUT OF SERVICE OR THE GAUGE MUST BE CALIBRATED WHEN THE UNIT IS OFF LINE. THE INSTALLATION OF A MANUAL ISOLATION VALVE WILL ALLOW FOR THE CALIBRATION OF THE PI DURING ANY MODE OF OPERATION.

THE INSTALLATION OF THE VALVE IN THE EXISTING GENERATOR HYDROGEN SYSTEM DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS.

TSR 92-149

UNION ADDITIONS TO FACILITATE REMOVAL OF PASS SAMPLING VALVES

TECHNICAL EVALUATION DATED 9/2/92 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF INSTALLING SWAGelok TYPE UNIONS IN THE PASS PROCESS TUBING. IN ORDER TO PERFORM MAINTENANCE ON EXISTING SYSTEM VALVES, TUBING CONNECTIONS MUST BE CUT AND RE-WELDED AFTER MAINTENANCE IS COMPLETE. THE ADDITION OF UNIONS WILL SIMPLIFY THE MAINTENANCE ON SYSTEM VALVES AND WILL SERVE TO REDUCE THE POSSIBILITY OF ACCIDENTAL CONTAMINATION OR UNNECESSARY EXPOSURE TO PLANT PERSONNEL.

THE INSTALLATION OF UNIONS IN THE EXISTING PASS DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS.

TSR 92-021

PLANT SECONDARY SIDE UNION AND COUPLING ADDITIONS

TECHNICAL EVALUATION DATED 2/19/92 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF INSTALLING UNIONS OR COUPLINGS IN SYSTEM

PROCESS PIPING AS DESCRIBED IN THE TSR. MAINTENANCE OF EXISTING PLANT SYSTEMS OFTEN REQUIRES THE CUTTING OF PROCESS PIPING IN ORDER TO FACILITATE REPAIRS OR REPLACEMENTS OF PIPING OR COMPONENTS. THIS IS DUE LARGELY TO THE FACT THAT IT IS OFTEN IMPOSSIBLE TO REMOVE SECTIONS OF EXISTING PIPING BECAUSE OF THE NATURE OF THREADED OR WELDED CONNECTIONS.

THE INSTALLATION OF UNIONS IN EXISTING PLANT SYSTEMS DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS.

TSR 89-11

AUXILIARY FEED SYSTEM TEST GAUGES/ISOLATION VALVE

THIS COMPLETED MODIFICATION PACKAGE WAS PRESENTED TO THE COMMITTEE FOR FINAL REVIEW. SM PROCEDURE 89-11 HAS BEEN COMPLETED, WAS PREVIOUSLY CLOSED OUT AT PORC, AND IS FILED IN CENTRAL RECORDS. THE COMMITTEE EVALUATED THE MODIFICATION, AND CONCLUDED THAT THE MODIFIED SYSTEM IS FULLY OPERABLE, AS DESCRIBED IN THE DESIGN CRITERIA, AND COMPLIES WITH THE REQUIREMENTS OF THE SM PROCEDURE AND DESIGN CRITERIA, THAT IT WILL NOT IMPACT ON THE SAFE OPERATION OF ANY SAFETY EQUIPMENT AND ENGINEERED SAFETY FEATURES, THAT IT DOES NOT HAVE KNOWN FAULTS THAT COULD IMPACT ITS OWN OPERABILITY, THAT THE QUALITY OF THE SYSTEM INSTALLATION IS SUFFICIENT TO ASSURE THESE ARE TRUE, AND THAT NO CONCERNS EXIST. ALL ITEMS LISTED ON THE MODIFICATION MANAGEMENT FORM ARE COMPLETED. THE COMMITTEE CONCURRED THAT THIS MODIFICATION IS COMPLETE AND THAT ALL DOCUMENTATION SHOULD BE TRANSMITTED TO CENTRAL RECORDS. THE COMMITTEE REVIEWED THE ABOVE ITEM AND HAS DETERMINED THAT IT DID NOT RESULT IN A NON-COMPLIANCE WITH TECHNICAL SPECIFICATIONS OR RESULT IN AN UNREVIEWED SAFETY QUESTION. THIS ITEM IS COMPLETE.

TSR 92-025

CONDENSATE STORAGE TANK LEVEL TRANSMITTER TUBING REROUTE EVALUATION

TECHNICAL EVALUATION DATED 8/14/92 REV 0

PAST EXPERIENCE WITH FILLING THE INSIDE CST HAS SHOWN THAT AT TIMES THE TANKS OVERFLOW PRIOR TO REACHING THE HIGH LEVEL ALARM SET POINT. THE OVERFLOW CONDITION HAS BEEN DETERMINED TO ONLY OCCUR WHEN THE CORS SYSTEM IS OPERATING AND THE PRIMARY DI PLANT IS SHUT DOWN. UNDER THESE CONDITIONS, THE CORS SYSTEM TAKES SUCTION FROM BOTH OF THE INSIDE CSTs, PROCESSES IT AND RETURNS IT TO THE CSTs. UPON FURTHER REVIEW OF THE CST TAP OFF LINES FOR THE CORS SUCTION AND THE TWO CST LEVEL TRANSMITTERS LT-2022A AND LT-2022B, BOTH COME OFF THE SAME TANK PENETRATION. AS A RESULT, WHEN THE PRIMARY DI IS OUT OF SERVICE THE CORS SYSTEM IS RECIRCULATING THE CST AND CAUSES A LOW PRESSURE CONDITION AT THE LEVEL TRANSMITTER AND FALSE LOW LEVEL.

IN ADDITION, IT WAS DISCOVERED THAT THE AUXILIARY FEEDWATER RECIRCULATION RETURN LINE ALSO CONNECTS TO THE CST LEVEL PENETRATION. THIS COULD CAUSE A FALSE HIGH LEVEL WHEN THE AFW SYSTEM IS IN RECIRC DUE TO A HIGH PRESSURE CONDITION AT THE LEVEL TRANSMITTER PENETRATION.

CONSEQUENTLY, IN ORDER TO RESOLVE THE ROOT CAUSE OF THE CST LEVEL ERROR, THE TAPS FOR THE CST LEVEL TRANSMITTERS WILL BE SWITCHED TO THE ADJACENT HOT WATER RETURN PENETRATION. THE HOT WATER RETURN LINES WILL BE BLANKED OFF AND THE EXISTING ALTERNATE RETURN PATH UTILIZED.

ALL ABANDONED LINES WILL BE PLUGGED OR CAPPED WITH COMPATIBLE MATERIAL. THE HOT WATER RETURN LINE WILL USE B61 OR B62 COPPER CAPS. THE OLD TRANSMITTER ROOT VALVES 4077A AND 4076A WILL HAVE SS SWAGelok PLUGS.

THE NEW TRANSMITTER CONFIGURATION SHALL PROVIDE THE SAME SPAN AS THE ORIGINAL CONFIGURATION. THE HOT WATER RETURN PENETRATION IS AT THE SAME RELATIVE ELEVATION AS THE EXISTING TRANSMITTER PENETRATION. IN ADDITION, THE TRANSMITTER WILL NOT BE MOVED. THEREFORE, ITS ELEVATION WILL NOT BE CHANGED AND THE CST LEVEL SPAN WILL BE UNAFFECTED BY THE TUBING REROUTE.

TSR 92-89

BORIC ACID EVAPORATOR OVER FLOW LINE AND LEVEL CONTROL EVALUATION

TECHNICAL EVALUATION DATED 7/13/92 REV 0

THE PURPOSE OF THIS EVALUATION IS TO DETERMINE IF ADDING A DRAIN AND LOOP SEAL TO THE BORIC ACID EVAPORATOR FEED TANK (BA EVAP) VENT LINE IS ACCEPTABLE. PRESENTLY, THE BA EVAP VENT LINE CONNECTS INTO THE AUXILIARY BUILDING VENTILATION SYSTEM UPSTREAM OF THE 1G AUX BLDG CHARCOAL FILTER UNIT. PREVIOUS PROBLEMS WITH THE LEVEL CONTROL SYSTEM HAVE CAUSED THE EVAPORATOR TO OVER FLOW THROUGH THE VENT INTO THE VENTILATION SYSTEM. OVER FLOW WITH IN THE VENTILATION SYSTEM EVENTUALLY LEAKS OUT OF THE DUCT WORK AND ONTO SAFETY RELATED EQUIPMENT. IN ADDITION, IT ALSO TENDS TO DECREASE THE LIFE OF THE CHARCOAL FILTERS.

BY ADDING A DRAIN WITH A LOOP SEAL TO THE VENT, ANY OVERFLOW FROM THE BA EVAP FEED TANK WILL FLOW OUT THE LOOP SEAL INTO A SPARE CAPPED EQUIPMENT DRAIN VERSES INTO THE AUX BLDG HVAC DUCT. THE EXISTING HOSE CONNECTING THE TANK TO THE HARD PIPED VENT LINE WILL ALSO BE REPLACED WITH HARD PIPE.

BECAUSE OF THE RELATIVE ELEVATION OF THE OVERFLOW LINE WITH RESPECT TO THE VENT LINE, IT IS BELIEVED CHECK VALVES 1825E AND 1825F ARE INSTALLED IN THE TANK LEVEL SENSING LINES TO PREVENT INTRUSION OF BA SOLUTION INTO NON-HEAT TRACED LINES.

HOWEVER, IT IS BELIEVED THE HIGH SIDE CHECK VALVE MAY BE STICKING DUE TO BA BUILD UP CAUSING THE HIGH SIDE TRANSMITTER NOT TO SEE A CHANGE IN LEVEL AND NEVER REACH THE HIGH LEVEL FEED SHUT OFF. CONSEQUENTLY, THE TANK WOULD OVER FLOW INTO THE VENT LINE. WITH THE INSTALLATION OF A DRAIN AT AN ELEVATION EQUAL WITH THE TOP OF THE TANK, OVERFLOW INTO THE SENSING LINES WILL NOT BE POSSIBLE SINCE THE SENSING LINES EXIT THE TOP OF THE TANK ABOVE THE NEW DRAIN LINE. THEREFORE, THE CHECK VALVES WILL BE REMOVED TO REDUCE THE POTENTIAL FOR LEVEL FAILURES DUE TO STICKING. THIS NEW CONFIGURATION IS SIMILAR TO THE BAST AND CONCENTRATES HOLDING TANK LEVEL LINES.

TSR 92-203

TURBINE LUBE OIL RESERVOIR VAPOR EXTRACTOR DRAIN LINE ADDITION

TECHNICAL EVALUATION DATED 12/4/92 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF RECONFIGURATION OF THE EXISTING DRAIN LINE FROM THE TURBINE LUBE OIL VAPOR EXTRACTORS AND THE TURBINE LUBE OIL RESERVOIR VENT STACK. THE NEW CONFIGURATION WILL PROVIDE SEPARATE DRAIN LINES FROM THESE COMPONENTS TO THE TURBINE LUBE OIL RESERVOIR TO IMPROVE THE ABILITY TO DRAIN COLLECTED OIL BACK TO THE RESERVOIR.

THE INSTALLATION OF THE DRAIN LINES DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS.

TSR 93-020

FLANGE ADDITION TO CONTAINMENT AIR TEST AFTERCOOLER

TECHNICAL EVALUATION DATED 1/29/93 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF THE ADDITION OF FLANGE CONNECTIONS TO THE SHELL AND TUBE SIDES OF THE CONTAINMENT AIR TEST AFTERCOOLER IN THE TURBINE BUILDING. THIS MODIFICATION IS INTENDED TO ALLOW FOR INSPECTION AND MAINTENANCE OF THE AFTERCOOLER.

THE INSTALLATION OF EQUIPMENT DESCRIBED ABOVE DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS.

TSR-93-020A

ILRT PIPING BREATHING AIR FILTER ADDITION

TECHNICAL EVALUATION DATED 2/3/93 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY



CONSEQUENCES OF THE RELOCATION AND RECONFIGURATION OF BREATHING AIR FILTERS FPP05 AND FPP07 AND THE ASSOCIATED VALVES FROM CONTAINMENT TO THE TURBINE BUILDING AND TO EVALUATE THE REMOVAL OF THE DESICCANT MATERIAL FROM THE CONTAINMENT AIR TEST AIR DRYER.

THE INSTALLATION OF EQUIPMENT DESCRIBED ABOVE DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS.

TSR 93-020B

ILRT ORIFICE LPP01 REMOVAL

TECHNICAL EVALUATION DATED 2/3/93 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF THE REMOVAL OF ORIFICE LPP01 AND ASSOCIATED PRESSURE TAPS FROM THE ILRT SYSTEM PIPING.

THE REMOVAL OF EQUIPMENT DESCRIBED ABOVE DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BASED UPON THE DISCUSSION CONTAINED WITHIN THE SAFETY ANALYSIS.

TSR 91-183

ACTUATOR UPGRADES AND DIAGNOSTIC TESTING FOR MOVs SCHEDULED FOR THE 1992, 1993, 1994 & 1995 AO&I

DESIGN CRITERIA DATED 1/26/93 REV 1

SAFETY ANALYSIS DATED 1/26/93 REV 1

THE LIAISON ENGINEER PRESENTED THIS REVISION OF THE DESIGN CRITERIA AND SAFETY ANALYSIS BECAUSE OF THE MINOR CHANGES IN THIS REVISION, PRE-PORC WAS NOT PERFORMED PRIOR TO THIS PRESENTATION. THE TECHNICAL ASPECTS OF THIS TECHNICAL STAFF REQUEST (TSR) WERE NOT CHANGED FROM REVISION 0. REVISION 1 REPRESENTS THE ADDITION OF WORK SCOPE AS INDICATED ON ATTACHMENT 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS. SEVERAL MOTOR OPERATED VALVES (MOVs) AT GINNA STATION ARE SCHEDULED FOR DISASSEMBLY, INSPECTION, REFURBISHMENT AND DIAGNOSTIC TESTING DURING REFUELING OUTAGES UNDER THE PRIMARY VALVE IMPROVEMENT PROGRAM. THE COMPLETE OVERHAUL OF EACH MOV PRESENTS AN IDEAL OPPORTUNITY TO UPGRADE THE VALVE ACTUATOR IN ACCORDANCE WITH CURRENT INDUSTRY STANDARDS.

THIS MODIFICATION INSTALLATION WILL FUNCTION TO PERFORM THE REFURBISHMENTS. THE FOLLOWING ACTUATOR UPGRADES SHALL BE INCORPORATED DURING THE REFURBISHMENT EFFORT:

MOVs HAVING A TWO-ROTOR LIMIT SWITCH ASSEMBLY SHALL BE UPGRADED WITH A FOUR-ROTOR DESIGN. THIS CHANGE WILL ALLOW THE INDICATING LIGHTS TO OPERATE INDEPENDENTLY OF THE TORQUE

SWITCH BYPASS LIMIT SWITCH TO PROVIDE MORE ACCURATE INDICATION OF VALVE POSITION PER NRC IN 86-29.

THE ONE-PIECE SPRING CARTRIDGE CAP COVER DESIGN WILL BE REPLACED WITH A THREE-PIECE DESIGN TO PROVIDE THE CAPABILITY TO ADJUST THE SPRING PACK GAP AND TO FACILITATE MOVATS TESTING.

ANY DEGRADED/COLLAPSED SPRING PACKS WILL BE REPLACED WITH A NEW DESIGN (SUPPLIED BY THE MANUFACTURER) WHERE THE EXISTING STYLE IS OBSOLETE.

LEAF-TYPE TORQUE SWITCHES SHALL BE REPLACED WITH A NEW, BALANCEABLE DESIGN TORQUE SWITCH FOR SMB-00 SIZE ACTUATORS. THIS IS ALSO A DIRECT SUBSTITUTE SUPPLIED BY THE MANUFACTURER FOR AN OBSOLETE DESIGN.

THE GREASE IN THE MAIN GEARCASE SHALL BE REPLACED WITH EXXON NEBULA EP-0. THIS GREASE IS APPROVED FOR ALL UNITS AS STATED IN LIMITORQUE MAINTENANCE MANUAL, BULLETIN SMBI-82C. USING ONE GREASE TYPE FOR ALL MOVs (I.E., THOSE LOCATED OUTSIDE AS WELL AS INSIDE CONTAINMENT) IS BASED UPON THE RECOMMENDATIONS MADE IN INPO SER 7-84.

THE LIMIT SWITCH GEARBOX AND CARTRIDGE ASSEMBLY GREASE SHALL BE REPLACED WITH MOBIL 28. AGAIN, THIS GREASE IS APPROVED FOR USE IN ALL APPLICATIONS BY LIMITORQUE AND WAS RECOMMENDED FOR USE IN NRC IN 79-03.

ADDITIONALLY, MOV 1815A AND 1815B ACTUATORS SHALL BE ROTATED TO FACILITATE THE FOUR-ROTOR LIMIT SWITCH UPGRADE. A MINOR CCW PIPING ALTERATION SHALL BE PERFORMED TO PERMIT THE ROTATION OF THESE VALVE ACTUATORS.

THE PROPOSED MODIFICATION WILL INSTALL VENDOR-RECOMMENDED ACTUATOR UPGRADES AND IMPROVEMENTS, INCLUDING LIMIT AND TORQUE SWITCH SETTINGS IN ORDER TO PROVIDE THE NECESSARY ASSURANCE THAT THE REFURBISHED MOV WILL PERFORM ITS INTENDED FUNCTION IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN NRC GENERIC LETTER 89-10.

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY NRC REGULATORY GUIDE 1.70 AND THE FOLLOWING EVENTS ARE RELATED TO THIS MODIFICATION:

- A) MAJOR AND MINOR FIRES
- B) A SEISMIC EVENT
- C) A MAIN STEAM LINE BREAK (MSLB)
- D) A LOSS OF COOLANT ACCIDENT (LOCA)

TSR-93-010
LEAD SHIELDING

DESIGN CRITERIA DATED 03/04/93 REV 1

SAFETY ANALYSIS DATED 03/04/93 REV 1

THE LIAISON ENGINEER PRESENTED THIS TECHNICAL STAFF REQUEST (TSR) ADDRESSING THE SAFETY CONSEQUENCES OF ADDING LEAD SHIELDING EITHER DIRECTLY TO OR IN THE VICINITY OF PLANT EQUIPMENT.

IF SHIELDING WILL BE INSTALLED DIRECTLY TO SEISMIC CATEGORY I OR NON-SEISMIC EQUIPMENT OR PIPING WHILE THE EQUIPMENT IS REQUIRED TO FUNCTION, THE EQUIPMENT OR PIPING WILL BE RE-QUALIFIED WITH THE ADDITIONAL WEIGHT OF THE SHIELDING.

IF SHIELDING WILL BE INSTALLED IN THE VICINITY OF SEISMIC CATEGORY I EQUIPMENT OR PIPING, WHILE THE EQUIPMENT IS REQUIRED TO FUNCTION, AND THE SHIELDING COULD AFFECT THE FUNCTIONING OF THE EQUIPMENT IF ITS SUPPORTING SYSTEM WERE TO FAIL DURING A SEISMIC EVENT, THE SHIELDING SUPPORTING SYSTEM WILL BE SEISMICALLY QUALIFIED.

IF SHIELDING WILL REMAIN INSTALLED INSIDE CONTAINMENT ABOVE COLD SHUTDOWN, THE LEAD SHIELDING MATERIAL WILL BE QUALIFIED FOR THE CONTAINMENT ENVIRONMENT SUCH THAT IT WILL NOT CLOG THE CONTAINMENT SUMP OR ADVERSELY AFFECT SAFETY RELATED EQUIPMENT PERFORMANCE DURING A LOCA. IF DURING A LOCA THE LEAD SHIELDING BLANKETS WERE TO BECOME DISLODGED FROM THEIR SUPPORTS DUE TO BREAK SPRAY, THEY WOULD SINK AND REMAIN ON THE CONTAINMENT FLOOR DUE TO THEIR EXTREMELY HIGH DENSITY.

THE PROPOSED MODIFICATION WILL NOT INCREASE THE CONSEQUENCES OF AN ACCIDENT OR A MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE UFSAR BECAUSE ANY EQUIPMENT OR PIPING WILL BE RE-QUALIFIED WITH THE ADDED WEIGHT OF THE SHIELDING IF ITS REQUIRED TO FUNCTION WHILE THE SHIELDING IS INSTALLED. IN ADDITION, IF THE LEAD SHIELDING WILL BE INSTALLED IN CONTAINMENT ABOVE COLD SHUTDOWN, IT WILL BE QUALIFIED FOR THE CONTAINMENT ENVIRONMENT TO PREVENT CLOGGING THE CONTAINMENT SUMP DURING A LOCA.

TSR 92-002

VALVE INSPECTION AND REFURBISHMENT PROGRAM VALVE UPGRADES-PHASE V

DESIGN CRITERIA DATED 2/24/93 REV 0

SAFETY ANALYSIS DATED 2/24/93 REV 0

THE LIAISON ENGINEER PRESENTED THIS TECHNICAL STAFF REQUEST (TSR). THIS DESIGN MODIFICATION IS A CONTINUANCE OF THE GINNA STATION VALVE IMPROVEMENT PROGRAM COMMENCED IN 1989-REFERENCE TSR #89-002, 90-004, 90-197 AND 91-140. VALVES AND VALVE ACTUATORS CONSIDERED VITAL TO PLANT SAFETY AND

OPERABILITY ARE TO BE INSPECTED AND COMPLETELY REFURBISHED AS PART OF THIS PROGRAM. THE REFURBISHMENT INCLUDES VENDOR AND INDUSTRY RECOMMENDED UPGRADES OR IMPROVEMENTS.

THIS MODIFICATION INSTALLATION WILL FUNCTION TO UPGRADE THE VALVES AND WILL RANGE FROM METALLURGICAL CHANGES, INCLUDING FASTENER OR BOLTING UPGRADES, TO MINOR DESIGN IMPROVEMENTS. IN SOME INSTANCES, EXACT IDENTICAL REPLACEMENT PARTS ARE NO LONGER AVAILABLE FROM THE ORIGINAL EQUIPMENT MANUFACTURER AND THE UPGRADED REPLACEMENT PART(S) IS ALL THAT IS AVAILABLE FOR PROCUREMENT. THE PROPOSED MODIFICATION WILL PERMANENTLY MODIFY THE VALVES. THE INDIVIDUAL ITEMS AND UPGRADES ARE SPECIFICALLY ADDRESSED WITHIN THE TSR. TABLE A OF THE DESIGN CRITERIA LISTS ALL OF THE VALVES ADDRESSED IN THE SCOPE OF TSR 92-002.

SEVERAL 150# GATE VALVES USED THROUGHOUT THE SERVICE WATER SYSTEM AT GINNA STATION ARE EITHER CRITERION (R) GATE VALVES, CRANE CATALOG NO. 101XU OR CHAPMAN LIST 150 OR 155 VALVES. THESE VALVE MODELS ARE NO LONGER MANUFACTURED. PARTS ARE NOT READILY AVAILABLE FOR REPLACEMENT OF THESE STYLE VALVES WITH ONE CURRENTLY IN PRODUCTION. BECAUSE OF THESE ISSUES IT IS MORE FEASIBLE TO REPLACE THE OBSOLETE 101XU AND LIST 150 AND 155 VALVES WITH A CURRENT VALVE STYLE THAN REPAIR THE EXISTING VALVE SEATS OR BODY. THE CRANE NO. 47 1/2XU, BEING THE CLOSEST IN DESIGN, IS THE STYLE THAT WAS SELECTED. TSR 92-002 TABLE B SUMMARIZES THE PROJECTED VALVE REPLACEMENTS BY EIN.

A REVIEW HAS BEEN MADE OF ALL THE EVENTS ANALYZED IN THE GINNA STATION UFSAR, THE DESIGN BASIS FOR GINNA STATION TECHNICAL SPECIFICATIONS AND THE EVENTS REQUIRING ANALYSIS BY USNRC REGULATORY GUIDE 1.70. THE ONLY EVENTS APPLICABLE TO THIS MODIFICATION ARE LOSS-OF-COOLANT ACCIDENTS AND SEISMIC EVENTS.

SINCE THE CHANGES MADE BY THIS MODIFICATION ARE INTENDED TO UPGRADE OR IMPROVE THE VALVE(S) MATERIAL AND OPERATIONAL CONDITION OF THE LONG TERM PERFORMANCE AND RELIABILITY OF THE VALVE WILL BE ENHANCED. THEREFORE, THE ABILITY OF THE APPLICABLE VALVES TO HELP MITIGATE THE CONSEQUENCES OF LOSS-OF-COOLANT AND SEISMIC EVENTS ARE NOT AFFECTED.

IN ADDITION, THE DESIGN CRITERIA AND PLANT MAINTENANCE PROGRAM REQUIRED POST-MAINTENANCE TESTING INCLUDING GASKET LEAKAGE INSPECTION, VALVE STROKING AND VALVE SEAT LEAKAGE AS APPROPRIATE TO VERIFY THAT THE INSPECTION AND UPGRADES HAVE NOT DEGRADED THE PERFORMANCE OF THE VALVES. THEREFORE, THE DESIGN SAFETY FUNCTIONS OF THE APPLICABLE VALVES ARE NOT AFFECTED.

SINCE THE MODIFICATIONS ADDRESSED AFFECT COMPONENT WEIGHT VERY LITTLE, E.G., LESS THAN 10%, THE SEISMIC ANALYSIS FOR THE EFFECTED VALVES REMAINS VALID.

TSR 90-266

CONDENSATE PUMP SEAL WATER PIPING MODIFICATION EVALUATION

TECHNICAL EVALUATION DATED 12/16/90 REV 0

SAFETY ANALYSIS DATED 12/16/90 REV 0

THE PURPOSE OF THE ATTACHED ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF REPLACING THE EXISTING CARBON STEEL PIPING DOWNSTREAM OF SEAL WATER FILTER FGS02 WITH STAINLESS STEEL PIPING PER SPEC 301.

TSR 93-024

WASTE HOLDUP TANK PUMP DISCHARGE FLOW TRANSMITTER FT-1007 REMOVAL

TECHNICAL EVALUATION DATED 2/22/93 REV 0

SAFETY ANALYSIS DATED 2/22/93 REV 0

THE DISCHARGE FLOW METER (FT-1007) FOR THE WASTE HOLDUP TANK PUMP HAS BEEN FREQUENTLY CLOGGED BY DEBRIS. UNPLUGGING OF THIS FLOW TRANSMITTER HAS RESULTED IN EXPOSURE OF THE I&C TECHNICIANS AND OPERATORS TO RADIATION IN THE WASTE HOLDUP TANK ROOM. THE WASTE HOLDUP TANK PUMP IS CURRENTLY SUPPLYING A VENDOR SUPPLIED DEMINERALIZATION SYSTEM LOCATED IN THE DRUMMING STATION ON THE TOP FLOOR OF THE AUXILIARY BUILDING. A PUMP AND FLOW INDICATION ARE PRESENT IN THE VENDOR SYSTEM. ELIMINATION OF FT-1007 SHOULD NOT POSE A PROBLEM WITH THE CURRENT OPERATION OF THE SYSTEM. THIS ANALYSIS WILL EVALUATE THE INSTALLATION OF A SPOOL PIECE WHICH WOULD REPLACE FT-1007

TSR 93-056

ILRT VENT VALVE INSTALLATION

THE ATTACHED TECHNICAL EVALUATION WAS REVIEWED BY THE PORC:

THE PURPOSE OF THE EVALUATION IS TO REVIEW THE SAFETY CONSEQUENCES OF ADDING AN 8" MANUAL VALVE ON SPARE FLANGED PENETRATION #2 FOR THE CONTAINMENT INTEGRATED LEAK RATE TEST (ILRT) DURING COLD SHUTDOWN (CSD). THE ADDITIONAL VALVE IS DESIRED IN ORDER TO INCREASE THE CAPACITY FOR VENTING CONTAINMENT UPON COMPLETION OF THE CONTAINMENT ILRT. AFTER VENTING IS COMPLETE, THE VALVE WILL BE REMOVED AND THE SPARE PENETRATION WILL HAVE BOTH OF ITS BLIND FLANGES RE-INSTALLED PRIOR TO LEAVING COLD SHUTDOWN

DURING PLANT OPERATIONS ABOVE COLD SHUTDOWN, THE PENETRATION IS REQUIRED TO BE ISOLATED USING A DOUBLE GASKETED BLIND FLANGE INSIDE AND OUTSIDE CONTAINMENT. DURING COLD SHUTDOWN CONDITIONS, PENETRATION #2 IS USED FOR ROUTING S/G INSPECTION

CABLE FROM THE S/G TO A DIAGNOSTIC TRAILER LOCATED OUTSIDE CONTAINMENT.

THE VENT VALVE MAY BE INSTALLED IN THE CLOSED POSITION DURING REFUELING OPERATIONS. IF CONTAINMENT CLOSURE IS REQUIRED DUE TO A FUEL HANDLING ACCIDENT, THE CLOSED VENT VALVE WILL PROVIDE SUFFICIENT PENETRATION ISOLATION SINCE CONTAINMENT WILL NOT BE PRESSURIZED. INSTALLING THE INNER BLIND FLANGE PRIOR TO THE REFUELING ACTIVITY IS ALSO AN ACCEPTABLE REFUELING CONTAINMENT CLOSURE MECHANISM.

THE VENT VALVE MAY BE INSTALLED DURING LOW LOOP OPERATIONS HOWEVER, CONTAINMENT CLOSURE FOR REDUCED INVENTORY OPERATIONS WILL BE BASED ON REMOVING THE VALVE AND RE-INSTALLING THE OUTER BLIND FLANGE ON THE PENETRATION WITHIN 2 HRS PER THE EXISTING OPERATIONAL PROCEDURES FOR CONTAINMENT CLOSURE. ALTERNATIVELY, IF THE VENT VALVE IS TESTED IN THE CLOSED POSITION OR WITH A BLIND FLANGE INSTALLED ON THE DOWN STREAM SIDE OF THE VALVE IN ACCORDANCE WITH 10 CFR 50 APPENDIX J CRITERIA, IT MAY PROVIDE THE REDUCED INVENTORY CLOSURE FUNCTION.

THE EVALUATION FOUND THIS CONFIGURATION ACCEPTABLE FROM A DESIGN AND SAFETY STAND POINT.

TSR 93-041

REPLACEMENT OF C.S. SMALL BORE PIPING AND COMPONENTS WITH CHROME-MOLY MATERIAL

THE ATTACHED TECHNICAL EVALUATION WAS REVIEWED BY THE PORC:

THE PURPOSE OF THIS EVALUATION IS TO DETERMINE THE SAFETY CONSEQUENCES OF REPLACING NON-SAFETY RELATED SMALL BORE CARBON STEEL DRAIN PIPING 2" DIA. AND LESS WITH CHROME-MOLY MATERIAL.

REPLACING PORTIONS OF PIPING WITH CHROME-MOLY IS DESIRABLE TO REDUCE EROSION. THE CHROME-MOLY MATERIAL WAS FOUND TO HAVE EQUAL OR BETTER MECHANICAL PROPERTIES AND IMPROVED CHEMICAL PROPERTIES. THE EVALUATION FOUND THE REPLACEMENT MATERIAL ACCEPTABLE FROM A SAFETY AND DESIGN STAND POINT.

TSR 92-227

STEAM DUMP BYPASS LINE REMOVAL

THE ATTACHED TECHNICAL EVALUATION WAS REVIEWED BY THE PORC:

THE PURPOSE OF THIS EVALUATION IS TO REVIEW THE SAFETY CONSEQUENCES OF DELETING THE 1" WARM UP/BYPASS LINE AND ASSOCIATED PIPING AND VALVES FROM THE EIGHT 10" MANUAL ISOLATION VALVES LOCATED DOWN STREAM OF THE STEAM DUMP VALVES.



THE SUBJECT LINES WERE FOUND TO BE SUBJECT TO FATIGUE FAILURES DUE TO THEIR EXCESSIVELY LONG CANTILEVER CONFIGURATION. SINCE THE VALVES ARE A BOUNDARY VALVE TO THE CONDENSER, THEY SERVE NO SYSTEM FUNCTION AND MAY BE REMOVED. THE EVALUATION FOUND THE REMOVAL ACCEPTABLE FROM A SAFETY AND DESIGN STAND POINT

TSR 92-191

RV 9531 E&F FOREIGN MATERIAL INTRUSION

THE ATTACHED TECHNICAL EVALUATION WAS REVIEWED BY THE PORC

THE PURPOSE OF THIS EVALUATION IS TO REVIEW THE SAFETY CONSEQUENCES OF ADDING PLUG TYPE ISOLATION VALVE ON THE COMMON RESIN TRANSFER LINE FROM THE CONDENSATE DEMINERALIZER RESIN VESSELS. PRESENTLY, THE HIGH PRESSURE CONDENSATE IS ISOLATED WITH A BUTTERFLY VALVE WHICH ARE INHERENTLY POOR ISOLATION VALVES BY DESIGN. THE VALVE WILL BE LOCATED IN THE HIGH PRESSURE PIPING UPSTREAM OF THE LOW PRESSURE PIPING SAFETY VALVES. THE EVALUATION FOUND THIS CONFIGURATION ACCEPTABLE FROM A SAFETY AND DESIGN STAND POINT.

TSR 92-230

FEEDWATER REGULATING VALVE BYPASS LINE DRAIN VALVE REMOVAL

THE ATTACHED TECHNICAL EVALUATION WAS REVIEWED BY THE PORC

THE PURPOSE OF THIS EVALUATION IS TO EVALUATE THE SAFETY CONSEQUENCES OF DELETING A 1" DRAIN VALVE ON THE FEEDWATER REGULATING VALVES BYPASS LINE AND REPLACING THE VALVE WITH A CAPPED CONNECTION. THE SUBJECT VALVE WAS FOUND TO BE LEAKING AND SINCE IT IS NOT THE ONLY DRAIN CONNECTION, IT MAY BE REMOVED.

TSR 89-15

SBAFW TEST TANK GAUGE

TECHNICAL EVALUATION DATED 4/13/93 REV 0

SAFETY ANALYSIS DATED 4/14/93 REV 0

DURING THE PT-36 SERIES OF PROCEDURES A TEMPORARY GAUGE IS INSTALLED ON THE TEST TANK FOR USE IN CALCULATING PUMP DIFFERENTIAL PRESSURES. THIS EVALUATION WILL PERMANENTLY INSTALL A PRESSURE GAUGE AT THE LOCATION OF THE TEST GAUGE. THE ADDITION OF THE GAUGE WILL NOT AFFECT ANY SEISMIC OR SAFETY RELATED EQUIPMENT OR STRUCTURES IN THE AREA.

TSR 93-063

CONTROL ROOM CHILLER SW INLET/OUTLET FLANGE ADDITION AND END BELL REPAIR

SAFETY EVALUATION DATED 3/30/93 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO DETERMINE THE SAFETY CONSEQUENCES OF ADDING FLANGES TO THE SERVICE WATER INLET AND OUTLET LINES TO THE "A" AND "B" CONTROL ROOM CHILLERS IS ACCEPTABLE. PRESENTLY, THE EXISTING PIPING AND SUPPORTS DO NOT ALLOW REMOVAL OF THE HEAT EXCHANGER END BELLS FOR TUBE MAINTENANCE. MAINTENANCE IS REQUIRED TO BE PERFORMED EACH REFUELING OUTAGE. IN ADDITION, THE DIVIDER PLATE ON THE END BELLS HAS SIGNIFICANT CORROSION AND REQUIRES REBUILDING TO PREVENT BYPASS FLOW. THIS EVALUATION WILL ALSO DETERMINE AN ACCEPTABLE REPAIR METHOD AND CORROSION PROTECTION FOR THE DIVIDER PLATE AND ANY OTHER CORRODED SW NON-PRESSURE BOUNDARY COMPONENT.

TSR 92-059

PENETRATION LEAKRATE TESTING TUBING REROUTE FOR PENETRATIONS 404, 402, PERSONNEL, AND EQUIPMENT HATCHES

TECHNICAL EVALUATION DATED 1/14/93 REV 0

SAFETY ANALYSIS DATED 2/19/93 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF INSTALLING OR RE-ROUTING TUBING AND/OR VALVES FOR SEVERAL OF THE PENETRATION TESTING LINES.

TSR 93-059

CONDENSATE SYSTEM SAMPLE EQUIPMENT INSTALLATION

TECHNICAL EVALUATION DATED 4/6/93 REV 0

SAFETY ANALYSIS DATED 4/9/93 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF THE ADDITION OF CHEMISTRY SAMPLING EQUIPMENT TO THE NON-SAFETY CLASS CONDENSATE SYSTEM.

TSR 93-063

CONTROL ROOM CHILLER SW INLET/OUTLET FLANGE ADDITION AND END BELL REPAIR

TECHNICAL EVALUATION DATED 3/30/93 REV 0

SAFETY ANALYSIS DATED 3/30/93 REV 0

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY

CONSEQUENCES OF ADDING FLANGES TO THE SERVICE WATER INLET AND OUTLET LINES TO THE "A" AND "B" CONTROL ROOM CHILLERS IS ACCEPTABLE. PRESENTLY, THE EXISTING PIPING AND SUPPORTS DO NOT ALLOW REMOVAL OF THE HEAT EXCHANGER END BELLS FOR TUBE MAINTENANCE. MAINTENANCE IS REQUIRED TO BE PERFORMED EACH REFUELING OUTAGE. IN ADDITION, THE DIVIDER PLATE ON THE END BELLS HAS SIGNIFICANT CORROSION AND REQUIRES REBUILDING TO PREVENT BYPASS FLOW. THIS EVALUATION WILL ALSO DETERMINE AN ACCEPTABLE REPAIR METHOD AND CORROSION PROTECTION FOR THE DIVIDER PLATE AND ANY OTHER CORRODED SW NON-PRESSURE BOUNDARY COMPONENT.

SECTION D - TEMPORARY MODIFICATIONS

This section contains descriptions and summaries of safety evaluations of temporary changes pursuant to the requirements of 10 CFR 50.59(b).

5772.1099

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 92-061

Date: 08/19/92

Rev. 0

Title: Instrument Air Hose Connection to Provide Clean Air for Maintenance of the B Rx Compartment Cooler. WO 9201643.

PART II

Type: Electrical Fluid X Structural

Description:

In order to perform a solder repair of the B Rx Compartment Cooling Unit, it is necessary to blow remaining water out of the cooling unit tubes. Attempts have been made using bottled air,, however the volume is insufficient to completely dry the tubes to accept solder. The intended solution is to provide a connection to the Instrument Air System such that a larger volume of air may be used to dry the tubes. *Connection is downstream of V-7076 B.*

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PART III

Design Inputs:

IA System Design pressure	= 150 psig
" " " temperature	= 400 Deg F
IA System Operating pressure	= 125 psig
" " " temperature	= 100 Deg F

Tubing is to be 3/8" OD rigid poly tubing. Fittings are to be Swagelok and NPT as applicable.

Evaluation:

This tubing is rated for an approximate pressure of 200 psi and it is normally used throughout the IA system for similar applications. It will also allow for a sufficient volume of air based on the 3/8" OD size. *Volume of air taken away from AOV-754 A and AOV-392 B is inconsequential, as both valves fail in the safe position.*

Testing Requirements:

Following removal of the Temp Mod, the system connection will be checked for any signs of leakage.

Safety Review:

See attached Safety Analysis.

5772 .1100

Design Review:

The Design Review Checklist, per A-304, has been reviewed and all applicable items have been met.

Mode Restriction:

None

PREPARED BY:

Bruce A. Kuhl

DATE:

8/19/92

REVIEWED BY:

James T. Sweet

DATE:

8/19/92

APPROVED BY:

A. T. L. L.

DATE:

8/19/92

PORC APPROVAL MEETING:

92-111

DATE:

8/19/92

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator)TM No.: 92-063 Date: 09/17/92 Rev: 0Title: SW CHLORINATION INJECTION LINE

Part II (Initiator)Type: Electrical Fluid ✓ Structural

Description: CHLORINE INJECTION LINES TO SW BAY HAVE FAULED AND WILL NOT
PASS FLOW. TEMPORARY MODIFICATION INVOLVES INSTALLING TUBING DOWNSTREAM
OF VALVES 2124V AND 2125V AND ROUTING TUBING THROUGH
SCREENHOUSE FLOOR GRATING ABOVE SW BAY STOP LOG ACCESS.
SEE DWG MARKUPS ATTACHED FOR ARRANGEMENT.

Part III (Station Engineer)

Design Inputs (i.e. Press, Temp, Corrosion, Wind, Seismic etc.)

PRESSURE = 60 PSIG TEMP = 70°FCORROSION RESISTANT MATERIALS COMPATIBLE WITH NaCl SYSTEMSEISMIC 2/1 CONCERNS IN SW PUMP BAYARRANGE TO PROTECT TUBING TO EXTENT PRACTICAL

ATTACHMENT 1 (CONT'D)

Evaluation: POLY-FLO TUBING PURCHASED UNDER CP 356.53 A JD ^{GR} EQUIVALENT
(3/8" ϕ , 0.062" WALL) HAS A MAX RECOMMENDED WORK PRESSURE OF
90 PSIG AND A BURST PRESSURE OF 350 PSIG @ 75°F PER MANUFACTURER'S
DATA AND WILL THEREFORE MEET THE 60 PSIG @ 70°F DESIGN REQUIREMENT
DEFINED BY MAX PUMP PRESSURE RATE. PER PREVIOUS PLANT EXPERIENCE
WITH POLY-FLO (POLYETHYLENE) TUBING AND MANUFACTURER'S DATA,
POLY-FLO IS COMPATIBLE WITH NaOCl SYSTEM CONDITIONS FOR CORROSION RESISTANCE
CONT'D ON ATTACHMENT
 Testing Requirements: PRE-SERVICE LEAK TEST WITH
SW PRIOR TO NaOCl SERVICE.

Safety Review: THIS CHANGE DOES NOT RESULT IN A NON-COMPLIANCE
WITH THE TECHNICAL SPECIFICATION BECAUSE THE CHANGE DOES
NOT DEGRADE ANY SYSTEM COVERED BY THE TECHNICAL SPECIFICATIONS.
THIS CHANGE DOES NOT DEGRADE THE OPERATIONAL CAPABILITY TO
PRECLUDE OR MITIGATE PLANT TRANSIENTS OR POSTULATED ACCIDENTS
BECAUSE THE CHANGE DOES NOT AFFECT ANY SAFETY SIGNIFICANT
CONT'D ON ATTACHMENT
 Design Review: The design review checklist, per A-304
has been reviewed and all applicable items
have been met.

Mode Restrictions: None

PREPARED BY: MW Zweig DATE: 9-16-92
 REVIEWED BY: [Signature] DATE: 9/16/92
 APPROVED BY: [Signature] DATE: 9/17/92
 PORC APPROVAL MEETING: 9/12/90 DATE: _____

per Temp Mod 90-16
 Reviewed by: [Signature] 10/4/93
 Approved by: [Signature] 10/16/93

EVALUATION CONT'D: THE SEISMIC CONCERNS ARE ADDRESSED UNDER THE SAFETY REVIEW SECTION. TUBING WILL BE SUFFICIENTLY PROTECTED IF ROUTED AS SHOWN IN ATTACHED MARKUP TO THE EXTENT PRACTICAL.

SAFETY REVIEW CONT'D: OR SAFETY RELATED SYSTEMS OTHER THAN THE SW PUMP BAY WHICH IS A SEISMIC STRUCTURE AND WHICH WAS EVALUATED AGAINST A COMMON CHANGE UNDER TEMP. FLUID PROVISION 90-16 APPROVED 9-12-90.

THIS CHANGE WILL NOT CREATE THE POTENTIAL FOR OPERATION OF PLANT EQUIPMENT OUTSIDE THE EQUIPMENT'S DESIGN

PARAMETERS OR PLACE THE EQUIPMENT'S ASSOCIATED SYSTEM IN A CONFIGURATION NOT ORIGINALLY INTENDED BECAUSE THE CHANGE ONLY INVOLVES THE BYPASS OF PIPING WITH TUBING WHICH WILL NOT CREATE ANY ADVERSE SYSTEM CONDITION.

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 92-064

Date: 09/18/92

Rev. 0

Title: RTD 410A-1 Conductor Swap

PART II

Type: Electrical

Description: As described in the attached Safety Evaluation, conductors at TB1 in the Fox 2 rack will be "swapped" to accommodate one conductor that currently exhibits a high resistance reading.

PART III

Design Inputs: RG&E Drawings 21489-488 and 21489-504
Circuit Schedule R230A

Evaluation: "Swapping" conductors, as described in the attached Safety Evaluation, will not change the function or characteristic of the RTD input to the Fox 2 Rack.

Testing Requirements: Verify proper temperature indication based on actual RTD resistance.

Safety Review: See attached Safety Evaluation.

Design Review: The Design Review Checklist, per A-304, has been considered and all applicable items have been addressed satisfactorily.

Mode Restriction: None

PREPARED BY: *[Signature]*

DATE: 9/21/92

REVIEWED BY: *[Signature]*

DATE: 9/21/92

APPROVED BY: *[Signature]*

DATE: 9/21/92

PORC APPROVAL MEETING: *[Signature]*

DATE: 9/21/92

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 92-065

Date: 09/22/92

Rev. 0

Title: Recorder Connection for Boric Acid Flow Instrument Loop
Bistable YC-110A

PART II

Type: Electrical

Description: Intermittent operation of Boric Acid Flow Instrument Loop Bistable YC-110A is causing erratic operation of Boric Acid Flow Counter YIC-110. To isolate the intermittent channel, recording equipment will be connected to existing Test Point TP-110 and then output of Bistable YC-110A.

PART III

Design Inputs: Foxboro Drawings CD-19, shts 1,2,3

Evaluation: The recording equipment utilized has multi-channel, high impedance, isolated inputs. Failure of a recorder input will not propagate beyond the recorder.

Testing Requirements: Ensure that recorder is functioning properly after connection to the instrument loop.

Safety Review: Safety Evaluation is attached.

Design Review: The Design Review Checklist, per A-304, has been considered and all applicable items have been addressed satisfactorily.

Mode Restriction: None

PREPARED BY: *[Signature]*

DATE: 9/23/92

REVIEWED BY: *[Signature]*

DATE: 9/24/92

APPROVED BY: *[Signature]*

DATE: 9/25/92

PORC APPROVAL MEETING: TP-110 92-123

DATE: 7/30/92

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 92-067

Date: 12/17/92

Rev: 2

Title: DI TRUCK CITY WATER SUPPLY

PART II

Type: Electrical

Fluid X

Structural

Description: During periods when the outside air temperature is below freezing, the water supply lines to the temporary DI Truck need to be protected from freezing. This temp mod provides a City Water supply from the existing 3" abandon Blowdown line going to the Primary Water Treatment Plant. Also the de-oxygenating vessel will be placed in the Turbine bldg bsmt to provide freezing protection. See attachments 1,2,3,4,5,6,7 for details

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PART III

Design Inputs: Gilbert Line Specification SP-5291, section IV
Line Specification 125-1
Pressure: 125 psig
Temperature: 100 F
ANSI B31.1-1955
P&ID 33013-1234, 33013-1908sh1, 33013-2250
Non-QA application

Evaluation: Per the attached sketches, the new piping and valves meet the applicable line spec 125-1 except 3" fittings are threaded and the valve body is brass. Threaded fittings are acceptable up to 4" per ANSI B16.11. Also since this application is non-cyclic and low operating temperature, threaded connections will not see thermal or shock stresses and therefore low potential for leaking. Welded connections are specified to minimize maintenance due to leaks at joints. Steel valve bodies are required by line spec 125-1 since 2 1/2" and larger requires welding. Since welding is not required in this application, brass is acceptable for water applications. Supports are provided in accordance with B31.1 spacing tables.

The abandoned Blow down line was designed to a higher pressure class than the City Water line and therefore envelopes this application. The City Water system supply requirements will not be changed by the addition of the DI truck supply line since the truck will replace the Primary Water Treatment system which uses approximately the same quantity of water. (less than 200 gpm) The connections to the DI Truck and De-oxygenating vessel will be connected with 2 1/2" fire hose. Fire hoses are rated for 150

psig and therefore meets the design conditions.

Routing the fire hoses to the DI Trucks located east of the AVT Bldg will require removing one 16"x16" concrete block from the AVT north section of the east wall. The east wall is a non load bearing wall and therefore removing one block will not cause damage to the structure. In addition, this wall is not a fire barrier and will not require a fire rated seal.

The hoses exterior the building will be heat traced, and insulated with 110vac self regulating heat tape and "armaflex" styrofoam type insulation. The heat tape power requirements are insignificant, less than 10 amps, and consequently, will not adversely affect the building electrical loading. The heat tape will be plugged into existing wall sockets in the AVT bldg and is therefore already accounted for in the electrical loading design.

The De-oxygenating vessel weighs 10,000 lbs and has a base area of 49 sqft. This results in a floor loading of 205 lbs/sqft which is less than the allowable loading of 255 and 300 lbs/ftsq for the Turbine and Service Bldg respectively.

Locating the De-oxygenating vessel inside the Turbine bldg will introduce two 50 gal drums of hydrazine into the building which is pumped into the vessel to aid in oxygen removal. The drums will be placed inside a chemical spill container to prevent any leak from entering the floor drain system. The drums will be closed when stored or in service to prevent any personnel exposure to fumes. Hydrazine already exist in the turbine bldg middle level at the chemical addition area and therefore will not introduce a new hazard to the building. If the temporary fire hose is to develop a leak or break it is enveloped by the 96" dia Circulating Water pipe break.

Testing Requirements: After system operating pressure has been established, the new lines shall be check for leaks by maintenance since this is a non-QA application

Safety Review: See attached Safety Evaluation for rev 0 which still envelopes rev 2 change from gate valve to globe valve.

Design Review: All the applicable items in figure 1 of A-304 have been adequately addressed and no other issues are of concern.

Mode Restriction: None

PREPARED BY: Russell [Signature]

DATE: 12/17/92

REVIEWED BY: B. [Signature]

DATE: 12/17/92

APPROVED BY: [Signature]

DATE: 12/17/92

PORC APPROVAL MEETING: See Attached Safety

DATE: Analysis

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-001 Date: 3/17/93 Rev. 1

Title: High Conductivity Waste Tank Pump Filters

PART II

Type: Electrical Fluid X Structural

Description: This modification involves the addition of multiple filter housings, process piping, fittings, valves and misc. piping components to the discharge of the HCWT Pump in the basement of the AVT in accordance with the attached diagrams and sketches. This modification is intended to remove quantities of suspended iron from the discharge of the HCWT Pump in order to meet NY State environmental regulations, SPDES Permit NY - 0000493.

PART III

Design Inputs: 1) Gilbert Specification SP-863, Line Spec 125-6.
2) Gilbert Drawing D-381-104, Rev 2; Operating Design Flow = 300 gpm, Operating Design Pressure = 43.3 psig, Operating Design Temperature = 100 °F.
3) Current operating conditions of the HCWT Pump consist of an 80 psig (186 ft head) discharge pressure and a flow rate of 250 gpm. A "no flow" test conducted on 1/14/93 indicated that the pump is capable of producing 203.5 feet of head.
4) RG&E Drawing 33013-1912; non-ASME, non-QA, non-seismic, non-safety.
5) ANSI/ASME B31.1 - 1986.
6) Pall Thoroseal High Flow Series Bag Filter Housing, P/N BFC1005733G65H13; design pressure = 100 psig, design temperature 650 deg F, designed to ASME Sect VIII, Div I - U Stamped.
7) ASTM D1785 PVC 1120 piping; min pressure rating 320 psi at 73 deg F.

Evaluation: The governing design documentation, SP-863, indicates the use of polypropylene resin lined ASTM A53 Gr A, sch 40 carbon steel piping, similarly lined ASTM A105 or A216 Gr WCB 150 lb

flanges and A193, Gr B7 bolts & A194 Gr 2H nuts. This installation will utilize commercial grade (ASTM D1785) sch 80 PVC 1120 piping, 150 lb PVC flanges/fittings and 150 lb PVC ball valves as a minimum. Bolting and nuts will be commercial grade carbon steel as a minimum. Filter housings will consist of commercial grade carbon steel and will be equipped with an isolable drain and pressure gauge to indicate downstream pressure. These materials are not in direct compliance with the original line spec, however these materials are considered to be equivalent since 1) PVC is at least as corrosion resistant as the original piping, 2) the other miscellaneous materials, carbon steel (painted), bronze, etc. will perform acceptably in this installation and 3) the installed duration of this mod is intended to be for a relatively short period of time.

The pressure/temperature rating of the filter housings exceeds system design requirements and is thus acceptable.

This installation will be installed in accordance with ANSI/ASME B31.1-1986 Power Piping Code in regards to piping stress and support requirements. A support spacing of less than 10 feet will yield stress values less than the materials allowable stress of 4200 psi. Installation requirements are as specified on the attached sketches.

Testing Requirements: Maintenance will verify that all connections are leak free and will be repair as required.

Safety Review: See attached Safety Analysis.

Design Review: All the applicable items of A-304, Figure 2 have been addressed and determined to be acceptably met.

Mode Restriction: none

PREPARED BY:	<u>Bryon A. Kunkel</u>	DATE:	<u>3/17/93</u>
REVIEWED BY:	<u>Shawn P. H.</u>	DATE:	<u>3/18/93</u>
APPROVED BY:	<u>J. D. Cook</u>	DATE:	<u>3/20/93</u>
PORC APPROVAL MEETING:	<u>93-008</u>	DATE:	<u>1/28/93</u>

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator)TM No.: 93-002Date: 1/5/93Rev: 0Title: Temporary Rigging to Remove Fire System Valve 9208

Part II (Initiator)

Description: A 2"x2" 1/4" thick structural tube steel beam will be
clamped to structural beams above V-9208 to allow a straight
vertical pick.

Part III (Station Engineer)

Design Inputs (i.e. Press, Temp, Corrosion, Wind, Seismic etc.)

Valve is a 8" Fairbanks - assumed weight 200#Chainfall weight - assumed 100#Span of beam 77" Maximum allowable tensile stress - 12.6 ksiMaximum bending moment - 5775 in-lb

5772-1154

A-1406:16

ATTACHMENT 1 (CONT'D)

Evaluation: Determined moment of inertia $I = .71 \text{ in}^4$
Max torsional stress = 6346 psi
See attached Sheets

Testing Requirements: None

Safety Review: See Safety Evaluation

Design Review: _____

Mode Restrictions: _____

Permanent Resolution: _____

PREPARED BY: John Walder DATE: 1/5/93

REVIEWED BY: Tom J. Kunkel DATE: 1/5/93

APPROVED BY: [Signature] DATE: 1/5/93

PORC APPROVAL MEETING: 93-002 DATE: 1/5/93

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 92-069

Date: 11/03/92

Rev: 0

TITLE: Temporary Leak Repair at V-4176

PART II

Type: Electrical

Fluid

X

Structural

Description:

Weld a 1 1/2" schedule 80, ASTM A106-65 Gr. B pipe over the existing pipe in order to repair a line leak. The pipe will be cut lengthwise to allow for placement around the existing pipe. After placement the pipe will be welded lengthwise and at each end to the 90 deg elbow and the weld-o-let on V-4176. The line leak is on the downstream side of V-4159 between V-4159 and V-4176. V-4159 is the bypass around Steam Dump Valve 4176.

=====

PART III

Design Inputs:

Line Spec 600-1: per DWG 33013-1232; Pressure = 1085 psig, Temp = 600 Deg F

This installation is non-QA, non-Seismic, non-Safety Class and non-ASME Code Class.

Evaluation:

Pipe meets Line Spec 600-1. By inspection loads are less than ANSI B31.1 code allowables for dead weight. Pressure and temp loads are also acceptable since they are within Line Spec 600-1. Weld stresses are within code allowables. See attached sketch.

Testing Requirements:

Weld should be visually inspected and leak tight.

Safety Review:

See attached Safety Analysis for Temp Mod 91-052.

Design Review:

The design review checklist, per A-304, has been reviewed and all applicable items have been met.

Mode Restriction:

None

PREPARED BY: *Don J. K. Lynch* DATE: 11/3/92

REVIEWED BY: *Robert R. Ray* DATE: 11/4/92

APPROVED BY: *J. W. Langland* DATE: 11/4/92

PORC APPROVAL MEETING: mtg # 150 DATE: 12/12/91

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-004

Date: 01/07/93

Rev: 0

TITLE: Temporary Leak Repair Downstream of V-3684

PART II

Type: Electrical

Fluid X

Structural

Description:

Weld 1" a schedule 80 ASTM A106-65, Gr B nipple and thread a 1" ASTM A234 Gr WPB, 3000# cap, on a 1" 90 degree elbow, in order to repair a steam leak near the Condenser. The line leak is downstream of V-3684 and upstream of the A Main Condenser.

PART III

Design Inputs:

Line Spec 600-1: per DWG 33013-1231; Pressure = 1085 psia, Temp = 600 Deg F

This installation is non-OA, non-Seismic, non-Safety Class and non-ASME Code Class.

Evaluation:

Pipe meets Line Spec 600-1. By inspection loads are less than ANSI B31.1 code allowables for dead weight. Pressure and temp loads are also acceptable since they are within Line Spec 600-1. Weld stresses are within code allowables. See attached sketch.

Testing Requirements:

Weld should be visually inspected and leak tight.

Safety Review:

See attached Safety Analysis for Temp Mod 91-052.

Design Review:

The design review checklist, per A-304, has been reviewed and all applicable items have been met.

5895.2371

Mode Restriction:

None

PREPARED BY: B. J. H. L. DATE: 1/7/93

REVIEWED BY: David H. J. DATE: 1/7/93

APPROVED BY: St. L. DATE: 1/8/93

PORC APPROVAL MEETING: Sec. Attached SA for DATE: 12/12/91
Temp Mod 91-052, PORC Approved

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-007

Date: 01/29/93

Rev: 0

TITLE: AOV-6494 HHS Temporary Bypass Line

PART II

Type: Electrical Fluid X Structural

Description:

Due to excessive trap blow by in the House Heating System (HHS), the Return valve back to the Condenser AOV 6494 cannot maintain proper level in the Condensate Return Tank. As a result, an excessive amount of steam is lost out the tank vent to the atmosphere. Adding a manual bypass line around AOV 6494 will increase the tank drain capacity since the up stream and down stream piping from AOV 6494 is 2" and 1 1/2" dia respectively, and the AOV is a 1" dia valve acting like a flow restricting orifice.

PART III

Design Inputs:

Line Spec SP-5291 Space Heat(SH), Pressure = 150 psig, Temp = 400 Deg F. This installation is non-QA, non-Seismic, non-Safety Class and non-ASME Code Class.

Evaluation:

Since the new pipe will be constructed to line 150-4 which meets the ANSI rating for temperature and pressure, does not have concentrated loads and the line will be supported per the B31.1 spacing table, no detailed calculations are required. To prevent the Condensate Return tank from draining due to decreased HHS loads, the bypass valve (7973) should be adjusted such that AOV-6494 is controlling at between 1/2 and 3/4 open. In addition, the procedure for removing the HHS system from service should be changed to close the bypass line prior to isolating the system. (T-35 series)

Testing Requirements:

All new connections shall be visually inspected by maintenance for leakage prior to placing the line inservice.

Safety Review:

See attached Safety Analysis for Temp Mod 93-007

Design Review:

The design review checklist, per A-304, has been reviewed and all applicable items have been met.

Mode Restriction:

None

PREPARED BY: Richard D. Blum DATE: 1/29/93

REVIEWED BY: D. J. W. H. H. DATE: 1/29/93

APPROVED BY: A. T. Lebn DATE: 1/29/93

PORC APPROVAL MEETING: 93-009 DATE: 1/29/93

5772 1150

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-010

Date: 02/22/93

Rev. 0

Title: High Range Radiation Monitor R-30 Alarm Check High Switch S60 Jumper

PART II

Type: Electrical

Description: Contact 2/5 on Alarm Check High Switch S60 has failed. This Temporary Modification will install a temporary jumper to allow normal R-30 operation. Refer to attached Safety Analysis for discussion.

PART III

Design Inputs: Victoreen Manual for R-29/R-30, diagram excerpt attached.

Evaluation: As discussed in the attached Safety Evaluation, the temporary jumper will not affect normal monitor operation. High Alarm Testing will be affected procedurally, but not operationally. The test circuit will be actuated by removing the jumper and depressing S60. After releasing S60, the jumper must be reinstalled.

Testing Requirements: Ensure that the High Alarm test circuit functions normally after jumper installation.

Safety Review: Refer to attached Safety Evaluation.

5772.1151

Design Review: The Design Review Checklist, per A-304, has been considered and all applicable items have been addressed satisfactorily.

Mode Restriction: None

PREPARED BY: *[Signature]* DATE: 2/22/93

REVIEWED BY: *James F. Sweet* DATE: 2/22/93

APPROVED BY: *[Signature]* DATE: 2/22/93

PORC APPROVAL MEETING: 2-22-93 DATE: 2/22/93

PORC MTG

93-18

~ 1530 hours

T. Marlow

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-011

Date: 2/25/93

Rev: 0

TITLE: Temporary City Water connection for Laundry Room AC

PART II

Type: Electrical Fluid X Structural

Description: Due to Replacement of the Containment Recirculation fans, the normal SW cooling to the Laundry Room AC Unit will be isolated. In order to maintain cooling to the unit, a 5/8" hose will be run from the City Water (CI) line located in the Laundry Room to the Service Water (SW) inlet vent. See attached sketch

PART III

Design Inputs: SW Design Pressure 150 psig
 SW Design Temperature 100 F

 CI Design Pressure for 2" and smaller 150 psig
 CI Design Temperature 100 F

Evaluation: The normal supply and discharge to the AC unit is from a 1" non-safety related SW line. The City Water will be supplied from a 1/2" line in the SE corner of the Laundry Room. The tie in on the Service Water System will be through 1/2" vent downstream of V-4500D. The reduced flow from the 1/2" City Water line is acceptable because the flow controller AOV-4500C normally runs in a throttled position. The 5/8" rubber hose is rated for 300 psi and is therefore adequate for the service conditions. The SW supply will be isolated when the cross connect hose is installed by placing holds on sw supply valves 4500 and 4799T. This will prevent any potential back flow of CW into the isolated SW System and conversely and flow from the SW into the CI System. The normal SW discharge path will remain open. Consequently, the CI will be discharged back into Lake Ontario. The CI piping of this size is designed for the same pressure and temperature ratings as the SW system; Therefore, the cross connection is acceptable. CI has a chlorine content of approximately 30 ppm and is higher than our SPEDES discharge. However, the flow rate from the AC unit will be less than 50 gpm and will be diluted by the 180,000 gpm Circulating Water flow. This will dilute the chlorine to acceptable levels.

Testing Requirements: The hose connections shall be verified not to leak.

Safety Review:

See Safety Analysis for TM-93-011

Design Review:

The design review checklist, per A-304, has been reviewed and all applicable items have been met.

Mode Restriction: None

PREPARED BY: John Walden DATE: 2/26/93

REVIEWED BY: Sam J. Kudryk DATE: 2/26/93

APPROVED BY: J. J. Cook DATE: 2/26/93

PORC APPROVAL MEETING: 93-025 DATE: 3-4-93

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART ITM No: 93-012Date: 02/26/93Rev: 0Title: Temporary Cooling to Admin. Computer Cooling Unit

PART II

Type: Electrical

Fluid x

Structural

Description: Due to maintenance on SW system maintenance, the normal SW cooling to the Administration Computer HVAC unit, will have to be isolated. In order to maintain cooling to the unit, a 3/4" hose will be run from the City Water line located in the computer room to the SW inlet line. See attached sketch

=====

PART III

Design Inputs: SW pressure- 150 psig

SW temperature- 100 F

City Water pressure for 2" and smaller 150 psig

City Water temperature 100 F

Evaluation: The normal supply and discharge to the HVAC unit is from 2" non-safety related SW lines. The reduced flow from the 1/2" City water line is acceptable because the flow control AOV normally runs in a throttled position with only one of the two compressor units operating and due to the low City water and outside air temperature. The 1/2" rubber hose is rated for 250 psig and is therefore adequate for the service conditions. The normal SW supply will be isolated when the cross connect hose is installed by placing holds on SW supply valves 12500A and 4761A. This will prevent any potential back flow of SW water into the City Water system. The normal SW discharge path will remain open. Consequently, the City Water will be discharged back to the lake. The SW piping is designed for a higher rating than City water piping and is therefore acceptable. City water has a chlorine content of approximately 30 ppm and is higher than our SPEDES discharge. However, the flow rate from the HVAC unit will be less than 50 gpm and will be diluted by the 180,000 gpm CW flow. This will dilute the chlorine to acceptable levels.

Testing Requirements: The hose connections shall be verified not to leak.

Safety Review: See Safety Analysis for TM-93-012

Design Review: All the applicable items in figure 1 of A-304 have been adequately addressed and no other issues are of concern.

Mode Restriction: None

PREPARED BY: John Welden DATE: 2/26/93

REVIEWED BY: Don J. K. [Signature] DATE: 2/26/93

APPROVED BY: [Signature] DATE: 2/26/93

PORC APPROVAL MEETING: 93-025 DATE: 3-4-93

5835 2124

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-013

Date: 02/26/93

Rev. 0

Title: Diesel Generator 'A' Lube Oil Heater Disconnection

PART II

Type: Electrical

Description: On the 'A' Diesel Generator, one of four lube oil heaters, specifically the "North" heater, has developed a ground fault.

PART III

Design Inputs: 10905-145

Evaluation: To disable the grounded heater, the line conductor must be de-terminated from the heater compression connectors and then insulated prior to energizing the heater circuit. Any commercial insulating method rated at a minimum of 480 Volts is acceptable. Once re-energized, the remaining three heaters will function normally since the heaters are connected in series and the north heater is the end heater.

Testing Requirements: Ensure that the remaining three heaters are functioning normally by measuring line current. Ensure that the ground fault has cleared.

Safety Review: Refer to attached Safety Evaluation.

Design Review: The Design Review Checklist, per A-304, has been considered and all applicable items have been addressed satisfactorily.

Mode Restriction: None

PREPARED BY:

R.P. Luntin

DATE:

2/26/93

REVIEWED BY:

Russell R. J.

DATE:

2/26/93

APPROVED BY:

A. L.

DATE:

2/24/93

PORC APPROVAL MEETING:

Thermal Monitor

DATE:

2/26/93

93-23

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-014

Date: 04/09/93

Rev: 2

TITLE: Temporary Chiller System

PART II

Type: Electrical X Fluid X Structural

Description: See Attached

PART III

Design Inputs: City Water Design Pressure: 150 psig

Design Temperature: 100 F

Fluid: Chlorinated Lake Water

Code: ANSI B31.1 1955

Chilled Water Design Pressure: 150 psig

Design Temperature: 100 F

Fluid: Glycol & Water

Code: ANSI B31.1 1955

Evaluation: See Attachment 1

Testing Requirements: The hose connections, hoses, valves and piping connections shall be checked for leakage prior to operating the system.

Safety Review: See attached Safety Evaluation

Design Review:

The design review checklist, per A-304, has been reviewed and all applicable items have been met.

Mode Restriction: None

PREPARED BY: John WalkerDATE: 4-10-93REVIEWED BY: James J. KistlerDATE: 4/10/93APPROVED BY: John P. CashDATE: 4/10/93PORC APPROVAL MEETING: Thomas H. MullenDATE: 4/10/93

93-060

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-015

Date: 3/8/93

Rev: 1

TITLE: Alternate Cooling Supply to A & B MDAFW Pumps

PART II

Type: Electrical Fluid X Structural

Description: Due to Replacement of the Containment Recirculation fans, the normal SW cooling to the A & B Auxiliary Feedwater Pumps will be isolated. In order to maintain cooling to the bearings and lube oil coolers, a hose will be run from the City Water line located on the Main Steam Header level of the Intermediate Building to the Service Water cooling supply of each Auxiliary Feedwater Pump. An additional line will be run for chiller cleaning to the North of the Auxiliary Feedwater Pumps. See attached sketch

PART III

Design Inputs: SW Design Pressure 150 psig
SW Design Temperature 100 F
Code ANSI B31.1, 1955

City Water Design Pressure (2" and smaller) 150 psig
City Water Design Temperature 100 F
Code ANSI B31.1, 1955

Auxiliary Feedwater Pump Cooling Design Flows
7gpm/pump

Evaluation:

The SW supply will be isolated when the cross connect hose is installed by placing holds on sw supply valves 4090 and 4091. Electrical jumpers will need to be installed to ensure SOV-4325 and SOV-4326 remain closed. This will prevent any potential back flow of City Water into the isolated Service Water System and conversely and flow from the Service Water into the City Water System. The normal Service Water discharge path will remain open. Consequently, the City Water will be discharged back into Lake Ontario.

The City Water piping of this size is designed for the same pressure and temperature ratings as the Service Water system;

Therefore, the cross connection is acceptable. City Water has a chlorine content of approximately 2 ppm and is higher than our SPEDES discharge. However, the flow rate from the cooling units will be less than 50 gpm and will be diluted by the 180,000 gpm Circulating Water flow. This will dilute the chlorine to acceptable levels. The chlorine levels in the City Water are within the limits of Service Water during biologic control injections.

Temporary strainers will be needed on the hose lines to the auxiliary feedwater pumps due to the fact that the hoses are being connected to the existing strainer body with the internals removed. Temporary valves A & B will allow maintenance on the service water cooling to either auxiliary feedwater pump

The hoses used between the city water line and temporary valves A & B shall be 3/4" or greater. From the temporary valves to the strainers and chiller cleaner, the hoses may be as small as 1/2". The hoses shall have a pressure rating of 300 psi.

Testing Requirements: The city water line shall be flushed prior to connecting the hoses to the auxiliary feedwater pumps. The hose connections shall be verified not to leak. Mechanics shall monitor the Auxiliary Feedwater Pumps during the initial runs of the pumps with the temporary cooling system installed.

Safety Review:

See the attached safety analysis for TM 93-015

Design Review:

The design review checklist, per A-304, has been reviewed and all applicable items have been met.

Mode Restriction:

The modification may not be installed with the RCS greater than 350 deg F. The modification must also be removed before the RCS is brought above 350 deg F.

PREPARED BY:	<u>John Walden</u>	DATE:	<u>3/26/93</u>
REVIEWED BY:	<u>Tom A. Kordyk</u>	DATE:	<u>3/26/93</u>
APPROVED BY:	<u>J. O. Cook</u>	DATE:	<u>3/26/93</u>
PORC APPROVAL MEETING:	<u>93-046</u>	DATE:	<u>3/26/93</u>

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-022

Date: 03/24/93

Title: Gas Decay Tank Pressure Transmitter Nitrogen Feed

PART II

Type: Electrical Fluid X Structural

Description: Instrument air is to be isolated to the Auxiliary Building for repairs while fuel is unloaded from the core during the 1993 outage. The isolation of IA would render the pressure transmitters for the Gas Decay Tanks inoperable. Since the tanks have gas present it is desired to maintain the capability to monitor tank pressure. This is to be done via the installation of a temporary nitrogen supply to take the place of the normal instrument air pressure.

=====

PART III

Design Inputs:

Design Pressure - 150 psig
 Design Temperature - 400 degrees F
 Fluid - Air/Nitrogen
 Seismic Category - N/A

Evaluation:

The installation of the temporary nitrogen supply will maintain the full function of the gas decay tank transmitters.

The regulator is to be installed on a standard nitrogen supply bottle and will be rated for full nitrogen pressure (2000 psi). The regulator will be set to lower the supply pressure to 20 psi for transmitter operation and the downstream tubing will have a minimum rating of at least 20 psi (1/4" poly tubing with a working pressure of 55 psig).

The nitrogen bottle will be secured to a nearby building support column by either a rope or a chain. This would be capable of restraining the bottle weight as required by A-1406 to ensure

that nearby equipment is not affected during a seismic event. GMEDB classifies the affected transmitters as safety significant related to pressure boundary only. The transmitter functions are non-safety related. Since this modification will not affect the gas decay tank pressure boundary it can have no effect on the gas decay tank safety significant function.

The tanks and boundary piping are classified as seismic category 1 as per the Ginna UFSAR section 15.7.1.1.1. The installation of this temporary modification will be located such that it will not affect the seismic qualification of the waste gas system.

Testing Requirements:

The installed tubing shall be inspected for leakage by the installing craft. Bottle pressure should be checked every 2-4 hours to ensure adequate nitrogen supply is maintained.

Safety Review:

See attached Safety Analysis.

Design Review:

The design review checklist from procedure A-304 has been reviewed and all applicable items have been satisfactorily met.

Mode Restriction: Remove before leaving cold shutdown.

PREPARED BY: Peter Boniford DATE: 3/24/93

REVIEWED BY: Shawn D. My DATE: 3/24/93

APPROVED BY: John D. Cook DATE: 3/24/93

PORC APPROVAL MEETING: 93-0413 DATE: 3/24/93

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-028

Date: 4/12/93

Rev. 0

Title: Containment Temperature Monitoring of EQ Equipment

PART II

Type: Electrical

Description: The temporary modification will install nine (9) temporary RTD's in areas throughout containment to monitor EQ equipment. These nine (9) RTD's and the six (6) permanent RTD's will provide needed information on the actual temperature of the EQ equipment. The existing ILRT Panel recorder will be used to monitor/record the temperatures. The following is a list of the locations of the temporary RTD's;

LEVEL	RTD#	TB LOC.	TEMP. LOC.	EST. CABLE LGTH.
Bsmt.	RTD-4	C-105(243')	LT-427	100'
Bsmt.	RTD-1	C-114(243')	FT-925	200'
Bsmt.	RTD-6	C-113(243')	SV-10024	150'
Int.	RTD-11	C-119(263')	FT-3-1B	10'
Oper.	RTD-15	C-105(282')	FT-471	10'
Oper.	RTD-18	C-101(286')	LT-426	50'
Crane	RTD-21	C-105(331')	PORV 430	100'
Crane	RTD-22	C-107(331')	MOV 515	150'
Crane	RTD-23	C-108(331')	MOV 516	150'

All temporary RTD assemblies shall be mounted to existing updated seismic supports within 3 feet of the instrument, and mounted as close as possible to the base of the support. The support shall be of considerable size with respect to the size of the RTD assembly, and no original plant installation instrument supports shall be used. All temporary RTD's and cables shall be installed using nylon wire wraps, in accordance with A-1406.

ATTACHMENT 1 CONT'D

PART III

Design Inputs: Interoffice Correspondence from Terry Desbach to Mike Farran, dated 3/1/93, #13N1-RR-L4029

Evaluation: The installed temporary RTD's are for information only, they are not providing a safety function and do not interfere with any safety system from performing a safety function. This temporary modification will not require any action from operations during normal or abnormal conditions. This temporary modification is classified as non-QA.

Testing Requirements: None

Safety Review: See the attached safety analysis for Temporary Modification 93-028

Design Review: The Design Review Checklist, per A-304, has been considered and all applicable items have been addressed satisfactorily.

Mode Restriction: None

PREPARED BY: 

DATE: 4.19.93

REVIEWED BY: 

DATE: 4/19/93

APPROVED BY: 

DATE: 4/20/93

PORC APPROVAL MEETING: 93-001

DATE: 4/20/93

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

=====

PART I

TM No: 93-029

Date: 04/17/93

Rev: 1

Title: Temporary Cooling to Relay Rm and Battery Rm Cooling Units

=====

PART II

Type: Electrical

Fluid x

Structural

Description: Due to maintenance on the SW System, the normal SW cooling to the Relay Room and Battery Room HVAC units, is to be isolated. In order to maintain cooling to the unit, a 3/4" hose will be run from a union downstream of V-2377, Cntrl Rm Wtr Htr Inlet Isol or from a new 1/2" copper tee upstream of V-2377 to the SW flushing tee downstream of V-4761A and 4674K. See attached sketches.

=====

PART III

Design Inputs: SW pressure- 150 psig
SW temperature- 100 F

City Water pressure- 125 psig

City Water temperature 100 F

Evaluation: The normal supply and discharge to the Relay Rm and Battery Rm HVAC unit is from 1" and 3/4" non-safety related SW lines. The reduced flow from the 1/2" City water line is acceptable since this is intended to temporarily reduce room heat up while the normal water supply is out of service. The 1/2" rubber hose is rated for 250 psig and is therefore adequate for the service conditions. The normal SW supply will be isolated when the cross connect hose is installed by placing holds on SW supply valve 4761A and either 4674D, 4674F and 4674H. This will prevent any potential back flow of SW water into the City Water system. The normal SW discharge path will remain open. Consequently, the City Water will be discharged back to the lake. The SW piping is designed for a higher rating than City water piping and is therefore acceptable. City water has a chlorine content in excess of the Ginna Station SPEDES discharge limit. This is not considered to be adverse since flow from the HVAC units will be less than 50 gpm and will be short in duration. Further dilution will occur by other water discharges and will tend to negate the affects of residual chlorine.

Testing Requirements: The hose connections shall be verified not to leak.

Safety Review: See Safety Analysis for Temp Mod 93-029, Rev 0.

Design Review: All the applicable items in figure 1 of A-304 have been adequately addressed and no other issues are of concern.

Mode Restriction: None

PREPARED BY:

Bur. P. Kumbly

DATE:

4/17/93

REVIEWED BY:

John L. Williams

DATE:

4/17/93

APPROVED BY:

J. P. Cash

DATE:

4/17/93

PORC APPROVAL MEETING:

Ref TM 93-029 1000
S.A.

DATE:

4/13/93

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-033

Date: 04/22/93

Rev: 0

Title: SCREEN WASH TEMPORARY SUPPLY

PART II

Type: Electrical

Fluid X

Structural

Description: Due to excessive leakage through the Service Water (SW) butterfly valves MOV-4609 and MOV-4780, the screen wash line will require isolation. The screen wash line also supplies seal flow to the Circulating Water pumps and supply to the chlorination system. The purpose of the temporary modification is to provide temporary supply to the screen wash line by connecting a 3" fire hose from valve 5236 on the Electric Fire Pump discharge to the "D" Traveling Screen inlet isolation valve 4788D. This will require removing a portion of the piping down stream of 4788D and inserting hose connection fittings. The "D" screen may be rendered inoperable due to removal of the piping section. However, only one screen per bay is required. Both MOV's will be isolated by closing the upstream manual isolation gate valve 4666 which will provide the safety related system boundary. Blind flanges may be installed in place of each of the removed MOV's, but will not be required to form the system boundary.

PART III

Design Inputs: Gilbert Line Specification SP-5291, section IV

Service Water Line Specification 125-1

Pressure: 150 psig

Temperature: 100 F

Fire Service Water Line Specification 125-11

Pressure: 200 psig

Temperature: 125 F

ANSI B31.1-1955

Safety class: Non-Safety

QA Program: Non-QA

P&ID 33013-1989 rev 6

33013-1250 sh1 rev 13

References:

- 1) Link Belt dwg JK8144-1, Rev B, dated 9/12/67.
- 2) NUS calculations 5P05-M-01 AND 5P05-M-06

Evaluation:

Pressure Rating:

The SW system design pressure is 50 psig lower than the Fire Water (FW) system. However, the FW 6" discharge relief valve 5135 is set for 135 psig or less. Since 135 is less than the 150 psig SW design pressure, use of the FW system will not over pressurize the Screen Wash supply line. All new fittings and piping shall meet the FW or SW line Specifications except fittings above 2 1/2" may be screwed. This application is low temperature and temporary screwed fittings are acceptable since welded fittings are primarily intended to reduce maintenance due to leaks. Screwed fittings are ANSI rated up to 300 lbs. The 3" fire hose is rated for 250 psig and is therefore also acceptable for this application. To minimize loads on the hose, 45 or 90 degree fittings shall be used to connect the hose to valve 4788D. In addition to minimize potential for water spray on safety related equipment, the hose will be routed in the CW side of the Screen House and tied down with rope or chain every 10' feet. Thermal and mechanical loads are not applicable due to the low design temperature and the use of fire hose.

Seismic Qualification:

The ASME class boundary is located at the removed MOV's. Since the system boundary will be moved upstream to the portion of the SW line containing valve 4666 which is included in the seismic analysis of this system and the removal of MOV's 4609 and 4780 will have no affect due to the restraint of this line in the X, Y and Z directions due to the installation of Service Water Supports SWU-635, 636, 637 and 641. The configuration of the existing supports will inhibit line movement either with or without the MOV's installed. The line is already seismically qualified and the blind flange, which may be installed in place of the removed valve, weighs less than the removed valve and therefore, the seismic qualification of the line will not be adversely effected.

System Flow Requirements:

The screen wash nozzles allow 320 gpm at 60 psig supply pressure per reference #1. With two screens in normal operation, total flow would be 640 gpm. The Circulating Pump seal water line are two 3/4" lines through various filters valves and fitting. The CWP flow demand is estimated to be less than 100 gpm. The 2 1/2" angle supply valve will limit flow to less than 1300 gpm with a 135 psig supply pressure (max delta P taken as 135 psi) based on a conservative flow coefficient (Cv) of 110 since flow is proportional to the square root of the differential pressure. This is extremely conservative since there will be a back pressure down stream of the valve and the Cv value used is for a 3" globe instead of a 2 1/2" angle globe. The FW system was analyzed by reference 2 to be capable of supplying the most demanding system requirement and still have an addition 1400 gpm capacity at the most remote hydraulic location based on the motor driven and

diesel driven FW pumps operating. Since the flow to the Screen wash line will be limited to less than 1400 gpm, the FW system capability will not be reduced.

System Operation:

Short durations of loss of flow to the Screen Wash line or the Circulating Pump seals during hose hook up will not effect plant operation since the screens will take hours to accumulate debris and the CW pump seals will be cooled by leakage out from pump discharge. The seal water pressure permissive is only required for starting the CW pumps so the seals will not be dry. The seal supply line is provided with filters, however, the filters are to extend seal life by reducing particle intrusion. Short durations (hours) with unfiltered water will not damage the seals. Previous operating experience with out seal flow has verified this condition.

Testing Requirements: After system operating pressure has been established, the new lines shall be check for leaks by maintenance since this is a non-QA application.

Safety Review: Per the attached Safety Evaluation, the temporary screen wash line is not an unreviewed safety question.

Design Review: All the applicable items in figure 1 of A-304 have been adequately addressed and no other issues are of concern.

Mode Restriction: None

PREPARED BY:

[Signature]

DATE:

4/22/93

REVIEWED BY:

[Signature]

DATE:

4/22/93

APPROVED BY:

[Signature]

DATE:

4/22/93

PORC APPROVAL MEETING:

93-072

DATE:

4/22/93

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

=====

PART I

TM No: ⁹³⁻⁰³⁷~~93-024~~ *SM*

Date: 05/05/93

Rev. 1

Title: Hose Connection to Cross Connect FWP A & B Seal Water Drain Tanks.

=====

PART II

Type: Electrical Fluid X Structural

Description:

Increased seal water leakage from FWP A has caused overflow conditions in the seal drain tank and is greater than the capacity of the FWP A Seal Drain Tank Pump. Tank overflow is estimated to be 25 gpm and is being discharged to the Turbine Bldg floor drains. In order to minimize the costly makeup of water, it is intended to cross connect the A & B FWP Seal Drain Tanks such that the extra capacity of the FWP B Seal Drain Tank Pump will help to return the excess seal water from FWP A back to the Main Condenser.

=====

PART III

Design Inputs:

Gland Sealing Water System design pressure = 75 psig and design temperature = 125 Deg F, Gilbert Spec SP-5291, Line 150-1. Boston Marathoner 3/4" (minimum), 300 psi, 180 deg F hose.

Evaluation:

This hose (or similar with a minimum pressure and temperature rating of 75 psig and 125 deg F) will perform acceptably in this instance since the hose meets the design pressure and temperature requirement of the system. Hose will be routed on the floor between valves 3777 and 3782 or other suitable tank connections for a distance of approximately 30 ft. The hose will be supported or tied off to nearby equipment as is necessary. The 3/4" to 1/2" reducer downstream of V-3782 will be removed to allow for the connection of the hose. Valves 3777 and 3782 (or other isolation valves) will be positioned in the open or throttled position in order to equalize the water level in each of the drain tanks.

Testing Requirements:

Following installation, the system connections will be checked for any signs of leakage.

Safety Review:

See attached Safety Analysis.

Design Review:

The Design Review Checklist, per A-304, has been reviewed and all applicable items have been addressed.

Mode Restriction:

None

PREPARED BY: B. J. K. K. K. DATE: 5/5/93
REVIEWED BY: R. J. K. K. DATE: 5/5/93
APPROVED BY: J. K. K. DATE: 5/5/93
PORC APPROVAL MEETING: 93-083 DATE: 5/5/93

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-039

Date: 5/5/93

Rev: 0

TITLE: Temporary Leak Repair at FW Drain Valves 4395 and 4397.

PART II

Type: Fluid

Description:

Feed Water bypass line drain valves 4395 and 4397 are experiencing unisolable bonnet leakage. It is intended to install a nozzle(s) on the valves to allow for the injection of 'Furmanite' or similar approved-for-use material into the valve. This injected material will serve to stop any further leakage from this location.

=====

PART III

Design Inputs:

Gilbert Spec SP-5291, Line 900-1 per 33013-1236 sht 2.

Design Pressure = 1550 psig and Design Temperature = 450 Deg F.

This installation is to a non-safety class, non-high energy, non-seismic portion of the FWRV Bypass Line (per 33013-1236, sht 2 and C-381-381 sht 6). Non QA materials will be utilized per the discussion in the attached safety analysis.

Evaluation:

Material Requirements:

Furmanite injection material will be approved through the Ginna Chemical Control Program.

Mechanical Requirements:

Per Gilbert Drawing C-381-381 sht 6, the existing configuration of the drain valves 4395 and 4397 in relation to the 4" NPS bypass line is such that any weight addition as a result of this temporary modification will produce negligible effect on the system. Both drain valves are located in vertical piping and the addition of weight will produce no stress in the 1" NPS drain pipe due to cantilevered mass. The 4" NPS piping is adequately supported to allow for the addition of an estimated 5 pound

increase in weight at each valve due to injection nozzles and injected Furmanite.

Sealant injection pressure is approximately 2000 psi. Since injection pressure is significantly higher than system operating pressure of 905 psi, provisions will be included in the work order package to ensure that sealant is not pumped into the fluid stream. This may take the form of sealant void calculations or the stopping of the injection pump upon a sudden noticeable pressure release.

Testing Requirements:

Connection should be visually inspected and leak tight following the injection process.

Safety Review:

This modification will remove the valves from service in a manner equivalent to the method of removal as described in the Technical Evaluation for TSR 92-230. A Safety Analysis for TSR 92-230 was presented and accepted at PORC on 3/24/93.

Design Review:

The design review checklist, per A-304, has been reviewed and all applicable items have been met.

Mode Restriction:

None

PREPARED BY: B. J. Kahl DATE: 5/5/93
REVIEWED BY: R. L. Beyers DATE: 5/7/93
APPROVED BY: J. H. Kahl DATE: 5/7/93
PORC APPROVAL MEETING: 3/24/93 DATE: _____

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

PART I

TM No: 93-041

Date: 05/11/93

Rev: 0

TITLE: Temporary Leak Repair at V-8505

PART II

Type: Fluid

Description:

Weld a 1" to 1 1/2" NPS, schedule 80, ASTM A106-~~65~~⁵⁵, Gr B nipple to the body of V-8505 and thread the correct size ASTM A234 Gr WPB, 3000# cap on the nipple* in order to repair a steam leak from the valve. V-8505 is the Main Steam to MSR 1B Outer Vent Valve to Main Condenser A. * or use 3000# coupling and plug, same materials.

=====

PART III

Design Inputs:

Line Spec 600-1: per DWG 33013-1918 sht 1; Pressure = 1085 psig, Temp = 600 Deg F

This installation is non-QA, non-Seismic, non-Safety Class and non-ASME Code Class.

Evaluation:

Pipe meets Line Spec 600-1. By inspection loads are less than ANSI B31.1 code allowables for dead weight. Pressure and temp loads are also acceptable since they are within Line Spec 600-1. Weld stresses are within code allowables. See attached sketch.

Testing Requirements:

Weld should be visually inspected and leak tight.

Safety Review:

See attached Safety Analysis for Temp Mod 91-052.

Design Review:

The design review checklist, per A-304, has been reviewed and all applicable items have been met.

Mode Restriction:

None

PREPARED BY: *D. M. J. Kurlish* DATE: 5/11/93

REVIEWED BY: *John R. Wallden* DATE: 5/11/93

APPROVED BY: *J. R. Wallden* DATE: 5/11/93

PORC APPROVAL MEETING: 12/12/91 DATE: _____

SECTION E - PROCEDURE CHANGES

This section is to contain a description of the changes to procedures as described in the UFSAR and a summary of the safety evaluation pursuant to the requirements of 10 CFR 50.59(b).

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A-601.8:12

FIGURE 2

SAFETY EVALUATION SUMMARY FORM

PROCEDURE # HK-43 DATE 1/15/73 PCN # 93-6014

Exclusion from Screening Criteria - Items 1, 2, or 6

If "yes" is answered for Items 1 or 2, provide the type of "inconsequential change" or the referenced 10CFR50.59 safety evaluation below:

Change Type: _____

If "no" was answered for Item 6, provide the basis for exclusion below:

Basis for Exclusion: _____

10CFR50.59 Safety Evaluation - Item 7

If "no" has been answered for each question in items 7a through 7g this change is not an Unreviewed Safety Question. Document the justification for these conclusions below. List any material referenced in the space provided.

Written Justification: See Attachment

Referenced Material: _____

| If "yes" was answered for Item 3, check this box ☒ and submit
| a UFSAR change per A-65.

If "yes", was answered for Item 7, PORC shall review and approve this submittal. This proposed change is an Unreviewed Safety Question (USQ) and requires submittal to the NRC for their review.

Submitted By: K. Jen



5753.958

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION PROCEDURE CHANGE NOTICE

PROCEDURE NO. HP-4.3 REV. NO. 40 INITIATION DATE 1/15/93 PCN NO. 93-6014☐ NEW PROCEDURE☐ PERMANENT CHANGE☐ TEMPORARY - REVIEW ONLY☐ TEMPORARY - PERMANENT☒ PERIODIC REVIEWJim Bennett

INITIATOR

K. J. J. J.

RESPONSIBLE MANAGER

PLANT STAFF

DUTY ENGINEER *

SHIFT SUPERVISOR *

* EXPIRATION DATE _____ * PORC REVIEW BY DATE _____

* (FOR TEMPORARY PCN'S ONLY)

* ☐ ONE TIME USE ONLY EQUIPMENT ID _____

TRAINING

YES ☒NO ☐REASON: Remove Shift Supervisor Approval, Extend Approval
Period for SW through the length of the Job, Clarify responsibilities
and Add Conservation through Pre-Job Surveys

PORC RECOMMENDATION:

APPROVAL

DISAPPROVAL ☐

PORC COMMENTS OR MODIFICATIONS:

RECEIVED
MAR 9 1993CENTRAL RECORDS
QA LIFETIME

PORC REVIEW DATE

9-3-93

EFFECTIVE DATE

9-15-93

CATEGORY 1.1

PS'S REVIEW

Laurie Parker

ORIGINAL

1. Title:

Change of the duration of Special Work Permits (SWP) approval and the removal of Shift Supervisor Approval Signature on Special and Radiation Work Permits.

2. Background and Scope:

Currently Special Work Permits are valid for 1 day and describe the health physics requirements for specific tasks or jobs. Radiation Work Permits are valid for one year and provide the health physics requirements for routine functions such as surveys and tours. In addition the Shift Supervisor signature is required for the approval of SWPs and RWPs as required in section 12.5.3.2 of the Ginna UFSAR, Administrative procedure A-1, and Health Physics and Chemistry procedure HP-4.3.

3. Purpose of Change:

The purpose of this change is to re-emphasize the command and control function of the Shift Supervisor in the safety of operations and remove the subordinate administrative function of signing radiation work permits. This will reduce the administrative burden for the Shift Supervisor reviewing and approving the SWPs. The change will also reduce the administrative burden on the HP and Chemistry Department in preparing and controlling duplicate SWPs for the larger number of jobs that are normally working for greater than 1 day. This change will result in reduction in the documents required to perform radiological work. The process will be streamlined to enhance the preparation, approval, and use of SWPs

4. Analysis:

The change to the Ginna UFSAR and procedure HP-4.3 has two components that require a safety analysis. First, extending the approval period of a SWP from 1 day to the length of the job and second, removing the Shift Supervisor signature from the Special Work Permits and Radiation Work Permits. In addition, several minor changes to HP-4.3 that add conservatism and change the format of the permit and are inconsequential in nature.

a. Extending the Approval Duration of the SWP

Section 12.5.3.2 of the Ginna UFSAR states:

"The work permit system consists of Special Work Permits and Radiation Work Permits. Radiation Work Permits are used for routine functions such as surveys or tours by operations personnel and are valid for one year. Special Work Permits are used for specific tasks or jobs and are valid for 1 day."

Extending the approval duration of 1 day to the length of the job does not adversely affect radiological safety. Currently, an SWP is processed again which normally contains the same health physics protective requirements as the previous SWP. Therefore, the ability to have an SWP valid for the length of the job will dramatically improve the process and remove the duplication involved with the preparation, approval and use of an SWP for ongoing work. An SWP may also be revised if radiological conditions change which require additional protective equipment or requirements.

During the 1992 AI&O the S/G group submitted 184 SWP requests that were processed and approved by Health Physics and the Shift Supervisor. With the

approval of the change the Steam Generator Group should be able to complete the 1993 AI&O with approximately 20 SWP. This will greatly enhance the preparation, and use of SWPs and place the added focus on health physics work practices due to less attention required in processing the SWP requests.

b. Shift Supervisor Approval

Section 12.5.3.2 of the Ginna UFSAR states:

"Both permits require the signatures of the supervisor of the group performing the work, a Health Physicist and the Shift Supervisor. Radiation Work Permits also require the signature of the Station Superintendent."

This requirement is implemented using health physics procedure HP-4.3, "Health Physics Work Permit Initiation and Use", section 7.4.7 which states the Shift Supervisor is required to approve the SWP. In addition, HP-4.3 section 7.5.3 states:

" The SHIFT SUPERVISOR'S responsibilities include but are not limited to:

- o Ensure that the work to be performed will not affect the safe operation of the plant.
- o Inform the Control Room personnel of any work being performed which would require coordination between the Operations Section and the work group utilizing the work permit.
- o Inform the appropriate job supervisor if the current operations could affect the workers involved with work permits in use.

The requirement for Shift Supervisor approval of the SWP relates primarily to the control of work at Ginna Station. Removing the SS approval eliminates a redundant notification and improves the process of preparing and approving the SWP. The following procedures govern the work control process:

- o A-1101, Performance of Tests
- o A-1103, Test Tag Control Program
- o A-1105, Calibration, Test, Check and Replacement Surveillance Program for Instrumentation and Equipment Important to Safety
- o A-1401, Station Hold Rules
- o A-1603, Overview of the Ginna Station Work Control System
- o A-1603.5 Work Order Execution

The above listed procedures provide the necessary notification and work control for maintenance, calibration, and testing activities at Ginna Station. Removing the SS signature from the work permit enhances the approval process and does not result in a lack of work controls or introduce an unreviewed safety question. In addition, the control room will be given a index of all approved health physics work permits on a daily basis (once a shift during plant shutdowns) to ensure the Operations group is aware of all approved health physics work permits. The index will contain the job description, building, location and job supervisor. This will help the Control Room staff make the appropriate notifications to job supervisor if required due to changing plant conditions.

c. Additional Changes:

Several other changes to HP-4.3 add conservatism or are inconsequential such as:

- o requirement for a pre-job survey to adequately describe the radiological conditions of the work area to prepare the SWP.
- o 24 hr. notification prior to work start to perform pre-job surveys, incorporate appropriate ALARA requirements, and generate the SWP (12 hours during plant refueling outages)
- o change in the format of the SWP.
- o addition of ALARA requirements section to the SWP.

5. Conclusion:

Based upon the above analysis, it is concluded that the proposed removal of the Shift Supervisor approval and extending the approval period of the SWP will not impact plant, personnel, or environmental safety. The removal of the SS signature will significantly reduce the administrative burden of the SS. In addition, extending the approval period will reduce the administrative burden in the SWP preparation, approval, and use and also enhance the impact of health physics' involvement in the work control process. In summary the bases for the conclusion are:

1. Current Ginna Station Procedures and the Work Control/Planning Process ensures that the SS will be informed of plant conditions and work being conducted.
2. There is no regulatory or industry standard requiring or recommending the duration of approved health physics work permits or that the SS be involved in the approval of health physics work permits.

This change does not increase the probability of occurrence or the consequences of an accident previously evaluated in the safety analysis report, nor does it create the possibility for an accident or malfunction of a different type than any evaluated in the safety analysis report. In addition, the change does not result in a violation of the Ginna Station Technical Specifications.

6. References:

1. Ginna Station UFSAR Section 12.
2. ANSI-N13.2-1969, Guide for Administrative Practices in Radiation Monitoring.
3. NUREG-0761, Radiation Protection Plans for Nuclear Power Licensees.
4. A-1, Radiation Control Manual.

FIGURE 2

SAFETY EVALUATION SUMMARY FORM

PROCEDURE # RSSP-1.5 DATE 2/18/93 PCN # 93-4056Exclusion from Screening Criteria - Items 1, 2, or 6

If "yes" is answered for Items 1 or 2, provide the type of "inconsequential change" or the referenced 10CFR50.59 safety evaluation below:

Change Type: _____

If "no" was answered for Item 6, provide the basis for exclusion below:

Basis for Exclusion: _____

_____10CFR50.59 Safety Evaluation - Item 7

If "no" has been answered for each question in items 7a through 7g this change is not an Unreviewed Safety Question. Document the justification for these conclusions below. List any material referenced in the space provided.

Written Justification: _____

This PCN to change turbine trip logic with reactor trip logic for the FW Regulating valves does not constitute an unreviewed safety question because the accident analysis does not assume credit for this isolation of the FRVs. FW isolation on a SI signal is not affected by this modification. Thus the margins of safety as assumed in the UFSAR are not reduced.

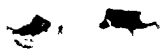
Referenced Material: _____

EWB 4773B DC/SA, Tech Specs 3.5, UFSAR 15.1 and 15.2

If "yes" was answered for Item 3, check this box ☒ and submit a UFSAR change per A-65.

If "yes", was answered for Item 7, PORC shall review and approve this submittal. This proposed change is an Unreviewed Safety Question (USQ) and requires submittal to the NRC for their review.

Submitted By: Robert L. Bryan



SECTION F - COMPLETED SPECIAL TESTS (ST) AND EXPERIMENTS

This section is to contain a description of special tests and experiments performed in the facility, pursuant to the requirements of 10 CFR 50.59(b). Within the time frame of this report, there were none conducted.

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CONCLUSIONS:

All of the above were reviewed by the PORC committee with respect to the Technical Specifications and the committee has determined that no Technical Specification changes or violations were involved.

Additionally, these changes were reviewed in committee to determine if they presented an Unreviewed Safety Question and the general summations of these reviews are as follows:

1. These changes do not increase the probability of occurrence, or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the UFSAR, because:

These changes were performed to ensure continued operability/availability of plant equipment and will not result in any equipment being operated outside of its normal operating range. This results in continued operability/availability of equipment important to safety. These changes additionally will not result in a change of operating characteristics of equipment used in the transient/accident mitigation which precludes an increase in the probability of occurrence of an accident. Because these changes ensure continued availability of plant equipment, the limits shown in the Technical Specifications, and the assumptions of the safety analyses of the Updated Final Safety Analysis Report continue to be met. As a result there is no increase in the consequences of any presently postulated accident.

2. These changes do not create the possibility for a new or different kind of accident, or a malfunction of a different type from any accident previously evaluated in the UFSAR because:

The changes do not present new failure mechanisms outside of those presently anticipated, and are bounded by the events contained in the Updated Final Safety Analysis Report.

3. The changes do not reduce the margin of safety because:

Present margins as contained in the Technical Specifications are valid, and these changes are performed within those limits. These changes will not result in violating the baseline assumptions made for equipment availability in the Technical Specifications, and the Updated Final Safety Analysis Report.

