

1992 REPORT  
OF  
FACILITY CHANGES, TESTS AND EXPERIMENTS  
CONDUCTED WITHOUT PRIOR APPROVAL  
FOR AUGUST 1991 THROUGH JULY 1992

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R.E. GINNA NUCLEAR POWER PLANT  
DOCKET NO. 50-244  
ROCHESTER GAS AND ELECTRIC CORPORATION

DATED DECEMBER 18, 1992



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.

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EWR-1405

MODIFICATIONS TO THE PLANT SECURITY SYSTEM

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE UPGRADE OF THE PLANT SECURITY SYSTEM. INFORMATION CONCERNING SPECIFICS OF THIS MODIFICATION ARE CONSIDERED SAFEGUARDS INFORMATION, AND WILL BE ADMINISTRATIVELY CONTROLLED UNDER CURRENT GS PROCEDURES.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES THE CHANGES TO DOOR #44 WHICH WILL BRING THE INVOLVED SECURITY AREA INTO COMPLIANCE WITH THE EXISTING ACCESS CONTROL SYSTEM.

REVISION 2 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCLUDES ADDING POSITION ALARM SWITCHES AND ASSOCIATED CONDUIT TO FIRE DOORS F12, F13, F14, AND F15, WHICH ACCESS THE TECHNICAL SUPPORT CENTER AT THE SOUTH AND NORTH ENDS. THE TURBINE BUILDING MEZZANINE TO THE TECHNICAL SUPPORT CENTER NORTH HALL, AND THE TURBINE BUILDING MEZZANINE NORTHWEST TO THE SERVICE BUILDING. THIS IS BEING DONE DUE TO PRESSURE DIFFERENTIALS THAT EXIST WHEN THE TURBINE BUILDING EXHAUST FANS ARE ACTIVATED, WHEREAS THESE FIRE DOORS ARE NOT ABLE TO CLOSE AND LATCH PROPERLY. THEREFORE, THE ADDED POSITION ALARMS ALLOW FOR ADMINISTRATIVE CONTROLS TO BE PLACED UPON THESE FIRE DOORS.

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 INCLUDE (1) FIRES AND APPENDIX R LEVELS OF PROTECTION FROM FIRES; (2) SECURITY.

THE TYPES OF ACCIDENTS AND THEIR CONSEQUENCES AS EVALUATED IN THE UFSAR ARE UNAFFECTED BY THIS MODIFICATION.

THE SECURITY SYSTEM IS POWERED FROM A NON-SAFEGUARDS BUS WITH BACKUP FROM A POWER SOURCE DEDICATED TO THE SECURITY SYSTEM.

SEISMIC CATEGORY I SYSTEMS, STRUCTURES, OR COMPONENTS ARE ONLY AFFECTED BY MODIFICATIONS TO THE ACCESS CONTROL SYSTEMS, AND THE DESIGN CRITERIA REQUIRES THAT SAFETY RELATED STRUCTURES, SYSTEMS, AND COMPONENTS ARE IN NO WAY DEGRADED.

FIRE PROTECTION REQUIREMENTS FOR THIS MODIFICATION SHALL BE MET AS OUTLINED IN THE DESIGN CRITERIA. THEREFORE, THERE WILL BE NO INCREASE IN FIRE LOADING OR FIRE HAZARD, AND NO EXISTING EQUIPMENT REQUIRED TO MEET 10CFR50 APPENDIX R REQUIREMENTS WILL BE AFFECTED. INTERIM MEASURES DURING CONSTRUCTION ACTIVITIES WILL BE ADMINISTRATIVELY CONTROLLED TO PREVENT DEGRADATION OF FIRE AND SECURITY BARRIERS.



THUS, THIS MODIFICATION DOES NOT AFFECT ANY SAFEGUARDS EQUIPMENT NOR DOES IT AFFECT THE OPERATION OF SUCH EQUIPMENT. THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

1. FIRE PROTECTION FEATURES
2. PLANT SECURITY

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-1660B  
RCS OVERPRESSURE PROTECTION PHASE 2

THIS ENGINEERING WORK REQUEST ADDRESSES THE REPLACEMENT OF CHECK VALVES FOR THE RCS OVERPRESSURE PROTECTION - PHASE 2.

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE GINNA STATION UPDATED FINAL SAFETY ANALYSIS REPORT. THE EVENTS RELATED TO THIS MODIFICATION ARE:

- 1) FIRES
- 2) SEISMIC EVENTS
- 3) INADVERTENT OPENING OR FAILURE TO CLOSE OF A PRESSURIZER PORV
- 4) EFFECT ON THE LOW TEMPERATURE OVERPRESSURE PROTECTION (LTOP) SYSTEM

THE MODIFICATION WILL NOT INCREASE THE PROBABILITY OF, OR THE EFFECTS OF, A FIRE SINCE THE MATERIALS USED WILL MEET CRITERIA EQUAL TO OR GREATER THAN THOSE PRESENTLY INSTALLED.

THE REPLACEMENT CHECK VALVES WILL CONTINUE TO BE SEISMICALLY SUPPORTED AND THEREFORE WILL NOT AFFECT SAFETY-RELATED EQUIPMENT.

THE MODIFICATION WILL NOT ALTER THE CURRENT OPERATION OF THE INSTRUMENT AIR SYSTEM OR THE NITROGEN ACCUMULATOR SYSTEM AND WILL NOT INCREASE THE PROBABILITY OF AN EVENT ASSOCIATED WITH THE INADVERTENT OPENING OR FAILURE TO CLOSE OF A PRESSURIZER PORV.

THE MODIFICATION WILL NOT AFFECT THE NITROGEN SUPPLY TO THE LTOP SYSTEM. NEITHER THE NITROGEN QUANTITY NOR THE NITROGEN PRESSURE WILL BE AFFECTED BY THE INSTALLATION OF THE CHECK VALVES. THE PERFORMANCE REQUIREMENTS OF THE PRESSURIZER PORV ACTUATION LINES ENSURE THAT THE ASSUMPTIONS USED IN THE LTOP EVALUATION ARE NOT VIOLATED. THEREFORE, LTOP IS NOT AFFECTED BY THIS MODIFICATION.



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BASED ON THE ABOVE ANALYSIS:

- A. ALL SAFETY REQUIREMENTS ARE MET AND THE MODIFICATION IS IN ACCORDANCE WITH THE GINNA STATION LICENSING DESIGN BASIS.
- B. THE MARGIN OF SAFETY DURING NORMAL OPERATING AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.
- C. THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.

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-3341

DC FUSE COORDINATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE UPGRADE OF THE 125 VOLT DC DISTRIBUTION SYSTEM.

REVISION 4 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS ADDRESSES THE TRANSFER OF LOADS FROM ONE FUSE/SWITCH POSITION TO ANOTHER IN THE SAME DC DISTRIBUTION PANEL.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATING TO THIS MODIFICATION ARE: (1) LOSS OF DC CONTROL POWER, (2) NATURAL EVENTS (FIRE AND EARTHQUAKE) AND (3) UFSAR CHAPTER 15 ACCIDENTS AND TRANSIENTS.

THE FIRST EVENT THAT HAS BEEN ANALYZED IS THE LOSS OF DC CONTROL POWER. THE PRIMARY PURPOSE OF THE PROPOSED FUSE CHANGES ARE TO INSURE THAT THE FUSES SUPPLYING CLASS 1E LOADS WILL DO SO UNDER ALL DESIGN BASIS CONDITIONS. IN ADDITION, THE PROPOSED FUSES THAT SUPPLY NON CLASS 1E LOADS WILL FUNCTION AS ISOLATION DEVICES. THAT IS, THEY WILL CLEAR ANY FAULT OR OVERLOAD CONDITION WITHOUT CAUSING THE LOSS OF THE SAFEGUARD LOADS ON THE SYSTEM. THIS WILL BE ACCOMPLISHED THROUGH PROPER FUSE COORDINATION AS DESCRIBED IN THE DESIGN CRITERIA. THEREFORE, AVAILABILITY, OF THE CLASS 1E DC DISTRIBUTION SYSTEM IS NOT DEGRADED.

NATURAL EVENTS AND CHAPTER 15 ACCIDENT/TRANSIENT ANALYSES.





THE FUSES SELECTED TO REPLACE EXISTING FUSES WILL BE SIZED TO CLEAR MAXIMUM FAULT CURRENTS AT RATED VOLTAGE AS WELL AS ENSURE SYSTEM OPERABILITY. THEREFORE, THE FUSES WILL BE ABLE TO PERMIT THE PROPER FUNCTIONING OF THE SAFETY SYSTEMS USED TO MITIGATE UFSAR CHAPTER 15 ACCIDENTS AND TRANSIENTS. IN ADDITION, CORRECTLY SIZED FUSES WILL INSURE THAT SUSTAINED ARCING WILL NOT OCCUR DURING FAULT CONDITIONS. THEREFORE, THE CONSEQUENCES OF A FIRE IS NOT INCREASED.

ANY ADDITIONAL WIRING FOR TRANSFERRING THE SUPPLY TO A CIRCUIT FROM ONE FUSE/SWITCH POSITION TO ANOTHER WILL USE CABLE IN COMPLIANCE WITH IEEE 383-1974 FLAME TEST. SUCH CABLE WILL BE ONLY WITHIN A DC DISTRIBUTION PANEL AND THUS WILL NOT INCREASE THE FIRE LOADING IN THE AREA.

ALL FUSES USED ON THE 125VDC DISTRIBUTION SYSTEM WILL BE SHOWN TO FUNCTION WITHOUT DISCONTINUITY, CONSISTENT WITH THE SEISMIC TESTING REQUIREMENTS OF GOULD INC., FUSE QUALIFICATION SPECIFICATION FOR CLASS 1E EQUIPMENT, GEFD-001, REVISION B, DECEMBER, 1981. IN ADDITION, FUSE CLIPS AND REDUCERS WILL BE SIZED CONSISTENT WITH MANUFACTURER'S REQUIREMENTS. THEREFORE, THERE IS NO SIGNIFICANT INCREASE IN FUSE FAILURES DUE TO A SEISMIC EVENT.

SECTION 12.1 OF THE DESIGN CRITERIA ALLOWS THE USE OF EXISTING FUSES IN THE DC SYSTEM PROVIDED THEY ARE OF THE CORRECT SIZE AND TYPE. SPECIFICALLY, EXISTING FUSES MEETING ALL SYSTEM COORDINATION REQUIREMENTS AS DESCRIBED IN SECTION 17.0 OF THE DESIGN CRITERIA AND HAVING BEEN EVALUATED FOR USE IN CLASS 1E APPLICATIONS DO NOT REQUIRE REPLACEMENT. BASED UPON THE RESULTS OF THE TESTING PROGRAM FOR NEW FUSES, THE RELIABILITY OF THE EXISTING FUSES IS DETERMINED TO BE APPROPRIATE FOR CONTINUED USE IN THE DC SYSTEM.

THEREFORE, BASED UPON THE ABOVE ANALYSES, 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 PROVIDED 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 HAS NOT BEEN CREATED.

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



EWR-3505

MODERNIZATION OF STATION 13A

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODERNIZATION OF STATION 13A IN ORDER TO MEET MINIMUM REQUIREMENTS FOR RELIABILITY AND SECURITY AS DEVELOPED IN THE NORTHEAST POWER COORDINATING COUNCIL AND NEW YORK POWER POOL RELIABILITY CRITERIA AS IT APPLIES TO PROTECTIVE RELAYS.

REVISION 2 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS IS BASICALLY THE REPLACEMENT OF THE RELAYS FOR CIRCUITS 911 AND 912 WITH NEW STATIC DISTANCE PROTECTION TYPES, USED AS A SECONDARY PROTECTION SYSTEM; THESE MODELS, THE "QUADRAMHO", MANUFACTURED BY GEC MEASUREMENTS, INCORPORATE A "WEAK IN FEED FEATURE" THAT PERMITS OPERATION OF THE RELAY WITH A WEAK SUPPLY SOURCE.

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. EVENTS RELATED TO THIS MODIFICATION ARE AS FOLLOWS:

- 1) LOSS OF EXTERNAL LOAD
- 2) LOSS OF OFFSITE POWER

THE LOSS OF EXTERNAL LOAD HAS BEEN ANALYZED IN THE GINNA UFSAR. THIS MODIFICATION DOES NOT EFFECT THE RESULTS OF THAT ANALYSIS IN ADDITION, THIS MODIFICATION WILL INCREASE THE REDUNDANCY AND SEPARATION OF EXISTING PROTECTIVE RELAY SYSTEMS FOR THE 115 KV LINES. THUS THIS MODIFICATION DOES NOT INCREASE THE PROBABILITY OF A LOSS OF EXTERNAL LOADS. THE POWER CONTROL SCHEME WILL NOT BE MODIFIED IN ANY WAY.

THIS MODIFICATION WILL INCREASE THE REDUNDANCY AND SEPARATION OF THE EXISTING PROTECTIVE RELAYING FOR THE OFFSITE POWER SOURCES. THE POWER CONTROL SCHEME WILL NOT BE MODIFIED IN ANY WAY. THUS THIS MODIFICATION DOES NOT INCREASE THE PROBABILITY OF A LOSS OF OFFSITE POWER.

BASED UPON A REVIEW OF THE UFSAR, IT HAS BEEN CONCLUDED 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 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-4043

INCORPORATION OF KEYPHASOR PROXIMITY TRANSDUCERS INTO RCP VIBRATION MONITORING SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE INCORPORATION OF A KEYPHASOR PROXIMITY TRANSDUCER INTO THE RCP VIBRATION MONITORING SYSTEM OF EACH RCP. EACH KEYPHASOR PROXIMITY TRANSDUCER WILL PROVIDE RCP VIBRATION DATA VALUABLE FOR DIAGNOSTIC TESTING PURPOSES. THERE ARE NO CONTROL FUNCTIONS ASSOCIATED WITH THIS MODIFICATION.

REVISION 0, OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WERE PRESENTED AND APPROVED BY PORC ON JANUARY 24, 1985, PORC ITEM NUMBER 6.1.0-85-009-001.

UNDER REVISION 1, PARAGRAPHS 1.1, 1.3, 8.0, AND 23.1 OF THE DESIGN CRITERIA HAVE BEEN REVISED TO INCLUDE SEISMIC REQUIREMENTS FOR THE INSTALLATION OF NEW CONDUIT AND/OR ENCLOSURES LOCATED IN THE VICINITY OF SEISMIC CATEGORY 1 EQUIPMENT WILL BE INSTALLED IN ACCORDANCE WITH REGULATORY GUIDE 1.29 SECTION C.2.

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 MAJOR AND MINOR FIRES AND SEISMIC EVENTS.

BASED UPON THE ANALYSES DESCRIBED UNDER PARAGRAPH 3.1 TO 4.4 OF THE SAFETY ANALYSIS, IT HAS, THEREFORE, BEEN DETERMINED THAT ADEQUATE MARGINS OF SAFETY EXIST DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION, AND THERE ARE ADEQUATE STRUCTURES, SYSTEMS AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS.

EWR-4067

115 KV BENCHBOARD MODIFICATION

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH INVOLVES THE REPLACEMENT OF THE EXISTING (9 SECTIONS) 115 KV BENCHBOARD FROM THE CONTROL ROOM. ALL DIRECT BREAKER CONTROL FEATURES, NOW LOCATED ON THE 115 KV BENCHBOARD WILL BE REMOVED. EXISTING BREAKER CONTROL SWITCHES ON THE MCB WILL BE UNAFFECTED BY THIS MODIFICATION. THE 9 SECTION 115 KV BENCHBOARD WILL BE REPLACED WITH A STATUS DISPLAY PANEL. THE STATUS DISPLAY PANEL WILL BE ADDED TO THE MCR AND WILL PROVIDE STATUS LIGHTS ASSOCIATED WITH BREAKER POSITIONS LOCATED AT SUBSTATION 13A.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WERE PRESENTED AND APPROVED BY PORC ON JANUARY 30, 1985, PORC ITEM NUMBER 6.1.0-85-011-003.



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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) SEISMIC EVENTS, 2) MAJOR AND MINOR FIRES, 3) LOSS OF EXTERNAL ELECTRICAL LOAD AND 4) LOSS OF OFFSITE A.C. POWER.

BASED UPON THE ANALYSES DESCRIBED UNDER PARAGRAPH 3.1 TO 4.4 OF THE SAFETY ANALYSIS, IT HAS THEREFORE, BEEN DETERMINED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT HAVE NOT BEEN REDUCED. 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.

EWR-4265

CONTAINMENT POST ACCIDENT 1A & 1B CHARCOAL FILTER SYSTEMS MODIFICATION

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH MODIFIED THE A AND B TRAIN CONTAINMENT RECIRCULATION SYSTEMS.

IN THE EVENT OF A LARGE BREAK LOCA SCENARIO, THERE IS THE POTENTIAL FOR THE A AND B TRAIN CONTAINMENT RECIRCULATION CHARCOAL FILTER FAN SYSTEM OPERABILITY TO BE SEVERELY RESTRICTED DUE TO THE FLOODING OF THE SYSTEM DUCTWORK LOCATED IN THE BASEMENT OF CONTAINMENT.

THE PURPOSE OF THIS MODIFICATION IS TO UPGRADE THE A AND B TRAIN CONTAINMENT RECIRCULATION SYSTEMS TO ENSURE ADEQUATE AIR DISTRIBUTION OF THE RECIRCULATION AIR THROUGH THE CHARCOAL FILTERS TO THE CONTAINMENT VESSEL OPERATING FLOOR.

IN ORDER TO ENSURE ADEQUATE AIR DISTRIBUTION OF THE RECIRCULATION AIR THROUGH THE CHARCOAL FILTERS TO THE OPERATING FLOOR, SIX (6) ADDITIONAL AIR DISCHARGE OPENINGS ARE TO BE ADDED TO THE 1A AND 1B POST ACCIDENT CHARCOAL FILTER DISCHARGE DUCTWORK.

ALL OF THE OPENINGS ARE TO BE ON THE DISCHARGE SIDE OF THE CHARCOAL FILTERS AND BEFORE THE LOCATION OF THE DUCTWORK WHICH COULD POTENTIALLY FLOOD AND RESTRICT THE DELIVERY OF THE AIR TO THE CONTAINMENT OPERATING FLOOR.

ALL OF THE OPENINGS ARE TO BE LOCATED ABOVE THE CONTAINMENT OPERATING FLOOR IN ORDER TO ENSURE ADEQUATE DELIVERY OF THE FILTERED AIR TO THIS AREA.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON APRIL 29, 1987 PORC NUMBER 6.1.0-87-068-001.

THE PURPOSE OF REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO CORRECT TYPOGRAPHICAL ERRORS IN REVISION 0.





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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 LISTED AS FOLLOWS:

- 1) INTERNAL AND EXTERNAL EVENTS SUCH AS FIRE, FLOODS, STORMS, AND EARTHQUAKES.
- 2) SYSTEM FUNCTIONAL OPERATION DURING A LOCA SCENARIO.

BASED UPON THE ANALYSES DESCRIBED UNDER PARAGRAPHS 3.1 TO 4.4 OF THE SAFETY ANALYSIS, IT HAS THEREFORE, 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 AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR-4514

STATION 13A FIBER OPTIC COMMUNICATIONS SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE INSTALLATION OF FIBER OPTIC COMMUNICATION EQUIPMENT AT THE STATION 13 RADIO TOWER AND AT STATION 13A AND FIBER OPTIC CABLE BETWEEN THE TWO LOCATIONS.

THE PURPOSE OF THIS MODIFICATION IS TO REPLACE THE PRESENT LEASED TELEPHONE LINE COMMUNICATING SYSTEM AT STATION 13A WITH A FIBER OPTIC COMMUNICATION SYSTEM THAT WILL TIE INTO THE PRESENT MICROWAVE SYSTEM LOCATED AT STATION 13.

THIS MODIFICATION INVOLVES THE INSTALLATION OF FIBER OPTIC MULTIPLEXING AND CHANNEL BANK EQUIPMENT TO BE INSTALLED AT THE STATION 13 RADIO TOWER AND AT STATION 13A AND BE CONNECTED BY A LINK OF FIBER OPTIC CABLE BETWEEN THE TWO LOCATIONS. THIS SYSTEM WILL TIE INTO THE PRESENT MICROWAVE SYSTEM LOCATED AT STATION 13, AND WILL ALSO BE A PART OF RG&E'S OVERALL TELECOMMUNICATIONS NETWORK.

FIBER OPTIC CABLE WILL BE INSTALLED BETWEEN STATION 13A AND THE RADIO TOWER AT STATION 13. THE CABLE WILL BE INSTALLED UNDERGROUND WITH ALL NECESSARY TRENCHING DONE OUTSIDE OF THE SECURITY FENCING AT GINNA STATION. THE OVERHEAD PART OF THE INSTALLATION WILL BE CONSTRUCTED ON AN EXISTING POLE LINE LOCATED OUTSIDE OF THE SECURITY FENCING.

THE SYSTEMS WORK ON A HOT STANDBY PRINCIPAL, IN WHICH THE FAILURE OF A SINGLE ELECTRICAL COMPONENT OR FIBER WILL NOT MAKE THE SYSTEM INOPERATIVE. TOTAL FAILURE OF THE SYSTEM WOULD HAVE THE SAME AFFECT TO STATION 13 AS TELEPHONE CABLE FAILURE WOULD HAVE ON THE STATION UNDER PRESENT CONDITIONS.

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

- (1) SEISMIC EVENT
- (2) LOSS OF EXTERNAL ELECTRICAL LOAD
- (3) LOSS OF OFFSITE A.C. POWER
- (4) MAJOR AND MINOR FIRES

THIS MODIFICATION DOES NOT INSTALL ANY NEW OR MODIFY ANY EXISTING EQUIPMENT NECESSARY FOR THE SAFE SHUTDOWN OF THE PLANT. NEW EQUIPMENT WILL NOT BE LOCATED IN ANY AREA THAT CONTAINS SAFETY RELATED EQUIPMENT. THE MODIFICATION IS, THEREFORE, DESIGNATED AS NON-SEISMIC.

THIS MODIFICATION WILL IMPROVE AND PROVIDE REDUNDANCY IN EQUIPMENT COMMUNICATIONS TO/FROM STATION 13A. THIS MODIFICATION WILL NOT CHANGE ANY OF THE CONTROL OR INDICATION FUNCTIONS ASSOCIATED WITH STATION 13A. THEREFORE, NO NEW FAILURE MODES, BEYOND THOSE ASSOCIATED WITH THE ORIGINAL CONTROL SCHEMES, WILL BE INTRODUCED BY THE MODIFICATION RELATIVE TO LOSS OF EXTERNAL ELECTRICAL LOAD OR LOSS OF OFFSITE AC POWER.

THIS MODIFICATION DOES NOT INVOLVE THE INSTALLATION OF ANY EQUIPMENT IN A GINNA FIRE AREA. AN APPENDIX R EVALUATION IS, THEREFORE, NOT REQUIRED.

IN ACCORDANCE WITH THE DESIGN CRITERIA, THE CABLE ROUTING WILL BE ENTIRELY OUTSIDE OF THE SECURITY FENCE PERIMETER. THEREFORE, NO UNDERGROUND SAFETY RELATED CIRCUITS WITHIN THE SECURITY FENCE BOUNDARY WILL BE AFFECTED.

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 AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.

EWR - 4522

4160V AND 34.5KV BREAKER SWITCH RELOCATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE RELOCATION OF 4160V AND 34.5KV BREAKER SWITCHES ON THE MCB.

THE PROPOSED MODIFICATION WILL MINIMIZE THE POTENTIAL FOR OPERATOR ERROR, BY RELOCATING BREAKER SWITCHES ON THE MCB, SO THAT THEY ARE CONSISTENT WITH THE BREAKER CONFIGURATION ON THE 4160 VOLT BUSES.

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 OFFSITE AC POWER.
- 2) NATURAL EVENTS/FIRE AND EARTHQUAKE.

THE FIRST EVENT THAT HAS BEEN ANALYZED FOR THIS MODIFICATION CONCERNS THE LOSS OF OFFSITE AC POWER. THIS MODIFICATION WILL NOT CHANGE ANY ELECTRICAL CIRCUIT DESIGN OR DESIGN INTENT ASSOCIATED WITH 4160 VOLT OR 34.5KV BUSES. THEREFORE, THIS MODIFICATION WILL NOT DEGRADE THE EXISTING CAPABILITY TO DEAL WITH THE OFF-SITE AC POWER LOSS INCIDENT.

THE SECOND EVENT ANALYZED IS THE EFFECT OF A FIRE ON THE PLANT DUE TO THIS MODIFICATION. NO NEW WIRING IS ANTICIPATED, BUT IN THE EVENT ANY NEW WIRING IS REQUIRED IT SHALL MEET THE REQUIREMENTS OF IEEE STD. 383-1974 FLAME TEST. THUS THERE IS NO SIGNIFICANT INCREASE IN THE FIRE LOADING DUE TO THIS MODIFICATION.

THE THIRD EVENT ANALYZED IS THE EFFECT OF A SEISMIC EVENT ON THE PLANT DUE TO THIS MODIFICATION. THE EXISTING CONTROL SWITCHES WILL BE REARRANGED WITH MINIMAL DISTURBANCE OF EXISTING WIRING; THE SEISMIC ANALYSIS PERFORMED UNDER EWR 2831 STILL APPLIES FOR THIS MODIFICATION. THEREFORE, C2 OF REGULATORY GUIDE 1.29 WILL BE MET. THUS THE CONSEQUENCES OF A FAILURE DUE TO A SEISMIC EVENT ARE MITIGATED.

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 PROVIDED 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.

#### EWR-4525

#### OFFSITE POWER RECONFIGURATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE IMPROVEMENT OF THE GINNA STATION OFFSITE POWER SUPPLY SYSTEM. THIS WILL INVOLVE SPLITTING THE 34.5 KV BUS INTO TWO SECTIONS WITH NO TIE BREAKER. ONE BUS SECTION WILL RECEIVE POWER FROM EXISTING OFFSITE CIRCUIT 751 (STATION 204) THROUGH A 34.5 KV BREAKER AND SUPPLY STATION AUXILIARY TRANSFORMER 12A, WHILE THE OTHER SECTION IS FED BY CIRCUIT 767 (STATION 13A) TO SUPPLY STATION AUXILIARY TRANSFORMER 12B.



EACH STATION AUXILIARY TRANSFORMER WILL PROVIDE THE NORMAL FEED TO ONE 4160 VOLT SAFETY SOURCE BUS AND FUNCTION AS THE ALTERNATE FEED TO THE OTHER 4160 VOLT SAFETY SOURCE BUS. AUTOMATIC TRANSFERS WILL BE MADE BETWEEN NORMAL AND ALTERNATE SOURCES WITHOUT UNNECESSARY DIESEL STARTS.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 0, TO CORRECT TYPOGRAPHICAL ERRORS, TO INCLUDE ALL MODIFICATIONS PREVIOUSLY ADDRESSED UNDER EWR 4522, TO ADD ADDITIONAL REFERENCES, CODES AND STANDARDS, TO ADD MISSING FIGURES, TO FINALIZE SECTIONS OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WHICH HAD PREVIOUSLY NOT BEEN APPROVED.

NOTE: PREVIOUSLY PORC APPROVAL OF REVISION 1 OF DESIGN CRITERIA AND SAFETY ANALYSIS HAD BEEN LIMITED TO THOSE SECTIONS RELATED TO THE INSTALLATION OF SWITCHGEAR AND BUS DUCT SUPPORT FOUNDATIONS AND SCREENWALL PENETRATION.

REVISION 2 TO THE DESIGN CRITERIA INCORPORATES CHANGES FROM REVISION 1, TO PROVIDE CLARIFICATION OF FIRE PROTECTION REQUIREMENTS AND TO DESCRIBE THE MEASURES TO BE TAKEN TO ENSURE THAT THE MODIFICATION WILL NOT, DEGRADE EXISTING FIRE BARRIERS OR AFFECT THE PERFORMANCE OF ANY EXISTING FIRE PROTECTION EQUIPMENT.

THE SAFETY ANALYSIS DATED 1/25/89 REVISION 2 SUPERCEDES REVISION 1 SENT OUT FOR PRE-PORC REVIEW. REVISION 2 CORRECTED TYPOGRAPHICAL ERRORS IN PARAGRAPHS 1.1.8.1, 1.1.8.2, AND 3.5 DELETED THE FIRST SENTENCE OF PARAGRAPH 3.3.1 AND CHANGED THREE SUCCESSIVE TO TWO SUCCESSIVE IN PARAGRAPH 3.4.1.

REVISION 3 OF THE SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 2 TO UPDATE THE REVISION OF THE DESIGN CRITERIA IN SECTION 2.0 REFERENCE DOCUMENTS.

REVISION 4 OF THE SAFETY ANALYSIS REPLACES SECTION 3.2.2, APPENDIX R REQUIREMENTS, TO COINCIDE WITH THE CHANGES IN DESIGN CRITERIA REVISION 2.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND EVENTS REQUIRING ANALYSIS BY USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE FIRE AND EARTHQUAKE, LOSS OF OFFSITE POWER AND LOSS OF ELECTRICAL LOAD.

FIRE AND EARTHQUAKE ARE REVIEWED AS FOLLOWS:

SECTION 27.3 OF THE DESIGN CRITERIA DETAILS CARE TO BE TAKEN WITH FIRE STOPS. NEW WIRING AND CABLE WILL BE REQUIRED FOR THIS MODIFICATION WHICH COULD ADD TO THE FIRE LOADING OF THE PLANT, AND BECAUSE OF THIS POTENTIAL, THE DESIGN CRITERIA REQUIRES THAT ALL SUCH CABLE MEET THE IEEE-383-1974 FLAME TEST REQUIREMENTS. THEREFORE, THIS MODIFICATION WILL CAUSE NO SIGNIFICANT INCREASE IN FIRE PROPAGATION HAZARD.



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THIS MODIFICATION HAS BEEN REVIEWED PER ASSUMPTIONS OF APPENDIX R ALTERNATIVE SHUTDOWN SYSTEM TO ENSURE THAT FAILURE OF ANY ELECTRICAL CABLE INSTALLED AS A PART OF THIS MODIFICATION WILL NOT RESULT IN THE DISABLING OF VITAL EQUIPMENT NEEDED TO SAFELY SHUTDOWN THE PLANT DURING POSTULATED FIRES.

FAULT DUTIES RESULTING FROM THIS MODIFICATION TO THE OFFSITE POWER SYSTEM WILL NOT CAUSE THE DESIGN REQUIREMENTS OF CONTAINMENT ELECTRIC PENETRATION ASSEMBLIES AS SPECIFIED IN IEEE-317-1983 TO BE EXCEEDED.

THIS MODIFICATION IS CLASSIFIED NON-CLASS 1E CONSISTENT WITH THE CLASSIFICATION OF THE OFFSITE POWER SYSTEM. THIS CLASSIFICATION IS ACCEPTABLE BECAUSE OFFSITE POWER IS NOT NEEDED FOR SAFE SHUTDOWN.

CHANGES TO THE MCB REQUIRED BY THIS MODIFICATION ARE ACCEPTABLE BECAUSE THE DESIGN CRITERIA REQUIRES THEY NOT DEGRADE MCB SEISMIC CAPABILITY.

LOSS OF OFFSITE POWER IS REVIEWED AS FOLLOWS:

THE PURPOSE OF THIS MODIFICATION IS TO INCREASE THE INDEPENDENCE OF THE INCOMING SUPPLIES TO THE PPS WITHOUT CHANGING THE PRIORITY FOR THROWOVER SEQUENCE IN SUPPLY TO THE SAFETY BUSES. THE CONSEQUENCE OF A SINGLE CONTINGENCY (FAILURE OF A COMPONENT) IN THE PPS WILL BE AUTOMATIC TRANSFER TO A SECOND PPS CIRCUIT. THIS WILL REDUCE THE PROBABILITY FOR TRANSFER OF SAFETY RELATED LOADS TO THE EMERGENCY POWER SYSTEM THE MARGIN OF SAFETY, IN TERMS OF RELIABILITY OR NUMBER OF AUTOMATIC TRANSFERS TO ALTERNATE SUPPLIES PRIOR TO DEPENDENCE UPON DIESEL GENERATORS IS INCREASED. THE PROBABILITY OF LOSS OF PPS IS DECREASED AND THE DESIGN ADEQUACY AS DOCUMENTED IN THE UFSAR IS ENHANCED.

BASED ON SECTION 17.2.2 OF THE DESIGN CRITERIA BOTH OFFSITE TRANSMISSION SOURCES (CIRCUIT 767 AND 751) ARE EACH REQUIRED TO HAVE ADEQUATE POWER CAPABILITIES TO SUPPLY ALL CLASS 1E AND NON-CLASS 1E PLANT LOADS. THIS IS VERIFIED BY TESTS IN SECTION 23.1 OF THE DESIGN CRITERIA. SINCE BOTH OF THE OFFSITE SOURCES EACH HAVE ADEQUATE POWER CAPABILITIES AND ORIGINATE FROM DIFFERENT SWITCHING STATIONS, THEY ARE TRULY INDEPENDENT SOURCES OF OFFSITE POWER. THEREFORE, THIS MODIFICATION WILL RESULT IN A DECREASE IN THE PROBABILITY OF LOSS OF OFFSITE POWER.





LOSS OF ELECTRICAL LOAD IS REVIEWED AS FOLLOWS:

UPON LOSS OF ELECTRICAL LOAD UNIT AUXILIARY LOADS ARE TRANSFERRED FROM THE 11 TRANSFORMER TO THE PPS. THE CONSEQUENCE OF A SINGLE CONTINGENCY IN THE PPS WILL BE AS DESCRIBED IN 3.3.1. EACH OF THE PPS SUPPLIES IS CAPABLE OF CARRYING FULL SAFETY AND UNIT AUXILIARY ELECTRICAL LOADS. THIS WILL REMAIN UNCHANGED BY THIS MODIFICATION AND AS PRESENTED IN THE UFSAR. A DOUBLE CONTINGENCY (FAILURE OF TWO PPS COMPONENTS) WILL BE REQUIRED FOR BLACKOUT OF THE PPS. THE MARGIN OF SAFETY FOR THIS EVENT IS THEREFORE, ALSO ENHANCED AS DESCRIBED IN 3.3.1. ONLY AFTER TWO SUCCESSIVE INDEPENDENT SUPPLIES BECOME UNAVAILABLE WILL CLASS 1E DEPENDENCE ON EMERGENCY DIESEL GENERATORS OCCUR.

THEREFORE, THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT WILL BE ENHANCED. 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 PROBABILITY OF OCCURRENCE OR THE CONSEQUENCE OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY, PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL BE REDUCED BY THE PROPOSED MODIFICATION.

THE POSSIBILITY OF AN ACCIDENT OR A MALFUNCTION OF A DIFFERENT TYPE THAN ANY EVALUATED PREVIOUSLY IN THE SAFETY ANALYSIS WILL NOT BE CREATED BY THE PROPOSED MODIFICATION.

THE MARGIN OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION WILL NOT BE REDUCED BY THE PROPOSED MODIFICATION.

#### EWR-4644

#### GSU DATA ACQUISITION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES AN EVALUATION OF THE PRESENT EQUIPMENT USED TO MONITOR THE GENERATOR STEP-UP TRANSFORMER (GSU) REVEALED AN INACCURACY OF AT LEAST 10°C. IT IS IMPORTANT TO MAINTAIN THE TEMPERATURE OF THE GSU WITHIN THE PROPER OPERATING TEMPERATURE LIMITS.

THIS MODIFICATION WILL REPLACE THE EXISTING GSU TOP OIL TEMPERATURE GAUGE AND THERMOCOUPLE COMBINATION. THE FUNCTION OF THE REPLACEMENT INSTRUMENTATION IS TO MORE ACCURATELY MONITOR THE TOP OIL TEMPERATURE OF THE GSU TRANSFORMER. THE REPLACEMENT INSTRUMENTATION WILL PROVIDE LOCAL INDICATION, ALARM CONTACT OUTPUTS AND TWO ANALOG OUTPUTS PROPORTIONAL TO THE TEMPERATURE BEING MONITORED. ONE ANALOG OUTPUT WILL BE SENT TO THE PLANT PROCESS COMPUTER SYSTEM (PPCS). THE SECOND ANALOG OUTPUT WILL NOT BE USED AT THIS TIME.



A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATING TO THIS MODIFICATION ARE MAJOR AND MINOR FIRES AND A SEISMIC EVENT. EQUIPMENT INSTALLED UNDER THIS MODIFICATION IS NOT REQUIRED TO FUNCTION DURING OR AFTER ACCIDENT CONDITIONS.

NEW WIRING AND CABLE WHICH MAY BE REQUIRED FOR THIS MODIFICATION COULD ADD TO THE FIRE LOADING OF THE PLANT. THEREFORE, THE DESIGN CRITERIA REQUIRES THAT ALL SUCH CABLES MEET IEEE 383-1974 FLAME TEST REQUIREMENTS. FIRE STOPS WILL BE TREATED AS IDENTIFIED IN SECTION 28.2 OF THE DESIGN CRITERIA. BECAUSE OF THIS, THERE WILL BE NO SIGNIFICANT INCREASE IN THE FIRE LOADING CAUSED BY THIS MODIFICATION.

AN APPENDIX R CONFORMANCE REVIEW SHALL BE PREPARED TO DETERMINE THAT THE PROPOSED MODIFICATION DOES NOT IMPACT APPENDIX R COMPLIANCE.

BASED ON REGULATORY GUIDE 1.29 AND CONSISTENT WITH APPENDIX A OF THE GINNA STATION QUALITY ASSURANCE MANUAL THIS MODIFICATION SHALL BE NON-SEISMIC. THIS MODIFICATION IS NOT REQUIRED FOR THE SAFE SHUTDOWN OF THE REACTOR.

WHERE APPLICABLE, THOSE PORTIONS OF THIS MODIFICATION WHOSE FAILURE COULD PRECLUDE SAFETY RELATED EQUIPMENT FROM PERFORMING THEIR SAFETY RELATED FUNCTIONS, SHALL BE RESTRAINED AND SUPPORTED IN A MANNER COMPARABLE TO SEISMIC CATEGORY I. THIS SHALL BE PERFORMED SUCH THAT SAFETY-RELATED EQUIPMENT IS NOT PREVENTED FROM PERFORMING ITS INTENDED FUNCTION BEFORE, DURING OR AFTER A SAFE SHUTDOWN EARTHQUAKE (SSE).

IT HAS BEEN DEMONSTRATED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATION AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION HAVE NOT BEEN REDUCED. 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.

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 4756

MCB ANNUNCIATOR ALARM (CRDR)

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF THE MAIN CONTROL BOARD EXISTING ALARM BUZZER WITH AN ADJUSTABLE ALARM.

REVISION 2 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS ADDRESSES SETTING THE NEW CONTROL ROOM ANNUNCIATOR ALARM AT LEAST 5 dBA ABOVE BACKGROUND WITH THE OTHER MCB ALARMS WITHIN A BAND OF +/- 2.5 dBA AROUND THE ANNUNCIATOR LEVEL.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY RG&E ENGINEERING PROCEDURE QE311 SECTION 3.2.2. THE EVENTS RELATED TO THIS MODIFICATION ARE:

- 1) SEISMIC EVENT
- 2) FIRES

THIS MODIFICATION DOES NOT INSTALL ANY NEW OR MODIFY ANY EXISTING EQUIPMENT NECESSARY FOR THE SAFE SHUTDOWN OF THE PLANT AS IDENTIFIED IN THE APPENDIX R SUBMITTAL.

ANY PORTION OF THIS MODIFICATION INVOLVING THE MAIN CONTROL BOARD IS DESIGNATED SEISMIC CATEGORY I. THE REMAINING WORK FOR THIS MODIFICATION WILL BE DESIGNED TO MEET THE REQUIREMENTS OF USNRC REGULATORY GUIDE 1.29, POSITION C.2.

THIS MODIFICATION INVOLVES THE INSTALLATION OF EQUIPMENT AND CABLE IN THE CONTROL BUILDING, FIRE AREA CC ZONE CR. A REVIEW WILL BE PERFORMED TO ASSURE CONTINUED COMPLIANCE WITH 10 CFR 50, APPENDIX R.

ALL NEW WIRING WILL BE QUALIFIED TO IEEE 383-1974 FLAME TEST REQUIREMENTS.

FIRE BARRIER PENETRATIONS WILL BE REPAIRED OR REPLACED IN ACCORDANCE WITH EXISTING PLANT PROCEDURES. THEREFORE EXISTING SEALS WILL NOT BE DEGRADED.

THIS MODIFICATION DOES NOT AFFECT THE SAFE SHUTDOWN ANALYSIS IN THE APPENDIX R SUBMITTAL FOR THE FOLLOWING REASONS:

- A) THE MODIFICATION INVOLVES EQUIPMENT WHICH IS NOT IDENTIFIED AS SAFE SHUTDOWN EQUIPMENT IN THE APPENDIX R SUBMITTAL.
- B) THERE IS NO EFFECT ON SEPARATION OF EXISTING CIRCUITS, ASSOCIATED CIRCUITS, OR FIRE AREA BOUNDARIES AS ANALYZED IN THE APPENDIX R SUBMITTAL.



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THIS MODIFICATION WILL NOT AFFECT THE CAPABILITIES OF THE ALTERNATIVE SHUTDOWN SYSTEM. FURTHERMORE, NONE OF THE EXISTING PROCEDURES FOR OBTAINING AN ALTERNATIVE SAFE SHUTDOWN WILL BE EFFECTIVE. THIS MODIFICATION, THEREFORE, COMPLIES WITH 10 CFR 50, APPENDIX R.

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-4759

HIGH MAST LIGHTING CABLE REPLACEMENT

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION TO REMOVE ANTIFALL DEVICES AND THE REPLACEMENT OF THE LIGHT FIXTURE LIFTING CABLES ON LIGHTING POLES #1, 3, 4, 5, 6 AND 7.

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. EVENTS RELATED TO THIS MODIFICATION: (1) LOSS OF ALL EXTERNAL (OFFSITE) AC POWER TO THE STATION; (2) INTERNAL AND EXTERNAL EVENTS/FIRE, FLOOD, STORM, OR EARTHQUAKE.

THE FIRST EVENT CONSIDERED IS "LOSS OF ALL EXTERNAL (OFFSITE) AC POWER TO THE STATION". THE MOTOR DRIVEN LIFT MECHANISMS ARE FED FROM NON-1E SAFETY RELATED BUSES. SINCE THERE IS NO CHANGE TO THE 1E SAFETY RELATED BUSES, THE PROBABILITY OF A LOSS OF AC POWER HAS NOT BEEN INCREASED.

THE SECOND EVENT CONSIDERED IS "INTERNAL AND EXTERNAL EVENTS/FIRE, FLOOD, STORM, OR EARTHQUAKE". THIS MODIFICATION IS NOT REQUIRED TO BE 1E NOR SEISMIC. THE FAILURE OF THE LIFT MECHANISM WILL NOT AFFECT SAFETY RELATED EQUIPMENT. THIS MODIFICATION IS OUTSIDE THE PERIMETER OF ANY FIRE AREAS. THERE IS NO IMPACT ON APPENDIX R OR OTHER FIRE PROTECTION REQUIREMENTS AND NO ADDITIONAL APPENDIX R REVIEW IS REQUIRED.

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 PROVIDED 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.

EWR 4809

DIESEL FIRE PUMP BATTERY CHARGER

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF THE BATTERY CHARGER FOR THE DIESEL FIRE PUMP. THE DESIGN OF THE EXISTING CHARGER IS THAT THROUGH A TIMING CAM, THE A AND B BATTERIES, FOR STARTING THE DIESEL FIRE PUMP, ARE ALTERNATELY CHARGED FOR ABOUT TWO MINUTES EVERY OTHER HOUR. THE NEW BATTERY CHARGER CONTINUOUSLY FLOAT CHARGES THE BATTERIES. IT WOULD HAVE THE CAPABILITY TO EQUALIZE OR RECHARGE THE BATTERIES AND AFTER THE REQUIRED CHARGE PERIOD RETURN TO THE FLOAT LEVEL AUTOMATICALLY. THIS WOULD PROVIDE BETTER CONTROL AND PROLONG BATTERY LIFE.

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 AS FOLLOWS:

- 1) SEISMIC EVENT
- 2) FIRE IN THE PLANT

THE FIRST EVENT ANALYZED IS THE EFFECT OF A SEISMIC EVENT. THE DESIGN CRITERIA REQUIRES THE NEW BATTERY CHARGER TO BE SEISMICALLY MOUNTED TO CATEGORY 1 CRITERIA. THEREFORE, THE MODIFICATION WILL NOT ADVERSELY AFFECT THE SYSTEM DURING A SEISMIC EVENT.

THE SECOND EVENT ANALYZED IS THE EFFECT OF A FIRE IN THE PLANT DUE TO THIS MODIFICATION. THE CONTROL WIRING USED FOR THIS MODIFICATION IS REQUIRED TO MEET THE REQUIREMENTS OF IEEE STANDARD 383-1974, FLAME TEST SPECIFICATION.

BASED UPON A REVIEW OF THE UFSAR, AND THE REQUIREMENTS OF THE 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-4931

TDAFWP CHECK VALVE REPLACEMENT

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE REPLACEMENT OF VALVES 4003 AND 4004, EVALUATION OF THE EFFECTS OF VALVE REPLACEMENTS AND THE ADDITION/MODIFICATION OF PIPE SUPPORT(S) IF DEEMED NECESSARY.





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. EVENTS RELATED TO THIS ANALYSIS ARE:

- A) FIRES
- B) SEISMIC EVENTS
- C) PIPE BREAKS OUTSIDE THE CONTAINMENT BUILDING
- D) PIPE BREAKS INSIDE THE CONTAINMENT BUILDING
- E) LOSS OF COOLANT ACCIDENT
- F) LOSS OF ALL A.C. POWER
- G) COOLDOWN
- H) STEAM GENERATOR TUBE RUPTURE
- I) LOSS OF MAIN FEEDWATER

THIS MODIFICATION WILL NOT CAUSE THE DEGRADATION OF EXISTING FIRE BARRIERS. MATERIALS USED WILL MEET CRITERIA EQUAL TO OR GREATER THAN THOSE PRESENTLY INSTALLED. FURTHERMORE, THIS MODIFICATION WILL BE REVIEWED AGAINST THE ASSUMPTIONS OF 10CFR50 APPENDIX 'R' TO ASSURE THAT ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO COMPLY WITH AND MAINTAIN EQUIVALENT LEVELS OF PROTECTION WILL BE MET DURING AND FOLLOWING THE MODIFICATION.

ALL PIPING AND ANY PIPE SUPPORT MODIFICATIONS WILL BE EVALUATED, IN REGARD TO A SEISMIC EVENT, TO CRITERIA IDENTICAL TO THE EWR 2512 SEISMIC UPGRADE PROGRAM SO AS TO EQUAL OR IMPROVE THE SYSTEMS CAPABILITY TO WITHSTAND A SEISMIC EVENT.

REPLACEMENT OF THE EXISTING CHECK VALVES IN THE AUXILIARY FEEDWATER SYSTEM WILL NOT ADVERSELY AFFECT AUXILIARY FEEDWATER PERFORMANCE IN RESPONSE TO PIPE BREAKS, LOCA, STEAM GENERATOR TUBE RUPTURE AND LOSS OF MAIN FEEDWATER. PREVIOUS PIPE BREAK REQUIREMENTS WILL NOT BE AFFECTED, AS THE SYSTEM WILL BE HYDROSTATICALLY TESTED TO PROVE INTEGRITY PRIOR TO TURNOVER FOR USE.

ALL ACCIDENTS LISTED (E THROUGH I ABOVE) ARE NOT ADVERSELY AFFECTED. THE REDUCTION IN LEAKAGE BETWEEN STEAM GENERATORS (UNDER THIS MODIFICATION) WILL IN FACT REDUCE THE IMPACT OF THESE EVENTS.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR, 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING A SEISMIC EVENT, 2) AFFECT THE LEVELS OF PROTECTION FROM FIRES DURING AND FOLLOWING MODIFICATIONS TO THE TDAFWP PIPING SYSTEM, 3) ALTER THE PERFORMANCE OF THE SYSTEM IN RESPONSE TO PIPE BREAKS INSIDE AND OUTSIDE CONTAINMENT, INCLUDING LOCA'S, LOSS OF MAIN FEEDWATER, COOLDOWN AND STEAM GENERATOR TUBE RUPTURE, AND 4) THE REPLACEMENT OF THE TDAFWP DISCHARGE CHECK VALVES WILL NOT BE AFFECTED BY LOSS OF ALL A.C. POWER DUE TO THEIR PASSIVE DESIGN FEATURES.



BASED UPON A REVIEW OF THE UFSAR AND 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 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-5025

MCB KEY SWITCHES CONTROL

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES LER 89-016, WHICH IDENTIFIED A POTENTIAL COMMON MODE FAILURE DUE TO AN OT-2 CONTACT BLOCK PLUNGER MECHANISM MALFUNCTION. A SINGLE OT-2 SWITCH ON THE MCB IS USED TO CONTROL THE SAFETY INJECTION BLOCK/NORMAL/UNBLOCK FUNCTION FOR BOTH TRAINS OF SAFETY INJECTION (SI). A MALFUNCTION COULD RESULT IN THE BLOCKING OF SOME AUTOMATIC ACTUATION FEATURES OF SI. TO CORRECT THE DEFICIENCY, THE PRESENT SI BLOCK FUNCTION WILL BE MODIFIED TO PROVIDE A SEPARATE BLOCK/NORMAL/UNBLOCK SWITCH FOR EACH TRAIN.

A REVIEW WAS PERFORMED TO IDENTIFY ANY ADDITIONAL FUNCTIONS SUBJECT TO A SIMILAR COMMON MODE FAILURE. THE RESULTS CONCLUDED THAT THE SI RESET, CONTAINMENT SPRAY RESET, CONTAINMENT ISOLATION RESET AND CONTAINMENT VENTILATION ISOLATION RESET SWITCHES HAVE SIMILAR DESIGN DEFICIENCIES. TO CORRECT THE DEFICIENCIES AND PROVIDE A SEPARATION OF TRAINS, THE WIRING OF THE SWITCHES WILL BE RECONFIGURED.

IN ADDITION, THE GARD COMMITTEE HAS RECOMMENDED THAT THE KEY PUSHBUTTONS FOR CONTAINMENT ISOLATION RESET AND CONTAINMENT VENTILATION ISOLATION RESET BE REPLACED WITH NON-KEY PUSHBUTTONS.

AS A RESULT OF THESE CHANGES AND THE GARD COMMITTEE'S RECOMMENDATION, CONGESTED AREAS OF THE LEFT FRONT SECTION WILL BE REARRANGED TO PROVIDE BETTER SEPARATION OF FUNCTIONS AND UTILIZATION OF MCB SPACE. THE DEVICES TO BE RELOCATED ARE: THE EXISTING SI BLOCK/NORMAL/UNBLOCK, AMSAC SYSTEM RESET, BOTH MANUAL CONTAINMENT SPRAY VENT ISOLATION, DIESEL GENERATOR A START, DIESEL GENERATOR B START, BAST LO-LO LOCKOUT RESET, MANUAL SI, MANUAL CONTAINMENT ISOLATION AND REACTOR EMERGENCY TRIP. ALSO, THE LEFT FRONT SECTION OF THE MAIN CONTROL BOARD (MCB) WILL BE REARRANGED TO PROVIDE A CONSISTENT PHYSICAL RELATIONSHIP BETWEEN VALVES THAT HAVE BOTH KEY AND CONTROL SWITCHES. THE VALVES ARE: MOV-852A, MOV-852B, MOV-896A, MOV-896B, AND MOV-856. IN ORDER TO PROVIDE THE SPACE ON THE MCB, THE CONTAINMENT SPRAY CHARCOAL FILTER DOUSE MOTOR OPERATED VALVE CONTROLS WILL BE RELOCATED TO BLANK AREA ON THE LEFT FRONT BENCHBOARD. THEY ARE: MOV-875A, MOV-875B, MOV-876A, AND MOV-876B.

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 SEISMIC, FIRE, AND LOSS OF POWER.

THE FIRST EVENT ANALYZED IS THE EFFECT OF A SEISMIC EVENT ON THE PLANT DUE TO THIS MODIFICATION. THE NEW SAFETY INJECTION (SI) BLOCK/NORMAL/UNBLOCK SELECTOR SWITCH AND ANY REPLACED DEVICES WILL BE QUALIFIED TO MEET THE STANDARDS SET FORTH BY IEEE STD. 344-1975. THEREFORE, THE CONSEQUENCES OF A FAILURE DUE TO A SEISMIC EVENT WILL BE MITIGATED.

THE SECOND EVENT ANALYZED IS THE EFFECT OF A FIRE ON THE PLANT DUE TO THIS MODIFICATION. THE REPLACED OR ADDITIONAL AMOUNT OF CONTROL WIRING NECESSARY FOR THIS MODIFICATION IS MINIMAL AND WILL BE REQUIRED TO MEET IEEE STD. 383-1974, VERTICAL FLAME TEST REQUIREMENTS. THE ADDITIONAL FIRE LOADING IS INSIGNIFICANT; THUS, THE LIKELIHOOD OR THE SEVERITY OF FIRE RESULTING WILL NOT INCREASED.

THE THIRD EVENT ANALYZED IS THE EFFECT OF LOSS OF POWER TO THE SYSTEMS.

THE RISK OF LOSING POWER WILL NOT BE INCREASED BY THIS MODIFICATION SINCE THE ADDITIONAL SI BLOCK/MANUAL/UNBLOCK SWITCH WILL BE INSTALLED TO PROVIDE A SEPARATION OF TRAINS AND WILL OPERATE IN THE SAME MANNER UNDER VARIOUS PLANT CONDITIONS AS THE ORIGINAL CONFIGURATION. THE UFSAR SECTION REVIEWED WAS 7.1.2.

TO PROVIDE BETTER SEPARATION OF TRAINS, THE SI RESET, CONTAINMENT SPRAY RESET, CONTAINMENT ISOLATION RESET, AND CONTAINMENT VENTILATION ISOLATION RESET PUSHBUTTONS WILL BE REWIRED TO ESTABLISH INDIVIDUAL SWITCH SECTIONS SUPPLYING SIGNAL TO EACH TRAIN. THESE RESET SIGNALS DO NOT AUTOMATICALLY START SYSTEMS. THE INITIATION OF A SYSTEM IS A SEPARATE OPERATION. MANUAL OPERATION OF EACH SYSTEM IS ALWAYS AVAILABLE. REPLACING THE CONTAINMENT ISOLATION RESET AND THE CONTAINMENT VENTILATION ISOLATION RESET KEY PUSHBUTTONS WITH NON-KEY PUSHBUTTONS WILL REQUIRE A CHANGE TO THE UFSAR SECTION 6.2.4.4.3. THE ORIGINAL CONTROL CONFIGURATION OF THE CONTAINMENT ISOLATION AND CONTAINMENT VENTILATION ISOLATION RESETS LOCKED OUT SOME AUTOMATIC ACTUATION SIGNALS ONCE THEY WERE RESET. EWR 2950 CORRECTED THAT DEFICIENCY BY REMOVING THE LOCKOUT RELAY. PRESENTLY THE SYSTEMS CANNOT BE RESET UNTIL THE INITIATING SIGNAL HAS CLEARED MAKING THE PROCEDURE TO HAVE A KEY TO RESET THEM OBSOLETE. ADDITIONAL UFSAR SECTIONS REVIEWED WERE 6.2.4.4.2, 6.2.4.4.4, 7.3.2.1, 7.3.2.4, 9.2.12 AND TABLE 7.3-1.

SINCE THERE WILL BE NO CHANGE TO THE CONTROL OR MODES OF OPERATION FOR MOV-852A, MOV-852B, MOV-875A, MOV-875B, MOV-876A, MOV-876B, MOV-896A, MOV-896B, AMSAC SYSTEM RESET, BOTH MANUAL CONTAINMENT SPRAY VENT ISOLATION, DIESEL GENERATOR A START, DIESEL GENERATOR B START, BAST LO-LO LOCKOUT RESET, MANUAL SI, MANUAL CONTAINMENT ISOLATION AND REACTOR EMERGENCY TRIP THERE WILL BE NO INCREASED RISK DUE TO A LOSS OF POWER.

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-5156  
PRESSURIZER INSULATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REMOVAL OF EXISTING PRESSURIZER INSULATION AND REPLACEMENT WITH REMOVABLE TYPE REFLECTIVE INSULATION TO FACILITATE VISUAL EXAMINATION OF THE PRESSURIZER WELDS.

THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS REVISED TO INCORPORATE PLANT COMMENTS, FOR REVISION 0 AND THE FOLLOWING ADDITIONAL CHANGES:

- SECTION 1.3.3 OF DESIGN CRITERIA ADDED REFERENCE TO TECH. SPEC. SECTION 3.1.1.5 REQUIREMENT OF 100 KW MIN. HEATER CAPACITY FOR OPERATION ABOVE 350°F.
- SECTION 2.10.4 ADDED WORKSHEET SCA-2 TO REFERENCES.
- SECTION 5.2 OF DESIGN CRITERIA CLASSIFIED ELECTRICAL CONNECTIONS TO PRESSURIZER HEATERS AS SAFETY SIGNIFICANT.



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- SECTION 15.2 WAS ADDED TO THE DESIGN CRITERIA HYDRAULIC REQUIREMENTS AS FOLLOWS:

15.2 THE DESIGN OF THE INSULATION SHOULD CONSIDER CLOGGING OF CONTAINMENT SUMP WHICH SHOULD NOT BE BLOCKED BY DEBRIS OF INSULATION FOLLOWING A LOSS-OF-COOLANT ACCIDENT.

- SECTION 17.0 WAS CHANGED FROM N/A TO THE FOLLOWING:

17.0 ELECTRICAL REQUIREMENTS

PRESSURIZER HEATER ELECTRICAL CONNECTIONS SHALL NOT BE DEGRADED BY THIS MODIFICATION. NON-FUNCTIONAL PRESSURIZER HEATERS SHALL BE CONSIDERED FOR RESTORATION TO SERVICE IN ACCORDANCE WITH UFSAR REQUIREMENTS.

- SECTION 3.1 OF SAFETY ANALYSIS ADDED LOCA TO THE DESIGN BASIS EVENTS ASSOCIATED WITH THIS WORK.
- SECTION 3.2.3 OF THE SAFETY ANALYSIS ADDED AS FOLLOWS:

3.2.3 THE EFFECTS OF LOCA HAVE BEEN ADDRESSED IN SECTION 15.2 OF THE DESIGN CRITERIA. AS DESCRIBED IN THE DESIGN CRITERIA THE INSULATION SHALL BE DESIGNED SUCH THAT THE CONTAINMENT SUMP WILL NOT BE CLOGGED BY DEBRIS OF INSULATION FOLLOWING A LOCA EVENT.

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

- 1) FIRES
- 2) SEISMIC EVENTS
- 3) LOCA

THE MODIFICATION WILL NOT INCREASE THE PROBABILITY OF THE EFFECTS OF FIRE SINCE EXISTING FIRE BARRIERS WILL NOT BE DEGRADED AND THE MATERIALS USED IN THE MODIFICATION SHALL NOT INCREASE THE PROBABILITY OR CONSEQUENCE OF A FIRE AND WILL NOT AFFECT THE PERFORMANCE OF ANY EXISTING FIRE PROTECTION EQUIPMENT. IN ADDITION, THE MODIFICATION 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.



THE MODIFICATION WILL NOT ADVERSELY AFFECT THE SEISMIC QUALIFICATION OF THE PRESSURIZER, ITS ASSOCIATED PIPING, OR THE REACTOR COOLANT SYSTEM. SINCE THE INSULATION ASSEMBLY SHALL BE DESIGNED TO WITHSTAND DYNAMIC EFFECTS AND ACCELERATIONS DUE TO SEISMIC AND SYSTEM OPERATIONAL TRANSIENTS. THIS SHALL INCLUDE A REVIEW OF THE EXISTING PIPING ANALYSIS AND ASSOCIATED SUPPORTS FOR ANY EFFECTS THAT THE CHANGE IN INSULATION WEIGHT MAY HAVE ON THE ANALYSIS.

THE MODIFICATION WILL NOT ADVERSELY AFFECT THE EFFECTS OF LOCA BECAUSE THE INSULATION SHALL BE DESIGNED SUCH THAT THE CONTAINMENT SUMP WILL NOT BE CLOGGED BY DEBRIS OF INSULATION FOLLOWING A LOCA EVENT.

BASED ON THE ABOVE ANALYSIS:

- 1) THE MARGINS OF SAFETY DURING NORMAL OPERATION AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED DUE TO THIS MODIFICATION.
- 2) THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS CONTINUE TO REMAIN ADEQUATE.

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-5162  
INSTALL BALANCED MAGNETIC SWITCHES

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE INSTALLATION OF BALANCED MAGNETIC SWITCHES (BMS) ON DOORS S54 AND S55.

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 EVENT
- 2) MAJOR AND MINOR FIRES
- 3) INDUSTRIAL SECURITY

THIS MODIFICATION DOES NOT INSTALL ANY NEW OR MODIFY ANY EXISTING EQUIPMENT NECESSARY FOR THE SAFE SHUTDOWN OF THE PLANT. NEW EQUIPMENT WILL NOT BE LOCATED IN ANY AREA THAT CONTAINS SAFETY RELATED EQUIPMENT. THE MODIFICATION IS, THEREFORE, DESIGNED AS NON-SEISMIC.



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

THE INSTALLATION OF ADDITIONAL BMS DOES NOT EFFECT SECURITY OPERATIONS AND PROVIDES GREATER PROTECTION TO THE VITAL AREA.

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-5340

#### GENERATOR STEP-UP TRANSFORMER MODIFICATIONS

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE COOLERS ON THE GENERATOR STEP-UP TRANSFORMER (GSU) AT GINNA WHICH ARE OIL TO AIR HEAT EXCHANGERS DESIGNED TO REMOVE HEAT FROM THE INTERIOR OF THE TRANSFORMER. HEAT IS GENERATED BY CORE AND WINDING MATERIALS USED FOR CONSTRUCTION OF THE TRANSFORMER. THERE ARE ELEVEN (11) COOLERS ON THE TRANSFORMER WITH EACH COOLER CONSISTING OF THREE (3) FANS AND ONE (1) OIL PUMP. THE FANS AND PUMPS ARE DRIVEN BY 440 VOLT, 3 PHASE ELECTRIC MOTORS. THE INSULATION ON THE WIRING SUPPLYING POWER TO THESE FANS AND PUMPS HAS DETERIORATED AND WILL BE REPLACED WITH NEW WIRING. DETERIORATION OF THE INSULATION HAS BEEN CAUSED BY HEAT GENERATED BY THE GSU.

A STUDY HAS INDICATED THAT CIRCUIT BREAKERS FOR PROTECTION OF COOLER MOTORS AND SUPPLY SOURCES TO THE COOLER GROUPS WILL OPERATE SIMULTANEOUSLY FOR A FAULT ON A SINGLE COOLER MOTOR. THIS ACTION RESULTS IN LOSS OF POWER TO 50% OF THE COOLERS ON THE GSU. CIRCUIT BREAKERS PROVIDING PROTECTION FOR EACH COOLER AND CIRCUIT BREAKERS PROVIDING PROTECTION FOR 5 AND 6 COOLER GROUPS WILL BE REPLACED WITH PROTECTIVE EQUIPMENT THAT WILL PROVIDE THE PROPER COORDINATION.



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INSPECTION OF WIRING USED TO EXTEND CURRENT TRANSFORMER SECONDARY WIRING TO THE CONTROL CABINET HAS REVEALED DETERIORATION OF THE INSULATION FOR THIS WIRING. THIS WIRING LOCATED IN A RACEWAY BETWEEN THE CONTROL CABINET AND CURRENT TRANSFORMER JUNCTION BOX, WILL BE REPLACED WITH NEW WIRING. DETERIORATION OF THE INSULATION HAS BEEN CAUSED BY HEAT GENERATED BY THE GSU.

A REVIEW HAS BEEN MADE OF EVENTS ANALYZED IN THE GINNA STATION UFSAR, CHAPTER 8.0 - ELECTRICAL, CHAPTER 3.0 - DESIGN OF STRUCTURES, SECTION 3.1 AND CHAPTER 9 - AUXILIARY SYSTEMS, SECTION 9.5.1 - FIRE PROTECTION SYSTEMS. THE EVENTS RELATED TO THIS MODIFICATION ARE LOSS OF EXTERNAL ELECTRICAL LOAD, LOSS OF OFFSITE POWER, FIRES, AND SEISMIC EVENTS.

LOSS OF OFFSITE POWER IS REVIEWED AS FOLLOWS:

WORK ON CIRCUITS 751 AND 767, BOTH SOURCES OF OFFSITE POWER, WILL NOT BE REQUIRED AS PART OF THIS MODIFICATION. IN ADDITION, WORK ON TRANSFORMERS 12A AND 12B WILL NOT BE REQUIRED AS PART OF THIS MODIFICATION.

THE WORK ON THE GSU COOLERS WILL BE SCHEDULED AROUND OUTAGES OF THE DIESEL GENERATORS AT GINNA. THE GSU IS A BACKUP SOURCE OF POWER FOR THE DIESEL GENERATORS.

THIS MODIFICATION WILL NOT INCREASE THE PROBABILITY OF LOSS OF OFFSITE POWER.

LOSS OF EXTERNAL ELECTRICAL LOAD EVENTS ARE REVIEWED AS FOLLOWS:

THIS MODIFICATION WILL BE PERFORMED DURING THE 1991 GINNA REFUELING OUTAGE WHEN GINNA IS OFF-LINE.

THIS MODIFICATION, AFTER COMPLETION, WILL NOT INCREASE THE PROBABILITY OF A LOSS OF EXTERNAL ELECTRICAL LOAD.

SEISMIC EVENTS ARE REVIEWED AS FOLLOWS:

THE GSU IS NOT NEEDED FOR SAFE SHUTDOWN DURING OR AFTER A SEISMIC EVENT.

FIRES ARE REVIEWED AS FOLLOWS:

THIS MODIFICATION DOES NOT INVOLVE WIRING ASSOCIATED WITH THE GSU FIRE PROTECTION SYSTEM OR FIRE BARRIERS. AN APPENDIX R CONFORMANCE VERIFICATION WILL BE PERFORMED TO DEMONSTRATE CONTINUED COMPLIANCE WITH APPENDIX R REQUIREMENTS. THEREFORE, THIS MODIFICATION HAS NO EFFECT ON FIRES AT GINNA.



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THEREFORE, 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 PREVENTION OF ACCIDENTS AND THE 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.

TSR 90-186

SPRINKLER HEAD HEAT COLLECTOR INSTALLATION

THIS TECHNICAL STAFF REQUEST (TSR) ADDRESSES THE ADDITION OF HEAT COLLECTORS TO SHIELD THE SPRINKLER HEADS LOCATED IN THE AREA OF THE GRATING AROUND THE CONDENSATE STORAGE TANKS IN THE SERVICE BUILDING.

THE FUNCTION OF THE HEAT COLLECTORS IS TO SHIELD THE SPRINKLER HEADS FROM POSSIBLE SOURCES OF COOLING FROM ABOVE THE GRATING. THE HEAT COLLECTORS WILL ACT TO TRAP HEAT IN THE INSTANCE OF A FIRE AND WILL CAUSE THE SPRINKLER TO CONTINUE TO DISCHARGE EFFECTIVELY IN THE EVENT OF A FIRE.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE UFSAR AND IN TABLES 1 AND 2 OF PROCEDURE A-303 AS WELL AS THOSE REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENT RELATED TO THIS MODIFICATION IS A FIRE.

THIS MODIFICATION WILL NOT ALTER ASSUMPTIONS IN ANY SAFETY ANALYSIS IN THE UFSAR AND ITS SUPPLEMENTS AND WILL NOT ADVERSELY AFFECT THE WAY IN WHICH THE FIRE PROTECTION SYSTEM FUNCTIONS. IT WILL PROVIDE A MEANS TO ENSURE THAT THE APPLICABLE SPRINKLER HEADS WILL OPERATE IN THE MANNER ORIGINALLY DESIGNED FOR.

THE PROBABILITY OF OCCURRENCE OF A FIRE IN THIS AREA WILL NOT BE AFFECTED BY THIS MODIFICATION BECAUSE THE FUNCTION OF THE FIRE PROTECTION SYSTEM WILL NOT BE ALTERED AS THE MODIFICATION INCORPORATES NO COMBUSTIBLE MATERIALS.

ANY CONSEQUENCES OF A FIRE WILL REMAIN THE SAME AND THIS MODIFICATION WILL HAVE NO ADDITIONAL EFFECT ON THOSE CONSEQUENCES.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50, APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL NOT BE ALTERED DURING AND FOLLOWING IMPLEMENTATION OF THIS MODIFICATION.





THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR FIRE PROTECTION FEATURES. THE INSTALLATION OF HEAT COLLECTORS IS AN INSIGNIFICANT ADDITION TO AN EXISTING SYSTEM THAT WILL IMPROVE THE ABILITY OF THE SYSTEM TO FUNCTION PROPERLY.

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.

TSR 90-256

INSTRUMENT AIR ISOLATION VALVE ADDITION

THIS TSR (TECHNICAL STAFF REQUEST) ADDRESSES MODIFICATION OF THE EXISTING INSTRUMENT AIR LINE BY INSTALLING A MANUAL VALVE WHICH WILL PROVIDE ISOLATION CAPABILITY TO EACH TURBINE BUILDING HEADER. IN ADDITION, FITTINGS WILL BE ADDED TO ALLOW THE WORK AREA TO BE JUMPED DURING INSTALLATION SO THAT THE INSTRUMENT AIR SERVICE WILL NOT BE COMPLETELY INTERRUPTED.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70 AND GINNA PROCEDURE A-303. THE DESIGN BASIS EVENTS THAT ARE APPLICABLE TO THIS MODIFICATION ARE:

- LOSS OF ALL AC POWER TO THE STATION AUXILIARIES
- LOSS OF NORMAL FEEDWATER FLOW
- INCREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM

WHILE THE INSTRUMENT AIR SYSTEM IS CLASSIFIED AS NON-SAFETY RELATED, IT CONTROLS SAFETY AND NON-SAFETY RELATED AOVs. THE VALVES CONTROLLED FAIL TO A SAFE POSITION, PROVIDING ASSURANCE AGAINST LOSS OF FEEDWATER FLOW AND/OR INCREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM.

THIS MODIFICATION WILL NOT IMPACT THE FUNCTION OF THE INSTRUMENT AIR SYSTEM. BY INSTALLING THE NEW VALVE AND FITTINGS CONSISTENT WITH THE SYSTEM DESIGN SPECIFICATIONS, THERE WILL BE NO IMPACT ON SYSTEM FUNCTIONS DURING NORMAL OR ACCIDENT CONDITIONS. THEREFORE, PLANT RESPONSE TO ANY DESIGN BASIS ACCIDENT WILL REMAIN UNCHANGED.

THUS, THE MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGIN OF SAFETY FOR INTERNAL EVENTS INVOLVING:

- LOSS OF ALL AC POWER TO THE STATION AUXILIARIES
- LOSS OF NORMAL FEEDWATER FLOW
- INCREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM

BASED UPON A REVIEW OF THE UFSAR AND THE REQUIREMENTS OF PROCEDURE A-303 AND GINNA STATION TECHNICAL SPECIFICATIONS, IT HAS BEEN CONCLUDED THAT WITH NO EFFECT ON EITHER INSTRUMENT AIR OR ANY SAFETY SYSTEM, 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.



## 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-89-06.1

DI AND SA 3/4" AUXILIARY BUILDING PIPE SUPPORTS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE NEW PERMANENT PIPE SUPPORTS ADDED TO THE 3/4" DI SUPPLY LINE AND 3/4" SERVICE AIR SUPPLY LINE TO THE AUXILIARY BUILDING OPERATING FLOOR.

SM-89-07.1

OUTSIDE CONDENSATE STORAGE TANK TRANSFER LINE INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF A 2 1/2 INCH DIAMETER LINE WITH APPROPRIATE VALVING FROM THE DISCHARGE OF THE A AND B REGENERATION SLUICE PUMPS TO THE DISCHARGE OF THE CONDENSATE TRANSFER PUMP UPSTREAM OF CHECK VALVE 9505G.

SM-89-20.1

AUXILIARY BUILDING EXHAUST FAN B CONDUIT SUPPORT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THIS MODIFICATION WHICH INVOLVES AN UPGRADE TO AN EXISTING CONDUIT SUPPORT FOR THE AUXILIARY BUILDING EXHAUST FAN B AND ALLOW REMOVAL OF THE SUPPORT WHEN MAINTENANCE IS REQUIRED ON THE FAN.

SM-89-30.1

SI CHECK VALVE 1828 TEST CONNECTION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF SI CHECK VALVE 1828 TEST CONNECTION.

SM-2504.27

CONTAINMENT MINI-PURGE EXHAUST SYSTEM ELECTRICAL ACCEPTANCE TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE ELECTRICAL ACCEPTANCE TESTING, AND TURNOVER OF THE CONTAINMENT MINI-PURGE EXHAUST SYSTEM AT PENETRATION 132 AND THE STATUS LIGHTS FOR V5869, V5879, AND V5392.

SM-2504.28

CONTAINMENT MINI-PURGE SYSTEM PERFORMANCE TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE CONTAINMENT MINI-PURGE SYSTEM.

SM-2512.139

SEISMIC UPGRADE OF PIPE SUPPORTS, ANALYSIS LINE SW-2100, SERVICE WATER SUCTION AND SUCTION CROSS-TIE TO "D" SAFW PUMP

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF PIPE SUPPORT MODIFICATIONS TO THE SERVICE WATER LINE FORMING SUCTION AND SUCTION CROSS-TIE FEED TO THE "D" SAFW PUMP NOT PREVIOUSLY COMPLETED UNDER SM-2512.127. A 10CFR50.59 REVIEW

WAS CONDUCTED AND BASED ON A REVIEW OF TECH. SPECS. DESIGN CRITERIA AND SAFETY ANALYSIS 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.

SM-2512.141

SEISMIC UPGRADE OF PIPE SUPPORTS - REWORK OF FEEDWATER SUPPORTS FWU-37 AND FWU-41 ON ANALYSIS LINE FW-300

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF MODIFICATIONS TO PIPE SUPPORTS FWU-37 AND FWU-41 ON MAIN FEEDWATER PIPING..

SM-2512.144

REWORK OF SERVICE WATER SUPPORT SWU-153 ON 20" SERVICE WATER LINE IN THE AUXILIARY BUILDING - ANALYSIS LINE SW-1100

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF SUPPORT SWU-153 FOR THE 20" SERVICE WATER LINE IN THE AUXILIARY BUILDING AT ELEVATION 265'-3".

SM-3258.4

REWORK OF SEISMIC GEARBOX SUPPORT FOR SERVICE WATER VALVE #4644

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF VALVE #4644 SEISMIC SUPPORT IN ACCORDANCE WITH NCR 91-060.

SM-3595.12

FUNCTIONAL TEST OF CONTROL ROOM VENTILATION SYSTEM

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE MODIFICATIONS MADE TO THE CONTROL ROOM VENTILATION SYSTEM AND VENTILATION MONITORS.

SM-3596.11

DIESEL GENERATOR A AND B TUBING PROTECTION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF TUBING PROTECTION ON THE FLOOR BETWEEN THE INSTRUMENT PANELS AND DIESEL GENERATOR SKIDS FOR THE A AND B DIESEL GENERATORS.

SM-3596.13

DIESEL GENERATOR "B" AIR START SYSTEM MECHANICAL UPGRADE

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

SM-3596.14  
D/G "A" AIR START UPGRADE TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF D/G "A" AIR START SYSTEM UPGRADE.

SM-3596.15  
D/G "B" AIR START UPGRADE TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE D/G "B" AIR START SYSTEM UPGRADE.

SM-3596.16  
DIESEL GENERATOR A AND B INSTRUMENT TUBING GUARDRAILS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF GUARDRAILS AROUND THE DAY TANK LEVEL TRANSMITTERS AND INSTRUMENT TUBING FOR THE A AND B DIESEL GENERATORS.

SM-3681.2  
INSTALLATION OF PULL POINTS FOR THE GSU TRANSFORMER REPLACEMENT

THE LIAISON ENGINEER PRESENTED THIS PROCEDURE FOR FINAL CLOSEOUT AND DELETION. THIS WORK WAS COMPLETED IN 1986 AND THE PROCEDURE SUBSEQUENTLY LOST. A WALKDOWN OF THE CONSTRUCTION WAS RECENTLY PERFORMED BY A LIAISON ENGINEER AND AN ESD ENGINEER TO VERIFY PROPER INSTALLATION.

SM-3797.12  
MRPI SYSTEM GROUND FAULT MONITORING INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF MODIFICATIONS TO THE MRPI SYSTEM TO PROVIDE MONITORING FOR SYSTEM FAULTS.

SM-3881.4  
SI SYSTEM HYDROSTATIC AND SYSTEM FUNCTIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE SI RECIRC SYSTEM.

SM-3881.4  
SI RECIRCULATION SYSTEM RE-TEST

THE LIAISON ENGINEER PRESENTED THIS PCN TO THE COMMITTEE.  
IT REQUESTED CHANGES BE MADE TO RE-PERFORM SI FULL FLOW VERIFICATION TEST.

SM-3881.6  
BORIC ACID STORAGE TANKS OVERFLOW PIPING MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE BORIC ACID STORAGE TANK(S) OVERFLOW PIPING MODIFICATION.

SM-3881.9

SAFETY INJECTION PUMP RECIRCULATION PRESSURE GAUGE RELOCATION AND VALVE 874B REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF SAFETY INJECTION RECIRCULATION PRESSURE GAUGES (PI-912, 913, 914, AND 915) RELOCATION AND VALVE 874B REPLACEMENT.

SM-3990.5

DIESEL GENERATOR BUILDING IMPINGEMENT MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE RELOCATION/INSTALLATION, TESTING, AND TURNOVER OF THE BELOW GRADE ROOF DRAINS, BELOW GRADE FIRE SERVICE WATER LINE, BELOW GRADE OUTDOOR GROUNDING, AND ALTERNATE COOLING WATER SUPPLY STUB-UPS ADJACENT TO THE DIESEL GENERATOR BUILDING. ALSO INCLUDED ARE THE CIVIL WORKS THROUGH AND INCLUDING EXCAVATION, FOOTERS, STEM WALLS, GRADE BEAMS, BACKFILL (AS REQUIRED) AND MISCELLANEOUS APPURTENANCES. THIS PROCEDURE GENERICALLY COMPLETES THE BELOW GRADE AND FOUNDATION ERECTION ITEMS PREVIOUSLY COMMENCED UNDER SM-3990.3.

SM-3990.6

DIESEL GENERATOR BUILDING - PARAPET WALL MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE DIESEL GENERATOR BUILDING PARAPETS AND WALLS.

SM-3990.8

DIESEL GENERATOR BUILDING - ROOF SLAB, MISSILE DOOR, AND INTAKE CANOPY MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, AND TURNOVER OF THE D/G BUILDING ROOF SLAB, INCLUDING MUFFLER PIPING REWORK, HVAC COMPONENTS, ROOF DRAINS AND STRUCTURAL STEEL COMPONENTS.

SM-3990.9

DIESEL GENERATOR BUILDING - SPRINKLER ADDITION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF SPRINKLER SYSTEMS ADDITIONS IN THE DIESEL GENERATOR BUILDING.

SM-3990.10

FIRE SERVICE YARD LOOP MODIFICATION - WEST SIDE

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE FIRE SERVICE YARD LOOP FOR NEW TRAILERS.

SM-3990.11



#### A/B DIESEL GENERATOR ROOM ALCOVE LIGHTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF ADDITIONAL LIGHTING FIXTURES LOCATED IN THE PERSONNEL DOOR ALCOVES.

#### SM-4068.8 RMS AREA MONITOR PRE-AMP CHANGEOUT

THE PURPOSE OF THIS PROCEDURE IS TO PROVIDE INSTRUCTION FOR THE REPLACEMENT OF THE DETECTOR PREAMP MODULE IN THE RMS AREA MONITORS.

#### SM-4068.9 R-15, AIR EJECTOR RADIATION MONITOR DETECTOR - ELECTRICAL MODIFICATIONS AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL PORTION OF THE NEW R-15, AIR EJECTOR RADIATION MONITOR DETECTOR MODIFICATION.

#### SM-4068.11 R-16, CONTAINMENT FAN COOLING RADIATION MONITOR DETECTOR- ELECTRICAL MODIFICATIONS AND REMOVALS

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

#### SM-4068.13 R-17, COMPONENT COOLING WATER RADIATION MONITOR DETECTOR- ELECTRICAL MODIFICATIONS AND REMOVALS

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

#### SM-4068.14 R-18, WASTE LIQUID 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-18, WASTE LIQUID RADIATION MONITOR DETECTOR MODIFICATION. ALSO, THE WESTINGHOUSE EXPERIMENTAL Ge(Li) LIQUID WASTE DETECTOR (LOCATED JUST SOUTH OF THE EXISTING R-18) WILL BE REMOVED.

#### SM-4068.15 R-18, WASTE LIQUID RADIATION MONITOR DETECTOR - ELECTRICAL MODIFICATIONS AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL PORTION OF THE NEW R-18, WASTE LIQUID RADIATION MONITOR DETECTOR MODIFICATION.

SM-4068.17

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

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

SM-4068.18

R-20A, SPENT FUEL POOL HEAT EXCHANGER "A" SERVICE 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-20A, SPENT FUEL POOL HEAT EXCHANGER "A" SERVICE WATER RADIATION MONITOR DETECTOR MODIFICATION.

SM-4068.19

R-20A, SPENT FUEL POOL HEAT EXCHANGER "A" SERVICE WATER RADIATION  
MONITOR DETECTOR - ELECTRICAL MODIFICATIONS AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL PORTION OF THE NEW R-20A, SPENT FUEL POOL HEAT EXCHANGER "A" SERVICE WATER RADIATION MONITOR DETECTOR MODIFICATION.

SM-4068.20

RADIATION MONITOR SYSTEM CABINETS RMS-1 AND RMS-3 MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL MODIFICATIONS TO RMS-1 AND RMS-3 CABINETS.

SM-4068.21

R-15 FUNCTIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE FUNCTIONAL TESTING AND TURNOVER OF R-15, AIR EJECTOR RADIATION MONITOR.

SM-4068.22

R-16 FUNCTIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE FUNCTIONAL TESTING AND TURNOVER OF R-16, CONTAINMENT FAN COOLING RADIATION MONITOR.

SM-4068.23

R-17 FUNCTIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE FUNCTIONAL TESTING AND TURNOVER OF R-17, COMPONENT COOLING WATER RADIATION MONITOR.

SM-4068.24



R-18 FUNCTIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS FOR R-18 FUNCTIONAL TEST.

SM-4068.25

R-19 FUNCTIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE FUNCTIONAL TESTING AND TURNOVER OF R-19, STEAM GENERATOR BLOWDOWN RADIATION MONITOR.

SM-4068.26

R-20A FUNCTIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE FUNCTIONAL TESTING AND TURNOVER OF R-20A, SFP HEAT EXCHANGER A RADIATION MONITOR.

SM-4068.27

R-20B FUNCTIONAL TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE FUNCTIONAL TESTING AND TURNOVER OF R-20B, SFP HEAT EXCHANGER B PROCESS MONITOR.

SM-4112.1

AUXILIARY BUILDING OPERATING FLOOR LIGHTING UPGRADE

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF NEW LIGHTING FIXTURES ON THE AUXILIARY BUILDING OPERATING LEVEL.

SM-4218.5

SEISMIC UPGRADE - STEAM GENERATOR A LEVEL INSTRUMENTATION TUBING SUPPORTS ASSOCIATED WITH LT-460 AND LT-460A

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF STEAM GENERATOR LEVEL INSTRUMENTATION TUBING SUPPORTS ASSOCIATED WITH LT-460 AND LT-460A.

SM-4218.13

SEISMIC UPGRADE - STEAM GENERATOR "B" LEVEL INSTRUMENTATION TUBING AND SUPPORTS ASSOCIATED WITH LT-472

THE PURPOSE OF THIS PROCEDURE IS TO DOCUMENT/DIRECT REWORK OF LT-472 TUBING AND SUPPORTS.

SM-4218.18

SEISMIC UPGRADE - STEAM GENERATOR B LEVEL INSTRUMENTATION TUBING AND SUPPORTS ASSOCIATED WITH LT-470 IN THE "B" LOOP AREA

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF STEAM GENERATOR LEVEL INSTRUMENTATION TUBING AND REQUIRED SUPPORTS. ASSOCIATED WITH WIDE RANGE



TRANSMITTERS LT-470, IN THE "B" LOOP AREA.

SM-4218.19

PERMANENT CONDUIT/CABLE AND FOXBORO RACK INSTALLATION AND TESTING-  
A/B S/G STEAM DOME PRESSURE TRANSMITTERS PIT-510/511

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF PERMANENT ELECTRICAL CONNECTIONS BETWEEN TRANSMITTERS PIT-510/511 AND PPCS MUX CABINET 1, TO INCLUDE ALL CABLE, CONDUIT AND SUPPORTS, CONNECTIONS AND MODULE INSTALLATION IN FOXBORO RACK #3.

SM-4223.1

RETENTION TANK pH CONTROL DRAIN TRENCH MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE RETENTION TANK pH CONTROL DRAIN TRENCH MODIFICATION.

SM-4225.4

INSTALLATION AND TESTING OF AMPTECTOR OVERCURRENT DEVICES

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF AMPTECTOR OVERCURRENT DEVICES FOR THE DB-25, DB-50, AND DB-75 WESTINGHOUSE BREAKERS.

SM-4225.5

INSTALLATION AND TESTING OF LOCAL PUSHBUTTONS FOR 480V BREAKERS ON  
BUS 13 AND BUS 15

THE PURPOSE OF THIS PROCEDURE IS TO DIRECT INSTALLATION AND TESTING OF LOCAL PUSHBUTTONS.

SM-4225.6

INSTALLATION VERIFICATION AND TESTING OF LOCAL PUSHBUTTONS FOR  
480V BREAKERS ON BUS 13 AND BUS 15

THE PURPOSE OF THIS PROCEDURE IS TO VERIFY THE INSTALLATION AND TO PERFORM TESTING OF LOCAL PUSHBUTTONS FOR LISTED BREAKERS ON BUSES 13 AND 15.

SM-4225.20

INSTALLATION AND TESTING OF AN AMPTECTOR OVERCURRENT DEVICE FROM  
KIT #8184A50G08 ON BUS 13/7D (GENERATOR TRANSFORMER AUXILIARY  
POWER SUPPLY 1A)

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF AN AMPTECTOR OVERCURRENT DEVICE FOR THE DB-25 WESTINGHOUSE BREAKER ON BUS 13, POSITION 7D (GENERATOR TRANSFORMER AUX. POWER SUPPLY 1A) EMPLOYING AN AMPTECTOR FROM KIT #8184A50G08.

SM-4225.21

INSTALLATION AND TESTING OF AN AMPTECTOR OVERCURRENT DEVICE FROM



KIT #8184A50G08 ON BUS 15/3D (GENERATOR TRANSFORMER AUXILIARY POWER SUPPLY 1B)

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF AN AMPTECTOR OVERCURRENT DEVICE FOR THE DB-25 WESTINGHOUSE BREAKER ON BUS 15, POSITION 3D (GENERATOR TRANSFORMER AUX. POWER SUPPLY 1B) EMPLOYING AN AMPTECTOR FROM KIT #8184A50G08.

SM-4225.22  
INSTALLATION AND TESTING OF AN AMPTECTOR OVERCURRENT DEVICE FOR A SPARE "C" SI PUMP BREAKER

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF AN AMPTECTOR KIT, APPLIED TO A SPARE BREAKER SUITED FOR THE SUPPLY OF THE "C" SI PUMP FROM EITHER BUS 14 OR BUS 16.

SM-4324.16  
S/G BLOWDOWN VALVE INDICATIONS REWORK - NCR G89-740

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE REWORK, TESTING AND TURNOVER OF THE A AND B S/G BLOWDOWN MANUAL FLOW CONTROL VALVES FCV-5725A AND FCV-5725B VALVE POSITION INDICATION LIGHTS ON THE S/G BLOWDOWN PANEL.

SM-4526.20  
D/G FUEL OIL SYSTEM PUMPING STATION INSTRUMENTATION ELECTRICAL PORTION

THE PURPOSE OF THIS PROCEDURE IS TO INSTALL THE ELECTRICAL PORTION OF THE D/G FUEL OIL SYSTEM PUMP STATION INSTRUMENTATION. THE COMMITTEE REVIEWED AND RECOMMENDED APPROVAL OF THIS NEW PROCEDURE. THE FOLLOWING DOCUMENTATION IS PROVIDED AS JUSTIFICATION FOR COMPLIANCE WITH 10 CFR 50.59. REFERENCES: UFSAR, TECH. SPECS. JUSTIFICATION: THIS MODIFICATION IS ADDED TO GIVE AN INDICATION OF TRANSFER PUMP DISCHARGE PRESSURE AND SUCTION STRAINER DP. THOSE PORTIONS AFFECTING SAFETY SYSTEMS ARE QUALIFIED, OTHER PORTIONS DO NOT AFFECT PLANT SAFETY.

SM-4526.23  
1A DIESEL GENERATOR DAY TANK INSTRUMENTATION (PHASE 2) AND FUEL TRANSFER PUMP A AND B AUTO FUNCTION REMOVAL

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE ELECTRICAL PORTION OF THE DAY TANK INSTRUMENTATION UPGRADE PHASE 2 ON THE 1A DIESEL GENERATOR. IN ADDITION, THIS PROCEDURE WILL PROVIDE INSTRUCTION FOR FILL AND BYPASS SOLENOID VALVE DETERM/RETERM AND MODIFICATION OF FUEL TRANSFER PUMP START CIRCUIT.

SM-4526.24  
1B DIESEL GENERATOR DAY TANK INSTRUMENTATION (PHASE 2) AND FUEL TRANSFER PUMP A AND B AUTO FUNCTION REMOVAL





10-10-10  
10-10-10  
10-10-10



THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE ELECTRICAL PORTION OF THE DAY TANK INSTRUMENTATION UPGRADE PHASE 2 ON THE 1B DIESEL GENERATOR. IN ADDITION, THIS PROCEDURE WILL PROVIDE INSTRUCTION FOR FILL AND BYPASS SOLENOID VALVE DETERM/RETERM AND MODIFICATION OF FUEL TRANSFER PUMP START CIRCUIT.

SM-4526.27

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

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

SM-4526.29

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

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

SM-4526.30

"A" D/G FUEL OIL SYSTEM UPGRADE TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE "A" DIESEL GENERATOR FUEL OIL SYSTEM ELECTRICAL AND MECHANICAL UPGRADE.

SM-4526.31

"B" D/G FUEL OIL SYSTEM UPGRADE TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING, AND TURNOVER OF THE "B" DIESEL GENERATOR FUEL OIL SYSTEM ELECTRICAL AND MECHANICAL UPGRADE.

SM-4618.3

MAIN FEED PUMP ROOM DAMPER WIND SCREENS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MAIN FEED PUMP ROOM DAMPER WIND SCREENS AND WALL HYDRANT EXTENSIONS.

SM-4618.4

MAIN FEED PUMP ROOM WINDOW REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MAIN FEED PUMP ROOM WINDOW REPLACEMENT.



SM-4658.1

"A" COMPONENT COOLING WATER HEAT EXCHANGER TEST INSTRUMENTATION  
INSTALLATION

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

SM-4671.7

"A" RCS HOT LEG RHR FLOW CORRECTION  
UTILIZING NEW INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING ASSOCIATED  
WITH FIELD DATA VERIFICATION OF THE "A" RCS HOT LEG LOOP LEVEL  
CORRECTION AS A RESULT OF RHR FLOW. THIS TEST IS BEING PERFORMED  
IN CONJUNCTION WITH PROCEDURE O-2.3.1.

SM-4675.10

3/4" RHR VALVE PRESSURE RELIEF PIPING SEISMIC UPGRADE

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND  
TURNOVER OF THREE NEW SEISMIC SUPPORTS ON THE RHR-300 BYPASS LINES.

SM-4755.3

"A" SFP PUMP DISCHARGE LINE ANNUBAR FLOW INDICATOR INSTALLATION  
AND TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION,  
TESTING, AND TURNOVER OF THE ANNUBAR IN THE "A" SFP PUMP DISCHARGE  
LINE.

SM-4755.4

IST HYDRO TEST CONNECTIONS, VALVE 2205 AND 2209 - CVCS CHARGING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION,  
TESTING, AND TURNOVER OF HYDRO TEST CONNECTIONS FOR CVCS CHARGING  
LINE VENT VALVE 2209 AND DRAIN VALVE 2205.

SM-4760.1

MOV 856 CONTROL POWER

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION,  
TESTING, AND TURNOVER OF THE MODIFICATION TO INSTALL A KEY SWITCH  
FOR CONTROL POWER TO MOV 856.

SM-4760.2

MOV 856 CONTROL POWER FUNCTION TEST

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING OF  
CONTROL POWER KEY SWITCH FOR MOV 856.

SM-4773.5

RELOCATION OF REACTOR COOLANT DRAIN TANK PUMP A CONTROL SWITCH



THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE REACTOR COOLANT DRAIN TANK PUMP A CONTROL SWITCH.. THE SWITCH IS TO BE RELOCATED FROM THE MCB CENTER SECTION TO THE LEFT SECTION.

SM-4773.6

RELOCATION OF REACTOR COOLANT DRAIN TANK PUMP B CONTROL SWITCH

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE REACTOR COOLANT DRAIN TANK PUMP B CONTROL SWITCH. THE SWITCH IS TO BE RELOCATED FROM THE MCB CENTER SECTION TO THE LEFT SECTION..

SM-4773.7

RELOCATION OF CONTAINMENT AND PLANT EVACUATION ALARM SWITCHES

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE CONTAINMENT AND PLANT EVACUATION ALARM SWITCHES. THE SWITCHES ARE TO BE RELOCATED FROM THE MCB FRONT LEFT SECTION TO THE LEFT SIDE OF THE MCB.

SM-4773.8

REACTOR PROTECTION RACK R2 MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE MODIFICATION TO THE REACTOR PROTECTION RACK R2, 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-4773.9

REACTOR PROTECTION RACK W2 MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE MODIFICATION TO THE REACTOR PROTECTION RACK W2, 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-4773.11

REACTOR PROTECTION RACK Y2 MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE MODIFICATION TO THE REACTOR PROTECTION RACK Y2, 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-4773.12

S/G A INSTRUMENTATION INSIDE CONTAINMENT



THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF CONDUIT AND CABLES FOR THE S/G A INSTRUMENTATION PORTION OF THE ADFCS MODIFICATION. THIS NEW INSTRUMENTATION IS FT-498, LT-460, LT-504 AND LT-505.

SM-4773.13

S/G B INSTRUMENTATION INSIDE CONTAINMENT

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF CONDUIT AND CABLES FOR THE S/G A INSTRUMENTATION PORTION OF THE ADFCS MODIFICATION. THIS NEW INSTRUMENTATION IS FT-499, LT-470, LT-506 AND LT-507.

SM-4773.14

CABLE REMOVALS FOR ADFCS MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE DISCONNECTION AND TURNOVER OF CABLE AND COMPUTER TAPS NO LONGER REQUIRED DUE TO THE ADFCS MODIFICATION.

SM-4773.15

RVLMS RACK 1 CABLE INSTALLATION FOR S/G WIDE RANGE LEVEL INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF CONDUIT AND CABLES FOR THE WIDE RANGE S/G LEVEL INSTRUMENTATION PORTION OF THE ADFCS MODIFICATION. THIS NEW INSTRUMENTATION WILL BE LOCATED IN THE RVLMS RACK 1.

SM-4773.16

RVLMS RACK 2 CABLE INSTALLATION FOR S/G WIDE RANGE LEVEL INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF CONDUIT AND CABLES FOR THE WIDE RANGE S/G LEVEL INSTRUMENTATION PORTION OF THE ADFCS MODIFICATION. THIS NEW INSTRUMENTATION WILL BE LOCATED IN THE RVLMS RACK 2.

SM-4773.17

REMOVAL OF FEEDWATER ISOLATION RESET PUSHBUTTONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE REMOVAL, TESTING, AND TURNOVER OF THE FEEDWATER ISOLATION RESET PUSHBUTTONS AND ASSOCIATED WIRING. THE ABANDONED HOLES SHALL BE UTILIZED BY EWR-5025.

SM-4773.18

RELOCATION OF MSIV 1A AND MSIV 1B CONTROL SWITCHES

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE MSIV 1A AND MSIV 1B CONTROL SWITCHES. THE SWITCHES ARE TO BE RELOCATED FROM THE MCB LEFT SECTION TO THE CENTER SECTION.



SM-4773.19

MCB ANNUNCIATOR AND BISTABLE STATUS LIGHT MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MCB ANNUNCIATOR AND BISTABLE STATUS LIGHT MODIFICATIONS FOR ADFCS. THE S/G LOW LEVEL COINCIDENT WITH STEAM FLOW/FED FLOW MISMATCH TRIP WILL BE REMOVED FROM THE RX TRIP LOGIC ALONG WITH ASSOCIATED ALARMS.

SM-4773.21

INTERMEDIATE BUILDING ELECTRICAL WORK FOR FEEDWATER AND STEAM FLOW INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF CONDUIT FOR THE NEW FEEDWATER AND STEAM FLOW INSTRUMENTATION PORTION OF THE ADFCS MODIFICATION.

SM-4773.22

TURBINE BUILDING ELECTRICAL WORK FOR FEEDWATER PRESSURE INSTRUMENTATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF CONDUIT AND CABLES FOR THE NEW FEEDWATER PRESSURE INSTRUMENTATION PORTION OF THE ADFCS MODIFICATION.

SM-4773.24

MFW VALVE POSITION INDICATION MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE MFW I/P TRANSDUCER AND VALVE POSITION INDICATION CABLE MODIFICATION.

SM-4773.26

MFW AND MFW BYPASS REGULATING VALVE BAILEY POSITIONER REPLACEMENT

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF BAILEY VALVE POSITIONERS FOR THE MFW REGULATING VALVES (FCV-466) AND FCV-476) AND THE MFW BYPASS REGULATING VALVES (FCV-480 AND FCV-481).

SM-4773.27

AMSAC RACK WORK AND TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TESTING OF NEW MODULES INTERNAL TO THE FOX 3 RACK FOR THE AMSAC SYSTEM. THIS WILL BE DONE AS A RESULT OF THE INSTALLATION OF THE ADVANCED DIGITAL FEEDWATER CONTROL SYSTEM.

SM-4773.28

REACTOR LOGIC RACK AND RSC RACK MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE REACTOR LOGIC RACK AND ROD SPEED CONTROL (RSC) RACK MODIFICATIONS. THE S/G LOW LEVEL COINCIDENT



WITH STEAM FLOW/FEED FLOW MISMATCH TRIP WILL BE REMOVED AS A RESULT OF THE INSTALLATION OF THE ADVANCE DIGITAL FEEDWATER CONTROL SYSTEM.

SM-4833.1

SAS/PPCS NERP COMMUNICATION CABLE INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF MANHOLES, CONDUIT, AND FIBER OPTIC CABLES BETWEEN THE FOLLOWING AREAS: THE SIMULATOR BUILDING, BROOKWOOD TRAINING CENTER, THE TECHNICIAN SUPPORT CENTER, AND THE GUARDHOUSE.

SM-4892.2

B RHR LOOP ENHANCEMENTS - MECHANICAL

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

SM-4937.6

REPLACEMENT OF HEAT TRACE CIRCUIT #29 (BORIC ACID BLENDER AREA)

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW CHEMELEX SELF REGULATING HEAT TRACE CABLE FOR CIRCUIT #29 (BORIC ACID BLENDER AREA PIPING).

SM-4937.7

REPLACEMENT OF HEAT TRACE CIRCUIT #E-6 (BORIC ACID FILTER)

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW CHEMELEX SELF-REGULATING HEAT TRACE FOR CIRCUIT #E-6 (BORIC ACID FILTER).

SM-4960.1

AGASTAT TIME DELAY RELAY REPLACEMENTS FOR THE 1990 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 1990 OUTAGE.

SM-4960.3

AGASTAT TIME DELAY RELAY REPLACEMENT TDR-1A3 AND TDR-1B3

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF AGASTAT TIME DELAY RELAY REPLACEMENT FOR TDR-1A3 AND TDR-1B3 DURING THE 1991 OUTAGE. THE SPECIFIC TESTING TO BE DONE WILL ENSURE THAT THE CIRCUITRY FOR THE DC AUXILIARY OIL PUMPS TO THE MAIN FEEDWATER PUMPS WILL BE OPERATIONAL FOR THE CONDITIONS CONTROLLED BY THE AGASTAT TIME DELAY RELAYS TDR-1A3 AND TDR-1B3.

SM-4960.4

AGASTAT TIME DELAY RELAY REPLACEMENTS FOR THE FEEDWATER PUMP LOSS OF SEAL WATER TRIP



THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF AGASTAT TIME DELAY RELAY REPLACEMENTS FOR THE FEEDWATER PUMP (FWP) LOSS OF SEAL WATER TRIP. THE TIME DELAY FOR TRIP OF THE FWP FOLLOWING A LOSS OF SEAL WATER WILL ALSO BE CHANGED FROM 5 TO 60 SECONDS TO PREVENT UNNECESSARY TRIPS OF THE FWPs.

SM-5078.1  
INTRUSION DETECTION SYSTEM - GUARD HOUSE

THE PURPOSE OF THIS PROCEDURE IS TO INSTALL A NEW "E" FIELD PERIMETER ON THE GUARD HOUSE.

SM-5097.2  
UNIT 1A CONTAINMENT RECIRCULATION PLENUM MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE UNIT 1A RECIRCULATION PLENUM MODIFICATION.

SM-5157.1  
"A" STEAM GENERATOR INSULATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE "A" STEAM GENERATOR INSULATION.

SM-5157.2  
"A" STEAM GENERATOR INSULATION SUPPORT STEEL

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE "A" STEAM GENERATOR INSULATION SUPPORT STEEL.

SM-5168.2  
SCREENHOUSE FLOOR AREA CHLORINE INJECTION PIPING INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS INSTALL CHLORINE INJECTION PIPING IN THE SCREENHOUSE FLOOR AREA TO PROVIDE ZEBRA MUSSEL CONTROL.

SM-5168.7  
SCREENHOUSE SERVICE WATER SUPPLY CHLORINE MONITOR ELECTRICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL PORTION OF THE SERVICE WATER SUPPLY CHLORINE MONITOR IN THE SCREENHOUSE.

SM-5168.9  
TURBINE BUILDING SERVICE WATER DISCHARGE CHLORINE MONITOR ELECTRICAL INSTALLATION

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



SM-5168.10

INTERMEDIATE BUILDING SERVICE WATER DISCHARGE CHLORINE MONITOR ELECTRICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL PORTION OF THE SERVICE WATER DISCHARGE CHLORINE MONITOR IN THE INTERMEDIATE BUILDING.

SM-5168.11

SCREENHOUSE CHLORINE MONITOR - ELECTRICAL TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE ELECTRICAL INSTALLATION OF THE SCREENHOUSE CHLORINE MONITOR.

SM-5168.14

INTERMEDIATE BUILDING SERVICE WATER DISCHARGE CHLORINE MONITOR ELECTRICAL TESTING

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

SM-5191.1

MSIV CONDUIT/CABLE RE-ROUTE AND TESTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF CABLE AND CONDUIT RE-ROUTING FOR CONTROL POWER TO BOTH A AND B MSIV SOLENOID VALVES.

SM-5295.4

GINNA ELECTRIC DISTRIBUTION SYSTEM STUDY -  
TEMPORARY EQUIPMENT INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO OBTAIN DATA TO VERIFY COMPUTER MODELS OF GINNA STATION WHICH SIMULATE VOLTAGE AND SHORT CIRCUIT CURRENT LEVELS DURING ALL PLANT OPERATING CONDITIONS AND TO CONTROL THE INSTALLATION OF MEASUREMENT EQUIPMENT TO BE TEMPORARILY INSTALLED FOR THIS MODIFICATION.

SM-5295.5

GINNA ELECTRICAL SYSTEM LOAD STUDY - DATA COLLECTION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE DATA COLLECTION FROM THE RECORDING EQUIPMENT INSTALLED DURING THE OUTAGE.

SM-5295.6

MOTOR DATA COLLECTION FOR SELECTED MOTOR STARTS

THE PURPOSE OF THIS PROCEDURE IS TO OBTAIN DATA TO VERIFY COMPUTER MODELS OF GINNA STATION SAFETY RELATED MOTORS AND TO CONTROL THE INSTALLATION OF MEASUREMENT EQUIPMENT TO BE TEMPORARILY INSTALLED FOR THIS MODIFICATION. THE INSTALLATION OF ALL SUPPORTING TEST INSTRUMENTATION IS NON-INTRUSIVE AND WILL HAVE NO

IMPACT ON THE ASSOCIATED EQUIPMENTS OPERABILITY.

SM-5295.7

LOAD MEASUREMENTS FOR SELECTED EQUIPMENT DURING THE A DIESEL GENERATOR LOAD AND SAFEGUARD SEQUENCE TEST

THE PURPOSE OF THIS PROCEDURE IS TO OBTAIN DATA TO VERIFY COMPUTER MODELS OF THE GINNA EMERGENCY LOADS AND DIESEL GENERATORS AS WELL AS TO CONTROL THE INSTALLATION AND REMOVAL OF THE TEMPORARILY INSTALLED MEASUREMENT EQUIPMENT.

SM-5295.8

LOAD MEASUREMENTS FOR SELECTED EQUIPMENT DURING THE B DIESEL GENERATOR LOAD AND SAFEGUARD SEQUENCE TEST

THE PURPOSE OF THIS PROCEDURE IS OBTAIN DATA TO VERIFY COMPUTER MODELS OF THE GINNA EMERGENCY LOADS AND DIESEL GENERATORS AS WELL AS TO CONTROL THE INSTALLATION AND REMOVAL OF THE TEMPORARILY INSTALLED MEASUREMENT EQUIPMENT..

SM-5295.9

GINNA ELECTRICAL SYSTEM LOAD STUDY - TEMPORARY MEASURING INSTRUMENTATION REMOVAL

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE REMOVAL OF TEMPORARILY INSTALLED INSTRUMENTATION THAT WAS USED FOR DATA COLLECTION IN RESPONSE TO THE ELECTRICAL DISTRIBUTION SYSTEM FUNCTIONAL SAFETY INSPECTION.

SM-5393.1

UNITS "A" AND "B" CONTAINMENT RECIRCULATION FAN MOTOR COOLER REPLACEMENTS

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



## 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.



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TSR 90-177

TECHNICAL STAFF ENGINEERING EVALUATION DATED 9/3/91 REV 0

THE PURPOSE OF THIS EVALUATION IS TO JUSTIFY THE INSTALLATION OF VALVE 9519F, (TURBINE DRIVEN AUXILIARY FEEDWATER PUMP THROTTLE VALVE DRAIN/TRAP INLET DRAIN VALVE) AND ADDITIONAL MINOR PIPING ON A PREVIOUSLY CAPPED NIPPLE DOWNSTREAM OF STEAM DRAIN LINE ISOLATION VALVE 3529 AS INSTALLED UNDER MWRTR 89-3669.

TSR 90-140

SPENT FUEL POOL COOLING SKID MOUNTED PUMP INSTALLATION

TECHNICAL STAFF ENGINEERING EVALUATION DATED 8/26/91 REV 1

UNDER EWR 1594B, A SKID MOUNTED PUMP WAS TEMPORARILY INSTALLED IN THE BASEMENT OF THE AUXILIARY BUILDING TO SERVE IN SPENT FUEL POOL COOLING LOOP 3. THIS LOOP SERVES AS A BACKUP TO THE PERMANENT LOOPS 1 AND 2. IT IS REQUIRED TO BE OPERABLE WITHIN SEVERAL HOURS OF A LOOP 2 FAILURE DURING CERTAIN REFUELING SCENARIOS. IN ORDER TO MINIMIZE INSTALLATION TIME AND EFFORT IT IS DESIRED TO LOCATE THE PUMP PERMANENTLY IN ITS CURRENT LOCATION. THE PUMP IS SEISMICALLY MOUNTED TO THE BUILDING STRUCTURE AND IS ISOLATED FROM ANY PROCESS LINES OR THE ELECTRICAL SYSTEM. THEREFORE, THERE IS NO POTENTIAL IMPACT TO SAFETY RELATED EQUIPMENT IN THE AREA DURING NORMAL OR ACCIDENT CONDITIONS.

TSR 91-174

SAFWP C AND D COOLING UNITS TEST POINT INSTALLATION

TECHNICAL STAFF ENGINEERING EVALUATION DATED 9/16/91 REV 0

PRESENTLY, A METHOD DOES NOT EXIST TO MEASURE THE AIR FLOW THE SAFWP C AND D COOLING UNITS. THE INSTALLATION OF THE TEST POINTS IS NECESSARY IN ORDER TO VERIFY ACCEPTABLE HEAT EXCHANGER PERFORMANCE. THIS EVALUATION WILL PROVIDE EQUIVALENCY BETWEEN THE ORIGINAL CONDITION OF THE SUCTION SIDE DUCTING AND THE PROPOSED ADDITION 1/2" DIAMETER HOLES WITH 1/2" METAL HOLE PLUGS.

TSR 91-189

RELIEF VALVE 5477W SETPOINT INCREASE

TECHNICAL STAFF ENGINEERING EVALUATION DATED 9/24/91 REV 0

THE RELIEF SETPOINT OF VALVE 5477W IS CURRENTLY SET AT 100 PSI. PER REFERENCE OMM-051, WESTINGHOUSE RECOMMENDS THAT THE SETTING BE INCREASED TO A VALUE OF UP TO 125 PSI MAXIMUM. THIS IS TO BE DONE TO SOLVE PROBLEMS EXPERIENCED SUCH AS HIGH OIL TEMPERATURES AND INADVERTENT OPENING OF THE RELIEF VALVE DURING NORMAL OPERATION. NORMAL OPERATING PRESSURE DOWNSTREAM OF THE HYDROGEN SIDE SEAL OIL PUMP IS HIGHER THAN THE CURRENT RELIEF SETTING, AND THUS THE RELIEF VALVE DOES NOT AND CAN NOT SERVE ITS DESIGN FUNCTION.

TSR 91-173

AUX. BLDG. CRANE MAIN HOOK SHEAVE PIN LUBRICATION SYSTEM

TECHNICAL STAFF ENGINEERING EVALUATION DATED 9/20/91 REV 0

THIS TSEE WILL EVALUATE THE ADDITION OF MANUAL LUBRICATION PORT THROUGH THE CENTER OF THE MAIN HOOK HEADBLOCK SHEAVE PIN TO ENHANCE THE LUBRICATION OF THE SELF-LUBRICATING BUSHING ON THE SHEAVE PIN. THIS LUBRICATION ENHANCEMENT WILL AUGMENT THE SELF-LUBRICATING BUSHINGS BY PROVIDING A POSITIVE FLOW OF GREASE INTO THE AREA UNDER EACH SHEAVE PIN BUSHING AND ELIMINATING THE POTENTIAL FOR THE SHEAVES TO FREEZE TO THE PIN.

THIS FEATURE ADDITION WILL NOT COMPROMISE THE ABILITY OF THE CRANE TO WITHSTAND A DESIGN BASIS EARTHQUAKE. THE POTENTIAL FOR CONTAMINATION OF THE SFP FROM CHEMICAL LEACHING WHEN THE HEADBLOCK IS IMMERSSED IN THE POOL HAS BEEN ANALYZED AND FOUND TO BE ACCEPTABLE. THE LUBRICATION FEATURE WILL IMPROVE CRANE PERFORMANCE AND RELIABILITY. THE MACHINING REQUIRED FOR LUBRICATION PORT INSTALLATION HAS BEEN EVALUATED STRUCTURALLY AND WILL NOT AFFECT CRANE DESIGN LOADINGS.

TSR 91-135

PI-2212 RELOCATION

TECHNICAL STAFF ENGINEERING EVALUATION DATED 8/30/91 REV 0

PI-2212 PROVIDES INDICATION TO THE OPERATOR OF THE PRESSURE DOWNSTREAM OF AOV-3806 (SEAL WATER PRESSURE CONTROL AOV TO VALVE SEALING SYSTEM). WHEN PLACING THE AOV IN SERVICE OR WHEN USING THE BYPASS GLOBE VALVE FOR CONTROL, THE OPERATOR MUST OBSERVE PI-2212. HOWEVER, IT IS LOCATED APPROXIMATELY 25 FEET AWAY AND IS NOT VISIBLE FROM THE LOCATION OF THE AOV.

THE PURPOSE OF THIS EVALUATION IS TO RELOCATE THE PRESSURE GAUGE CLOSER TO THE AOV. THIS WILL INVOLVE THE REPLACEMENT OF SOME OF THE PIPING, REMOVAL OF A LENGTH OF TUBING AND A NEW ATTACHMENT INTO THE RUN PIPE FOR THE GAUGE CONNECTION.

THIS CHANGE AFFECTS ONLY A NON-SAFETY RELATED SYSTEM (CONDENSATE) AND IS LOCATED SUCH THAT IT HAS NO POTENTIAL IMPACT TO SAFETY RELATED STRUCTURES, SYSTEMS OR COMPONENTS. NO SYSTEM FUNCTION WILL CHANGE AS A RESULT OF THE GAUGE RELOCATION.

TSR 91-117

NRHX DRAIN LINES NIPPLE AND CAP ADDITION

TECHNICAL STAFF ENGINEERING EVALUATION DATED 10/10/91 REV 0

VALVES 2232 AND 2233, NRHX INLET AND OUTLET (RESPECTIVELY) DRAIN VALVES, HAVE EXPERIENCED SEAT LEAKAGE WHICH HAS IN TURN RESULTED IN THE RELEASE OF BOTH CONTAMINATED WATER AND RADIOACTIVE GASSES TO THE ENVIRONMENT OF THE AUXILIARY BUILDING DURING PERIODS WHEN THE AUXILIARY BUILDING VENTILATION SYSTEM IS OUT OF SERVICE.



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THIS EVALUATION WILL PROVIDE JUSTIFICATION FOR THE ADDITION OF TWO 3/4" NPT 3" LONG NIPPLES AND TWO 3/4" NPT THREADED CAPS, ONE TO BE ATTACHED TO THE DOWNSTREAM SIDE OF VALVE 2233 AND THE SECOND TO BE ATTACHED TO THE OPEN TEE DOWNSTREAM OF VALVE 2232.

TSR 91-002

EH RESERVOIR IMMERSION HEATER INSTALLATION

TSR 91-002 WILL INSTALL, DURING THIS SHUTDOWN, AN IMMERSION HEATER IN THE EH RESERVOIR. THE PURPOSE OF THE HEATER IS TO BRING EH FLUID CLOSER TO OPERATING TEMPERATURE PRIOR TO STARTUP. IT IS INTENDED TO ENERGIZE THE HEATER ONLY DURING PRE-STARTUP OF THE EHC SYSTEM. THE HEATER WILL BE MOUNTED ON AN EXISTING FLANGE THAT WAS INSTALLED DURING THE 1991 SHUTDOWN PER THIS TSR. AN EXISTING 208 VAC RECEPTACLE, CURRENTLY USED ONLY FOR THE EH OIL TRANSFER PUMP, WILL BE UPGRADED FROM A "HANGING CORDCAP" TO A PANEL MOUNTED FLANGED RECEPTACLE. THE RECEPTACLE CAN THEN BE UTILIZED TO POWER THE EHC TRANSFER PUMP OR THE IMMERSION HEATER. IT IS NOT ANTICIPATED THAT BOTH DEVICES WILL BE REQUIRED SIMULTANEOUSLY. A TSEE AND 50.59 ARE COMPLETE PER A-305.

TSR 92-057

TEMPORARY CONNECTION OF MONITORING EQUIPMENT TO EXISTING TEST POINTS

THE PURPOSE OF THIS ANALYSIS IS TO EVALUATE THE SAFETY CONSEQUENCES OF CONNECTING TEMPORARY MONITORING INSTRUMENTATION TO EXISTING TEST POINTS. UNDER THE SCOPE OF A-1406, CONNECTING TEMPORARY RECORDERS FOR EXTENDED PERIODS OF TIME IS CONSIDERED A TEMPORARY MODIFICATION. THIS EVALUATION IS BASED ON USING MONITORING INSTRUMENTATION WITH HIGH IMPEDANCE ISOLATED INPUTS CONNECTED TO ESTABLISHED TEST POINTS.

TSR 92-094

VALVE 4051 BLANK FLANGE INSTALLATION

TECHNICAL STAFF ENGINEERING EVALUATION DATED 4/2/92 REV 0

THIS EVALUATION WILL JUSTIFY THE PERMANENT INSTALLATION OF A CARBON STEEL PLATE AT THE BOLTED FLANGE DOWNSTREAM OF VALVE 4051, MAIN CONDENSER "B" CONDENSATE FILL MANUAL VALVE.

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).



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8/16/91

SERVICE WATER PUMP C AND D DISCHARGE PT-2028  
PRESSURE SENSING LINE REPLACEMENT 91-20

278  
BJK

The pressure sensing line for PT-2028 has been isolated at the 1 inch root valve on the Service Water Pump C and D discharge header, due to a leak at a contact point with tube track. In order to return the pressure transmitter to service, it has been proposed to replace the existing tubing run. Drawing 33013-1250 Sh. 1 indicates this as ASME Class 3, and as such, is safety-related as described in Quality Control Manual section 2.1.14b. The line specification for tubing requires that this be seamless, hand drawn copper, ASTM B75 type DHP, with .035 inch wall thickness, for up to 200 psig application. The proposed replacement is to be outside the tube track, eliminating the potential for a tube track contact problem and sharp bends. It is proposed to use ASTM B-280 3/8 inch copper tubing with .032 inch wall thickness, fastened with tie-wrap to conduit in the area.

Per drawing C-381-358 Sht. 35, the tubing downstream of valve 4506 was not seismically analyzed, thus the temporary installation does not require to be seismically secured and will be retained through the use of tie wraps as indicated. As this is not a seismic installation the temporary tubing will be installed and supported in accordance with the requirements of ANSI B31.1-1986.

Stress experienced in the temporary line will consist of components due to pressure and sustained loads. The stress experienced from design pressure of the service water system is:

$$S_p = \frac{P D_o}{4 t_n} = \frac{(150 \text{ psig})(0.375 \text{ in})}{4 (0.032 \text{ in})} = 439 \text{ psi}$$

The stress experienced from the sustained load of the tubing is:

$$S_s = \frac{0.75 i M_{\max}}{Z}$$

Where the maximum bending movement  $M_{\max}$  is determined from a maximum unsupported length of 36", thus  $M_{\max}$  equals;

$$M_{\max} = \frac{W x}{2} (L - x) = \frac{(0.086 \text{ lb/in})(36 \text{ in})}{2} (36 \text{ in} - 18 \text{ in})$$

$$= 28 \text{ in lb}$$

$$\text{Thus } S_s = \frac{(1)(28 \text{ in lb})}{0.0027 \text{ in}^3} = 10300 \text{ psi}$$

$$\text{and } S_{\text{total}} = S_p + S_s = 439 + 10300 = 10739 \text{ psi}$$

The tensile strength of soft annealed ASTM B280 seamless copper tubing is 30,000 psi. Thus the temporary replacement of the original tubing with the above mentioned material will yield an acceptable factor of safety providing that the tubing is supported with tie wraps at a maximum of 36" intervals.

The above construction requirements are to be observed. Based on these, the determinations called for in 10CFR50.59 are given below.

The installation does not result in a change to the facility or procedures as described in the Safety Analysis Report because details involved with the support of the original tubing were not discussed or listed and this temporary installation alters only the physical configuration of the tubing.

The installation does not involve a change in the Plant Technical Specifications because the pressure transmitter PT 2028 is not a Tech Spec instrument and the connection is isolable from the service water system through valve 4506.

The installation does not increase the probability of an occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report because the installed tubing will be placed and run such that stress levels remain well below maximum values associated with the material; thus, the probability of failure of the replacement temporary tubing will be no more than the original. Duration of the installation will be short term (approx. 2 months) thus probability of a failure is not effected.

The installation does not create the possibility for an accident or malfunction of a different type than any previously evaluated in the Safety Analysis Report because the replacement (temporary) tubing has been determined to be adequate for it's intended use and will be connected to the same isolation valve that would have isolated the original tubing run in the event of a failure (valve 4506).

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification because the temporary installation will be adequately supported such that stress levels within the material do not exceed the tensile strength and thus under normal conditions no postulated failures are expected.

The design basis events analysis in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events



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5519.543  
CATEGORY 3.3.5  
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REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GWINA STATION

# BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL

JOB FOREMAN: C. Bauber DATE: 8-16-91 REQUEST #: 91-42

JUMPER WIRE ☐ LIFTED WIRE ☒ FUSES PULLED ☐ STATES BLOCK ☐ OTHER ☐

FUNCTION Reverse power relay energize circuit for "B" Rod Drive Breaker  
(Generator Breaker)

PURPOSE To defeat the energize circuit so that the reverse power relay cannot be energized

LOCATION Rod Drive Generator Switchgear - "B" Generator Voltage Sensing Relay Panel - terminals 4 & 5

SAFETY EVALUATION REQUIRED: ☐ YES ☒ NO SKETCH ATTACHED: ☒ YES ☐ NO

PORC DATE (IF REQUIRED): 8/16/91 <sup>3600 equivalent at 5000V</sup>

TECHNICAL MANAGER: [Signature] DATE: 8/16/91

SHIFT SUPERVISOR: Douglas G. Peluso DATE: 8/16/91

## INSTALLATION

DATE & TIME 8-16-91, 1400

ENTERED IN OFFICIAL LOG: DB

NUMBER OF TAGS INSTALLED: ONE

INSTALLED BY: A. Spencer

VERIFIED BY: Randy V. Conaway

## REMOVAL

DATE & TIME 6/2/92 @ 1100

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: tag removal

REMOVED BY: delay of 93 outage

VERIFIED BY: H. Van Houten

## REVIEW (AS NECESSARY)

THE REVERSE CURRENT FUNCTION HAS BEEN DISABLED  
AT THE VOLTAGE SENSING RELAY PANEL INPUT. THE  
DE-TERMINATION OF CONDUCTORS AT TERMINALS 4 & 5  
WILL FURTHER ISOLATE THE BREAKER TRIP CIRCUIT  
FROM INADVERTANT REVERSE CURRENT MALFUNCTIONS.  
THIS DE-TERMINATION IS ACCEPTABLE. THE DISABLED  
REVERSE CURRENT FUNCTION WILL BE FURTHER  
EVALUATED BY TSK 91-167.

RECEIVED

[Signature] 8/14/91

JUN 4 1992

CENTRAL RECORDS

QA

DISPOSITION - 5 YRS.

Attach additional page(s) as necessary



551 CATEGORY: 11. 3.3.5

REVIEWED 11REFERENCE PROCEDURE  
A-1402ROCHESTER GAS AND ELECTRIC  
GINNA STATION

## BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL

JOB FOREMAN: C. Rauber DATE: 8-16-91 REQUEST #: 91-43  
 JUMPER WIRE ☐ LIFTED WIRE ☒ FUSES PULLED ☐ STATES BLOCK ☐ OTHER C  
 FUNCTION Reverse Power Relay energize circuit for "A" Rod Drive Breaker (Generator Breaker)

PURPOSE To defeat the energize circuit so that the reverse power relay cannot be energized

LOCATION Rod Drive Generator Switchgear - "A" Generator Voltage Sensing Relay Panel - terminals 4

SAFETY EVALUATION REQUIRED: ☐ YES ☒ NO SKETCH ATTACHED: ☒ YES ☐ NO

PORC DATE (IF REQUIRED): 8/16/91

TECHNICAL MANAGER: [Signature] DATE: 8/16/91

SHIFT SUPERVISOR: Douglas A. Roberts DATE: 9/16/91

## INSTALLATION

DATE & TIME 8-16-91, 1330

ENTERED IN OFFICIAL LOG: 11

NUMBER OF TAGS INSTALLED: ONE

INSTALLED BY: A. Spencer

VERIFIED BY: Randy V. Conaway

## REMOVAL

DATE & TIME: 8-16-91, 6/2/92 1102

ENTERED IN OFFICIAL LOG: 11

NUMBER OF TAGS REMOVED: 1 tag removed

REMOVED BY: delayed to 1993 entry

VERIFIED BY: H. Van Houte

## REVIEW (AS NECESSARY)

THE REVERSE CURRENT FUNCTION HAS BEEN DISABLED  
 AT THE VOLTAGE SENSING RELAY PANEL INPUT. THE  
 DE-TERMINATION OF CONDUCTORS AT TERMINALS 4 & 5  
 WILL FURTHER ISOLATE THE BREAKER TRIP CIRCUIT  
 FROM INADVERTANT REVERSE CURRENT MALFUNCTIONS.  
 THIS DE-TERMINATION IS ACCEPTABLE. THE DISABLED  
 REVERSE CURRENT FUNCTION WILL BE FURTHER  
 EVALUATED BY TSR 91-167.

RECEIVED

[Signature] 8/14/91

JUN 4 1992

CENTRAL RECORDS

QA

DISPOSITION - 5 YRS.

Attach additional page(s) as necessary



5244.1747

WO 9101592

CATEGORY 385  
REVIEWED [Signature]REFERENCE PROCEDURE  
A-1402ROCHESTER GAS AND ELECTRIC  
GINNA STATION

## BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL

JOB FOREMAN: Jones / J. ZAHEN'S DATE: September 13, 1991 REQUEST #: 91-46  
JUMPER WIRE ☐ LIFTED WIRE ☐ FUSES PULLED ☐ STATES BLOCK ☐ OTHER ☒  
FUNCTION Pressurizer Spray Valve ControlsPURPOSE To monitor spray valve control loop signals for fault determinationLOCATION: PLP RACK, Control Room TP-429A-1, TP-431K, TP-431K, TP-431K, TP-431KSAFETY EVALUATION REQUIRED: ☒ YES ☐ NO SKETCH ATTACHED: ☐ YES ☒ NOPORC DATE (IF REQUIRED): 9-13-91TECHNICAL MANAGER: [Signature] DATE: 9-13-91SHIFT SUPERVISOR: [Signature] DATE: Sept. 13, 1991

## INSTALLATION

DATE & TIME 9/13/91 1556ENTERED IN OFFICIAL LOG: [Signature]NUMBER OF TAGS INSTALLED: 4INSTALLED BY: [Signature]VERIFIED BY: [Signature]

## REMOVAL

DATE & TIME: 9/24/91 1022ENTERED IN OFFICIAL LOG: [Signature]NUMBER OF TAGS REMOVED: 4REMOVED BY: [Signature]VERIFIED BY: [Signature]

REVIEW (AS NECESSARY)

FOXBORO DRAWINGS RD-13 AND CD-13 HAVE BEEN  
REVIEWED. ONLY ESTABLISHED TEST POINTS ARE  
TO BE UTILIZED. RECORDER TO BE USED IS  
GOLD 2608 HAVING ISOLATED GROUND INPUTS.  
CONTROLLER TO BE IN MANUAL DURING RECORDER  
INSTALLATION AND REMOVAL.

[Signature] 9/13/91

RECEIVED

OCT 10 1991

Attach additional page(s) as necessary

CENTRAL RECORDS  
QA [Signature]  
DISPOSITION - 5 YRS.

40-142 Rev. 1





1. NAME

2. ADDRESS

3. CITY

4. STATE

5. ZIP

6. PHONE

7. FAX

8. E-MAIL

9. BIRTHDATE

10. GENDER

11. OCCUPATION

12. EDUCATION

13. MARITAL STATUS

14. RELIGION

15. ETHNICITY

16. ANNUAL INCOME

17. NUMBER OF CHILDREN

18. NUMBER OF PETS

19. NUMBER OF CARS

20. NUMBER OF TRIPS

21. NUMBER OF BOOKS

22. NUMBER OF MOVIES

23. NUMBER OF GAMES

24. NUMBER OF TOYS

25. NUMBER OF PLANTS

26. NUMBER OF FISH

27. NUMBER OF BIRDS

28. NUMBER OF INSECTS

29. NUMBER OF REPTILES

30. NUMBER OF AMPHIBIANS

31. NUMBER OF MAMMALS

32. NUMBER OF BATS

33. NUMBER OF MONKEYS

34. NUMBER OF APES

35. NUMBER OF HUMANS

5519.545  
CATEGORY 335  
REVIEWED M

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

## BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL

JOB FOREMAN: Jeff Jones DATE: 6-31-91 REQUEST #: 91-49  
JUMPER WIRE ☒ LIFTED WIRE ☐ FUSES PULLED ☐ STATES BLOCK ☒ OTHER ☒  
FUNCTION: 'A' STEAM GENERATOR CHLORIDE MONITOR ANNUNCIATOR

PURPOSE: TO ALLOW AFG CHLORIDE MONITOR TO OPERATE WITHOUT EXCESSIVE ALARM  
PRIOR TO REPAIR OF ALARM SYSTEM REPAIR. TAGS CARD SUBMITTED # 0010417

LOCATION: SECONDARY ALARM PNL, JUMPER AT OSP-SA 748

SAFETY EVALUATION REQUIRED: ☒ YES ☐ NO SKETCH ATTACHED: ☐ YES ☐ NO

PORC DATE (IF REQUIRED): 11/6/91 ATG # 91-140

TECHNICAL MANAGER: [Signature] DATE: 11/6/91

SHIFT SUPERVISOR: [Signature] DATE: 11/6/91

### INSTALLATION

DATE & TIME: 11/6/91 1346 RECEIVED REMOVAL 6/2/92 @ 1109

ENTERED IN OFFICIAL LOG: 1346 JUN 4 1992 ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 1 CENTRAL RECORDS NUMBER OF TAGS REMOVED: 1

INSTALLED BY: [Signature] QA REMOVED BY: PA Barnford

VERIFIED BY: Charles J. Karm VERIFIED BY: [Signature]

### REVIEW (AS NECESSARY)

Alarm is malfunctioning creating nuisance alarms on the MCB alarm panel. Disabling this alarm will allow the MCB alarm panel to function properly for all other alarms and provide the operators with reliable indication of out-of-spec conditions. Disabling the alarm also allows the monitor to be operated thus providing local trends. Alarms & out-of-spec conditions on chloride in the B S/G and conductivity in both S/Gs will be unaffected. This will provide If chlorides were high in the A S/G, conductivity would also be high and the B S/G chloride would also, most likely, be high providing backup indication & alarms.

Steps to ensure the alarm is operating properly upon repair will be included in the maintenance pkg.  
Attach additional page(s) as necessary ref VESAR 9.3.2.2.1



5204.1748

CATEGORY 3.3.5  
REVIEWED [Signature]REFERENCE PROCEDURE  
A-1402ROCHESTER GAS AND ELECTRIC  
GINNA STATION

## BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL

JOB FOREMAN: Dan Pulver (J Jones) DATE: 9-24-91 REQUEST #: 91-47  
JUMPER WIRE ☐ LIFTED WIRE ☐ FUSES PULLED ☐ STATES BLOCK ☐ OTHER ☒  
FUNCTION CONNECT TEST RECORDER TO MONITOR TAGG CIRCUITSPURPOSE MONITOR INPUTS AND OUTPUT OF TM-401D TAGG SUMMATION UNITLOCATION: SD RACKSAFETY EVALUATION REQUIRED: ☒ YES ☐ NOSKETCH ATTACHED: ☐ YES ☒ NOPORC DATE (IF REQUIRED): 9-23-91TECHNICAL MANAGER: [Signature] DATE: 9-23-91SHIFT SUPERVISOR: [Signature] DATE: 9-24-91

## INSTALLATION

DATE & TIME 9/24/91 0843ENTERED IN OFFICIAL LOG: [Signature]NUMBER OF TAGS INSTALLED: 1INSTALLED BY: [Signature]VERIFIED BY: [Signature]

## REMOVAL

DATE & TIME 9/27/91 1443ENTERED IN OFFICIAL LOG: [Signature]NUMBER OF TAGS REMOVED: 1REMOVED BY: [Signature]VERIFIED BY: [Signature]REVIEW (AS NECESSARY) W.O. # 9101636

FOXBORO DRAWINGS BD-15 AND BD-17 HAVE BEEN REVIEWED. ONLY ESTABLISHED TEST POINTS ARE TO BE UTILIZED. RECORDER TO BE USED IS Gould 2008 HAVING ISOLATED GROUND INPUTS. CAUTION TO BE OBSERVED WHEN CONNECTING RECORDER LEADS TO TEST POINTS.

RECEIVED

OCT 10 1991

CENTRAL RECORDS

Attach additional page(s) as necessary

POSITION - 5 YRS.

[Signature]  
9/23/91

ATTACHMENT 1

## TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator)TM No.: 91-051Date: 12/4/91Title: Flange Heating Steam Return Elbow RepairPart II (Initiator)Type: Electrical      Fluid      Structural     

Description: Temporary Piping is to be installed  
over a pin hole in a 90° Elbow in order to  
contain the leak. Configuration is to be determined  
by field similar to Attachment A

Part III (Station Engineer)

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

The applicable line spec for the flange heating steam  
is SP-5291: Class 600-1. Design press & Temp = 1085 <sup>psig</sup> ± 600°F  
respectively. Flange heating is a non QA non seismic system per  
33013-1232. All attached piping shall meet <sup>or exceed</sup> line spec 600-1 except  
pipe joints may be threaded. The piping shall be attached by welding  
a nipple/coupling up to 1 1/2" nominal pipe size over pin hole using bevelled  
weld prep. Min. weld 1/4". If plug/cap cannot be installed to stop  
leak due to high steam pressure, a valve may be installed. If  
valve is installed it shall be supported by wire or chain to overhead  
conduit support, overall length of new piping shall be less than 12".  
Valve shall be 600lb or greater



ATTACHMENT 1 (CONT'D)

**Evaluation:** See details in Part III Design Inputs section.

Since installed piping will meet line spec stresses  
will be below code allowances. Welded joints are  
for maintenance concerns only. ANSI B31.1 allows threaded  
joints for steam service. Thermal stresses are not a concern  
because of free end. A 1 1/2" D.I.A. <sup>600 lb</sup> VLV weighs less than 20 lbs. This is  
within the capacity of existing supports

**Testing Requirements:** All temporary modification welds should  
be visually inspected for adequacy and the threaded  
cap or plug should be verified to be snug, and/or  
leak tight.

**Safety Analysis:** (Attach documentation per A-303)

See Attached

**Mode Restrictions:** None

**PREPARED BY:** Bruce J. Kachyl **DATE:** 12/9/91

**REVIEWED BY:** Robert D. Phay **DATE:** 12/9/91

**APPROVED BY:** Jeffrey R. Wyzard **DATE:** 12/10/91

**PORC APPROVAL MEETING:** Thomas H. Marlow **DATE:** 12/10/91

PORC MTC # 91-148

SAFETY ANALYSIS

TEMPORARY MODIFICATION 91-050<sup>1</sup>

FLANGE HEATING STEAM RETURN ELBOW REPAIR

Rev.0

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

December 10, 1991

Prepared by: \_\_\_\_\_

Staff Engineer

12/10/91  
Date

Reviewed by: \_\_\_\_\_

Reactor Engineer

12/10/91  
Date

Reviewed by: \_\_\_\_\_

For Manager Technical Engineering

12/10/91  
Date

Approved by: \_\_\_\_\_

Chairman, PORC

12/10/91  
Date



## 1.0 SCOPE OF ANALYSIS

VALVE OF  
The HP turbine flange heating return line to the condenser has a 3/4" elbow with a small pin hole leak. The purpose of this analysis is to evaluate the safety consequences of welding a coupling or nipple to the elbow and inserting a plug to stop the leak. Replacement of the elbow would require shutting the unit down since it is unisolatable.

## 2.0 References

2.1 GINNA P&ID 33013-1231/2 ROP

2.2 Ginna UFSAR section 10.1.3.1, 15.1

## 3.0 Structures, Systems and Components Affected (SSC)

3.1 The Main Steam system is the only system affected by this temporary modification.

## 4.0 Safety Functions of Affected SSCs

4.1 The only Safety function the Main Steam system provides is to remove Reactor Decay Heat upon a Reactor trip via the MS safety relief valves.

4.2 As part of the MS system, the MSIV's provide MS header isolation in the event of High steam flow with an SI signal and low Tavg or High High steam flow with an SI signal.

## 5.0 Effects on Safety

5.1 The proposed temporary modification will not have an affect on the MS safety fuction since its down stream of the MSIV's.

5.2 The addition of the nipple/coupling and plug<sup>valve ROP</sup> to the elbow will not reroute any flange heating steam flow nor will increase or decrease the lines capacity. The temporary modification will restore the integrity of the pressure boundary with material meeting or exceeding the MS line specification SP-5291 600-1. The flange heating return line is not required to be seismically installed. Consequently, the small amount of wieght added by the coupling and plug<sup>valve</sup> will be well within the ANSI B31.1 code allowables. ROP

6.0 Unreviewed Safety Question Conclusion

- 6.1 The addition of the coupling/nipple and plug<sup>valve RA</sup> to the flange heating steam return line will not increase the probability of occurrences of an accident previously evaluated in the UFSAR because the added material will meet the MS piping specification and B31.1 stress allowables, the 3/4" dia line is below the minimum line size for high energy piping, and the lines capacity will not be increase or decreased.
- 6.2 The addition of the coupling/nipple and plug to the flange heating steam return line will not increase the probability of ~~of~~ consequences of an accident previously evaluated in the UFSAR because the added material will meet the MS piping specification and B31.1 stress allowables, the 3/4" dia line is below the minimum line size for high energy piping, and the lines capacity will not be increase or decreased. Since the line capacity is not increased, there will not be an increase in the secondary heat removal. ~~Consequently, there will not be an increase in radiation release.~~
- 6.3 The addition of the coupling/nipple and plug to the flange heating steam return line will not increase the probability of occurrences of a malfunction of equipment important to safety previously evaluated in the UFSAR because the added material will meet the MS piping specification and B31.1 stress allowables, the 3/4" dia line is below the minimum line size for high energy piping, and the lines capacity will not be increase or decreased. Consequently, the original design function of the line will be maintained and therefore, no increase in equipment malfunctions are possible.
- 6.4 The addition of the coupling/nipple and plug to the flange heating steam return line will not increase the of consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR because the added material will meet the MS piping specification and B31.1 stress allowables, the 3/4" dia line is below the minimum line size for high energy piping, and the lines capacity will not be increase or decreased. Since the line capacity is not increased, there will not be an increase in the secondary heat removal. ~~Consequently, there will not be an increase in radiation release.~~
- 6.5 The addition of the coupling/nipple and plug to the flange heating steam return line will not create a possibility for an accident of a different type than any evaluated previously in the UFSAR because the operation and the function of the line will not be changed.

- 6.6 The addition of the coupling/nipple and plug to the flange heating steam return line will not create a possibility for a malfunction of equipment of a different type than any evaluated previously in the UFSAR because the function and capacity of the return line will not be changed and the existing pipe break analysis envelopes 3/4" lines
- 6.7 The addition of the coupling/nipple and plug to the flange heating steam return line will not reduce any margin of safety as defined in the bases of any technical specification because the turbine flange heating is not part of the bases of any Technical Specification

7.0 Conclusion

The addition of a nipple/coupling and plug to the turbine flange heating return line does not constitute an unreviewed safety question based on the discussion presented in section 6.



ATTACHMENT 1

## TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator)TM No.: 91-052 Date: 12/12/91Title: Temporary leak repair HP Turbine  
exhaust drain line 1" DIAPart II (Initiator)Type: Electrical      Fluid      Structural     Description: 1" Line leak repair weld  
1/4 Nipple with 800 lb socket weld VIV  
slashed Schedule 80 A105 pipePart III (Station Engineer)

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

Pressure: 1085 psigTemp: 600 °FLine Spec 600-1800 lb ValveNon seismic



Under 2-

1. The first part of the document is a list of names and addresses of the persons who have been in contact with the subject of the investigation. The names are listed in alphabetical order, and the addresses are given in full. The list is as follows:

Name	Address
Mr. J. A. Smith	123 Main Street, New York, N.Y.
Mr. J. B. Jones	456 Broadway, New York, N.Y.
Mr. C. D. Brown	789 Third Avenue, New York, N.Y.
Mr. E. F. Green	101 West 125th Street, New York, N.Y.
Mr. G. H. White	202 East 100th Street, New York, N.Y.
Mr. I. K. Black	303 West 100th Street, New York, N.Y.
Mr. L. M. Gray	404 East 100th Street, New York, N.Y.
Mr. N. O. Blue	505 West 100th Street, New York, N.Y.
Mr. P. Q. Red	606 East 100th Street, New York, N.Y.
Mr. R. S. Yellow	707 West 100th Street, New York, N.Y.
Mr. T. U. Purple	808 East 100th Street, New York, N.Y.
Mr. V. W. Pink	909 West 100th Street, New York, N.Y.
Mr. X. Y. Brown	1010 East 100th Street, New York, N.Y.
Mr. Z. A. Green	1111 West 100th Street, New York, N.Y.

ATTACHMENT 1 (CONT'D)

## Evaluation: \_\_\_\_\_

All valves and Pipe meet line spec  
600-1. By inspection loads are less  
than ANSI B31.1 code Allowables  
for dead weight. OK for press since  
it meets line spec. See Attached  
Sketch

## Testing Requirements: \_\_\_\_\_

All weld shall be visually inspected  
and leak tight

## Safety Analysis: (Attach documentation per A-303) \_\_\_\_\_

See Attached

## Mode Restrictions: \_\_\_\_\_

NONE

PREPARED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

REVIEWED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

PORC APPROVAL MEETING: \_\_\_\_\_

91-150

DATE: \_\_\_\_\_





SAFETY ANALYSIS

TEMPORARY MODIFICATION 91-050 <sup>052</sup> PAB

~~HPTURBINE EXHAUST DRAIN~~  
~~FLANGE HEATING STEAM RETURN ELBOW REPAIR~~  
BB

Rev.0

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

December 12, 1991

Prepared by:

Perry D. Duff  
Staff Engineer

12/12/91  
Date

Reviewed by:

John Cook  
Reactor Engineer

12/12/91  
Date

Reviewed by:

Steve L. Brown  
Manager, Technical Engineering

12/12/91  
Date

Approved by:

Paul A. Mankin  
Chairman, PORC

12/12/91  
Date



1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the statistical analysis performed.

3. The third part of the document presents the results of the study, showing the trends and patterns observed in the data. It includes several tables and graphs to illustrate the findings.

4. The fourth part of the document discusses the implications of the results and the potential applications of the findings. It highlights the need for further research and the importance of sharing the results with the relevant stakeholders.

5. The fifth part of the document provides a conclusion and a summary of the key points discussed throughout the document. It also includes a list of references and a bibliography.

## 1.0 SCOPE OF ANALYSIS

The purpose of this analysis is to evaluate the safety consequences associated with performing temporary leak repairs on secondary non-safety related systems. Repairs will be performed by either applying a mechanical clamp or by welding a short length of pipe with a valve or plug/cap over the leak to isolate it. Pipe size will be limited to 2" nominal pipe diameter or smaller.

## 2.0 References

2.1 ANSI B31.1 Power Piping Code 1983

## 3.0 Structures, Systems and Components Affected (SSC)

3.1 The temporary leak repair will not affect any SSC since it will be applied to non safety related systems only, it will not change any system performance and will not be located such that it could impact safety related equipment.

## 4.0 Safety Functions of Affected SSCs

4.1 None

## 5.0 Effects on Safety

5.1 The proposed temporary modification will not have an affect on any safety fuctions since it will be a dead leg pipe, the materials shall meet the applicable line specification and any resulting additional loads will be within the ANSI B31.1 code allowables.

Since the added pipe is a 2" or less dead leg , no new flow paths or increased capacity will be introduced and any pipe breaks will be eveloped by the existing secondary pipe break analysis and isolated by the MSIV'S or Main Feedwater check valves

5.2 By preventing the temporary modification from being installed such that it could phisically impact safety related equipment, the seismic qualification of safety related equipment will not be affected.

## 6.0 Unreviewed Safety Question Conclusion

- 6.1 The addition of the piping with valve or mechanical clamp to non-safety related secondary systems will not increase the probability of occurrences of an accident previously evaluated in the UFSAR because the added material will meet the piping specification and B31.1 stress allowables, the 3/4" dia line is below the minimum line size for high energy piping, and the lines capacity will not be increase or decreased.
- 6.2 The addition of the piping with valve or mechanical clamp to non-safety related secondary systems will not increase the probability of consequences of an accident previously evaluated in the UFSAR because the added material will meet the MS piping specification and B31.1 stress allowables, the 2" dia line is below the minimum line size for high energy piping, and the lines capacity will not be increase or decreased. Since the line capacity is not increased, there will not be an increase in the secondary heat removal.
- 6.3 The addition of the piping with valve or mechanical clamp to non-safety related secondary systems will not increase the probability of occurrences of a malfunction of equipment important to safety previously evaluated in the UFSAR because the added material will meet the MS piping specification and B31.1 stress allowables, the 3/4" dia line is below the minimum line size for high energy piping, and the lines capacity will not be increase or decreased. Consequently, the original design function of the line will be maintained and therefore, no increase in equipment malfunctions are possible.
- 6.4 The addition of the piping with valve or mechanical clamp to non-safety related secondary systems not increase the of consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR because the added material will meet the MS piping specification and B31.1 stress allowables, the 2" dia line is below the minimum line size for high energy piping, and the lines capacity will not be increase or decreased. Since the line capacity is not increased, there will not be an increase in the secondary heat removal.
- 6.5 The addition of the piping with valve or mechanical clamp to non-safety related secondary systems will not create a possibility for an accident of a different type than any evaluated previously in the UFSAR because the operation and the function of the line will not be changed.

6.6 The addition of the piping with valve or mechanical clamp to non-safety related secondary systems will not create a possibility for a malfunction of equipment of a different type than any evaluated previously in the UFSAR because the function and capacity of the return line will not be changed and the existing pipe break analysis envelopes 2" lines

6.7 The addition of the piping with valve or mechanical clamp to non-safety related secondary systems will not reduce any margin of safety as defined in the bases of any technical specification because the temporary modification will not change the function any system and therefor will not affect the bases of any Technical Specification.

#### 7.0 Conclusion

The addition of the piping and valve or mechanical clamp does not constitute an unreviewed safety question based on the discussion presented in section 6.

ATTACHMENT 1TEMPORARY MODIFICATION EVALUATIONPart I (TM Coordinator)TM No.: 92-01 Date: 1/2/92Title: FILTER AND VALVE INSTALLATION UPSTREAM OF PCV-1022APart II (Initiator)Type: Electrical      Fluid ✓ Structural     

Description: ① Install temporary isolation valve (3/8" SS whirly) between Gas Decay tank sample header (Valves 1036B, 1037B, 1038B & 1039B) and PCV-1022A. Value added to simplify change out of filter added in ② and PCV-1022A. ② Install temporary inline filter between valve installed in ① and PCV-1022A. Filter installed to reduce number of failures of PCV-1022A caused by particulate impurities from gas decay tanks. ③ modify / retube existing 3/8" ss tubing runs per attached drawings to accomplish installation of filter and valve.

CONTACT Steve Spinson or Charles Cook with questions X 335.Part III (Station Engineer)

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

Line Spec 2505 per Dwg 33013-1273Pressure - 2500 psig Temp - 650°FMaterial - stainless steel, tubing SST A249, A213 or A2693/8" OD, .065 wall. Valves - Surgelok SST Type 316.Line is non-seismic, non-ASME code class.

## ATTACHMENT 1 (CONT'D)

Evaluation: See attached figures 1, 2, 3, 4, 5 and 6

Design Review - All the items of figure 2 to A-304  
were answered No. All design outputs meet design  
inputs. Note system design pressure is 150 psig.

Testing Requirements: Leak test all modified  
joints using "SNOOP" or other method.  
Ensure proper operation and flow to the  
MSA Gas Analyzer.

Safety Analysis: (Attach documentation per A-303)

See attached

Mode Restrictions: None

PREPARED BY: PJ Bamford DATE: 1/6/92

REVIEWED BY: Paul D. King DATE: 1/8/92

APPROVED BY: JW DATE: 1/8/92

FORC APPROVAL MEETING: Bill Mankin DATE: 1/15/92

EVALUATION FOR TEMPORARY MODIFICATION 92-01  
PCV-1022A FILTER AND ISOLATION VALVE INSTALLATION

The installation shown on the attached sketches, <sup>1, 2, 3, 4, 5 and 6 Ref</sup> prepared by the I/C shop (Steve Stinson) is to be installed to the non-code class portion of the waste gas system per drawing 33013-1273, sheet 2. It is considered to be non-seismic, however position c(2) of USNRC Regulatory Guide 1.29 will be considered in the installation and will be discussed later in this evaluation.

The line specification for this section of tubing is 2505. This translates to a design pressure of 2500 psig at 650 degrees F. The Waste Gas system (tanks and related piping) is designed for 150 psig per Gilbert Spec 5291. The Gas Decay Tanks have reliefs and rupture disks which limit pressure to 150 psig. Operating pressure is generally 110 psig or less and operating temperature is 50-140 degrees F. The primary components to be used in this modification are stainless steel tubing, an isolation valve and a filter assembly. The tubing is to be stainless steel, 3/8" O.D., with a .065" wall thickness in accordance with the line specification. The isolation valve is to be a Whitey SS-1VS4, rated for 3435 psig at 450 degrees F. Both of these components meet or exceed all pressure requirements. The filter is a Balston type 45S6, maximum pressure 250 psig at 220 degrees F. This meets the system pressure requirements.

The new bracket, filter and housing weighs approximately 6 pounds. It will be mounted to the wall using embedded unistrut and two 1/4" fasteners. This fastening system is more than capable of restraining the weight of the new components as is required for temporary modifications. In addition, the only items which would be impacted if the restraining device were to fail during a seismic event are the copper air supply lines to valves 1036B, 1037B, 1038B, and 1039B. Since Instrument Air is not a seismic system, impact to these lines is not deemed to be a safety concern. All other items in the area are sufficiently protected from impact of the new components.

The modification involves portions of the non-code class lines as shown by the P&ID. However the work is classified as safety significant per the Ginna Master Equipment Database and Licensing classification. The Ginna QA program is therefore applicable to the modification. However, QA material is not required. This is in accordance with paragraph 3.4.2.2 of procedure A-1406 and appropriate for the function that these components will serve. As a good practice QA material should be used if possible.

Flow to (and from) the waste gas analyzer is controlled by three pressure regulators, a vacuum pump, bypass flow features and needle valves at the two analyzers. The addition of a filter and isolation valve will induce a new pressure drop into the system. They are located upstream of the pressure regulator. Therefore since there is a large (80-100 psig) pressure drop across the regulators any new drops at the low flow values experienced (6



cfh) will be adjusted for by the regulators. This will ensure that flow to the analyzers is within the system design requirements.

SAFETY ANALYSIS

TEMPORARY MODIFICATION 92-01

PCV-1022A FILTER AND ISOLATION VALVE INSTALLATION

REVISION 0

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

JANUARY 3, 1991

Prepared by:	<u>PJ Bamford</u>	<u>1/6/92</u>
	Staff Engineer	Date
Reviewed by:	<u>John Cash</u>	<u>1/2/92</u>
	Reactor Engineer	Date
Reviewed by:	<u>Jeffrey P. W. [Signature]</u>	<u>1/8/92</u>
	Manager, Technical Section	Date
Approved by:	<u>Barth M. [Signature]</u>	<u>1/15/92</u>
	Chairman, PORC	Date

1.0 Scope of Analysis:

1.1 The purpose of this analysis is to evaluate the safety consequences associated with the addition of a filter and isolation valve upstream of PCV-1022A. These items are necessary to protect the control valve from particulate matter that has been fouling it, causing frequent corrective maintenance.

1.2 PCV-1022A is the pressure control valve in the sample header of the Gas Decay Tanks to the MSA Gas Analyzer. It is located in the tubing downstream of the ASME class break. The components of this modification are located in the tubing also, ensuring that there is no effect on the seismic, class 3 piping further upstream.

2.0 References:

2.1 USNRC Regulatory Guide 1.29, Seismic Design Classification.

2.2 RG&E Drawing 33013-1273, sheet 2, Waste Disposal - Gas.

2.3 Gilbert Specification 5291.

2.4 Ginna Master Equipment Database.

2.5 Swagelok Manual W-1287-4

2.6 Procedure A-1406, Control of Temporary Modifications.

2.7 Ginna UFSAR, section 3.9.2.1.3, 15.7.1, 11.3

2.8 Ginna Technical Specifications, sections 4.12.2, 5.5.2.

3.0 Structures, Systems and Components Affected:

3.1 This modification is to be installed in the waste gas system connected to the MSA Gas Analyzer. It will be located downstream of the ASME Code Class break and therefore has no effect on safety related systems, structures or components. The only SSC in the immediate vicinity to the modification are valves 1036B, 1037B, 1038B, and 1039B. These are 3/4" NPS valves which are of higher section modulus than the tubing of the modification and are large enough components to be considered protected from impact of the modification items above (reference evaluation section of Temporary Permit 92-01). The new filter will be adequately secured in accordance with normal requirements for a temporary modification.

4.0 Safety Functions of Affected SSCs

- 4.1 The (4) valves in the vicinity remotely isolate the four gas decay tanks from the sample header and form the ASME class break.

5.0 Effects on Safety:

- 5.1 The location of the new and modified components is in the non-code class tubing section of the sampling lines. This ensures that there is no direct effect on the lines upstream of the air operated isolation valves (1036B, 1037B, 1038B, 1039B) which are safety related and form the pressure boundary of the Gas Decay Tanks. As previously discussed, the ASME Class 3 lines are large enough to afford inherent protection against a failure during a seismic event of the tubing and components above.
- 5.2 The new components will meet the line pressure requirements and will have no effect on the ultimate flow delivered to the gas analyzer through the operation of the regulating valves. Therefore no system function will change due to this modification.

6.0 Unreviewed Safety Question Conclusion:

- 6.1 The addition of a filter and isolation valve to the waste gas system will not increase the probability of occurrence of an accident previously evaluated in the UFSAR because it is located downstream of the remote isolation valves of the Gas Decay Tanks. In addition it will meet all the requirements for pressure retaining capability.
- 6.2 The addition of these components will not increase the consequences of an accident previously evaluated in the UFSAR because it affects a non-code class section of the waste gas system and therefore is bounded by the current analysis for a gas decay tank rupture.
- 6.3 This modification will not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the UFSAR since it has been shown to have no effect on such items in the vicinity.
- 6.4 This modification will not increase the consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR since it has been shown to have no effect on such items in the vicinity.

- 6.5 This modification will not create a possibility for an accident of a different type than any evaluated previously in the UFSAR because the system function will not be affected and there is no effect on surrounding structures, systems or components.
- 6.6 This modification will not create a possibility for a malfunction of equipment of a different type than any evaluated in the UFSAR because it will enhance the operation and maintenance of the system and will have no effect on surrounding equipment.
- 6.7 This modification will not reduce any margin of safety as defined in the basis of any Technical Specification because it will not affect the function of any system and therefore the basis for any Technical Specification.
- 7.0 Conclusion:
- 7.1 The implementation of this temporary modification does not constitute an unreviewed safety question based on the discussion presented in the previous section.

ATTACHMENT 1

## TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator)

TM No.: <sup>002</sup>92-004 RP Date: 1-19-92Title: Connection of Monitoring Equipment to Existing Test Points

Part II (Initiator)

Type: Electrical X Fluid      Structural     Description: 6 PEN GOULD RECORDER IS CONNECTED  
INTO THE RSC RACK (CONTROL ROOM) AS FOLLOWS:CH1 - TP401H ; Average T<sub>AVG</sub>CH2 - TP401K ; Power MismatchCH3 - TP401I ; T<sub>REF</sub>CH4 - TP401L ; Variable GainCH5 - TP401M-1 ; Summer OutputCH6 - TP401M ; RDS IN CONTROLLER OUTPUT

Part III (Station Engineer)

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

Test Points used in the RSC Rack (shown on  
Frabon CD-12) are all voltage test points. Actual  
Rot Speed and Control signals will be unaffected  
by connection of the Gould Recorder (Category 3 MTE).

ATTACHMENT 1 (CONT'D)

Evaluation: Operators will be aware of connection of  
monitoring equipment. Failure of recorder could affect signal  
from TP4012 - Unusable gain, however recorder with isolated  
inputs is being used.

Testing Requirements: Not Applicable

Safety Analysis: (Attach documentation per A-303)

See attached Safety Evaluation

Mode Restrictions: None

PREPARED BY: [Signature] DATE: 1-19-92

REVIEWED BY: [Signature] DATE: 1-19-92

APPROVED BY: [Signature] DATE: 1-19-92

PORC APPROVAL MEETING: [Signature] DATE: 1-19-92

For Richard Richardson

SAFETY EVALUATION

TEMPORARY MODIFICATION 92-002

Connection of Monitoring Equipment  
To Existing Test Points  
Rod Control System

Rev. 0

Ginna Station

Rochester Gas and Electric Corporation

89 East Ave

Rochester, New York 14649

January 19, 1992

Prepared by: *John Lash* 1-19-92  
Staff Engineer Date

Reviewed by: *for JEFFREY W. WATSON John Lash* 1-19-92  
Reactor Engineer Date

Reviewed by: *for Steve Adams John Lash* 1-19-92  
Manager, Technical Engineering Date

Approved by: *for RICHARD MARCHIONNA John Lash* 1-19-92  
Chairman, Plant Operations Review Committee Date

\* Contacted by telephone



## 1.0 Scope of Analysis

The purpose of this temporary modification is to connect monitoring instrumentation to existing test points in the rod control system. This modification is required to monitor for spurious signals in the rod control system causing a demand for rod out movement.

## 2.0 References

2.1 Plant Procedure A-1406, Control of Temporary Modifications

2.2 Foxboro Drawing, CD-12

2.3 Updated Final Safety Analysis Report, Section 7.7

## 3.0 Structures, Systems, and Components Affected (SSC)

The system affected by this modification is the auto rod control system.

## 4.0 Safety Function of Affected SSC's

The function of the rod control system is to automatically respond to changes in reactor coolant system temperature and nuclear power (load perturbations) to control reactivity and maintain or recover stable plant conditions with RCS Tav<sub>g</sub> within 1.5 degrees of program Tav<sub>g</sub>.

## 5.0 Effects on Safety

The proposed modification will connect a 6 pen Gould recorder to 6 existing test points in the RSC rack (see reference 2.2). Normal monitoring the voltage drop across the resistor at the test point by the high impedance recorder will have no effect on the loop signals generated in the auto rod control system. Failure of the test equipment would have no effect on 5 of the 6 signal loops. One of the six loops is a voltage loop where the potential failure would affect the variable gain input causing rods not to move at the required speed. Should rod control be in auto during this event, operator awareness of the test configuration and normal monitoring provides assurance that operator manual control of rods would maintain the plant stability.

## 6.0 Unreviewed Safety Question Conclusions

The proposed modification will not increase the probability of occurrence of an accident previously evaluated in the UFSAR because normal monitoring of the loop signals by this

test equipment will not affect the function of auto rod control.

The proposed modification will not increase the consequences of an accident previously evaluated in the UFSAR because there is no affect on the radiological barriers to a release of fission products.

The proposed modification will not increase the probability or consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR. The purpose of this modification is to identify the source of an equipment malfunction. The test equipment will not normally affect the signals being monitored to the rod control system. Should a test equipment failure occur, operator awareness of the modified system configuration and normal operator response to rod control malfunctions will prevent consequences outside those evaluated in the UFSAR.

The proposed modification will not create the possibility of an accident or malfunction of equipment of a different type than any evaluated in the UFSAR. The proposed modification only affect the rod control system operation in auto. Uncontrolled rod movement is evaluated in the UFSAR in Chapter 15 which bounds any potential event resulting from this modification.

The proposed modification will not reduce any margin of safety as defined in the basis of any Technical Specification. Rod control malfunctions are addressed in the UFSAR as discussed above. The proposed modification does not affect any margins of safety.

## 7.0 Conclusion

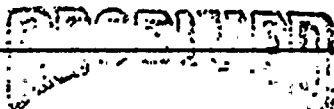
Based on the above discussion the proposed modification does not present an unreviewed safety question.

ATTACHMENT 1

## TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator)TM No.: 92-003 Date: 2/3/92Title: Boric Acid Transfer Pump RiggingPart II (Initiator)Type: Electrical ☐ Fluid ☐ Structural ☒Description: Attach chain hoist to grating over  
BA transfer pump A to facilitate pump removalPart III (Station Engineer)

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

Pump weight approx 150 #grating acceptable safe load > 200 #/Ft<sup>2</sup>

AUG 31 1992

CENTRAL RECORDS

TECHNICAL RECORDSCategory 442Reviewed SKH

ATTACHMENT 1 (CONT'D)

Evaluation: \_\_\_\_\_

The combined weight of the pump and chain hoist is less than 200#. This is less than the load rating of the grating and is therefore acceptable

Testing Requirements: NONESafety Analysis: (Attach documentation per A-303)

see attached

Mode Restrictions: NONEPREPARED BY: Ronald D. King DATE: 2/3/92REVIEWED BY: P. B. Bamford DATE: 2/4/92APPROVED BY: Jeffrey R. King DATE: 2/5/92PORC APPROVAL MEETING: Thomas M. Harris DATE: 2/3/92

SAFETY EVALUATION  
TEMPORARY MODIFICATION

Temporary Rigging to Remove The  
"A" Boric Acid Transfer Pump

92-003  
February 2, 1992

Rev. 0

Ginna Station  
Rochester Gas and Electric Corporation  
89 East Ave  
Rochester, New York 14649

Prepared by:	<u>Paul D. Pflay</u>	<u>2/4/92</u>
	Staff Engineer	Date
Reviewed by:	<u>J. W. Gledhill</u>	<u>2/5/92</u>
	Reactor Engineer	Date
Reviewed by:	<u>John P. Wylde</u>	<u>2/5/92</u>
	Manager, Technical Engineering	Date
Approved by:	<u>Thomas A. Marlow</u>	<u>2/5/92</u>
	Chairman, Plant Operations Review Committee	Date

## 1.0 Scope of Analysis

- 1.1 The purpose of this analysis is to evaluate the safety consequences of attaching temporary rigging to the grating over the A Boric Acid transfer pump. Under the scope of A-1406, connecting temporary rigging to non-rigging identified points is considered a temporary modification.

## 2.0 References

- 2.1 Plant Procedure A-1406, Control of Temporary Modifications
- 2.2 Interoffice Correspondence, dated March 30, 1987, Subject AFCAR 86-12:RD Item #2 Anchorage of Temporary Equipment at Ginna, From Leonard Sucheski To J. Widay
- 2.3 Ginna Technical Specifications section 3.2.2 and 3.3.1.1.j

## 3.0 Structures, Systems, and Components Affected (SSC)

The boric Acid transfer system could be affected by this Temporary Modification.

## 4.0 Safety Function of Affected SSC's

The boric Acid transfer system provides boric acid to the ECCS system for negative reactivity addition and shutdown margin.

## 5.0 Effects on Safety

Since the temporary rigging is located 1 1/2 times its height from the opposite train of boric acid transfer components and any other safety related equipment, damage to the surrounding equipment under a seismic event is prevented. In addition based on the evaluation of the rigging attachment provided in the Temp Mod evaluation, the rigging is within the load rating of the grating. The A train BA system is already out of service and covered by a Tech Spec LCO.

## 6.0 Unreviewed Safety Question Conclusions

- 6.1 The proposed modification will not increase the probability of occurrence of an accident previously evaluated in the UFSAR because the surrounding equipment will not be affected.

- 6.2 The proposed modification will not increase the consequences of an accident previously evaluated in the UFSAR because only the out of service train of the boric acid system will be affected
- 6.3 The proposed modification will not increase the probability or consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR evaluated in the UFSAR because only the out of service train of the boric acid system will be affected
- 6.4 The proposed modification will not create the possibility of an accident or malfunction of equipment of a different type than any evaluated in the UFSAR because only the out of service train of the boric acid system will be affected
- 6.5 The proposed modification will not reduce any margin of safety as defined in the basis of any Technical Specification. because only the out of service train of the boric acid system will be affected and LCO actions are already in place.
- 7.0 Conclusion

Based on the above discussion the proposed modification does not present an unreviewed safety question.

ATTACHMENT 1

## TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator)TM No.: 42-004 Date: 2/6/92Title: TEMPERARY CONNECTION OF RECORDING EQUIPMENT  
FOR TROUBLESHOOTING THE MAG-A-STAT VOLTAGE  
REGULATOR.Part II (Initiator)Type: Electrical ☒ Fluid ☐ Structural ☐Description: CONNECT TEMPORARY RECORDING  
EQUIPMENT TO VARIOUS POINTS IN THE  
MAG-A-STAT VOLTAGE REGULATOR.Part III (Station Engineer)

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

TEST POINT LOCATIONS AS SHOWN ON ATTACHED  
DRAWING 138D167TECHNICAL RECORDSCategory 442Reviewed NOT



ATTACHMENT 1 (CONT'D)

Evaluation: PER THE ATTACHED SAFETY EVALUATION,  
THE TEMPORARY CONNECTION OF RECORDING  
EQUIPMENT TO THE MAG-A-STAT VOLTAGE  
REGULATOR DOES NOT PRESENT AN  
UNREVIEWED SAFETY QUESTION.

Testing Requirements: NONE

Safety Analysis: (Attach documentation per A-303)  
SEE ATTACHED SAFETY EVALUATION

Mode Restrictions: \_\_\_\_\_

PREPARED BY: A. Permatius DATE: 2/6/92

REVIEWED BY: Robert H. Bryan DATE: 2/6/92

APPROVED BY: J. H. Pugh DATE: 2/6/92

PORC APPROVAL MEETING: 92-018 DATE: 2/6/92

SAFETY EVALUATION  
TEMPORARY MODIFICATION

Temporary Connection of Recording  
Equipment for Troubleshooting the  
Mag-A-Stat Voltage Regulator

92-004

02/06/92  
REV. 0

Ginna Station  
Rochester Gas & Electric Corporation

Prepared by: *R. L. Matthews* *2/6/92*  
Staff Engineer Date

Reviewed by: *J. J. L.* *2/6/92*  
Reactor Engineer Date

Reviewed by: *Thomas A. Marlow* *2-6/92*  
Manager, Technical Engineering Date

Approved by: *Thomas A. Marlow* *2-6-92*  
Chairman, PORC Date

1.0 Scope of Analysis

1.1 The purpose of this analysis is to evaluate the safety consequences of connecting temporary recording equipment to various points in the Mag-A-Stat Voltage Regulator. The recording equipment will gather data over an undetermined length of time, for the purpose of troubleshooting the Regulator.

1.2 The following points will be monitored:

- > Regulator Input Voltage
- > Field Breaker Voltage
- > Trinistat Input Voltage
- > Trinistat - Exciter Field Voltage
- > Trinistat - Exciter Field Current

2.0 References

2.1 Plant Procedure A-1406, Control of Temporary Modifications

2.2 Ginna Station UFSAR, Sections 10.2.2 & 10.7.6.8

2.3 Ginna Station Technical Specifications, Section 3.7

3.0 Structures, Systems, and Components Affected (SSC)

The Mag-A-Stat Voltage Regulator and Generator Field Excitation could be affected by this modification.

4.0 Safety Function of Affected SSC's

4.1 The Mag-A-Stat Voltage Regulator does not provide any function necessary for the safe shutdown of the plant.

4.2 The Ginna Station UFSAR, in section 10.7.6.8 addresses the Generator Exciter Cooling system in descriptive form only.

4.3 The Ginna Station Technical Specifications do not address Generator Excitation in section 3.7, Auxiliary Electrical Systems.

- 4.4 The Ginna Station UFSAR, in section 10.2.2 addresses Generator excitation in descriptive form only.
- 5.0 Effects on Safety
- 5.1 Since the Mag-A-Stat Voltage Regulator provides no safety function, there will be no effect on plant safety by the temporary installation of recording equipment.
- 5.2 The recording equipment utilized will have isolated, high impedance inputs so that no inadvertent failure of the Voltage Regulator, due to the recording equipment is anticipated.
- 6.0 Unreviewed Safety Question Conclusions
- 6.1 The proposed temporary modification will not increase the probability of occurrence of an accident previously evaluated in the UFSAR because the system affected is not required for the safe shutdown of the plant.
- 6.2 The proposed temporary modification will not increase the probability or consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR because the system affected is not required for the safe shutdown of the plant.
- 6.3 The proposed temporary modification will not increase the consequences of an accident previously evaluated in the UFSAR because the system affected is not required for the safe shutdown of the plant.
- 6.4 The proposed temporary modification will not create the possibility of an accident or malfunction of equipment of a different type than any evaluated in the UFSAR because only the Mag-A-Stat Voltage Regulator and Generator Excitation could be affected.
- 6.5 The proposed temporary modification will not reduce any margin of safety as defined on the basis of any Technical Specification because only Generator Exciter Cooling is addressed in Technical Specifications on a description basis only.

7.0

## Conclusion

7.1

Based on the above discussion, the proposed temporary modification does not present an unreviewed safety question.

ATTACHMENT 1

## TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator)TM No.: 92-005 Date: 02/18/92 REV 0Title: 5A HEATER VENT REPAIRPart II (Initiator)Type: Electrical      Fluid X Structural     

Description: THERE IS A LEAK IN THE VENT LINE FROM 5A  
HEATER THAT GOES TO THE CONDENSER. THERE COULD BE TWO  
POSSIBLE REPAIRS. INSTALL A 2 PIECE PATCH AND WELD IT OR :  
INSTALL A NIPPLE UP TO 2" IN DIAMETER AND A THREADED  
CAP. LINE IS Labeled LOCATED ABOVE 4A HTR. W04 9200364.  
LINE IS NWS.

Part III (Station Engineer)

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

Line Spec 150-1 PID 33013 1922 REV 7Press 425 psigTemp 400 °FNon Seismic Non Safety related



ATTACHMENT 1 (CONT'D)

Evaluation: see Attachment 1 for repair configuration  
Since end of pipe is not restrained  
thermal stress are not applicable. due to the  
short length of pipe between main and branch no  
supports required. Pipe materials and schedules  
are compatible with line Spec 150-1. Consequently,  
231.1 press rating is met. Seam welded pipe is  
acceptable for short durations

Testing Requirements: Visual examination by maintenance  
is acceptable

Safety Analysis: (Attach documentation per A-303)

Covered by Temp Mod Safety Analysis 91-051  
~~91-050~~ Welded patch is equivalent to mechanical  
clamp

Mode Restrictions: None

PREPARED BY: Russ Stief DATE: 02/18/92

REVIEWED BY: B. J. K. K. K. DATE: 2/18/92

APPROVED BY: J. J. K. K. DATE: 2/18/92

PORC APPROVAL MEETING: T1-14B DATE: 12/10/91



ATTACHMENT 1

## TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator)TM No.: 92-006Date: 2/28/92

Title: TEMPORARY CONNECTION OF RECORDING EQUIPMENT  
FOR TROUBLESHOOTING ERRATIC OPERATION OF HEAT  
TRACE CIRCUIT ESP.

Part II (Initiator)Type: Electrical ☒ Fluid ☐ Structural ☐

Description: CONNECT RECORDING EQUIPMENT TO  
HEAT TRACE ESP CONTROLLER

Part III (Station Engineer)

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

TEST POINT LOCATIONS SHOWN ON ATTACHED  
SKETCH.

TECHNICAL RECORDS

Category

4.42

Reviewed

AKA

ATTACHMENT 1 (CONT'D)

Evaluation: PER THE ATTACHED SAFETY EVALUATION,  
THE TEMPORARY CONNECTION OF RECORDING  
EQUIPMENT TO THE EBP HEAT TRACE  
CONTROLLER DOES NOT PRESENT AN  
UNREVIEWED SAFETY QUESTION

Testing Requirements: NONE

Safety Analysis: (Attach documentation per A-303)

SEE ATTACHED SAFETY EVALUATION

Mode Restrictions: NONE

PREPARED BY: D. Perwaters

DATE: 2/28/92

REVIEWED BY: John Peak

DATE: 2/28/92

APPROVED BY: W. J. [Signature]

DATE: 2/28/92

FORC APPROVAL MEETING: Bill Marshall

DATE: 2/28/92

SAFETY EVALUATION  
TEMPORARY MODIFICATION

Temporary Connection of Recording  
Equipment for Troubleshooting Erratic  
Operation of Heat Trace Circuit E8P

92-006

02/28/92  
REV. 0

DATE: 2/28/92

MEETING # 92-004

Ginna Station

Rochester Gas & Electric Corporation

Prepared by: *J. Peratoni* 2/28/92  
Staff Engineer Date

Reviewed by: *John Cook* 2/28/92  
Reactor Engineer Date

Reviewed by: *Jeffrey P. W. J.* 2/28/92  
Manager, Technical Engineering Date

Approved by: *Bill M. H.* 2/28/92  
Chairman, PORC Date

1.0 Scope of Analysis

1.1 The purpose of this analysis is to evaluate the safety consequences of connecting temporary recording equipment to Heat Trace Circuit E8P. This circuit has experienced erratic operation.

1.2 The following points will be monitored:

- > Spare Contact on E8P Thermostat Controller
- > E8P Thermocouple mV Input

1.3 Per Procedure S-3.6, circuit E8P is heat trace for Boric Acid Pump #1, primary, Recorder 14A input point 18.

2.0 References

2.1 Ginna Procedure A-1406, Control of Temporary Modifications

2.2 Ginna Station UFSAR, Sections 9.3.4.2.6 and 9.3.4.3.3.5

2.3 Ginna Station Technical Specifications, Section 3.2.3

2.4 Ginna Station Procedure S-3.6, Auxiliary Building Heat Tracing System Operation

3.0 Structures, Systems, and Components Affected (SSC)

There are no SSC's affected by this Temporary Modification. Since a spare contact will be utilized on the heat trace controller, the heat trace circuit will not be affected. Since a recorder with an isolated, high impedance input will be used to monitor the thermocouple input, the controller input and Recorder 14A, point 18 will not be affected.

4.0 Safety Function of Affected SSC's

4.1 The Ginna Station UFSAR, in Section 9.3.4.2.6, addresses Heat Trace Systems associated with CVCS. This section does not specifically address heat trace associated with Boric Acid Pump #1.

- 4.2 The Ginna Station UFSAR, in Section 9.3.4.3.3.5, addresses the Boric Acid Transfer Pumps. This section does not specifically address heat trace associated with the pump.
- 4.3 The Ginna Station Technical Specification, in Section 3.2.3(b), addresses limiting conditions for operation regarding the Boric Acid Pumps. Should Heat Trace Circuit E8P fail, Boric Acid Pump #1 may have to be declared inoperable. If it remains inoperable for more than 24 hours, the reactor must be brought to Hot Shutdown.
- 5.0 Effects on Safety
- 5.1 Heat trace associated with the Boric Acid Pumps inherently provides no direct safety function. Failure of heat trace on one pump is operationally covered by Technical Specifications.
- 5.2 Connection of recording equipment will not cause inadvertent failure of the heat trace circuit (see paragraph 3.0, above).
- 6.0 Unreviewed Safety Question Conclusions
- 6.1 The proposed temporary modification will not increase the probability of occurrence of an accident previously evaluated in the UFSAR because this heat trace circuit does not directly provide an accident mitigating function.
- 6.2 The proposed temporary modification will not increase the probability or consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR because this heat trace circuit does not directly provide a safety function.
- 6.3 The proposed temporary modification will not increase the consequences of an accident previously evaluated in the UFSAR because isolated recording techniques will be used and thus, will not cause heat trace controller failure.

6.4 The proposed temporary modification will not create the possibility of an accident or malfunction of equipment of a different type than any evaluated in the UFSAR because isolated recording techniques will be used and thus, will not cause heat trace controller or Boric Acid Pump failure.

6.5 The proposed temporary modification will not reduce any margin of safety as defined on the basis of any Technical Specification because isolated recording techniques will be used and thus, will not cause heat trace controller failure. Should the controller or heat trace fail during the troubleshooting period, causing Boric Acid Pump #1 to be inoperable, Technical Specifications provide the criteria for taking the reactor to shutdown.

7.0 Conclusion

7.1 Based on the above discussion, the proposed temporary modification does not present an unreviewed safety question.



ATTACHMENT 1

## TEMPORARY MODIFICATION EVALUATION

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**Part I (TM Coordinator)**TM No.: 72-507 Date: 3/11/72Title: "A" FW Pump Section Relief Valve Repair

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**Part II (Initiator)**Type: Electrical      Fluid ✓ Structural     

Description: EVALUATE THE INSTALLATION OF TEAM  
LEAK REPAIR CLAMP ON THE INLET PIPING  
TO RELIEF VALVE V-3973 ON THE "A" MFW PUMP.  
WO # 9200539

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Charm Collins

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**Part III (Station Engineer)**

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

Design Pressure 400 psigDesign Temp 375°FLine Spec 300-1

Non-seismic, N'S valve / line

PID 33013-1236 sheet 1

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ATTACHMENT 1 (CONT'D)

Evaluation: The clamp will be designed for  
the low temperature and pressure and will  
therefore meet the pressure boundary requirements  
for this line. It has no potential impact  
to any safety related SSC.

Testing Requirements: Visual inspection for leakage  
after installation.

Safety Analysis: (Attach documentation per A-303)

See generic safety analysis for secondary  
(NWS) pipe repair clamps, Temp Mod 91-052  
safety analysis. This clamp falls within  
the bounds of TM 91-052 safety analysis.

Mode Restrictions: None.

PREPARED BY: PB Bamford DATE: 3/11/92

REVIEWED BY: H. Van Houte DATE: 3/11/92

APPROVED BY: W. J. L. DATE: 3/11/92

PORC APPROVAL MEETING: 91-152 (TM 91-052) DATE: 12/12/91



ATTACHMENT 1

## TEMPORARY MODIFICATION EVALUATION

Part I (TM Coordinator) NoneTM No.: 92-009 Date: 3/17/92Title: FIRE SYSTEM VALVE 9209 LIFT RIGGINGPart II (Initiator)Type: Electrical      Fluid      Structural ✓

Description: FIRE VALVE 9209 HAS A STRUCTURAL  
I. BEAM ABOUT 6" WEBBING THE VALVE WOULD HAVE TO BE  
RIG FROM THIS BEAM

Bob HAYS KZZS

Part III (Station Engineer)

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

Value weight is approx 300#. weight of chain hoist,  
clamps, slings or chains is approx 100#. I-beam  
is 9' in length and is a W8x31.

ORDS42ABA

## ATTACHMENT 1 (CONT'D)

Evaluation: Bending moment from applied 400# load is  
 $M = \frac{F \cdot L^2}{2} = 400 \cdot (4.5 \text{ ft})^2 / 2 = 4050 \text{ ft-lb}$  resultant bending stress  
 is flexure  $f = \frac{M \cdot C}{I} = (4050 \text{ ft-lb}) \cdot (12 \text{ in/ft}) \cdot (1 \text{ in}) / 110 \text{ in}^4 = 196 \text{ psi}$   
 Thus additional load to this building member is  
 acceptable as it will not exceed it beyond allowable  
 stress values. Turb Bldg Inter floor <sup>acceptable</sup> live load =  $200 \text{ lb/ft}^2$ , a 400#  
 load to this beam will result in a load of  $(8 \text{ ft}) \cdot (200 \text{ lb/ft}^2) = 1600 \text{ lb}$  or  $400 \text{ #} \cdot (1 \text{ ft}^2) \cdot (1 \text{ ft})$   
 or  $66 \frac{2}{3} \text{ lb/ft}^2$  and is therefore acceptable. No other live loads  
 presently exist in this area of the building.  
 Testing Requirements: None

Safety Analysis: (Attach documentation per A-303)

See Attached

Mode Restrictions: None

PREPARED BY: D. J. Karlysh

DATE: 3/11/92

REVIEWED BY: Planned & Done

DATE: 3/19/92

APPROVED BY: W. J. Karlysh

DATE: 3/19/92

PORC APPROVAL MEETING: 9-2-629

DATE: 3-19-92



ROCHESTER GAS AND ELECTRIC CORPORATION

89 EAST AVENUE

ROCHESTER, NEW YORK 14649

GINNA STATION

SAFETY ANALYSIS

FOR

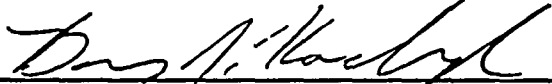



TEMPORARY MODIFICATION

92-009  
~~92-008~~ SX

REVISION 0

MARCH 11, 1992

TEMPORARY RIGGING TO REMOVE/INSTALL  
FIRE SYSTEM VALVE 9209

PREPARED BY:	<u></u>	<u>3/18/92</u>
	Responsible Staff Engineer	Date
REVIEWED BY:	<u></u>	<u>3/18/92</u>
	Reactor Engineer	Date
REVIEWED BY:	<u></u>	<u>3/18/92</u>
	Technical Manager	Date
APPROVED BY:	<u></u>	<u>3/19/92</u>
	Chairman, Plant Operations Review Committee	Date

1.0 SCOPE OF ANALYSIS:

1.1 The purpose of this analysis is to evaluate the safety consequences of attaching temporary rigging to a structural member of the Turbine Building located above Fire Protection System valve 9209.

2.0 REFERENCES:

- 2.1 A-1406, Control of Temporary Modifications.
- 2.2 A-303 Preparation, Review and Approval of Safety Analysis for Minor Modifications for Special Tests.
- 2.3 Interoffice Correspondence, dated March 30, 1987, Subject AFCAR 86-12:RD Item #2 Anchorage of Temporary Equipment at Ginna Station, From L. Sucheski to J. Widay.
- 2.4 Technical Specifications Section 3.14.

3.0 STRUCTURES, SYSTEMS AND COMPONENTS AFFECTED (SSC)

3.1 Structures, systems and components affected directly or indirectly by the modification are as tabled below.

<u>Structures</u>	<u>Systems</u>	<u>Components</u>
Turbine Bldg	Fire Protection	Valve 9209

4.0 SAFETY FUNCTION OF AFFECTED SSCs

- 4.1 This area of the Turbine Building presently serves no safety function. It's primary purpose is to provide protection of secondary plant equipment.
- 4.2 The Fire Protection System and valve 9209 are classified as Safety Significant. Their safety function is to provide a supply of water for Fire Protection.





5.0 EFFECTS

- 5.1 This temporary modification will not adversely affect any other components or equipment with any safety functions. This temporary modification will not adversely affect the Turbine Building, as it serves no safety function. This temporary modification will not adversely affect the Fire Protection System, as this portion of the system will be taken out of service for maintenance of valve 9209. The temporary modification will in turn be removed when maintenance is completed and can thus not affect the inservice Fire Protection System.

6.0 UNREVIEWED SAFETY QUESTION CONCLUSIONS

- 6.1 The proposed modification will not increase the probability of occurrence of an accident previously evaluated in the UFSAR. Only the structure of the Turbine Building and the out of service portion of the Fire Protection System will be affected and other surrounding equipment is not utilized for any accidents evaluated in the UFSAR.
- 6.2 The proposed modification will not increase the consequences of an accident previously evaluated in the UFSAR because only the Turbine Building structure and the out of service portion of the Fire Protection System will be affected.
- 6.3 The proposed modification will not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the UFSAR because only the Turbine Building structure and the out of service portion of the Fire Protection System will be affected.
- 6.4 The proposed modification will not increase the consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR because only the Turbine Building structure and the out of service portion of the Fire Protection System will be affected.
- 6.5 The proposed modification will not create a possibility for an accident of a different type than any evaluated previously in the UFSAR because only the Turbine Building structure and the out of service portion of the Fire Protection System will be affected and the requirements of Technical Specifications have been considered.

6.6 The proposed modification will not create a possibility for a malfunction of equipment of a different type than any evaluated previously in the UFSAR because this modification only affects the Turbine Building structure and the out of service portion of the Fire Protection System.

6.7 The proposed modification will not reduce any margin of safety as defined in the basis of any Technical Specification because only the Turbine Building structure and the out of service portion of the Fire Protection System is affected, the temporary modification will be removed and the system restore to service following maintenance of the valve.

7.0 CONCLUSION

7.1 This modification does not involve an unreviewed safety question based upon the discussion contained within this document.

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

=====  
PART I

TM No: 92-010

Date: 03/23/92

Rev. 0

Title: INSTALL "A" MFP SEAL DP TRANSMITTER AND RECORDER

=====  
PART II

Type:        Electrical   x      Fluid   x      Structural     

Description: IN ORDER TO MONITOR MFP SEAL DP DURING SHUTDOWN AND START UP INSTALL A TEMPORARY TRANSMITTER, TUBING AND THREE WAY BLOCK VALVE DOWN STREAM OF ROOT VALVES 3810B AND 3810C FOR PS-2051 (A MFP SEAL DP PRESSURE SWITCH). ALSO INSTALL A TEMPORARY WIRE FROM THE OUTPUT OF PT-2015 "A" MFP SUCTION PRESSURE AT TEST POINT TP-6 LOCATED IN THE LOCAL FEEDWATER PANEL. THE OUTPUT FROM THE SEAL DP TRANSMITTER AND THE TEMP WIRE FROM TP-6 WILL BE INPUT TO A GOULD RECORDER LOCATED IN THE MAIN FEED PUMP ROOM NEXT TO THE FEEDWATER CONTROL PANEL. POWER FOR THE RECORDER AND THE NEW PT WILL BE SUPPLIED FROM A 120VAC WALL SOCKET. IN ADDITION, WHILE THE TRANSMITTER IS BEING FILLED AND VENTED, THE "A" MFP LOW SEAL DP WILL BE DEFEATED (See Attached Sketch 1 and marked up dwgs 33013-1905,1627,1959 for details)

=====  
PART III

Design Inputs: Sealwater Injection design pressure: 400 psig  
Sealwater Injection design temperature: 375 F  
Fluid: Condensate water  
Code: ANSI B31.1 1986

Evaluation: A) MECHANICAL- Tubing shall be seamless stainless steel type 304 or 316 and fittings shall be swagelok compression fittings SS type 316 or 304. This meets the system temperature, pressure, and code design conditions per Gilbert line spec SP-863 A-1. The valves for the new transmitter shall be Anderson Greenwood Assy No. 25-257-540, type M1HS3TON. This is a Type 316 SS three way instrument block valve with a 900# ANSI rating. This meets the system code, temperature, and pressure design requirements. The new transmitter shall be Rosemount Model 115HP7E22B1. This model transmitter is made from 316 SS and is rated for 2500 psig working pressure. This also meets system design requirements. The new transmitter will be rigidly mounted to provide adequate support to the new tubing and valves. Temperature affects on the

~~INACHMEUS~~

TEMPORARY MODIFICATION 92-010

Evaluation (cont.)

new tubing is not a consideration since essentially the tubing will be at ambient temperature due to no flow through the new tubing and there is sufficient flexibility in the tubing run to accommodate any thermal expansion. Sketch 1 provides the necessary installation instructions.

B) ELECTRICAL- A temporary wire will be connected at test point TP-6 (reference RG&E dwg 33013-1627) within the Feedwater panel located in the MFP room and input into the temporary Gould recorder also located in the MFP room. Since TP-6 is an established test point and the Gould model 22005 has isolated inputs, control circuits will not be affected by any cable faults. The addition of the Rosemount DP transmitter will only input to the Gould recorder and consequently, will also not affect control circuits. In order to prevent any false low seal DP signals from tripping the "A" MFP while the new transmitter tubing is being filled and vented, the DP signal will be bypassed until the new transmitter is in service. This will be accomplished by opening the states deck for terminals 1 and 2 on terminal block FL-2 located in relay rack RA-2 (front) for the contact from relay AR-58 which closes to make up the "A" MFP trip circuit. This will prevent the AR-58 contact in the MFP trip circuit from closing and energizing the trip coil. Relay AR-58 is deenergized when PS-2051 is closed which then closes contact AR-58 in the pump trip circuits. (see attached drawings 33013-1959 sh1 ,10905-0030A sh1 and 10905-318 for reference)

C) OPERATIONS- As a compensatory measure while the low seal DP is defeated, an Auxiliary Operator shall be stationed locally to monitor "A" MFP seal DP.

Testing Requirements: The new tubing, valve and transmitter connections shall be checked for leakage prior to reinstating low MFP seal DP trip.

Safety Review: See attached safety evaluation for TM 92-010

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

Mode Restriction: None

TEMPORARY MODIFICATION 92-010

Evaluation (cont.)

PREPARED BY: Robert D. Hoff DATE: 3/21/92  
REVIEWED BY: Ben J. Kachyl DATE: 3/24/92  
REVIEWED BY: R. Senectious DATE: 3/24/92  
APPROVED BY: W. J. H. DATE: 3/24/92  
PORC APPROVAL MEETING: Timarlow DATE: 3/25/92

SAFETY ANALYSIS

Temporary Connection of a Pressure Transmitter  
to "A" MFP Seal Differential Pressure Switch  
and Temporary Defeat of Low Seal DP MFP Trip

Ginna Station

Rochester Gas and Electric Corporation

89 East Ave

Rochester, New York 14649

TEMPORARY MODIFICATION 92-010

Rev. 0

March 23, 1992

Prepared by: *Paul D. Bluff* 3/21/92  
Staff Engineer Date

Reviewed by: *John P. Cook* 3/24/92  
Reactor Engineer Date

Reviewed by: *J. W. [unclear]* 3/24/92  
Manager, Technical Engineering Date

Approved by: *Thomas A. Marlow* 3/25/92  
Chairman, Plant Operations Review Committee Date





## 1.0 Scope of Analysis

- 1.1 The purpose of this analysis is to evaluate the safety consequences of temporarily connecting a pressure transmitter across the "A" main feed water pump (MFP) seal injection differential pressure (DP) switch PS-2051.
- 1.2 In addition, the affects of temporarily defeating the "A" MFP low seal DP pump trip while filling and venting the new transmitter will also be evaluated.
- 1.3 The safety consequences of temporarily connecting a recorder to test point 6 in the feed water panel has already been reviewed under TSR 92-057 and found to be acceptable. Therefore, this analysis will not address the recorder

## 2.0 References

- 2.1 Plant Procedure A-1406, Control of Temporary Modifications
- 2.2 Ginna UFSAR sections 10.4.4, 10.4.5, 15.2.6
- 2.3 Temporary Modification 92-010

## 3.0 Structures, Systems, and Components Affected (SSC)

The "A" Main Feed Water Pump is affected by this Temporary modification

## 4.0 Safety Function of Affected SSC's

- 4.1 The MFP does not perform any safety functions
- 4.2 The function of the low seal DP trip is solely to prevent pump seal damage due to loss of cooling. It does not provide any safety functions

## 5.0 Effects on Safety

- 5.1 The purpose of adding a pressure transmitter to the seal pressure switch is to record pressure transients during unit shutdown and start up. On several occasions during pressure transients associated with start up and shutdown of the feed water system low seal DP trips have occurred on the "A" MFP. Having a hard copy of the transients may provide information which could attribute the pressure fluctuations to equipment manipulations.

- 5.2 Per the Temporary Modification Evaluation, all the new tubing, fittings, valves, and the transmitter meet the design requirements for temperature and pressure for the Seal Water Injection system. In addition the new components will be properly supported to prevent any structural damage.
- 5.3 As a precautionary measure, while the new equipment is being filled and vented, the low seal DP to the "A" MFP will be defeated to preclude any false signals. As a compensatory measure, local indication will be monitored to alert the operators to any real low DP signals. These measures will prevent any spurious or false loss of feed water.
- 6.0 Unreviewed Safety Question Conclusions
- 6.1 The proposed modification will not increase the probability of occurrence of an accident previously evaluated in the UFSAR because the new equipment meets all the system design requirements and during installation measures will be provided to prevent any false pump trip signals that could result in a partial loss of feed water.
- 6.2 The proposed modification will not increase the consequences of an accident previously evaluated in the UFSAR because Auxiliary Feedwater is unaffected by this modification and it provides the safety function for a loss of main feedwater.
- 6.3 The proposed modification will not increase the probability or consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR because any potential false signals from during installation of this modification will be defeated and direct continuous operator monitoring will be provide the pump protection function.
- 6.4 The proposed modification will not create the possibility of an accident or malfunction of equipment of a different type than any evaluated in the UFSAR because the feed water system function and design will not be changed.
- 6.5 The proposed modification will not reduce any margin of safety as defined in the basis of any Technical Specification because the main feed water pumps are not part of Technical Specifications nor are they part of any of the basis.
- 7.0 Conclusion

Based on the above discussion the proposed modification does not present an unreviewed safety question.

TECHNICAL RECORDS

Category 4.42

TEMPORARY MODIFICATION EVALUATION

Reviewed AKH

=====

PART I

TM No: 92-011

Date: 03/26/92

Rev. 0

Title: TEMPORARY CHILLER SYSTEM

=====

PART II

Type:        Electrical x        Fluid x        Structural   

Description: See Attached

AUG 31 1992

=====

PART III

Design Inputs: Service Water design pressure: 150 psig

design temperature: 200 F

Fluid: Lake water

Code: ANSI B31.1 1955

Chilled Water design pressure: 75 psig

design temperature: 100 F

Fluid: Glycol and Water

Code : ANSI B31.1 1955

Evaluation: See attachment 1

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

Safety Review: See attached safety evaluation for TM 92-011

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

Mode Restriction: None

Category T-1

DESCRIPTION - sketch

TEMPORARY MODIFICATION 92-011

PREPARED BY: [Signature] DATE: 3/27/92

REVIEWED BY: [Signature] DATE: 3/28/92

APPROVED BY: [Signature] DATE: 3/28/92

PORC APPROVAL MEETING: Thomas M. Moore DATE: 3/28/92

# Temporary Modification 92-011

## ATTACHMENT #1 TEMPORARY SYSTEM CHILLED WATER

page 1 of 7

### DESCRIPTION:

The Chilled Water System provides cooling for the control room. Heated air and cooled air are mixed in proper proportions with dampers to maintain a comfortable air temperature.

The purpose of this temporary system is to maintain chilled water primarily to the control room and secondarily to the service building HVAC systems while the Chilled Water heat exchangers (SCI03A and B) are removed from service for maintenance. Chilled Water will be cooled by Service Water through temporary redundant heat exchangers and recirculated by temporary pumps. Each heat exchanger is capable of removing enough heat to service the control room.

Only the chilled water will be effected, air balances and filtration will remain unchanged from the normal HVAC configuration.

1.5" hoses will be connected between Service Water and the tube side of each heat exchanger. The service water system has ample capacity to supply this flow. Chilled Water will be routed from drain valves on the return header (valves 5836A and 5836B) to the suction side of two pumps with temporary piping. The discharge from these pumps will be routed to the shell side of the heat exchangers. The shell side outlets will be routed to the Chilled Water supply header (valves 5834B and 5634C), closing the loop.

The hot and cold deck controllers will function normally and can be adjusted to maintain a level comfort in the Control Room. Other Chilled Water loads will be supported but can be isolated or throttled if necessary to support the demand of the Control Room.

### DESIGN CRITERIA:

The function of the Control Room HVAC System is to provide a controlled environment for the safety and comfort of the control room personnel and to ensure the operability of the control room components during normal operating, anticipated operational transient, and design basis accident conditions.

## CALCULATION:

$$\dot{Q} = \dot{M} C_p \Delta T$$

where:

$\dot{Q}$  = heat-transfer

$\dot{M}$  = flowrate

$C_p$  = specific-heat

$\Delta T$  = temperature-change

$$(100 \text{ GPM}) (1 \text{ BTU/LB}^\circ\text{F}) (10^\circ\text{F}) (8 \text{ LB/GAL}) (60 \text{ MIN/HR}) = 480,000 \text{ BTU/HR}$$

Water flow through the temporary chill water system is limited by the pressure drops, 50 GPM is expected for each of the two loops, or a total of 100 GPM.

The Temperature of the Service Water (Lake Ontario Temperature) is typically less than 40 deg for this time of year.

The Service Water flow rate will be 100 GPM per heat exchanger or a total of 200 GPM.

The Chilled Water delta T desired is 10 deg for a total heat transfer rate of 480,000 BTU/HR (both heat exchangers). the Service Water temperature will increase 5 deg for this heat transfer.

The control room heat load was found to be 48,700 BTU/H as reported in the Devonrue Environmental Study. The estimated heat transfer rate of this temporary system is adequate to maintain a level of comfort in the control room. Excess cooling capacity will be used by the service building HVAC units.



## EVALUATION:

Maintaining the control room safety and comfort is the safety significant function of the control room HVAC system. This temporary system will remove the heat necessary to maintain the level of comfort in the control room.

This system is made up of redundant independent heat exchangers and pumps. If any single component should fail, the redundant system is capable of supplying the control room HVAC cooling.

~~In the case of loss of Service Water there is no new condition introduced, the permanent system also uses SW as the heat sink, however, fire water is available as an alternate heat sink for the temporary system.~~

In the case of the loss of offsite power the chiller system is powered by bus 13 and 15 which ~~are~~<sup>can be</sup> tied to safeguards busses but ~~may~~<sup>will</sup> be automatically disconnected for diesel loading conditions. An alternative power supply could be obtained within a matter of hours for the temporary pump(s).

If a temporary heat exchanger should leak, the turbine building drains are adequate to prevent flooding. The Service Water and Chilled Water Systems are both rated at 150 psi and do not pose an over pressurization question should there be a tube to shell leak. Normal make up to the chilled water system will remain in service preventing a loss of inventory. The maximum head of the temporary pumps is well below the design pressure of the piping. Fire Hose 1 1/2" rated for 200 psi max. PVC PIPE Sch 80 rated for 470 psig @ 73°F

The two Systems in question are not high energy, and a break in the temporary piping does not represent a safety hazard to personnel in the area.

The structural loads introduced by this temporary system are minor, the majority of the weight will be supported by the turbine building basement concrete floor. Each pump, heat exchanger and associated piping (excluding fire hose) will weigh less than 280 pounds full of water.

~~This temporary system does not pose an unreviewed safety question. It does not increase the probability of occurrence of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report. It does not create the possibility of an accident or malfunction of a different type than any evaluated previously in the safety analysis report. It does not reduce the margin of safety as defined in the basis for any technical specification.~~

PVC rating at 110°F is 235 psig. The chilled water system is designed for 100°F therefore OK for chilled water. Based on calculation Service Water temperature rise will be 5°F SW operating temp max is 85°F in the summer. maximum operating temp would be 90°F. This is



## TEMPORARY MODIFICATION 92-011

## CHILLER SYSTEM

ELECTRICAL

Each pump will be powered from separate

Sources. The unit located next to the Fire

Water Storage Tank will be powered from

a 120VAC wall outlet located on Column E-4.

This wall outlet is powered from a duplex box on

Column E-4 via a (20 Amp) BKR. The Duplex box

is powered from Turbine Building Lighting Panel TB-01

Breaker #9 (90 Amp). The unit located next to

the bus duct cooling fans will be powered from

a 120VAC wall outlet located on Column F-12

This outlet is powered from Turbine Building Lighting

Panel TB-02 BKR #12 (20 Amp)



According to RGE Draw 03200-0102, TB-02

is powered from TB-09 BKR 4. TB-09 is powered

from BUS 13 <sup>POS/</sup> BKR #6A. TB-01 is powered from TB-09

BKR 2.

TB-01 and TB-02 ARE both capable of being

power from BUS 15 VIA THROW over switch

SS04 and SS05, respectively. SS04 is powered

from Control Building Lighting Panel CB-03 BKR #1

SS05 is powered from CB-03 BKR #9. CB-03

is powered from BUS 15 pos 3B.

Consequently, each unit will have the capability

of being powered from either BUS 13 or 15

Alternatively, the unit next to the bus duct coolers may be powered from the duplex outlet on Column E-11 (20 amp Bkr). This outlet is powered directly from TB-09 via Bkr #9 (90 amp).

The pump motor is - a  $1\frac{1}{2}$  HP 115V/230VAC (# 4291K34) MACMASTERS

D Motor with a 19.2 max amp draw. The pumping conditions will not require full rated conditions.

Consequently expected current draw should be much less than 19.2. Startup current may exceed the 20 amp breaker rating for a short duration but the breaker have a time delay that should prevent the breaker from tripping.



SAFETY ANALYSIS

Temporary Chiller System

Ginna Station

Rochester Gas and Electric Corporation

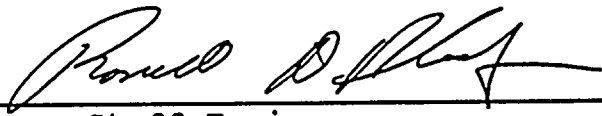
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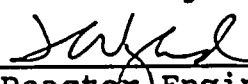
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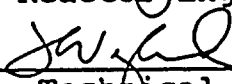
TEMPORARY MODIFICATION 92-011

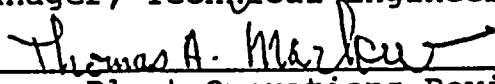
Rev. 0

March 26, 1992

Prepared by:  3/28/92  
Staff Engineer Date

Reviewed by:  3/28/92  
Reactor Engineer Date

Reviewed by:  3/28/92  
Manager, Technical Engineering Date

Approved by:  3/28/92  
Chairman, Plant Operations Review Committee Date

## Temporary Chiller System

### 1.0 Scope of Analysis

- 1.1 The purpose of this analysis is to evaluate the safety consequences of temporarily connecting a chiller system for the Control Room HVAC system while Service water valves and Chiller valves are being replaced in the permanent system. The system will be connected for approximately one week.

### 2.0 References

- 2.1 Plant Procedure A-1406, Control of Temporary Modifications  
2.2 Ginna UFSAR sections 6.4, 9.4.3  
2.3 Temporary Modification 92-011  
2.4 Ginna Technical Specifications sections 3.3.5, 3.5.6  
2.5 Devonrue Environmental Study

### 3.0 Structures, Systems, and Components Affected (SSC)

The Chilled Water System will be affected by this temporary modification. The chiller system provides cooling to the control room and service building HVAC units. The Chiller system is a closed loop system cooled by Service Water through two 100% capacity redundant heat exchangers and pumps

### 4.0 Safety Function of Affected SSC's

- 4.1 In the event of a design basis accident, the Control Room ventilation system provides sufficient radiation protection, ventilation, filtering and Toxic gas detection to ensure that control room personnel can perform all required safety functions from the Control Room.
- 4.2 Although Control Room cooling is not required by the Technical Specifications, under certain limiting Control Room heat load and outside air temperature conditions, the chillers are required to maintain Control Room temperature within design limits. ( ref 2.5)

### 5.0 Effects on Safety

- 5.1 The Control Room chiller system is a commercial grade non-safety related non-class 1E system and is not required by the control room HVAC system to perform safety function 4.1.

## Temporary Chiller System

- 5.2 The chiller system is a safety significant system. Consequently, the temporary system will be provided with redundant pumps and heat exchangers powered from bus 13 and 15 similar to the permanent chiller system. Service water cooling will be supplied with fire hoses from the Turbine Building header. The Turbine building Header has supply connections from both Service water headers similar to the Intermediate building header which supplies the permanent Chiller system. The temporary system meets both the Service water and the Chilled water system pressure and temperature requirements.
- 5.3 This temporary system provides redundant chiller capacity sufficient to remove heat from Control Room loads. According to the temporary modification evaluation (ref 2.3), the temporary system with both heat exchangers operating will provide approximately 1/3 ( 480,000 BTU/HR ) the capacity of the existing system. Based on test data, reference 2.5, the 100% power heat load for the Control Room is approximately 49,000 BTU/HR. The remainder of the heat load is from the service building.
- 5.4 Due to the weather conditions during the months of March and April and the reduced heat loads as a result of shutdown, this is considered sufficient capacity to prevent elevated temperatures in both areas. However, should temperatures increase in the Control Room, cooling flow to the Service building will be throttled or isolated. This will ensure that as a minimum, the control room will have sufficient cooling. Previous operational history during shutdowns with the chiller system totally isolated for short duration did not cause any appreciable Control Room heat up.
- 5.5 Should any leaks develop in either the temporary SW or Chiller piping/hoses, the associated volumes are enveloped by a break in the 36" Circulating Water piping. No water spray hazards will be introduced since the temporary hoses will not be routed in the area of any safeguards buses.
- 6.0 Unreviewed Safety Question Conclusions
- 6.1 The proposed modification will not increase the probability of occurrence of an accident previously evaluated in the UFSAR because replacement of the permanent commercial grade Chilled Water system with the redundant loop temporary system does not reduce the margins of safety.





ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

=====

PART I

TM No: 92-029

07/09/92  
Date: 05/19/92 ~~EX~~ Rev. 1

Title: Disable CET's A-7, B-5, C-8, G-4, H-13, K-3, ~~F-8~~<sup>BTX</sup> L-10

=====

PART II

Type: Electrical

Description: Intermittent and/or failed CET's are causing spurious alarms, erroneous indication, or failed indication. Disable CET inputs, as listed above, at Incore Rack #4 as follows:

A-7: T2B Terminals 5/6  
B-5: T2A Terminals 3/4  
C-8: T1B Terminals 21/22  
G-4: T1B Terminals 31/32  
H-13: T1A Terminals 23/24  
K-3: T1B Terminals 5/6

~~F-8~~<sup>BTX</sup>  
L-10: T1A Terminals 9/10

=====

PART III

Design Inputs: RGE Drawing 33013-1569

WR/TR 9200911

UFSAR Table 7.5-1, Note 2

UFSAR Section 7.7.2.6.4.5

Technical Specification Table 3.5-3

Evaluation: Ginna Technical Specifications require a minimum of four CET channels per core quadrant to be operable. The Ginna UFSAR indicates that one core map per hour is generated and stored in the Plant Process Computer System (PPCS). Disabling the above seven ~~six~~ CET's will not affect Technical Specification compliance or create an unreviewed safety configuration. As the attached sketch indicates, more than four CET's per quadrant remain available and the disabled CET's will not affect PPCS mapping. These CET's do not provide input to A or B Train RVCES.

Testing Requirements: Ensure that the remaining CET's are operating normally.

Safety Review: Refer to attached Safety Evaluation.

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: 5/20/92 *SK*  
REVIEWED BY: *[Signature]* DATE: 5/20/92 *SK*  
APPROVED BY: *[Signature]* DATE: 5/20/92 *SK*  
PORC APPROVAL MEETING: 92-086 DATE: 5/20/92

Rev1 Prepared by: *[Signature]* Date: 7/9/92  
Rev1 Reviewed by: *[Signature]* Date: 7/9/92  
Rev1 Approved by: *[Signature]* Date: 7/13/92  
PORC Approval Meeting: 92-102 Date: 7/15/92

ROCHESTER GAS AND ELECTRIC CORPORATION

89 EAST AVENUE

ROCHESTER, NEW YORK 14649

GINNA STATION

SAFETY EVALUATION

FOR

TEMPORARY MODIFICATION

92-029

REVISION 0

JULY 9, 1992

DISABLE CORE EXIT THERMOCOUPLES

PREPARED BY:	<u><i>Barry J. Kasby</i></u>	<u>7/10/92</u>
	Responsible Staff Engineer	Date
REVIEWED BY:	<u><i>John O'Leary</i></u>	<u>7/10/92</u>
	Reactor Engineer	Date
REVIEWED BY:	<u><i>A. J. [Signature]</i></u>	<u>7/13/92</u>
	Technical Manager	Date
APPROVED BY:	<u><i>A. J. [Signature]</i></u>	<u>7/15/92</u>
	for Chairman, Plant Operations Review Committee	Date

## DISABLE CORE EXIT THERMOCOUPLES

### SAFETY ANALYSIS

#### 1.0 SCOPE OF ANALYSIS:

- 1.1 This purpose of this analysis is to evaluate the safety consequences of temporarily disabling up to all but four Core Exit Thermocouples (CET's) per quadrant with the exception that RVLIS CET's in locations E-6, F-8, G-7, H-6, J-8 and J-9 will not be disabled.
- 1.2 The thermocouples are typically disabled due to the production of erroneous indication leading to spurious alarms or basic thermocouple failure.

#### 2.0 REFERENCES:

- 2.1 A-1406, Control of Temporary Modifications.
- 2.2 A-303, Preparation, Review and Approval of Safety Analysis.
- 2.3 Ginna Station UFSAR, Sections 7.3.2.3, 7.6.5, 7.7.2.6.4.5 and Table 7.5-1, Note 2.
- 2.4 RG&E Drawing 33013-1569.
- 2.5 Ginna Station Technical Specifications, Table 3.5-3.

#### 3.0 STRUCTURES, SYSTEMS AND COMPONENTS AFFECTED (SSC)

- 3.1 Mapping overall core temperature will be affected slightly by disabling up to all but four thermocouples per quadrant. As long as a minimum of four thermocouples per quadrant remain, each quadrant will be adequately monitored for temperature.

#### 4.0 SAFETY FUNCTION OF AFFECTED SSCs

- 4.1 The CET's are positioned to measure fuel assembly coolant temperatures at preselected core locations for the purposes of mapping and for input to the RVLIS.
- 4.2 The Ginna Station UFSAR indicates that one core map per hour is generated and stored in the Plant Process Computer System (PPCS). Disabling all but four CET's

will have a minimal affect on this mapping.

- 4.3 The Ginna Station Technical Specifications require a minimum of four CET channels per core quadrant to be operable and for two channels of the RVLIS to be operable. Disabling all but four CET's per core quadrant and ensuring that the RVLIS CET's as indicated in Section 1.1 are not disabled<sup>will</sup> not affect Technical Specification compliance.

5.0 EFFECTS ON SAFETY

- 5.1 Per Section 4.0, no effect on plant safety is anticipated.

6.0 UNREVIEWED SAFETY QUESTION CONCLUSIONS

- 6.1 The proposed Temporary Modification will not increase the probability of occurrence of an accident previously evaluated in the UFSAR because overall core temperature will still be adequately monitored.
- 6.2 The proposed Temporary Modification will not increase the consequences of an accident previously evaluated in the UFSAR because the CET system will be minimally affected and the RVLIS system will be unaffected.
- 6.3 The proposed Temporary Modification will not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the UFSAR. No other equipment important to safety is affected by this temporary modification to the CET system (other than core temperature monitoring) because the CET's required for the RVLIS will not be disabled.
- 6.4 The proposed Temporary Modification will not increase the consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR. No other equipment important to safety is affected by this temporary modification to the CET system (other than core temperature monitoring) because the CET's required for the RVLIS will not be disabled.
- 6.5 The proposed modification will not create a possibility for an accident of a different type than any evaluated previously in the UFSAR. No equipment is affected by this temporary modification to the CET system (other than core temperature monitoring) due to the requirement that the CET's for the RVLIS will not be disabled.



6.6

The proposed Temporary Modification will not create a possibility for a malfunction of equipment of a different type than any evaluated previously in the UFSAR because this installation has been shown to not impact any equipment important to safety.

6.7

The proposed Temporary Modification will not reduce the margin of safety as defined in the basis of any Technical Specification. Each core quadrant will be adequately monitored by a minimum of four CET's. In addition, CET's required for the RVLIS will not be disabled.

7.0

### CONCLUSION

7.1

Based on the above analysis, the proposed Temporary Modification does not present an unreviewed safety question.





ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

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PART I

TM No: 92-045

Date: <sup>11/19/92</sup>  
~~05/04/92~~ <sup>BSK</sup>

Rev: <sup>0</sup>  
~~1~~ <sup>BSK</sup>

TITLE: AOV-9553B AVT Rinse Drain Valve Replacement

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PART II

Type: Electrical                      Fluid              X              Structural

Description:

Due to AOV-9553B leaking through, a temporary manual drain valve has been installed. The AOV was replaced with a 4 inch flange with a 2 inch pipe and valve. When an appropriate replacement valve is available, the temporary valve will be removed.

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PART III

Design Inputs:

Line Spec 300-1; per DWG 33013-1911 Sht1; Condensate pump discharge: Design Pressure = 400 psig, design Temp = 150 Deg F  
Operating Pressure = 300 psig, Operating Temp = 100 Deg F  
Valve = ~~Lunkenhoimer 150-8, 300 WOG~~ <sup>BSK</sup> HENRY VOGT # 2801, 800#  
Crane valve catalog  
This installation is non-QA, non-Seismic, non-Safety Class and non-ASME Code Class.

Evaluation:

The AVT system was a vendor supplied system and specific design conditions are not readily available. However, the interfacing Condensate system design parameters envelope the AVT system, consequently, the Condensate Pump suction operating conditions will be used. During normal operation, valve 9553B is isolated via upstream valves from each vessel, consequently, it does not see normal condensate pressure. During operation of the flushing cycle there is a pressure reducing orifice upstream of drain valve 9553B. As such, the drain valve does not experience the 300 psig pressure and the ~~300 WOG~~ <sup>800#</sup> rating is considered adequate for this application.

Testing Requirements:

None

Safety Review:

See PCN 91T-1254 for procedure T-6.1

Design Review:

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

Mode Restriction:

None

PREPARED BY: Edward M. Murphy DATE: 6/5/92 <sup>BS</sup>  
REVIEWED BY: James F. Sweet DATE: 6/5/92 <sup>BSA</sup>  
APPROVED BY: [Signature] DATE: 6/5/92 <sup>BSA</sup>  
PORC APPROVAL MEETING: #145 Item 3.2.3-91-145-005 DATE: 12/4/91

Prepared By: [Signature] Date 11/19/92  
Reviewed By: James F. Sweet Date 11/19/92  
Approved By: [Signature] Date 11/19/92

ATTACHMENT 1

TEMPORARY MODIFICATION EVALUATION

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PART I

TM No: 92-045

Date: 06/04/92

Rev: 0

TITLE: AOV-9553B AVT Rinse Drain Valve Replacement

=====

PART II

Type: Electrical

Fluid

X

Structural

Description:

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PART III

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Valve = Lunkenheimer 150 S, 300 WOG  
Crane valve catalog  
This installation is non-QA, non-Seismic, non-Safety Class and non-ASME Code Class.

Evaluation:

The AVT system was a vendor supplied system and specific design conditions are not readily available. However, the interfacing Condensate system design parameters envelope the AVT system, consequently, the Condensate Pump suction operating conditions will be used. During normal operation, valve 9553B is isolated via upstream valves from each vessel, consequently, it does not see normal condensate pressure. During operation of the flushing cycle there is a pressure reducing orifice upstream of drain valve 9553B. As such, the drain valve does not experience the 300 psig pressure and the 300 WOG rating is considered adequate for this application.

Testing Requirements:

None

**Safety Review:**

See PCN 91T-1254 for procedure T-6.1

**Design Review:**

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

**Mode Restriction:**

None

PREPARED BY: Edward Mundy DATE: 6/5/92  
REVIEWED BY: Edward Mundy DATE: 6/5/92  
APPROVED BY: [Signature] DATE: 6/5/92  
PORC APPROVAL MEETING: #145 Item 3.2.3-91-145-005 DATE: 12/4/91

## 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).

**FIGURE 2**

**SAFETY EVALUATION SUMMARY FORM**

PROCEDURE # P-1  
 DATE 2/27/92  
 PCN # 92-3212  
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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: This change will clarify the, to-be  
alarm setpoint for Control Banks B and C. The REC circuitry  
limits the setpoint to a current equivalent to 217 steps.  
This change also lowers the alarm setpoint for Control  
Banks A and B, to 226 steps to insure alarm not in  
during normal operation with Control Banks A and B repositioned  
to full out position of 228 and 229 respectively.  
Repositioning approved by PORC mtr # 92-022.

Referenced Material: Letter to 50.59 Evaluation of Alarm  
Repositioning at Control Banks A and B dated 2/16/92

If "yes" was answered for Item 3, check this box ☐

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: [Signature]

50.59

PORC app'd  
# 92-022  
2/21/92

ROCHESTER GAS AND ELECTRIC CORPORATION  
Inter-Office Correspondence  
February 6, 1992

SUBJECT: Axial Repositioning of the Control Banks A and B  
Safety Evaluation per 10CFR50.59

TO: PORC

On October 16, 1991, by meeting #91-135, PORC approved the safety evaluation for repositioning the Shutdown Bank of rods to 227. The basis for this approval was that with 227 steps withdrawn remaining above the active fuel region, the reactivity effect of the change in bank position was negligible. This was confirmed during repositioning from observing no change in either RCS temperature or axial flux distribution.

The purpose of this evaluation is to address the repositioning of the Control Banks A and B to 228 and 229 steps respectively as the fully withdrawn position. This would be effective with startup following the 1992 outage and would result with the full out positions for each bank as follows:

Shutdown Bank	227
Control Bank A	228
Control Bank B	229
Control Bank C	230
Control Bank D	230

Therefore, with the normal rotation of RCCA's between banks that results with each refueling, the wear locations on the rodlets would be different each year.

As discussed for the Shutdown Bank and observed during repositioning, the reactivity effect of the change in the fully withdrawn position for CB's A and B will have no effect on shutdown margin and power distribution. Therefore there will be no affect on the design basis events of rod ejection, uncontrolled rod withdrawal or dropped rod.

Technical Specification 3.10.1.3 requires that the control bank position satisfy the insertion limit curves of TS Figure 3.10-1 and that the banks move sequentially with a 100 ( $\pm 5$ ) step overlap.

Figure 3.10-1 shows rod position in terms of percent withdrawn. Similar to the interpretation of "fully withdrawn" for the shutdown bank, Nuclear Safety and Licensing interprets the 100 % withdrawn as not inconsistent with the position of 228 or higher.

The bank overlap unit is currently set to begin withdrawal



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of a control bank when the preceding bank is at 130 steps. The 100 step overlap is from 130 to 230 steps. It is proposed that this 130 step position for initiation of overlap not be changed, but that the A and B bank position for stopping withdrawal be set at 228 and 229. Since there is no reactivity worth from 228 to 230, this change will have no effect on the combined reactivity worth per step for both banks moving sequentially and therefore no effect on power distribution or control. Also, the 2 step variation from the 100 step overlap is within the variance of  $\pm 5$  steps allowed by Technical Specifications.

This proposed change to the 100 percent withdrawn position for Control Banks A and B has been evaluated in accordance with the criteria of 10CFR50.59. This change does not present an unreviewed safety question for the following reasons:

The probability of occurrence or the consequences of an accident previously evaluated in the UFSAR will not be increased.

The repositioning of the control banks will have no reactivity effect due to the rods remaining above the active fuel region in the proposed full withdrawn position. This was confirmed during the repositioning of the Shutdown Bank where no effect on RCS temperature or axial flux distribution was observed. Since the rod position for initiation of succeeding bank withdrawal will not be changed (130 steps), there will be no change to the combined reactivity worth per step for rods moving in sequence and overlap. Therefore there will be no change in the rodded power distribution during withdrawal and the basis for the Technical Specification is satisfied.

Adjusting the thumbwheel switches (S2 and S4) in the bank overlap unit to terminate movement of CB A and B at 228 and 229 respectively will have no effect on the probability of occurrence of a uncontrolled rod withdrawal, rod ejection or rod drop. Since there is no reactivity effect of lower position of Bank A and B, there can be no affect on the consequences of these events.

The probability of occurrence, or the consequences of a malfunction of equipment important to safety will not be affected.

As discussed above, adjusting the thumbwheel switches on the bank overlap unit will have no effect on the probability of a malfunction of the rod control system. This adjustment will not place the unit in a configuration not originally intended. As discussed above there will be no affect on the consequences of a rod control system malfunction.

The possibility of an accident or malfunction of equipment of a different type than any evaluated in the UFSAR will not be created.

Repositioning the fully withdrawn position of Control Bank A and B will have no effect on the rod control or reactor protection systems.

The margin of safety as defined in the basis for any technical specification will not be reduced.

As discussed above, by maintaining the bank position at which succeeding bank withdrawal is initiated (130 steps), there will be no effect on the combined reactivity worth per step or the power distribution. Therefore the margin of safety as defined in the basis for any Technical Specification is not reduced.

  
John D. Cook  
Reactor Engineer

xc: Steve Adams  
Jeff Wayland

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.

## 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.

