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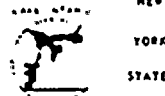
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December 17, 1990

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

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

Gentlemen:

The subject report is hereby submitted as required by 10 CFR 50.59(b). Enclosed are the original and one copy of the report containing descriptions and summaries of the safety evaluations conducted in support of changes to the facility and procedures described in the UFSAR and special tests, from August 1989 through July 1990.

Very truly yours,

Robert C. Meccredy  
Vice President, Ginna Nuclear Production

RES/jdw  
Enc.

xc: USNRC Region I Office  
USNRC Resident Inspector

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1990 REPORT  
OF  
FACILITY CHANGES, TESTS AND EXPERIMENTS  
CONDUCTED WITHOUT PRIOR APPROVAL  
FOR AUGUST 1989 THROUGH JULY 1990

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

DATED DECEMBER , 1990

9101020002





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

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

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



EWR-1483  
STEAM GENERATOR SNUBBER REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF SIX OF THE EIGHT HYDRAULIC SNUBBER PER STEAM GENERATOR.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 0 TO CORRECT THE FOLLOWING:

- 1) TYPOGRAPHICAL ERRORS
- 2) ADD ADDITIONAL REFERENCE - ANSI B31.1
- 3) PIPING ANALYSIS AND PRIMARY EQUIPMENT SUPPORTS WILL BE EVALUATED PER TABLES 1,2 & 3 (ATTACHMENTS TO D.C.) AND NOT IN ACCORDANCE WITH EWR-2512.

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. POSTULATED PIPING FAILURE IN FLUID SYSTEMS INSIDE CONTAINMENT.
2. DECREASE IN HEAT REMOVAL BY SECONDARY SYSTEM.
3. DECREASE IN REACTOR COOLANT SYSTEM FLOW RATE.
4. DECREASE IN REACTOR COOLANT INVENTORY.
5. INTERNAL AND EXTERNAL EVENTS SUCH AS MAJOR AND MINOR FIRES, FLOODS, STORMS, OR EARTHQUAKES.

THE INSTALLATION OF MECHANICAL BUMPERS WILL NOT CHANGE THE EFFECT OF A SEISMIC EVENT ON THE FUNCTION AND DESIGN REQUIREMENTS OF EXISTING STEAM GENERATOR RING GIRDER, REACTOR COOLANT LOOPS, MAIN STEAM LINES, FEEDWATER AND SECONDARY SHIELD WALL.

THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR THE FOLLOWING EVENTS:

1. LOSS OF NORMAL FEEDWATER FLOW
2. FEEDWATER SYSTEM PIPE BREAKS
3. RCS FLOW COASTDOWN ACCIDENTS
4. STEAM GENERATOR TUBE RUPTURE
5. PRIMARY SYSTEM PIPE RUPTURE
6. MAJOR AND MINOR FIRES
7. FLOODS, STORMS, AND EARTHQUAKES

THIS MODIFICATION NEITHER EFFECTS NOR IS EFFECTED BY ANY FLOOD OR STORM PREVIOUSLY EVALUATED.

THE MATERIALS UTILIZED IN THIS MODIFICATION WILL MEET APPENDIX "R" REQUIREMENTS BASED UPON 10CFR50 APPENDIX R AND ENGINEERING PROCEDURE AND WILL NOT INCREASE AT THE PROBABILITY OF MAJOR OR MINOR FIRE.

MODIFICATION OF ADDITION OF SUPPORTS WILL NOT DEGRADE PERFORMANCE OR FUNCTION OF ANY PLANT EQUIPMENT OR SYSTEM.



BASED UPON THE ABOVE ANALYSIS:

- 1) STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.
- 2) MARGIN OF SAFETY DURING NORMAL OPERATING AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.

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-1832A

CIRCUIT SEPARATIONS ANALYSIS ELECTRICAL MODIFICATIONS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL IMPROVE THE ELECTRICAL SEPARATION BETWEEN REDUNDANT SAFETY RELATED EQUIPMENT.

REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON 2/27/85 ITEM NUMBER 6.1.0-85-021-001.

THE CHANGES TO THE DESIGN CRITERIA FOR REVISION 2 ARE DESCRIBED BELOW:

<u>SECTION</u>	<u>DESCRIPTION</u>
1.1	(ADDED TO <u>SPECIAL NOTE</u> ): "DC FUSE COORDINATION REQUIREMENTS ARE DELETED FROM REVISION 2 OF THIS DESIGN CRITERIA. DC FUSE COORDINATION IS IN THE SCOPE OF EWR 3341."
1.1.3	DELETED FUSE COORDINATION REQUIREMENTS.
<u>SECTION</u>	<u>DESCRIPTION</u>
2.1.2	DELETED ANALYSIS 51 (FUSE COORDINATION REQUIREMENTS).
2.1.4	DELETED ANALYSIS : 113 (FUSE COORDINATION REQUIREMENTS).
16.1.2	DELETED FUSE TYPE REQUIREMENT. THIS IS IN THE SCOPE OF EWR 3341.
16.2.1	DELETED FUSE COORDINATION REQUIREMENTS.



SECTION

DESCRIPTION

16.2.2 DELETED FUSE COORDINATION REQUIREMENTS.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY THE USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE 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 BEEN DETERMINED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE UNCHANGED. THE ADEQUACIES OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE UNCHANGED.

EWR-1832B

FIRE SIGNALING SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL UPGRADE THE FIRE SIGNALING SYSTEM.

REVISION 6 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WERE PRESENTED AND APPROVED BY PORC ON 12-12-84 ITEM NUMBER 6.1.0-84-144-003.

THE CHANGES TO THE DESIGN CRITERIA FOR REVISION 7 ARE DESCRIBED BELOW:

SECTION

DESCRIPTION

- 11.4 ADD: "INSTALLING UL APPROVED RELEASE MODULES FOR THE HALON SYSTEMS IN THE RELAY AND COMPUTER (MUX) ROOMS WILL BE ACCOMPLISHED UNDER EWR 4064".
- 22.4.4 CHANGE "ENGINEER" TO "ENGINEERING".
- 23.6 ADD: "A NUMBER OF ELECTRICAL MODULES WILL BE CHANGED OUT UNDER EWR 4064 TO FACILITATE MAINTENANCE. THIS IS NECESSITATED BY THE FACT THAT CERTAIN ELECTRICAL MODULES WERE FURTHER DEVELOPED BY GAMEWELL AFTER THE INSTALLATION OF THE INITIAL-DESIGN MODULES. MODULES OF CURRENT-DESIGN WERE USED WHEN NEEDED FOR MAINTENANCE REPLACEMENT RESULTING IN A MIXTURE OF OLD AND NEW MODULE DESIGNS. THIS IN TURN CREATED A MAINTENANCE PROBLEM, SINCE THE LATEST WIRING DIAGRAM IS NOT APPLICABLE TO OLDER MODULES".
- 26.2.13 CHANGE "ALOW" TO "ALLOW".





A REVIEW HAS BEEN MADE OF THE EVENTS ANALYZED IN THE GINNA FSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE THE FIRES ANALYZED IN G.A.I. REPORT #1936 AND THE SEISMIC EVENT.

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

EWR-2606

POST ACCIDENT SAMPLING SYSTEM IMPLEMENTATION

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THIS DESIGN MODIFICATION.

AS A RESULT OF THE INABILITY AT THREE MILE ISLAND TO RAPIDLY OBTAIN REACTOR COOLANT SAMPLES TO ASCERTAIN THE EXTENT OF CORE DAMAGE, THE NRC IS REQUIRING THAT ALL LICENSEES EVALUATE AND, IF REQUIRED, UPGRADE THEIR PLANTS TO ENABLE ACQUISITION OF APPROPRIATE EXPEDITIOUS SAMPLES AFTER AN ACCIDENT. ABILITY TO ASSESS THE CONDITIONS OF THE CORE EARLY IN AN ACCIDENT CAN RESULT IN TAKING REMEDIAL ACTIONS WHICH COULD LIMIT OR EVEN PRECLUDE CORE DAMAGE.

THE SAMPLING SYSTEM AT GINNA HAS BEEN EVALUATED TO BE marginally ADEQUATE FOR POST-ACCIDENT CONDITIONS AND CONSEQUENTLY REMEDIAL MODIFICATIONS ARE PLANNED.

A NEW POST ACCIDENT SAMPLING SYSTEM (PASS) WILL BE INSTALLED WHICH WILL ENABLE THE STATION TO OBTAIN AND ANALYZE REACTOR COOLANT, CONTAINMENT AIR, AND CONTAINMENT SUMP SAMPLES WITHIN 3 HOURS OF THE DECISION TO SAMPLE. THE PASS WILL ALSO ENABLE SAMPLING OF THESE STREAMS DURING NORMAL OPERATION.

IN-LINE CHEMICAL INSTRUMENTATION WILL BE PROVIDED IN A NEW LIQUID AND GAS SAMPLE PANEL (LGSP) WHICH WILL REMOTELY DETERMINE IMPORTANT CHEMICAL PARAMETERS OF REACTOR COOLANT, CONTAINMENT AIR, AND CONTAINMENT SUMP.

THE LGSP WILL ENABLE ACQUISITION OF DILUTED AND UNDILUTED GRAB SAMPLES OF BOTH REACTOR COOLANT AND CONTAINMENT AIR FOR IOPIC ANALYSIS IN THE EXISTING COUNTING LAB.

THE LGSP WILL BE CONTROLLED FROM A NEW ELECTRIC CONTROL PANEL (ECP) AND INSTRUMENT PANEL (IP) TO BE LOCATED IN THE HOT SHOP. REMOTELY OPERATED VALVES AND INSTRUMENTS EXTERNAL TO THE LGSP WILL ALSO BE CONTROLLED FROM THE ECP. THE LGSP WILL BE LOCATED ON THE 253'-6" ELEVATION OF THE CONTROLLED PORTION OF THE INTERMEDIATE BUILDING.



THE PASS IS DESIGNED TO MEET THE REQUIREMENTS OF NUREG 0578 AND NUREG 0737 (SECTION II.B.3). FURTHERMORE, THE PASS INSTALLATION AT GINNA IS TO HAVE ADEQUATE PROVISIONS TO ALLOW COMPLIANCE WITH THE CONTAINMENT SUMP SAMPLING, pH AND OXYGEN ANALYSIS REQUIREMENTS NOW INVOKED BY REGULATORY GUIDE 1.97 (REV. 2) DATED DECEMBER 1980.

SAMPLE LINES ASSOCIATED WITH THE PASS WILL BE INSTALLED IN SUCH A MANNER THAT THE POST ACCIDENT DOSE CRITERIA WILL BE MET FOR SAMPLING AND ACCESS TO VITAL AREAS.

THE NECESSARY MODIFICATIONS ARE SHOWN SCHEMATICALLY ON THE ATTACHED FIGURE 1. THE GENERAL ARRANGEMENT OF EQUIPMENT IS SHOWN ON FIGURE 2.

STEAM GENERATOR BLOWDOWN SAMPLE LINES FROM CONTAINMENT PENETRATIONS 206 AND 207 TO THE EXISTING SAMPLE ROOM ARE TO BE REROUTED (FOR ALARA CONSIDERATIONS) USING THE SAME DESIGN CRITERIA DISCUSSED HEREIN. THESE TWO LINES ARE BEING REROUTED TO REDUCE OPERATOR EXPOSURE FOR ROUTINE SAMPLING AND ARE NOT REQUIRED AS A PART OF NUREG-0737 OR REG. GUIDE 1.97 (REV. 2).

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

- (1) EARTHQUAKE AND
- (2) RADIOACTIVE RELEASE FROM A SUBSYSTEM OR COMPONENT

ALL EQUIPMENT AND PIPING SUPPORTS IN THE CONTAINMENT, AUXILIARY AND INTERMEDIATE BUILDINGS ARE SEISMIC CATEGORY I. THEIR DESIGN WILL ASSURE OTHER EQUIPMENT WILL NOT BE STRUCTURALLY DAMAGED AS A RESULT OF FAILURE DURING AN EARTHQUAKE. THE CONSEQUENCES OF AN EARTHQUAKE ARE NOT CHANGED AS A RESULT OF THIS MODIFICATION.

FAILURE OF ANY PASS COMPONENT AFTER AN ACCIDENT SHALL NOT RESULT IN 10CFR PART 100 DOSES TO BE EXCEEDED AND ON THIS BASIS THE SYSTEM IS CLASSIFIED AS NON-SAFETY RELATED. THIS HAS BEEN CONFIRMED BY ANALYSIS.

IN THE EVENT OF A LOSS OF COOLANT ACCIDENT THE NEW PASS WILL PROVIDE A MEANS TO OBTAIN AND ANALYZE REACTOR COOLANT, CONTAINMENT AIR, AND CONTAINMENT SUMP SAMPLES. THE PASS WILL HAVE PROVISIONS TO BE PRESSURIZED WITH NITROGEN OR AIR PRIOR TO POST ACCIDENT OPERATION TO ASSURE LEAKTIGHTNESS.

THE MAJOR SYSTEM VALVES AND INSTRUMENTS ARE CONTAINED IN AN ENCLOSED, SEALED PANEL WHICH IS CONNECTED TO A CHARCOAL FILTERED STATION HVAC SYSTEM. THUS COMPONENT LEAKAGE WILL BE PREVENTED FROM UNCONTROLLED AREAS.



THEREFORE, 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 HAVE NOT BEEN AFFECTED.

EWR-2799

REACTOR LEVEL MONITORING SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL PROVIDE A REACTOR VESSEL LEVEL MONITORING SYSTEM. THE SYSTEM WILL CONSIST OF TWO REDUNDANT DIFFERENTIAL PRESSURE TRENDING CHANNELS. EACH CHANNEL WILL DRIVE A SEPARATE INDICATOR IN THE MAIN CONTROL ROOM SHOWING REACTOR VESSEL LEVEL TO THE PLANT OPERATORS UNDER ALL PLANT CONDITIONS.

REVISION 2 OF THE DESIGN CRITERIA AND REVISION 1 OF THE SAFETY ANALYSIS WERE PRESENTED AND APPROVED BY PORC ON MARCH 20, 1985, PORC NUMBER 6.1.0-85-037-002.

UNDER REVISION 3 OF THE DESIGN CRITERIA AND REVISION 2 OF THE SAFETY ANALYSIS, THE FOLLOWING PARAGRAPHS ARE AFFECTED:

DESIGN CRITERIA

STEP 4.1 REVISED FROM:

THE ATTACHMENT TO THE EXISTING HEAD VENT SYSTEM INCLUDING THE RESTRICTING DEVICE SHALL BE QUALITY GROUP A. REMAINING FLUID SYSTEMS AND COMPONENTS SHALL BE QUALITY GROUP B.

TO READ:

THE ATTACHMENTS TO THE GUIDE TUBE AND THE HEAD VENT SYSTEM, INCLUDING THE RESTRICTING DEVICE, SHALL BE QUALITY GROUP A. REMAINING FLUID SYSTEMS AND COMPONENTS SHALL BE QUALITY GROUP B.

STEP 5.1 REVISED FROM:

THE ATTACHMENT TO THE EXISTING HEAD VENT SYSTEM SHALL CONSIST OF A RESTRICTING DEVICE AND SHALL BE ASME CODE CLASS 1. CONSISTENT WITH REFERENCE 6.2.2.7 THE COMPONENTS DOWNSTREAM OF THE RESTRICTING DEVICE SHALL BE ASME CODE CLASS 2. THE COUPLING THAT ATTACHES TO THE REACTOR INSTRUMENTATION GUIDE TUBE SHALL BE ASME CODE CLASS 2.

TO READ:

THE ATTACHMENTS TO THE EXISTING HEAD VENT SYSTEM AND GUIDE TUBE SHALL CONSIST OF A RESTRICTING DEVICE AND SHALL BE ASME CODE CLASS 1. CONSISTENT WITH REFERENCES 6.2.2.7 THE COMPONENTS DOWNSTREAM OF THE RESTRICTING DEVICE SHALL BE ASME CODE CLASS 2.



STEP 7.1 REVISED FROM:

THE SYSTEM MECHANICAL DESIGN CONDITIONS WILL BE OVER A RANGE OF 0 TO 3000 PSI, AND 50° TO 697° F. THE SYSTEM SHALL ALSO PROVIDE INVENTORY INDICATIONS FOR TEMPERATURE OVER 697° F, ASSUMING SATURATED FLUID CONDITIONS, UP TO 2200° F, IN THE CORE.

TO READ:

THE SYSTEM MECHANICAL DESIGN CONDITIONS ARE 0 TO 2500 PSIG AND 50° TO 680° F. THE MOST SEVERE ACCIDENT CONDITION IS 3015 PSIG AT 697° F. THE SYSTEM SHALL ALSO PROVIDE INVENTORY INDICATIONS FOR TEMPERATURE OVER 697° F, ASSUMING SATURATED FLUID CONDITIONS, UP TO 2200° F, IN THE CORE.

STEP 7.6 HAS BEEN ADDED

THE ADDITION OF THE ATTACHMENT TO THE GUIDE TUBE SHALL NOT CAUSE THE GUIDE TUBE TO EXCEED WESTINGHOUSE ALLOWABLE LOADS FOR THE ATTACHMENT TO THE REACTOR VESSEL OR SEAL TABLE.  
STEP 8.1 REVISED FROM:

THE INSTRUMENT TUBING SHALL BE SUPPORTED SUCH THAT IT REMAINS FUNCTIONAL FOLLOWING AN SSE EVENT AS WELL AS DURING NORMAL OPERATION.

TO READ:

THE INSTRUMENT TUBING SHALL BE SUPPORTED SUCH THAT IT REMAINS FUNCTIONAL FOLLOWING AN SSE EVENT AS WELL AS DURING NORMAL OPERATION AND ALL POSTULATED ACCIDENT CONDITIONS.

STEP 8.3 REVISED FROM:

THE MOST SEVERE OPERATING CONDITIONS CONSIDERED FOR THE CONNECTION TO THE HEAD VENT SYSTEM IS THE CONTROL ROD EJECTION AND THE CORRESPONDING PRESSURE AND TEMPERATURE IS 3015 PSIG AND 697° F.

TO READ:

THE MOST SEVERE ACCIDENT CONDITION CONSIDERED FOR THE CONNECTIONS TO THE REACTOR COOLANT SYSTEM IS THE CONTROL ROD EJECTION. THE CORRESPONDING PRESSURE AND TEMPERATURE ARE 3015 PSIG AND 697° F.

STEP 10.1 REVISED FROM:

3.) PRIMARY REACTOR COOLANT LOOP, INCLUDING THE REACTOR VESSEL HEAD VENT SYSTEM.





TO READ:

- 3.) PRIMARY REACTOR COOLANT LOOP, INCLUDING THE REACTOR VESSEL HEAD VENT SYSTEM AND THE REACTOR VESSEL BOTTOM MOUNTED INSTRUMENTATION.

STEP 31.0 REVISED FROM:

"NOT APPLICABLE"

TO READ:

CONSTRUCTION PROCEDURES FOR ATTACHMENT TO THIS GUIDE TUBE WILL BE DEVELOPED THAT ENSURE THAT NO FOREIGN MATERIAL ENTER THE GUIDE TUBE.

ATTACHED FIGURE 1 TO THE DESIGN CRITERIA HAS BEEN REVISED STATING THAT INPUTS TO THE FOXBORO RACK ARE 3 INSTEAD OF 4 LINE THERMOCOUPLES.

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 RELATED TO THIS MODIFICATION ARE: 1) MAJOR AND MINOR FIRES, 2) SEISMIC EVENT, AND 3) THE SPECTRUM OF LOSS OF COOLANT ACCIDENTS INSIDE OF CONTAINMENT.

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-2846B

BLOCK WALL MODIFICATION/RESTRAINTS/EQUIPMENT PROTECTION  
INTERMEDIATE BUILDING

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATIONS TO PROVIDE PROTECTION OF AUXILIARY FEEDWATER CHECK VALVES, A AND B MAIN STEAM ISOLATION VALVE (MSIV) OPERATORS AND A AND B MSIV SOLENOID VALVES.

THE PURPOSE OF THIS MODIFICATION IS TO PROVIDE 1) UPGRADED PROTECTION FOR THE A AND B MSIV OPERATORS AND AIR SOLENOID VALVES SUCH THAT MSIV CLOSURE IS ENSURED FOR SCENARIOS INVOLVING SSE (SAFE SHUTDOWN EARTHQUAKE), TORNADO MISSILES/WIND LOADS AND HELB (HIGH ENERGY LINE BREAKS) OUTSIDE CONTAINMENT, 2) PROTECTION FOR THE "A" AND "B" AUXILIARY FEEDWATER CHECK VALVES FOR SCENARIOS INVOLVING TORNADO WIND LOADS AND SSE SEISMIC EVENTS.



REVISION 1 TO THE DESIGN CRITERIA AND SAFETY ANALYSIS WILL ALLOW REMOVAL OF VENT VALVE 3516A. THIS VALVE, AND ASSOCIATED PIPING, WILL BE REMOVED FROM THE "B" MSIV AND NOT REPLACED. THE SCOPE OF THE PIPING MODIFICATION WILL BE TO PLACE A PLUG IN THE EXISTING COVER FOR THE "B" MSIV.

PRE-PORC COMMENTS ARE ADDRESSED IN INTEROFFICE CORRESPONDENCE 13N1-RR-L2275 AND WILL BE INCORPORATED INTO THE NEXT REVISION.

THESE CHANGES INCLUDE TYPOGRAPHICAL CORRECTIONS TO THE DESIGN CRITERIA, PARAGRAPHS 1.2 AND 23.0. TO FURTHER CLARIFY THE TEST REQUIREMENTS, A SENTENCE WILL BE ADDED TO THE DESIGN CRITERIA PARAGRAPH 23.0 STATING "IN LIEU OF A HYDROSTATIC TEST, A LEAK CHECK MAY BE PERFORMED AT NORMAL OPERATING CONDITIONS".

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. EVENTS RELATED TO THIS MODIFICATION ARE EARTHQUAKES, PIPE BREAKS OUTSIDE THE CONTAINMENT BUILDING, TORNADOES, FIRES, AND TORNADO MISSILES.

ALL PROPOSED PROTECTIVE DEVICES ARE TO BE MOUNTED AS SEISMIC CATEGORY I IN ACCORDANCE WITH THE STRUCTURAL RE-ANALYSIS PROGRAM (SRP). REMOVABLE PANELS WILL BE UTILIZED TO PROVIDE MAINTENANCE/TESTING ACCESS AS REQUIRED.

PLACEMENT OF PASSIVE PROTECTIVE DEVICES AROUND THE MSIV OPERATORS/SOLENOID VALVES AND "B" AFW CHECK VALVES ENSURES FUNCTIONAL OPERATION DURING AND FOLLOWING HELB SCENARIOS OUTSIDE CONTAINMENT.

FIRE SYSTEMS AND FIRE BARRIERS DISCUSSED IN THE UFSAR ARE COVERED UNDER PLANT ADMINISTRATIVE CONTROLS, ENSURING THAT DEGRADATION OF PROTECTION/DETECTION FEATURES NECESSARY TO COMPLY WITH 10CFR50 APPENDIX R WILL NOT OCCUR.

TORNADO LOADS, SUCH AS DIRECT WIND, DIFFERENTIAL PRESSURE, AND TORNADO MISSILES HAVE BEEN INCORPORATED IN THE UFSAR UNDER SEP RE-EVALUATION DESIGN AND ANALYSIS.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SSE AND TORNADO EVENTS.
- 2) OPERATION DURING A HELB SCENARIO OUTSIDE CONTAINMENT.
- 3) FIRE PROTECTION FEATURES.



BASED UPON A REVIEW OF THE UFSAR AND THE STRUCTURAL RE-ANALYSIS PLAN (SRP), 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-3072  
RCP #1 SEAL LEAKOFF

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL INSTALL CHECK VALVES ON THE NUMBER ONE SEAL LEAKOFF LINES FROM THE REACTOR COOLANT PUMPS (RCP) A AND B. THE NEW CHECK VALVES WILL BE ASME N-STAMPED SEISMICALLY QUALIFIED. THE NEW CHECK VALVES WILL BE LOCATED IN CONTAINMENT INSIDE THE RCP SHIELD WALLS. THE MODIFIED PIPE SYSTEM, INCLUDING SUPPORTS, WILL BE SEISMICALLY QUALIFIED. THIS MODIFICATION IS SCHEDULED FOR INSTALLATION DURING THE 1987 REFUELING OUTAGE.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON JUNE 16, 1986 PORC NUMBER 6.1.0-86-081-001.

THE PURPOSE OF REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE REFERENCE TO THE ASME III CLASS 2 STANDARDS.

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 RELATED TO THIS MODIFICATION ARE: 1) PRIMARY SYSTEM PIPE RUPTURE, 2) INTERNAL AND EXTERNAL EVENTS; FIRES, FLOOD, STORM OR EARTHQUAKE, AND 3) LOSS OF A REACTOR COOLANT PUMP.

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-3092  
BORIC ACID PIPING

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE UPGRADE OF BORIC ACID PIPING FROM SCHEDULE 10 TO SCHEDULE 40 PIPE. INCLUDED IN THIS MODIFICATION IS THE RE-ROUTING OF THE PIPE TO AVOID HIGH RADIATION AREAS, INSTALLATION OF A NEW HEAT TRACING SYSTEM, UPGRADING OF PIPE SUPPORTS AND ADDITION OF A ONE INCH (1") ISOLATION VALVE IN THE MOV-825A/B BYPASS LINE.

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. REVISION 0 IDENTIFIED THE EVENTS RELATED TO THIS MODIFICATION AS: FIRE, SEISMIC, LOSS OF OFFSITE POWER, CVCS CONTROL SYSTEM MALFUNCTIONS, STEAM LINE BREAK AND LOCA.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50, APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING THIS MODIFICATION.

SEISMIC EVENTS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. PIPING AND PIPE SUPPORT ANALYSES SHALL BE PERFORMED IN ACCORDANCE WITH EWR-2512 DESIGN CRITERIA USING ANSI B31.1 AND ASME SECTION III. SUBSECTION NF AS A BASIS. STRUCTURAL WORK REQUIRED SHALL BE BASED UPON THE AISC CODE, EIGHTH EDITION.

THE DESIGN AND OPERATING CONDITIONS TO WHICH THE PIPING SYSTEMS WILL BE ANALYZED ARE DEFINED IN THE OPERATING TRANSIENTS DOCUMENT GENERATED FOR EWR 2512. SYSTEM THERMAL ANALYSES SHALL EVALUATE THE NORMAL 100% POWER CONDITION, AS WELL AS OTHER ABNORMAL OPERATING TRANSIENT CONDITIONS. THE LOADING COMBINATIONS AND STRESS LIMITS OF THE EWR 2512 DESIGN CRITERIA SHALL BE MET FOR ALL NORMAL AND ACCIDENT CONDITIONS.

ALL MODIFICATIONS OR ADDITIONS TO THE EXISTING PIPING OR PIPE SUPPORTS WILL BE REQUIRED TO INTERFACE WITH THE EXISTING PIPE, PIPE SUPPORTS, AND/OR STRUCTURES AND SHALL NOT DEGRADE THE ABILITY OF THESE ITEMS TO FUNCTION ACCORDING TO THEIR ORIGINAL DESIGN REQUIREMENTS.

THIS MODIFICATION WILL NOT DEGRADE PLANT SYSTEMS ON A LOSS OF OFFSITE POWER. THE HEAT TRACE CIRCUITS SHALL NOT DEGRADE THE PLANT NORMAL OR EMERGENCY POWER DISTRIBUTION SYSTEM. REDUNDANT POWER TRAINS SHALL BE MAINTAINED AND STRUCTURES AND ELECTRICAL EQUIPMENT WITHIN THE SCOPE OF THIS WORK SHALL REMAIN FUNCTIONAL FOLLOWING A SAFE SHUTDOWN EARTHQUAKE (SSE).

THE HEAT TRACING SYSTEM SHALL BE SUPPLIED WITH POWER FROM THE EMERGENCY DIESEL GENERATORS FOLLOWING A LOSS OF OFFSITE POWER. THE EFFECT OF THE NEW SYSTEM ON THE DIESEL GENERATOR LOADS SHALL BE EVALUATED.





THE MODIFICATION PERFORMED SHALL NOT INHIBIT THE AFFECTED SYSTEMS FROM PERFORMING THEIR FUNCTIONS DURING ALL NORMAL AND POSTULATED ACCIDENT CONDITIONS. THE BORIC ACID SYSTEM SHALL BE OPERABLE DURING ALL NORMAL, DESIGN TRANSIENT, UPSET AND FAULTED CONDITIONS. THE BORIC ACID PIPING CHANGES SHALL NOT AFFECT THE CONTROL OF ANY PLANT SYSTEM.

IN REVISION 1 TO THIS DESIGN CRITERIA THE SOLUBILITY TEMPERATURE LIMIT FOR 12-13 WEIGHT PERCENT BORIC ACID SOLUTION IS REVISED FROM 140°F TO 145°F TO COMPLY WITH TECHNICAL SPECIFICATIONS AND ADMINISTRATIVE CONTROLS ESTABLISHED AT GINNA STATION.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) FIRE PROTECTION FEATURES
- 2) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC AND TORNADO EVENTS.
- 3) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A LOSS OF OFFSITE POWER, STEAM BREAK OR LOSS OF COOLANT ACCIDENT (LOCA).

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 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-3199

VITAL BATTERY LOAD FLOW MONITOR

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE DESIGN MODIFICATION WHICH WILL PROVIDE A MEANS TO MONITOR CURRENT MAGNITUDES AND DIRECTION OF BOTH SAFEGUARDS D.C. BATTERY SYSTEMS AS WELL AS THE TECHNICAL SUPPORT CENTER (TSC) BATTERY. THE SYSTEM WILL CONSIST OF THE NECESSARY EQUIPMENT TO DISPLAY THE DIRECTION AND MAGNITUDE OF CURRENT GOING INTO OR OUT OF EACH BATTERY. THE SYSTEM WILL ALSO BE CAPABLE OF ANNUNCIATING ABNORMAL BATTERY CONDITIONS AND LOSS OF CONTINUITY OF BATTERY CIRCUITS. THE IMPLEMENTATION OF THIS MODIFICATION WILL SATISFY THE REQUIREMENTS OF SEP TOPIC # VIII-3.B.

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 ADDITION ARE (1) MAJOR AND MINOR FIRES, AND (2) SEISMIC EVENT.

IT HAS, THEREFORE, BEEN DETERMINED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION HAVE NOT BEEN AFFECTED.



EWR-3272  
SAS/PPCS COMPUTER SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE INSTALLATION OF A SAFETY ASSESSMENT SYSTEM (SAS) AND THE REPLACEMENT OF THE P-250 PLANT PROCESS COMPUTER SYSTEM (PPCS). DEDICATED CRTs AND LINE PRINTERS WILL BE CONNECTED TO THE SAS AND PPCS CPUS. THE SAS SYSTEM IS DESIGNED TO PROVIDE AN INTEGRATED DISPLAY OF CRITICAL PLANT SAFETY PARAMETERS AND PERFORM REFERENCE DIAGNOSTICS DURING EMERGENCIES. THE (SAS) SYSTEM WILL PROVIDE THE OPERATORS IN THE CONTROL ROOM, AND PERSONNEL IN THE TSC, THE EOF AND THE ENGINEERING CENTER WITH: 1) AN INDICATION OF THE SAFETY STATUS OF THE PLANT, 2) ACCIDENT DIAGNOSTIC DISPLAYS, AND 3) POST-ACCIDENT MONITORING. THE NEW PPCS WILL INITIALLY PERFORM THE SAME FUNCTIONS THAT THE P-250 PRESENTLY PERFORMS.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON 5/23/84, PORC NUMBER 6.1.0-84-082-002.

UNDER REVISION 1 OF THE DESIGN CRITERIA, PARAGRAPH 3.2 FIRST SENTENCE STATING, "THE REMAINING EQUIPMENT" HAS BEEN CHANGED TO READ "THE EQUIPMENT ASSOCIATED".

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 RELATED TO THIS MODIFICATION ARE 1) MAJOR AND MINOR FIRES, 2) SEISMIC EVENT.

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-3296A  
STRUCTURAL UPGRADE PROGRAM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE GINNA STATION STRUCTURAL UPGRADE PROGRAM WHICH IS IN RESPONSE TO THE SYSTEMATIC EVALUATION PROGRAM (SEP) BEGUN BY THE USNRC IN 1977. THE PURPOSE OF THIS MODIFICATION IS TO UPGRADE THOSE MEMBERS, CONNECTIONS AND ANCHORAGES FOUND TO BE OVERSTRESSED WHEN SUBJECTED TO THE DESIGN LOADS SET FORTH IN THE VARIOUS SEP TOPICS.



REVISION 0 TO THIS DESIGN CRITERIA/SAFETY ANALYSIS COVERED MODIFICATIONS INCLUDED IN THE SEP TOPICS LOCATED IN THE AUXILIARY BUILDING, CONTROL BUILDING, INTERMEDIATE BUILDING, TURBINE BUILDING, AND THE FACADE STRUCTURE. REVISION 1 OF THIS DESIGN CRITERIA/SAFETY ANALYSIS:

1. ADDRESSES THE DESIGN AND INSTALLATION OF BACKDRAFT DAMPERS REQUIRED ONLY IN THE AUXILIARY BUILDING. THESE DAMPERS, WHEN INSTALLED, WILL ELIMINATE THE EFFECTS OF THE DIFFERENTIAL PRESSURES ASSOCIATED WITH THE DESIGN BASIS TORNADO.
2. INCORPORATES CHANGES IN FORMAT AND CONTENT OF VARIOUS SUB-SECTIONS OF THE DESIGN CRITERIA.

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: WIND AND TORNADO LOADING, FIRES AND THE SAFE SHUTDOWN EARTHQUAKE (SEISMIC EVENTS).

THE DESIGN FOR WIND AND TORNADO LOADINGS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. MODIFICATIONS TO STRUCTURAL MEMBERS AND ATTACHMENTS WILL NOT ALTER EITHER THE SEISMIC QUALIFICATION OF EXISTING STRUCTURES OR SAFETY RELATED EQUIPMENT LOCATED WITHIN THESE STRUCTURES. THE INCLUSION OF BACKDRAFT DAMPERS UNDER THIS MODIFICATION INSURES THAT THE AUXILIARY BUILDING WILL NOT BE ADVERSELY AFFECTED BY TORNADO WINDS.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50, APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING THE STRUCTURAL UPGRADE MODIFICATIONS.

THUS, THIS MODIFICATION NEITHER INCREASE THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SSE, WIND AND TORNADO EVENTS
- 2) FIRE PROTECTION FEATURES

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



EWR-3595  
CONTROL ROOM HABITABILITY

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODIFICATION OF THE CONTROL ROOM HABITABILITY SYSTEM. IN ORDER, TO IMPROVE RELIABILITY AND MAINTAINABILITY OF THE RADIATION AND TOXIC GAS MONITORS EWR-3595 PHASE B WAS ESTABLISHED.

REVISION 5 OF THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES THE FOLLOWING CHANGES FROM REVIEW OF DC AND SA REVISION 4 PREVIOUSLY NOT PORC APPROVED. MODIFICATIONS APPLICABLE TO EWR-3595 PHASE B ARE AS FOLLOWS:

- 1) REPLACE 2 EXISTING TOXIC GAS SAMPLE PUMPS WITH TWO PUMPS, EACH WITH 100% CAPACITY. ONE PUMP WILL BE IN OPERATING MODE, THE OTHER WILL BE IN STANDBY MODE. THREE POSITION TOXIC GAS SAMPLE PUMP SWITCH SHALL ALSO BE INSTALLED.
- 2) REPLACE EXISTING RADIATION MONITOR FLOW SWITCH.
- 3) ADDITION OF CONTROL ROOM DAMPERS MANUAL ACTUATION SWITCH AT THE HVAC PANEL.
- 4) ADDITION OF RADIATION, AMMONIA, AND CHLORINE LOW SAMPLE AIR FLOW SIGNALS FOR CONTROL ROOM DAMPERS ISOLATION AND INDICATION TO THE PLANT PROCESS COMPUTER.
- 5) REPLACE EXISTING CHLORINE FLOW METER WITH ONE THAT HAS CFM UNIT INDICATION.
- 6) INSTALL CLEAR POLYCARBONATE "LEXAN" COVER FOR CHECKING PARTICULATE MONITOR PAPER ON THE RADIATION MONITOR CABINET.
- 7) REPLACE RADIATION MONITOR PUMP MOTOR FUSE WITH A MOTOR STARTER.

THE PROBABILITY OF OCCURRENCE OF AN ACCIDENT EVALUATED PREVIOUSLY IN THE UPDATED FINAL SAFETY ANALYSIS REPORT (UFSAR) IS NOT INCREASED. THERE IS NO REDUCTION IN SYSTEM RELIABILITY OR PERFORMANCE. THE CONTROL ROOM TOXIC GAS AND RADIATION MONITORS WILL REMAIN WITHIN THEIR DESIGN LIMITS AND WILL HAVE NO IMPACT ON PLANT ABILITY TO WITHSTAND FIRE.

THE CONSEQUENCES OF AN ACCIDENT PREVIOUSLY EVALUATED IN THE UFSAR ARE NOT INCREASED. THE MODIFICATION DOES NOT IMPACT OR INCREASE THE CALCULATED RADIOLOGICAL DOSE TO THE GENERAL PUBLIC FOR ANY EVENT EVALUATED IN THE UFSAR. THE FUNCTION AND CAPABILITY OF THE TOXIC GAS AND RADIATION MONITORS REMAIN THE SAME, AND NO FISSION PRODUCT BARRIERS ARE AFFECTED.





THE PROBABILITY OF OCCURRENCE OF A MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE UFSAR IS NOT INCREASED. THE MODIFICATION DOES NOT DEGRADE THE PERFORMANCE OF ANY SYSTEM FUNCTIONS, AND IN FACT, UPGRADES THE INSTRUMENTATION AND CONTROL OF THE MONITORS.

THE CONSEQUENCES OF A MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE UFSAR ARE NOT INCREASED. THE MODIFICATION DOES NOT IMPACT OR INCREASE THE CALCULATED RADIOLOGICAL DOSE TO THE GENERAL PUBLIC FOR ANY EVENT EVALUATED IN THE UFSAR. THE FUNCTION AND CAPABILITY OF THE MONITORS TO DETECT AND ALARM/ISOLATION REMAINS THE SAME, AND NO FISSION PRODUCT BARRIERS ARE AFFECTED.

THE POSSIBILITY OF AN ACCIDENT OF A DIFFERENT TYPE THAN ANY PREVIOUSLY EVALUATED IN THE UFSAR IS NOT CREATED. NO OTHER SYSTEMS ARE AFFECTED, NOR ANY NEW FAILURE MODE INDUCED.

THE POSSIBILITY OF A DIFFERENT TYPE OF MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY THAN ANY PREVIOUSLY EVALUATED IN THE UFSAR IS NOT CREATED. THE ADDITION OF THE SWITCHES, REMOTE INDICATION, AND CLEAR LEXAN COVER DOES NOT ADVERSELY AFFECT THE SUBJECT SYSTEM.

THE MARGIN OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION IS NOT REDUCED. THE FUNCTIONS AND PERFORMANCE CHARACTERISTICS OF THE MONITORS (E.G., DETECTION, ISOLATIONS, ETC.) REMAIN UNCHANGED.

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-3645A

GINNA STATION GROUND WATER LEVELS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES AN ANALYSIS OF BELOW GRADE STRUCTURES AT GINNA TO EVALUATE THE EFFECTS OF THE INCREASED GROUND WATER LEVEL (GWL).

THIS EWR COVERS ONLY THE EVALUATION OF EFFECTS OF THE NEW DESIGN BASIS GROUND WATER LEVEL (DBGWL) ON SAFETY RELATED STRUCTURES BELOW GRADE. THE NEW DBGWL IS DEFINED AS 265.0 FT MSL. THIS EVALUATION COMPRISES A PORTION OF A CONTINUING COMMITMENT TO THE USNRC RELATIVE TO SEP TOPIC III-3.A, "EFFECTS OF HIGH WATER LEVEL ON STRUCTURES - R.E. GINNA".



PRE-PORC COMMENTS LISTED BELOW WERE FORWARDED TO THE RESPONSIBLE ENGINEER (RE) VIA LETTER 13N1-RR-L50391. ANSWERS ARE PROVIDED FOR CLARIFICATION (SEE LETTER 13N1-RR-L1650).

- Q. DO THE RESULTS OF THIS EVALUATION HAVE ANY POTENTIAL TO IMPACT ANY ASSUMPTIONS MADE IN OUR PAST ANALYSIS OF THE CONTAINMENT VESSEL TENDONS OR THEIR ROCK ANCHORS?
- A. ENGINEERING REVIEW HAS ASCERTAINED THAT EVALUATION OF GROUND WATER LEVEL WILL HAVE NO POTENTIAL TO IMPACT ANY ASSUMPTIONS PREVIOUSLY MADE CONCERNING CONTAINMENT VESSEL TENDONS OR ROCK ANCHORS.
- Q. 1) THE UFSAR IS NOT REFERENCED IN SECTION 2.0 OF THE DESIGN CRITERIA BUT IS SPECIFICALLY CALLED OUT IN PARAGRAPH 7.4.
- 2) SAFETY ANALYSIS STEP 3.2 DOES NOT ADDRESS OPERATING BASIS EARTHQUAKES (OBE'S).
- A. ENGINEERING WILL INCORPORATE THESE COMMENTS AS CHANGES AT THE NEXT REVISION OF THE DESIGN CRITERIA/SAFETY ANALYSIS.

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 INTERNAL AND EXTERNAL EVENTS SUCH AS FIRE, FLOODS, STORMS, AND EARTHQUAKES, INCORPORATING BOTH OPERATING BASIS AND SAFE SHUTDOWN EARTHQUAKES.

THIS ANALYSIS WILL NOT DEGRADE ANY EXISTING FIRE PROTECTION SYSTEMS OR COMPONENTS. THEREFORE, ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50 APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION WILL BE MAINTAINED DURING AND FOLLOWING THIS ANALYSIS.

THE PRESENT DESIGN FOR FLOODING, STORMS, OPERATING BASIS EARTHQUAKE AND SAFE SHUTDOWN EARTHQUAKE (SEISMIC EVENTS), HAS BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. EVALUATION OF THE EFFECTS OF INCREASED GROUND WATER LEVEL ON SAFETY RELATED STRUCTURES BELOW GRADE WILL INSURE THAT THESE STRUCTURES ARE ADEQUATE TO RESIST LOAD COMBINATIONS REFERENCED IN THE DESIGN CRITERIA (BASED UPON USNRC STANDARD REVIEW PLAN GUIDELINES).

THUS, THIS ANALYSIS WILL NEITHER INCREASE THE CONSEQUENCES, NOR REDUCE THE MARGINS OF SAFETY FOR INTERNAL AND EXTERNAL EVENTS INVOLVING:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING OBE, SSE, FLOODING AND STORMS, INCLUDING TORNADO EVENTS.
- 2) FIRE PROTECTION FEATURES



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

EWR-3698

DIVERSE TRIP MODIFICATION ON REACTOR TRIP BREAKERS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH MODIFIED THE CONTROL CIRCUITRY ON THE SHUNT TRIP ATTACHMENT (STA) TO THE REACTOR TRIP BREAKERS. PRESENTLY, THE STA IS ENERGIZED THROUGH TWO MANUAL REACTOR TRIP SWITCHES. ONLY THE UNDERVOLTAGE COIL (UVTA) AUTOMATICALLY CAUSES A REACTOR TRIP WHEN A SCRAM IS REQUIRED. THE UVTA WOULD ALSO CAUSE A REACTOR TRIP ON LOSS OF D.C. CONTROL POWER. THIS MODIFICATION IS REQUIRED TO COMPLY WITH USNRC 83-28. 85% OF THIS MODIFICATION HAS BEEN COMPLETED UNDER THE PREVIOUS REVISIONS. THIS PROJECT IS SCHEDULED FOR COMPLETION DURING THE 1987 OUTAGE.

REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON FEBRUARY 5, 1986 PORC NUMBER 6.1.0-86-015-001.

THE PURPOSE OF REVISION 2 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE:

- A) NEW INDICATOR LIGHT TO VERIFY THAT THE STA IS OPERATIONAL. (PARAGRAPH 7.3.1)
- B) NEW TRIP TEST REQUIREMENTS FOR BOTH UVTA AND STA.

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 RELATED TO THIS MODIFICATION ARE:

- 1) ALL POSTULATED ACCIDENTS REQUIRING A REACTOR TRIP.
- 2) LOSS OF D.C. CONTROL POWER.
- 3) NATURAL EVENT/FIRE, AND EARTHQUAKE.

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.



PORV BLOCK VALVE(S) REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF PRESSURIZER MOTOR-OPERATED BLOCK VALVES 515 AND 516 WITH NEW SEISMICALLY AND ENVIRONMENTALLY QUALIFIED GATE VALVES. THE REPLACEMENT IS REQUIRED BECAUSE THE EXISTING BLOCK VALVE SEAT RINGS ARE APPROACHING THE MAXIMUM ALLOWABLE LIMITS FOR REMACHINING.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDES 1.29 AND 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE AS FOLLOWS:

- 1) INCREASE IN HEAT REMOVAL BY SECONDARY SYSTEM.
- 2) DECREASE IN HEAT REMOVAL BY SECONDARY SYSTEM.
- 3) DECREASE IN REACTOR COOLANT SYSTEM FLOW RATE.
- 4) REACTIVITY AND POWER DISTRIBUTION ANOMALIES.
- 5) INCREASE IN REACTOR COOLANT INVENTORY.
- 6) DECREASE IN REACTOR COOLANT INVENTORY.
- 7) INTERNAL AND EXTERNAL EVENTS SUCH AS MAJOR AND MINOR FIRES, FLOODS, STORMS, OR EARTHQUAKES.

THE FOLLOWING ACCIDENTS APPLICABLE TO THIS MODIFICATION ARE AS FOLLOWS:

1. INCREASE IN HEAT REMOVAL BY SECONDARY SYSTEM

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) DECREASE IN FEEDWATER TEMPERATURE
- B) INCREASE IN FEEDWATER FLOW
- C) EXCESSIVE LOAD INCREASE INCIDENT
- D) INADVERTANT OPENING OF A STEAM GENERATOR RELIEF/S-AFETY VALVE
- E) SPECTRUM OF STEAM SYSTEM PIPING FAILURES INSIDE AND OUTSIDE OF CONTAINMENT

2. DECREASE IN HEAT REMOVAL BY SECONDARY SYSTEM

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) STEAM PRESSURE REGULATOR MALFUNCTION OR FAILURE THAT RESULTS IN DECREASING STEAM FLOW
- B) LOSS OF EXTERNAL ELECTRICAL LOAD
- C) TURBINE TRIP
- D) LOSS OF CONDENSER VACUUM
- E) LOSS OF OFFSITE ALTERNATING CURRENT POWER TO THE STATION AUXILIARIES
- F) LOSS OF NORMAL FEEDWATER FLOW
- G) FEEDWATER SYSTEM PIPE BREAKS.





3. REACTIVITY AND POWER DISTRIBUTION ANOMALIES

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) UNCONTROLLED ROD CLUSTER CONTROL ASSEMBLY WITHDRAWAL FROM A SUBCRITICAL CONDITION
- B) UNCONTROLLED ROD CLUSTER CONTROL ASSEMBLY WITHDRAWAL AT POWER
- C) STARTUP OF AN INACTIVE REACTOR COOLANT PUMP
- D) CHEMICAL AND VOLUME CONTROL SYSTEM MALFUNCTION
- E) RUPTURE OF A CONTROL ROD DRIVE MECHANISM HOUSING
- F) ROD CLUSTER CONTROL ASSEMBLY DROP

4. INCREASE IN REACTOR COOLANT INVENTORY

5. DECREASE IN REACTOR COOLANT SYSTEM FLOW RATE

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) FLOW COASTDOWN ACCIDENTS
- B) LOCKED ROTOR ACCIDENTS

6. DECREASE IN REACTOR COOLANT INVENTORY

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) INADVERTANT OPENING OF A PRESSURIZER SAFETY OR RELIEF VALVE
- B) PRIMARY SYSTEM PIPE RUPTURES

THIS MODIFICATION WILL NOT DEGRADE THE DESIGN, CAPABILITY OR PERFORMANCE OF THE EXISTING PRESSURIZER RELIEF SYSTEM AND, THEREFORE, THE CONSEQUENCES OF THE ABOVE EVENTS WILL NOT BE INCREASED BY THE MODIFICATION.

THIS MODIFICATION AND THE MATERIALS UTILIZED WILL MEET APPENDIX R 10CFR50 CRITERIA AS DEFINED IN ENGINEERING PROCEDURE QE-326.

THE MODIFICATION NEITHER AFFECTS, NOR IS AFFECTED BY ANY FLOOD OR STORM PREVIOUSLY EVALUATED.

THE MODIFICATION IS DECLARED AS HAVING TO MEET SEISMIC CATEGORY 1 CRITERIA OF USNRC REG. GUIDE 1.29 AND CONDITIONS SPECIFIED IN THE UFSAR SECTION 3.11.3 TITLED "IDENTIFICATION OF LIMITING ENVIRONMENTAL CONDITIONS".



BASED UPON ALL THE ABOVE ANALYSES:

- 1) STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.
- 2) MARGIN OF SAFETY DURING NORMAL OPERATING AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.

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.

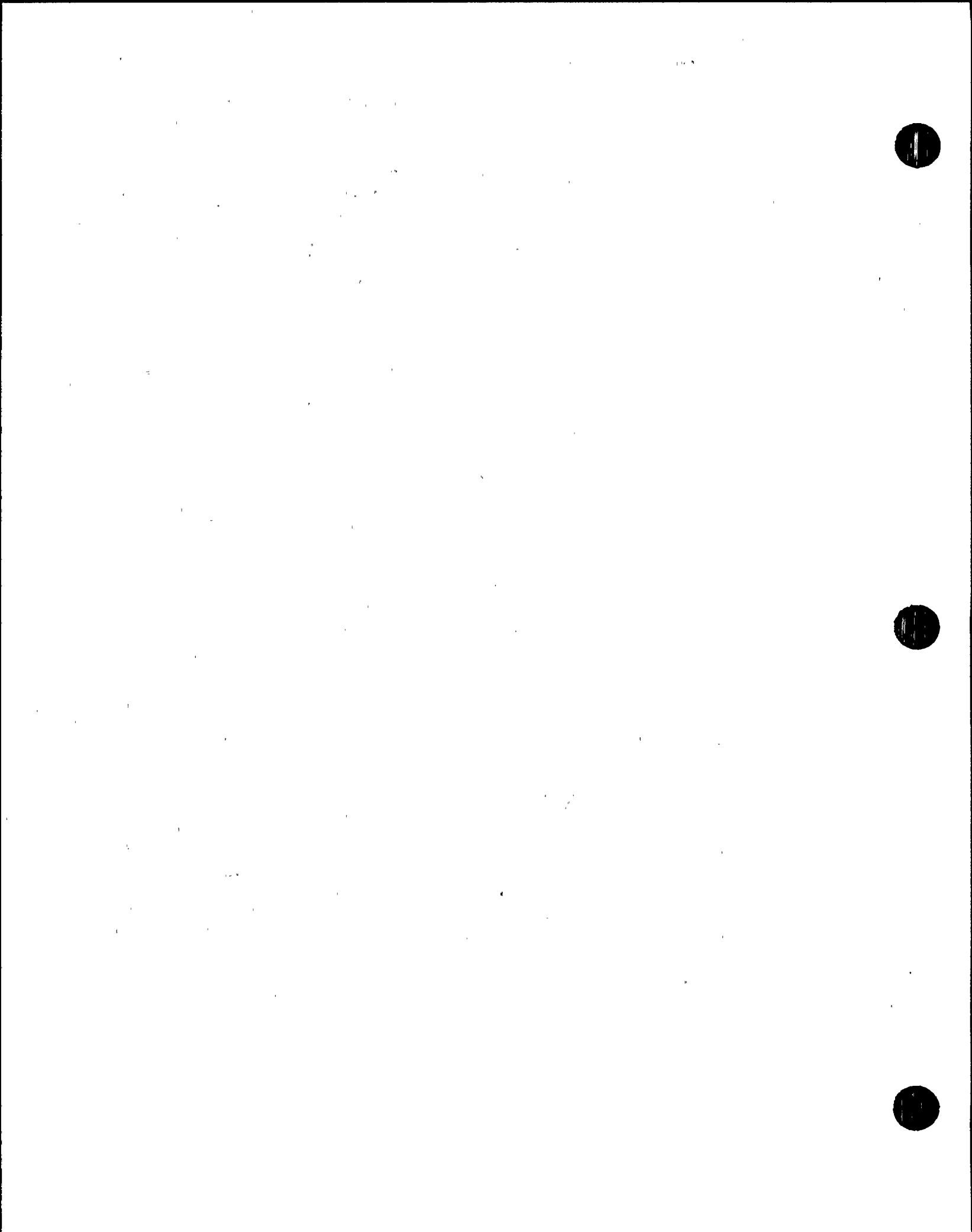
EWR-3768

CONTAINMENT PENETRATION COOLING

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE UPGRADE OF THE PENETRATION COOLING SYSTEM TO ENSURE THAT THE UNMONITORED PATH FOR AIRBORNE RADIATION FROM THE AUXILIARY BUILDING TO UNCONTROLLED AREAS WILL BE ELIMINATED.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATED COMMENTS TO REVISION 0, AND INCLUDED INSTALLING NEW DUCTWORK TO AN OUTSIDE AIR SOURCE, A BACKDRAFT DAMPER OR OTHER MEANS OF BACKFLOW PREVENTION, TO PREVENT UNMONITORED RELEASES OF RADIOACTIVITY, CHANGES TO THE EXISTING PENETRATION COOLING FAN SYSTEM INLET ARRANGEMENT BOX TO ACCEPT THE NEW DUCTWORK, INSTALLING A NEW STEAM HEATING COIL, INSTALLING ASSOCIATED STEAM SUPPLY AND STEAM CONDENSATE RETURN PIPING, INSTALLING A NEW CONDENSATE DRAIN PAN AND PIPING, AND INSTALLING NEW PNEUMATIC AND/OR ELECTRIC TEMPERATURE CONTROL DEVICES IN THE MODIFIED SYSTEM.

IN ADDITION TO THE DESIGN WORK REQUIRED TO MODIFY THE EXISTING CONTAINMENT PENETRATION COOLING SYSTEM AN ANALYSIS WAS PERFORMED TO DETERMINE THE ACTUAL BULK CONCRETE TEMPERATURES OF THE PENETRATIONS WITHOUT THE OPERATION OF THE CONTAINMENT PENETRATION COOLING SYSTEM. BULK CONCRETE TEMPERATURE LIMITATIONS HAVE BEEN RELAXED IN RECENT YEARS FROM THE ORIGINAL DESIGN LIMIT OF 150°F TO 200°F PER ASME BOILER AND PRESSURE VESSEL CODE, SECTION III/DIVISION 2, 1986 EDITION. THE ANALYSIS DEMONSTRATES THAT THE BULK CONCRETE TEMPERATURES DURING THE WORST CASE SCENARIO COULD EXCEED 200°F. THEREFORE THIS SYSTEM WILL BE MAINTAINED OPERABLE ABOVE A PRIMARY SYSTEM TEMPERATURE OF 200°F.



REVISION 2 OF THIS DESIGN CRITERIA AND SAFETY ANALYSIS UPDATES THE REFERENCE SECTIONS OF BOTH THE DESIGN CRITERIA AND SAFETY ANALYSIS AND INCORPORATES 1) A VERIFICATION THAT A STEAM COIL FAILURE (LOSS OF STEAM HEATING) WILL NOT ADVERSELY AFFECT SYSTEM OPERATION DURING COLD WEATHER, AND 2) A PUSH TO TEST SWITCH ON THE EQUIPMENT HATCH TEMPERATURE ALARM PANEL TO GIVE POSITIVE ASSESSMENT OF LAMP FUNCTION DURING OPERATION.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE PIPING FAILURES IN FLUID SYSTEMS OUTSIDE CONTAINMENT, SEISMIC EVENTS, FIRES, AND PLANT BUILDING SECURITY.

SEISMIC EVENTS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. MODIFICATION OF THE PENETRATION COOLING SYSTEM REQUIRES SEISMIC DESIGN FOR SUPPORTS TO ENSURE THAT MODIFIED PIPING/DUCTWORK WILL NOT COLLAPSE DURING A SEISMIC EVENT. THIS MODIFICATION WILL NOT ALTER EITHER THE SEISMIC QUALIFICATION OF EXISTING STRUCTURES OR SAFETY RELATED EQUIPMENT LOCATED WITHIN THE EXISTING AUXILIARY BUILDING STRUCTURE.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50, APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING THIS MODIFICATION.

A BREAK IN THE HOUSE HEATING STEAM LINE TO BE INSTALLED UNDER THIS MODIFICATION (PIPE BREAK OUTSIDE CONTAINMENT) WILL NOT HAVE ADVERSE EFFECTS ON SAFE SHUTDOWN OF THE PLANT. THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP ASSURES DELIVERY OF AUXILIARY FEEDWATER TO THE STEAM GENERATORS TO MAINTAIN SAFE SHUTDOWN. INVENTORY FOR THE PRIMARY SYSTEM IS ASSURED VIA CHARGING PUMPS LOCATED IN A ROOM SEPARATED FROM THE AUXILIARY BUILDING BY CONCRETE WALLS AND SEALED FIRE BARRIERS.

APPROPRIATE PROVISIONS WILL BE INSTALLED TO PRECLUDE UNMONITORED ACCESS TO THE AUXILIARY BUILDING VIA THE NEW INLET PENETRATION IN ACCORDANCE WITH GINNA STATION SECURITY REQUIREMENTS.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC EVENTS INCLUDING PIPE BREAKS OUTSIDE CONTAINMENT.
- 2) FIRE PROTECTION FEATURES
- 3) PLANT SECURITY



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

EWR-3817

CATALYTIC OXYGEN REMOVAL SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL PROVIDE A MEANS OF REDUCING OXYGEN CONCENTRATIONS TO LESS THAN 100 PPB IN THE CONDENSATE STORAGE SYSTEM. A WESTINGHOUSE CATALYTIC OXYGEN REMOVAL SYSTEM (CORS) HAS BEEN EVALUATED TO BE THE BEST METHOD AVAILABLE TO REDUCE DISSOLVED OXYGEN TO ACCEPTABLE LEVELS. THE PRINCIPLE IS TO MIX HYDROGEN WITH THE CONDENSATE AND REDUCE THE FREE OXYGEN TO WATER THROUGH EXPOSURE OF THE MIXTURE TO A METAL CATALYST SURFACE.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON NOVEMBER 6, 1985 PORC NUMBER 6.1.0-85-114-002.

DUE TO PRE-PORC COMMENTS, REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS, WERE NOT PRESENTED TO PORC.

THE PURPOSE OF REVISION 2 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE COMMENTS AS A RESULT OF PRE-PORC OF REVISION 1.

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 RELATED TO THIS MODIFICATION ARE A LOSS OF NORMAL FEEDWATER AND FIRES.

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-4037

CT-1 TERMINAL REPLACEMENT

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION OF THE EXISTING EBERLINE CT-1 EFFLUENT MONITOR CONTROL TERMINALS AT GINNA STATION WITH UPGRADED "B" VERSION EQUIPMENT. THE PURPOSE OF THE "B" VERSION UPGRADE IS TO IMPROVE THE OPERABILITY AND RELIABILITY OF THE EXISTING CONTROL TERMINALS IN THE CONTROL ROOM AND TECHNICAL SUPPORT CENTER. ALSO PROPOSED IS THE INSTALLATION OF A REPORT GENERATOR INTERFACE (RGIF) WHICH WOULD ENABLE THE CT-1 IN THE TSC TO COMMUNICATE WITH THE NEW PLANT COMPUTER PLANNED FOR INSTALLATION IN 1986. IF THE CONTROL ROOM OPERATORS HAVE ACCESS TO DATA FROM THE EFFLUENT MONITORS VIA THE PLANT COMPUTER, THE CT-1 IN THE CONTROL ROOM WOULD NO LONGER BE REQUIRED, AND COULD BE REMOVED TO DECREASE SOME OF THE CONGESTION IN THE CONTROL ROOM AND ELIMINATE THE NEED FOR DUPLICATING AT CT-1 FOR THE GINNA SIMULATOR PROJECT. IT IS PROPOSED THAT BOTH THE CONTROL ROOM AND THE TSC CONTROL TERMINALS BE UPGRADED WITH THE "B" VERSION EQUIPMENT IN 1985. WHEN THE NEW PLANT COMPUTER IS OPERATIONAL, THE RGIF WOULD BE INSTALLED BETWEEN THE TSC CT-1 AND THE PLANT COMPUTER, AND THE CONTROL ROOM CT-1 WOULD BE REMOVED.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION FSAR AND EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT.

BASED UPON THE ANALYSIS DESCRIBED UNDER PARAGRAPH 3.1 TO 4.4 OF THE SAFETY ANALYSIS, IT HAS BEEN DETERMINED THAT THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY, PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL NOT BE INCREASED BY THE PROPOSED ADDITION.

EWR-4070

NO. 1 AND 2 FEEDWATER HEATER REPLACEMENT

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE REPLACEMENT OF NUMBER 1 AND 2 FEEDWATER HEATER.

THE PURPOSE OF THIS MODIFICATION IS TO SPECIFY, PROCURE, AND INSTALL NEW FEEDWATER HEATER TUBE BUNDLES AND SHELL MODIFICATIONS AT THE FIRST AND SECOND EXTRACTION POINTS. THE PRIMARY GOAL IS TO ELIMINATE THE COPPER ALLOY TUBES. STAINLESS STEEL TUBES ARE RECOMMENDED.

REVISION 1 TO THE SAFETY ANALYSIS INCORPORATES A CHANGE RESULTING FROM PRE-PORC COMMENT OF REVISION 0 TO CLARIFY A STEP TO STATE THAT THE PROBABILITY OF UNINTENDED OPENING OF THE CONDENSATE BYPASS VALVE WILL NOT INCREASE DUE TO THE DESIGN CRITERIA REQUIREMENT TO LIMIT TUBESIDE PRESSURE DROP TO 45 PSI.

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE



GINNA STATION UFSAR, THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70, AND A 10CFR50.59 SAFETY EVALUATION. THE EVENTS RELATED TO THIS MODIFICATION ARE A DECREASE IN FEEDWATER TEMPERATURE AND A LOSS OF NORMAL FEEDWATER FLOW.

THE DECREASE IN FEEDWATER TEMPERATURE EVENT IS ANALYZED IN THE UFSAR AS AN ACCIDENTAL OPENING OF THE CONDENSATE BYPASS VALVE, WHICH RESULTED IN A SUDDEN REDUCTION INLET FEEDWATER TEMPERATURE TO THE STEAM GENERATORS.

THIS MODIFICATION HAS NO BEARING ON CONDENSATE BYPASS VALVE OPERATION OR PLANT RESPONSE TO THIS EVENT. A REDUCTION IN FEEDWATER TEMPERATURE WHICH RESULTED FROM A LOSS OF ONE FEEDWATER HEATER HAS BEEN ANALYZED IN UFSAR. THE ANALYSIS SHOWED THAT FOR A FEEDWATER ENTHALPY DECREASE CORRESPONDING TO THE LOSS OF ONE FEEDWATER HEATER AT FULL POWER MINIMUM DNBR DOES NOT FALL BELOW THE LIMIT VALUE. AT ZERO POWER THE RESULTS ARE LESS LIMITING THAN THOSE PRESENTED IN UFSAR SECTION 15.4.1, UNCONTROLLED ROD CLUSTER CONTROL ASSEMBLY WITHDRAWAL FROM A SUBCRITICAL CONDITION.

THE LOSS OF NORMAL FEEDWATER FLOW IS ANALYZED IN THE UFSAR AS A DISRUPTION OF SECONDARY SYSTEM HEAT REMOVAL CAPABILITY. THIS MODIFICATION WILL NOT INCREASE THE PROBABILITY OF THE DISRUPTION AS A RESULT OF CONDENSATE LINE BREAK SINCE THE DESIGN CRITERIA REQUIRES PROPER INSPECTION AND TESTING OF NEW WELDS.

THIS MODIFICATION IS NON-SEISMIC SINCE IT DOES NOT EFFECT THE SAFE SHUTDOWN OF THE REACTOR.

THIS MODIFICATION DOES NOT INCREASE THE FIRE LOADING IN FIRE AREAS CONTAINING SAFE SHUTDOWN EQUIPMENT OR DEGRADE EXISTING FIRE PROTECTION BECAUSE OF REQUIREMENTS IN SECTION 27.0 OF THE DESIGN CRITERIA.

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-4075  
TSC HVAC MODIFICATIONS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION OF THE GINNA STATION TSC HVAC SYSTEM. THIS MODIFICATION WILL CONSIST OF: 1) ADDING TWO COMPUTER TYPE AIR CONDITIONING UNITS TO THE NEW SAS COMPUTER ROOM, 2) INSTALLING NEW ZONE CONTROL BOXES, EACH WITH ITS OWN THERMOSTAT, 3) MODIFYING THE CENTRAL SYSTEM CONTROL SO THAT IT WILL AUTOMATICALLY CHANGE OVER FROM HEATING TO COOLING, AND BACK, AND 4) INSTALLING A FLOW CONTROLLER TO ASSURE THAT THE MAXIMUM DESIGN FLOW RATE THROUGH THE CHARCOAL FILTER IS NOT EXCEEDED.

REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC. ON 11/19/86 PORC NUMBER 6.1.0-86-135-002.

THE PURPOSE OF REVISION 2, OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE INSTALLATION REFERENCE TO SPECIFICATION EE-29, EE-80 AND IEEE 383.

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 RELATED TO THIS MODIFICATION ARE: INTERNAL AND EXTERNAL EVENTS, SUCH AS FIRES, FLOODS, STORMS AND EARTHQUAKES.

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.



TOTAL CHARGING FLOW INDICATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODIFICATION TO INSTALL TWO TRANSMITTERS FOR REACTOR COOLANT PUMP (RCP) SEAL INJECTION FLOW.

EWR 4118 WAS WRITTEN IN RESPONSE TO A NUMBER OF HUMAN ENGINEERING DISCREPANCIES (HEDS) IDENTIFIED DURING THE DETAILED CONTROL ROOM DESIGN REVIEW. HEDS 451 AND 471 STATE THAT INDICATION FOR REACTOR COOLANT PUMP (RCP) SEAL INJECTION FLOW AND TOTAL CHARGING FLOW ARE REQUIRED. HEDS 84, 85, 309, 310, AND 345 ADDRESS THE PROBLEM THAT THE CHARGING FLOW CONTROLLER IS LOCATED ON THE MIDDLE SECTION OF THE MAIN CONTROL BOARD (MCB), AND THE INDICATOR IS ON THE LEFT SECTION WHICH IS EIGHT TO TEN FEET AWAY. THE COMBINATION OF THESE HEDS RESULTED IN AN NRC COMMITMENT TO PROVIDE INDICATION FOR SEAL INJECTION AND A DUPLICATE INDICATOR FOR CHARGING FLOW ON THE MIDDLE SECTION OF THE MCB BY JUNE 1988. THIS PROJECT INVOLVES THE INSTALLATION OF TWO TRANSMITTERS FOR RCP SEAL INJECTION FLOW (FT115A AND FT116A). THESE TWO TRANSMITTERS WOULD BE INSTALLED IN PARALLEL WITH THE EXISTING RCP SEAL INJECTION FLOW LOCAL INDICATION (FT115 AND FT116). INDICATORS FOR SEAL INJECTION FLOW WILL BE INSTALLED ON THE MIDDLE SECTION OF THE MCB. THE TWO SEAL INJECTION FLOWS WILL BE INPUT TO THE PLANT PROCESS COMPUTER SYSTEM (PPCS). IN ADDITION, A DUPLICATE OF THE EXISTING CONTROL BOARD INDICATION FOR CHARGING FLOW (F0128) WILL BE INSTALLED ON THE MIDDLE SECTION OF THE MCB.

THE RCP SEAL INJECTION FLOWS, COUPLED WITH THE EXISTING CONTROL BOARD INDICATION FOR CHARGING FLOW, WILL ALLOW CONTROL ROOM OPERATORS TO DETERMINE TOTAL SYSTEM INFLOW. THE NEW INDICATORS FOR SEAL INJECTION FLOW AND CHARGING FLOW WILL BE LOCATED BESIDE EACH OTHER ON THE MIDDLE SECTION OF THE MCB. THE DUPLICATE INDICATOR FOR CHARGING FLOW WILL, IN ADDITION, BE LOCATED ABOVE THE CONTROLLER FOR CHARGING FLOW. A NEW PSEUDO ANALOG POINT WILL BE CREATED ON THE PPCS TO CALCULATE TOTAL CHARGING FLOW BY COMBINING CHARGING FLOW, AN EXISTING PPCS INPUT, WITH THE NEW RCP SEAL INJECTION FLOW POINTS.

DUE TO PRE-PORC COMMENTS, REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WERE NOT PRESENTED TO PORC.

THE PURPOSE OF REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE COMMENTS AS A RESULT OF PRE-PORC OF REVISION 0.





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) MAJOR AND MINOR FIRES
- 3) PIPE BREAKS OUTSIDE THE CONTAINMENT BUILDING

THIS MODIFICATION IS LIMITED TO WORK DOWNSTREAM OF THE ROOT VALVES FOR THE RCP SEAL INJECTION FLOW. SINCE THE ROOT VALVES DEFINE THE SAFETY CLASS BOUNDARY, THE EXISTING RCP SEAL INJECTION FLOW INSTRUMENTATION IS DESIGNATED NOT SEISMIC CATEGORY I. THE REMAINING WORK, FOR THIS MODIFICATION, WILL BE DESIGNED TO MEET THE REQUIREMENTS OF USNRC REGULATORY GUIDE 1.29, REVISION C.2.

THIS MODIFICATION INVOLVES THE INSTALLATION OF EQUIPMENT IN THE AUXILIARY BUILDING, FIRE AREA ABBM-ZONE ABB, AND THE CONTROL BUILDING, FIRE AREA - CC ZONES CR AND RR. THIS MODIFICATION ALSO REQUIRES ROUTING CABLE THROUGH THE CABLE TUNNEL WHICH IS FIRE AREA CT. A REVIEW WILL BE PERFORMED TO ASSURE CONTINUED COMPLIANCE WITH 10CFR50, 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 MODIFICATIONS DOES NOT AFFECT THE SAFE SHUTDOWN ANALYSIS IN THE APPENDIX R SUBMITTAL FOR THE FOLLOWING REASONS:

- A. THE APPENDIX R REQUIREMENTS FOR LOCAL INDICATION OF RCP SEAL INJECTION FLOW WILL BE MAINTAINED.
- B. THERE IS NO EFFECT ON SEPARATION OF EXISTING CIRCUITS, ASSOCIATED CIRCUITS, OR FIRE AREA BOUNDARIES AS ANALYZED IN THE APPENDIX R SUBMITTAL.

THIS MODIFICATION WILL INTERFACE WITH THE EXISTING 3/8 INCH RCP SEAL INJECTION FLOW SENSING LINE IN THE SAME MANNER AS DOES THE EXISTING LOCAL INDICATORS. THEREFORE THIS MODIFICATION DOES NOT INTRODUCE ANY NEW FAILURE MODES CONCERNING PIPE BREAKS OUTSIDE OF THE CONTAINMENT BUILDING.

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

THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.



CONTROL BUILDING EAST WALL MODIFICATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE STRUCTURAL UPGRADE REQUIREMENT OF THE EAST WALL OF THE CONTROL BUILDING. THE EAST WALL OF THE CONTROL BUILDING MUST BE CAPABLE OF WITHSTANDING THE LOADS ASSOCIATED WITH A 132 MPH TORNADO (DIRECT WIND AND  $\Delta P = 0.4$  PSI) AND TWO TORNADO MISSILES. THIS MODIFICATION WILL, IN EFFECT, UPGRADE THE RELAY ROOM EAST WALL AS PART OF THE STRUCTURAL UPGRADE PROGRAM TO PROVIDE THE NECESSARY ADDED STRENGTH REQUIRED TO RESIST THE IMPOSES LOADS OF SNOW, TORNADO (DIRECT AND  $\Delta P$ ), TORNADO MISSILES AND 2) PROVIDE A WATER-TIGHT BARRIER AGAINST FLOODING OF DEER CREEK.

REVISION 2 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 1 DELETING EXTRA CONDUIT FOR FUTURE CIRCUITS; ADDING GROUNDING AND DOOR POSITION SWITCHES FOR BOTH SECURITY AND FIRE DOORS.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYSIS IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE WIND, SNOW AND TORNADO LOADINGS, FLOODING AND SEISMIC, FIRES, LOSS OF A.C. POWER AND PLANT BUILDING SECURITY.

THE DESIGN FOR WIND, SNOW, TORNADOES AND EXTERNAL FLOODING HAS BEEN EVALUATED IN THE UFSAR AND WILL BE IN ACCORDANCE WITH COMMITMENTS MADE TO THE USNRC WHICH ARE REFERENCED IN SECTIONS 2.4, 3.3, 3.4.1 AND 3.8 OF THE UFSAR.

SEISMIC EVENTS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. MODIFICATION OF THIS EXTERNAL WALL OF THE RELAY ROOM WILL NOT ALTER EITHER THE SEISMIC QUALIFICATION OF EXISTING STRUCTURES OR SAFETY RELATED EQUIPMENT LOCATED WITHIN THE EXISTING STRUCTURES.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50 APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING THE STRUCTURAL UPGRADE MODIFICATIONS.

THE MODIFICATION AFFECTS ONLY LOADING OF NON-SAFETY RELATED BUS 15. SINCE THERE IS NO CHANGE IN THE SAFETY-RELATED BUSES, THERE IS NO CHANGE IN THE CONSEQUENCES OF A LOSS OF A.C. POWER.

THE RELOCATION OF AN EXISTING EXTERIOR SECURITY DOOR TO THE OUTSIDE OF THE NEW STRUCTURE WILL MAINTAIN THE LEVEL OF PRESENT SECURITY FROM INTRUSION AT GINNA STATION. INTERIM MEASURES DURING CONSTRUCTION WILL BE ADMINISTRATIVELY CONTROLLED TO PREVENT POSSIBLE DEGRADATION OF SECURITY BARRIERS.



THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SSE, FLOODING AND TORNADO EVENTS
- 2) FIRE PROTECTION FEATURES
- 3) PLANT SECURITY

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

EWR-4176  
APPENDIX R DETECTION UPGRADE

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL INSTALL THREE (3) NEW FIRE DETECTION ZONES AND SUPERVISED BY THE FIRE SIGNALLING SYSTEM. THESE ZONES ARE:

- Z-36 (SMOKE) INT. BLDG. SUB-BASEMENT FLOORS.
- Z-37 (SMOKE) INT. BLDG. NORTH UPPER ELEVATIONS.
- Z-38 (SMOKE) INT. BLDG. SOUTH ALL ELEVATIONS.

INCLUDED IN THIS MODIFICATION IS THE MOUNTING OF EQUIPMENT, ROUTING AND MOUNTING OF CONDUIT, AND ALL WIRING ASSOCIATED WITH THE NEW ZONES AND MODIFICATIONS TO THE EXISTING FIRE SIGNALLING SYSTEM. THIS MODIFICATION IS REQUIRED TO COMPLY WITH APPENDIX R ALTERNATIVE SHUTDOWN SYSTEM, GINNA NUCLEAR POWER PLANT REVISION 2.

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 RELATED TO THIS MODIFICATION ARE SEISMIC AND FIRE.

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. 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.



O<sub>2</sub>/H<sub>2</sub> ANALYZER REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE DIRECT REPLACEMENT OF THE EXISTING O<sub>2</sub>/H<sub>2</sub> ANALYZER SYSTEM. THIS MODIFICATION WILL REPLACE THE INACCURATE AND UNRELIABLE EXISTING O<sub>2</sub>/H<sub>2</sub> ANALYZER SYSTEM WITH A NEW RELIABLE AND ACCURATE SYSTEM.

REVISION 1 OF THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 0 TO CORRECT TYPOGRAPHICAL ERRORS AND SUMMARY DESCRIPTION OF MODIFICATION BACKGROUND INFORMATION.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND EVENTS REQUIRED BY USNRC REG. GUIDES 1.29, 1.60, 1.61, AND 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE MAJOR AND MINOR FIRES AND A SEISMIC EVENT.

ALL EXISTING AND NEW WIRING, CABLE, AND ELECTRICAL COMPONENTS REQUIRED FOR THIS MODIFICATION COMPLIES WITH 10CFR50 APPENDIX R.

THIS MODIFICATION HAS BEEN ANALYZED FOR SEISMIC EVENTS UNDER SECTION C.2 OF REG. GUIDE 1.29. THE INSTALLATION WILL MAINTAIN STRUCTURAL INTEGRITY SUCH THAT SURROUNDING SAFETY RELATED EQUIPMENT WILL NOT BE AFFECTED.

THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) MAJOR OR MINOR FIRES
- 2) SEISMIC EVENT

BASED UPON A REVIEW OF THE UFSAR AND USNC REG. GUIDE 1.29 AND 1.70, 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.





STATUS LIGHT MODIFICATION

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH CONSISTS OF INSTALLING A DROPPING RESISTOR IN EACH LIGHT ASSEMBLY IN THE MAIN CONTROL BOARD (MCB). INCLUDED WITH THIS MODIFICATION IS THE REPLACEMENT OF THE EXISTING 35 VOLT BULBS WITH 30 VOLT BULBS, AND NEW INDICATOR LIGHT LENS CAP. THIS MODIFICATION WILL PROVIDE GREATER LIGHT OUTPUT IN THE BRIGHT AND DIM MODE, THEREBY ELIMINATING THE PRESENT VISUAL CONTRAST BETWEEN BRIGHT AND DIM CONDITIONS. THESE STATUS LIGHTS IN SUBJECT, PROVIDE A VISUAL INDICATION OF SELECTED VALVE POSITIONS.

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 RELATED TO THIS MODIFICATION ARE: LOSS OF DC OR AC CONTROL POWER, NATURAL EVENTS, FIRE, AND EARTHQUAKE.

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.



C AND D STANDBY AUXILIARY FEEDWATER PUMP INTERLOCK

THIS ENGINEERING WORK REQUEST ADDRESSES THE MODIFICATION TO THE PUMP INTERLOCK.

PRESENTLY, THE ELECTRICAL AUXILIARY FEEDWATER SYSTEM CONFIGURATION CONSISTS OF TWO MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS (MDAFWP1A AND 1B) AND TWO STANDBY AUXILIARY PUMPS 1A AND 1B SUPPLY CONDENSATE WATER TO A AND B STEAM GENERATORS RESPECTIVELY. IN THE EVENT THAT EITHER ONE OR BOTH OF THESE PUMPS ARE INOPERABLE THE STANDBY PUMPS MAY BE USED TO PROVIDE AN EMERGENCY SOURCE FOR COOLING. THE STANDBY PUMPS (C AND D) ARE ELECTRICALLY INTERLOCKED WITH PRIMARY PUMPS (A AND B). THE INTERLOCKS ARE INTENDED TO PREVENT THE SIMULTANEOUS OPERATION OF THE PRIMARY PUMPS AND STANDBY PUMPS. DURING NORMAL OPERATION THIS CONFIGURATION SATISFIES THIS DESIGN CRITERIA, HOWEVER, WHEN PRIMARY BREAKERS ARE RACKED OUT INTO THE HELD POSITION (OR REMOVED), THE INTERLOCKS ARE ALSO REMOVED, MAKING THE STANDBY BREAKERS INOPERABLE. THIS PROPOSED MODIFICATION WILL ELIMINATE THIS CONDITION BY INSTALLING CELL SWITCHES IN THE PRIMARY BREAKER COMPARTMENTS, WHICH WILL CHANGE STATE WHEN THE BREAKER IS RACKED IN OR OUT. THE CELL SWITCH CONTACTS WILL BE WIRED IN PARALLEL WITH THE EXISTING INTERLOCK CONTACTS AND WILL PERMIT THE PRIMARY BREAKERS TO BE REMOVED FROM SERVICE FOR MAINTENANCE AND INSURE THAT THE STANDBY BREAKERS WILL BE OPERATIONAL.

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

- A) LOSS OF AUXILIARY FEEDWATER FLOW
- B) NATURAL EVENTS/FIRE, EARTHQUAKE.

THE FIRST EVENT ANALYZED WILL BE THE LOSS OF AUXILIARY FEEDWATER FLOW DUE TO THE PROPOSED MODIFICATION. THE ADDITION OF A CELL SWITCH WILL NOT EFFECT OPERABILITY OF THE MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS. THESE CELL SWITCHES SERVE AS PERMISSIVES TO THE STANDBY AUXILIARY FEEDWATER PUMPS, THEREFORE IN THE EVENT OF A FAILURE ONLY THE STARTING OF THE STANDBY PUMPS ARE AFFECTED. MANUFACTURER INSTALLATION AND TESTING PROCEDURES WILL BE PERFORMED AND A PERIODIC TESTING PROGRAM WILL BE INITIATED TO ASSURE PROPER OPERATION OF CELL SWITCHES, THEREBY REDUCING THE PROBABILITY OF FAILURE TO START STANDBY AUXILIARY FEEDWATER PUMPS TO AN ACCEPTABLY LOW LEVEL. THEREFORE THIS MODIFICATION WILL HAVE A NEGLIGIBLE IMPACT UPON OPERABILITY OF AUXILIARY FEEDWATER SYSTEM.

THE SECOND EVENT ANALYZED WILL BE THE EFFECT OF A SEISMIC EVENT ON THE PLANT DUE TO THIS MODIFICATION. THE CELL SWITCHES HAVE BEEN QUALIFIED BY THE MANUFACTURER, THEREFORE THE CONSEQUENCES OF A FAILURE DUE TO A SEISMIC EVENT ARE MITIGATED.



THE THIRD EVENT ANALYZED WILL BE THE EFFECT OF A FIRE ON THE PLANT DUE TO THIS MODIFICATION. THE CONTROL WIRING USED FOR THIS MODIFICATION IS REQUIRED TO MEET THE REQUIREMENTS OF IEEE STD. 383-1984 FLAME TEST. THUS THERE IS NO SIGNIFICANT INCREASE IN THE FIRE LOADING DUE TO THIS MODIFICATION.

AN APPENDIX R CONFORMANCE VERIFICATION WILL BE PERFORMED TO ENSURE THAT THE PROPOSED MODIFICATION DOES NOT ADVERSELY IMPACT EXISTING APPENDIX R COMPLIANCE METHODS.

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

- A) THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED AND
- B) THE STRUCTURES, SYSTEMS, AND COMPONENTS 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.

THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION.

EWR-4281

STEAM GENERATOR MANWAY STUD TENSIONER

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION COVERING THE INSTALLATION OF STEAM GENERATOR PRIMARY MANWAY STUDS AND NUTS. IN THE PAST THE PRIMARY MANWAY COVERS HAVE BEEN ATTACHED WITH BOLTS WHICH ARE TORQUED TO OBTAIN THE PROPER GASKET SEATING. THIS IS A TIME CONSUMING AND DIFFICULT TASK SINCE IT MUST BE DONE IN A HIGH RADIATION AREA. THIS MODIFICATION CONSISTS OF REPLACING THE EXISTING BOLTS AND NUTS. INSTEAD OF TORQUING THE NUTS TO INDUCE THE REQUIRED AXIAL LOADS, DIRECT HYDRAULIC LOADS ARE USED TO STRETCH THE STUDS.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON NOVEMBER 5, 1986, PORC NUMBER 6.1.0-86-125-001.



THE PURPOSE OF REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO REVISE PARAGRAPHS 2.6.1 AND 2.6.2 TO INCLUDE NEW EG&G DRAWING TITLES.

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 RELATED TO THIS MODIFICATION ARE: SEISMIC EVENTS, DECREASE IN REACTOR COOLANT SYSTEM INVENTORY AND FIRES.

BASED UPON THE ANALYSES DESCRIBED UNDER PARAGRAPHS 3.1 TO 4.0D 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-4282

CV RECIRC FAN CONDENSATE COLLECTOR LEVELS

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODIFICATION OF THE CV RECIRC FAN CONDENSATE COLLECTOR LEVELS.

THIS MODIFICATION IS FOR REPLACEMENT OF EXISTING OBSOLETE PRESSURE TRANSMITTERS, SIGNAL PROCESSORS AND MAIN CONTROL BOARD INDICATORS WITH INSTRUMENTS CAPABLE OF ACCURATELY MONITORING WATER LEAKAGE WITHIN CONTAINMENT. THE EXISTING TRANSMITTERS, POWER SUPPLIES, BISTABLES AND INDICATORS WILL BE REPLACED TO PROVIDE MORE ACCURATE AND RELIABLE CONDENSATE LEVEL INDICATION. THE SCALES IN THE EXISTING LEVEL INDICATOR SHALL BE PLACED IN THE NEW LEVEL INDICATORS WITH NO CHANGE IN THE APPEARANCE ON THE MCB. NEW REFERENCE LEG TUBING FROM THE TRANSMITTERS TO THE CONDENSATE COLLECTION STANDPIPES WILL BE INSTALLED.

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 RELATED TO THIS MODIFICATION ARE -(1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT, (3) PIPE BREAKS INSIDE THE CONTAINMENT BUILDING.

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

AN APPENDIX R CONFORMANCE REVIEW SHALL BE PREPARED TO DEMONSTRATE THAT CONTINUED COMPLIANCE WITH 10CFR50 APPENDIX R REQUIREMENTS IS MAINTAINED.





THIS MODIFICATION WILL BE REVIEWED 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 SHUT DOWN THE PLANT DURING POSTULATED FIRES.

THE PRESSURE BOUNDARY PORTIONS OF THE CONDENSATE COLLECTOR LEVEL INSTRUMENTATION ARE NOT DESIGNATED SEISMIC CATEGORY I. HOWEVER, ANY MODIFICATION TO THIS SYSTEM WHOSE FAILURE COULD CAUSE DAMAGE TO SAFETY RELATED EQUIPMENT WILL BE DESIGNED TO MEET THE REQUIREMENTS OF USNRC REGULATORY GUIDE 1.29, POSITION C.2.

THE NEW TRANSMITTERS WILL INTERFACE WITH THE EXISTING CONDENSATE COLLECTOR STANDPIPES IN THE SAME MANNER AS THE EXISTING TRANSMITTERS WITH THE ADDITION OF THE REFERENCE LEG TUBING PENETRATION. THIS MODIFICATION DOES NOT INTRODUCE ANY NEW FAILURE MODES CONCERNING PIPE BREAKS INSIDE THE CONTAINMENT BUILDING.

THIS MODIFICATION WILL NOT RESULT IN A CHANGE TO THE COMMITMENTS MADE IN THE UFSAR, SECTIONS 3.6.1.3.2.13 AND 5.4.11.1.2. THESE COMMITMENTS STATE THAT CONDENSATE FLOWS FROM APPROXIMATELY 1 GPM TO 30 GPM ARE TO BE MEASURED BY THE CONDENSATE MEASURING SYSTEM, USFAR SECTION 5.2.5.4.3.

THE DESIGN CRITERIA REQUIRES THAT A HUMAN FACTORS REVIEW OF THIS MODIFICATION BE PERFORMED PRIOR TO ISSUANCE OF DESIGN OUTPUTS, TO MINIMIZE THE PROBABILITY OF OPERATOR ERROR.

THE 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, 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.

IN ACCORDANCE WITH THE PROVISIONS OF 10CFR50.59 THIS MODIFICATION DOES NOT PRESENT AN UNREVIEWED SAFETY QUESTION FOR THE FOLLOWING REASONS:

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



THIS MODIFICATION WILL NOT AFFECT THE PERFORMANCE OF EQUIPMENT IMPORTANT TO SAFETY. THIS MODIFICATION WILL COMPLY WITH THE REQUIREMENTS OF USNRC REG. GUIDE 1.29 POSITION C.2 TO INSURE ANY FAILURE WILL NOT AFFECT SEISMIC CATEGORY I EQUIPMENT. AN APPENDIX R CONFORMANCE REVIEW WILL INSURE CONTINUED COMPLIANCE WITH 10CFR50 APPENDIX R REQUIREMENTS.

2. THE POSSIBILITY FOR AN ACCIDENT OR MALFUNCTION OF A DIFFERENT TYPE THAN ANY EVALUATED PREVIOUSLY IN THE SAFETY ANALYSIS IS NOT CREATED.

THIS MODIFICATION DOES NOT ADD TO, OR MODIFY, ANY EQUIPMENT IMPORTANT TO SAFETY, OR EQUIPMENT WHOSE FAILURE IS ADDRESSED IN THE FINAL SAFETY ANALYSIS REPORT.

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

AS STATED ABOVE, THIS MODIFICATION DOES NOT AFFECT EQUIPMENT IMPORTANT TO SAFETY. THE EFFECT OF THIS MODIFICATION WILL BE TO INCREASE THE RELIABILITY OF ONE OF THE DIVERSE MEANS AVAILABLE FOR OPERATORS TO DETECT LEAKAGE INSIDE CONTAINMENT.

#### EWR-4324

#### STEAM GENERATOR BLOWDOWN SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION ON STEAM GENERATOR BLOWDOWN SYSTEM.

THE PURPOSE OF THIS MODIFICATION IS TO CONVERT THE STEAM GENERATOR BLOWDOWN SYSTEM TO A FLASH TANK BASED PROCESS. THE PRIMARY GOAL IS TO IMPROVE RELIABILITY BY MOVING THE INHERENT TEMPERATURE CHANGES TO THE TANK AND PIPING. NEW PIPING INSTALLED TO ACCOMPLISH THIS CONVERSION SHALL BE RESIZED TO REDUCE THE EROSION-CORROSION POTENTIAL.

REVISION 3 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATE CHANGES TO REVISION 2 AS A RESULT OF THE COMMENTS FROM THE REVIEW OF REVISION 2 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS. THE CHANGES ARE OPERATIONAL CONCERNS AND CLARIFICATION.

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE AN INCREASE OR DECREASE IN SECONDARY SYSTEM HEAT REMOVAL.

AN INCREASE IN SECONDARY SYSTEM HEAT REMOVAL WOULD OCCUR IF A BLOWDOWN LINE RUPTURED. THIS EVENT IS ENVELOPED IN THE UFSAR BY EXAMINING THE INCREASE IN FEEDWATER FLOW EVENT AND THE SPECTRUM OF STEAM SYSTEM PIPING FAILURES. BOTH ANALYZED EVENTS ARE FAR MORE SEVERE THAN A BLOWDOWN LINE RUPTURE.



A DECREASE IN SECONDARY SYSTEM HEAT REMOVAL WOULD OCCUR IF BLOWDOWN WERE SUDDENLY ISOLATED. THIS EVENT IS SIMILAR TO A TURBINE TRIP. THE UFSAR DEFINES LOSSES TO 50% AT FULL POWER TO BE WITHIN NORMAL PLANT DESIGN. SINCE THE DESIGN CRITERIA LIMITS BLOWDOWN CAPACITY TO 7% AT FULL POWER; THEREFORE, THE SUDDEN BLOWDOWN ISOLATION EVENT ANALYSIS IS NOT CONSIDERED.

THIS MODIFICATION IS NON-SEISMIC SINCE IT DOES NOT EFFECT THE SAFE SHUTDOWN OF THE REACTOR.

THIS MODIFICATION DOES NOT INCREASE THE FIRE LOADING IN FIRE AREAS CONTAINING SAFE SHUTDOWN EQUIPMENT OR DEGRADE EXISTING FIRE PROTECTION BECAUSE OF REQUIREMENT IN SECTION 27.0 OF THE DESIGN CRITERIA. ANALYSIS NECESSARY TO ASSURE CONTINUAL COMPLIANCE WITH 10CFR50, APPENDIX R HAS BEEN REQUIRED. THEREFORE, THE PROBABILITY AND CONSEQUENCES OF A FIRE AFFECTING COLD SHUTDOWN OF THE PLANT ARE UNCHANGED.

HIGH ENERGY LINE PIPE BREAKS HAVE BEEN CONSIDERED BY REQUIRING THAT ALL EQUIPMENT NECESSARY FOR SAFE SHUTDOWN OF THE PLANT WILL BE PROTECTED CONSISTENT WITH REFERENCE 2.2.4 OF THE SAFETY ANALYSIS.

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-4350  
MFW AND FW BYPASS VALVE INDICATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODIFICATION TO INSTALL VALVE POSITION SENSORS FOR THE MAIN FEEDWATER AND FEEDWATER BYPASS VALVES (V4269, V4270, V4271, AND V4272) AND ASSOCIATED POSITION INDICATION DISPLAYED ON THE MAIN CONTROL BOARD.

THIS EWR WAS ISSUED AS A RESULT OF HUMAN ENGINEERING DISCREPANCY HED-65 WHICH CITED A NEED FOR ACTUAL VALVE POSITION INDICATION ON THE MCB RATHER THAN THE CONTROLLER DEMAND SIGNAL INDICATION.

DUE TO PRE-PORC COMMENTS, REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS, WERE NOT PRESENTED TO PORC.

THE PURPOSE OF REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE COMMENTS AS A RESULT OF PRE-PORC OF REVISION 0.



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) MAJOR AND MINOR FIRES
- 2) SEISMIC EVENT
- 3) INCREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM
- 4) DECREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM

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

REVIEWS AND/OR ANALYSES TO ASSURE CONTINUED COMPLIANCE WITH APPENDIX R HAVE BEEN REQUIRED. SAFE SHUTDOWN CAPABILITY FOLLOWING ALL POSTULATED FIRES, THEREFORE, WILL NOT BE JEOPARDIZED AS A RESULT OF THIS MODIFICATION.

THE DESIGN CRITERIA REQUIRES THAT NEW INDICATORS INSTALLED PER THIS MODIFICATION BE MOUNTED SO AS NOT TO DEGRADE THE INTEGRITY OF THE MAIN CONTROL BOARD (MCB). THEREFORE, THIS MODIFICATION WILL NOT AFFECT THE MAIN CONTROL BOARD'S SEISMIC QUALIFICATION.

THE ADDITION OF LDT'S TO THE STEM OF THE MAIN FEEDWATER AND FEEDWATER BYPASS VALVES WILL NOT DEGRADE THE VALVE'S ABILITY TO PERFORM ITS INTENDED FUNCTION. SINCE THESE VALVES ARE NOT REQUIRED TO FUNCTION DURING A SEISMIC EVENT, THE ABILITY TO FUNCTION DURING A SEISMIC EVENT HAS NOT BEEN DEGRADED.

THE ADDITION OF MFW AND FW BYPASS VALVE INDICATION WILL AID THE OPERATOR IN MONITORING ANY INCREASE OR DECREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM AND SHALL NOT AFFECT THE VALVES OPERATING CHARACTERISTICS.

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. 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 BY THE IMPLEMENTATION OF THIS MODIFICATION.





THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE INSTALLATION OF A SECOND UNINTERRUPTABLE POWER SUPPLY (UPS) FOR THE T.S.C. ELECTRICAL DISTRIBUTION SYSTEM. ALSO EXISTING ELECTRICAL LOADS WILL BE RE-DISTRIBUTED IN ORDER TO ACHIEVE EVEN BUS LOADING.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDES 1.29 AND 1.70. EVENTS RELATED TO THIS MODIFICATION ARE MAJOR AND MINOR FIRES AND A SEISMIC EVENT.

MODIFICATIONS REQUIRED BY THE DESIGN CRITERIA WILL NOT DEGRADE FUNCTIONS OR PERFORMANCE OF ANY STRUCTURES, SYSTEMS, OR COMPONENTS REQUIRED FOR THE PREVENTION AND MITIGATION OF ACCIDENTS OR ANY OTHER NON-SAFETY RELATED STRUCTURES, SYSTEMS, OR COMPONENTS.

THIS MODIFICATION AND THE MATERIALS UTILIZED WILL MEET APPENDIX R 10CFR50 CRITERIA. EVEN THOUGH THIS MODIFICATION INVOLVES EQUIPMENT WHICH IS NOT IDENTIFIED AS SAFE SHUTDOWN EQUIPMENT.

NEW EQUIPMENT WILL NOT BE LOCATED IN ANY AREA THAT CONTAINS SAFETY RELATED EQUIPMENT THEREFORE, THIS MODIFICATION IS DESIGNATED NON-SEISMIC.

MODIFICATION WILL NOT DEGRADE PERFORMANCE OR FUNCTION OF ANY PLANT EQUIPMENT OR SYSTEM.

BASED UPON THE ABOVE ANALYSIS:

- 1) STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.
- 2) MARGIN OF SAFETY DURING NORMAL OPERATING AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.

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.



4A AND 4B FEEDWATER HEATERS REPLACEMENT

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE REPLACEMENT OF 4A AND 4B HEATERS.

THE PURPOSE OF THIS MODIFICATION IS TO SPECIFY, PROCURE, AND INSTALL NEW FEEDWATER HEATERS AT THE FOURTH EXTRACTION POINT. THE PRIMARY GOAL IS TO ELIMINATE THE COPPER ALLOY TUBES. STAINLESS STEEL TUBES ARE RECOMMENDED.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES RESULTING FROM PRE-PORC COMMENTS OF REVISION 0 TO:

- 1) CLARIFY THE PERFORMANCE REQUIREMENTS OF THE 75 PSI TUBE SIDE PRESSURE DROP
- 2) ADD ADDITIONAL INTERFACE REQUIREMENTS IN DESIGN CRITERIA
- 3) CLARIFY REFERENCES AND TEST REQUIREMENTS
- 4) ADD ASME CODE
- 5) ADD ACCESSIBILITY, MAINTENANCE, REPAIR, AND INSERVICE INSPECTION REQUIREMENTS IN DESIGN CRITERIA

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE A DECREASE IN FEEDWATER TEMPERATURE, AND A LOSS OF NORMAL FEEDWATER FLOW.

THE DECREASE IN FEEDWATER TEMPERATURE EVENT IS ANALYZED IN THE UFSAR AS AN ACCIDENTAL OPENING OF THE CONDENSATE BYPASS VALVE, WHICH RESULTED IN A SUDDEN REDUCTION IN INLET FEEDWATER TEMPERATURE TO THE STEAM GENERATORS.

THE MODIFICATION HAS NO BEARING ON CONDENSATE BYPASS VALVE OPERATION OR PLANT RESPONSE TO THIS EVENT. A REDUCTION IN FEEDWATER TEMPERATURE WHICH RESULTED FROM A LOSS OF ONE FEEDWATER HEATER HAS BEEN ANALYZED IN UFSAR. THE ANALYSIS SHOWED THAT FOR A FEEDWATER ENTHALPY DECREASE CORRESPONDING TO THE LOSS OF ONE FEEDWATER HEATER AT FULL POWER MINIMUM DNBR DOES NOT FALL BELOW THE LIMIT VALUE. AT ZERO POWER THE RESULTS ARE LESS LIMITING THAN THOSE PRESENTED IN UFSAR SECTION 15.4.1, UNCONTROLLED ROD CLUSTER CONTROL ASSEMBLY WITHDRAWAL FROM A SUBCRITICAL CONDITION.

THE LOSS OF NORMAL FEEDWATER FLOW IS ANALYZED IN THE UFSAR AS A DISRUPTION OF SECONDARY SYSTEM HEAT REMOVAL CAPABILITY.



THIS MODIFICATION WILL NOT INCREASE THE PROBABILITY OF THE DISRUPTION AS A RESULT OF CONDENSATE LINE BREAKS SINCE THE DESIGN CRITERIA REQUIRES PROPER INSPECTION AND TESTING OF NEW WELDS. THE PROBABILITY OF A LOSS OF FEEDWATER THROUGH DEGRADATION OF HEATER TUBES IS REDUCED BY REMOVING THE EXISTING ERODED COPPER TUBING.

THIS MODIFICATION IS NON-SEISMIC SINCE IT DOES NOT EFFECT THE SAFE SHUTDOWN OF THE REACTOR.

THIS MODIFICATION DOES NOT INCREASE THE FIRE LOADING IN FIRE AREAS CONTAINING SAFE SHUTDOWN EQUIPMENT OR DEGRADE EXISTING FIRE PROTECTION BECAUSE OF REQUIREMENTS IN SECTION 27.0 OF THE DESIGN CRITERIA.

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-4638

GENERATOR #1 SURGE CAPACITORS AND NEUTRAL TRANSFORMER REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF THE NEUTRAL TRANSFORMER AND SURGE CAPACITORS CONTAINING PCBs. THESE COMPONENTS WILL BE REPLACED WITH SIMILAR COMPONENTS NOT CONTAINING PCBs.

REVISION 2 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGE FROM REVISION 1 TO SPECIFY INSTALLATION TESTS TO BE PERFORMED ON THE COMPONENTS. REVISION 1 DID NOT SPECIFY THE TEST TO BE PERFORMED.

A REVIEW HAS BEEN MADE OF ALL THE EVENTS ANALYZED IN THE GINNA STATION FSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE MAJOR AND MINOR FIRES, TOXIC GAS RELEASES, AND LOSS OF ELECTRICAL LOAD.

NO NEW WIRING OR CABLE IS REQUIRED FOR THIS MODIFICATION. THEREFORE, THERE WILL BE NO INCREASE OF FIRE LOADING DUE TO THIS MODIFICATION.

REVIEWS AND/OR ANALYSES TO ASSURE CONTINUED COMPLIANCE WITH APPENDIX R HAVE BEEN REQUIRED. SAFE SHUTDOWN CAPABILITY FOLLOWING ALL POSTULATED FIRES, THEREFORE, WILL NOT BE JEOPARDIZED AS A RESULT OF THIS MODIFICATION. THEREFORE, THE POTENTIAL FOR A LOSS OF ELECTRICAL LOAD EVENT CAUSED BY CAPACITOR FAILURE WILL NOT BE INCREASED.



THEREFORE, 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.

THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL NOT BE INCREASED BY THE PROPOSED MODIFICATION.

THE POSSIBILITY OF AN ACCIDENT OR 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.

THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION OR REQUIRE A TECHNICAL SPECIFICATION CHANGE.

EWR-4651

CORE EXIT THERMOCOUPLE CABLES

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSING THE MODIFICATION OF THE CORE EXIT THERMOCOUPLE CABLES TO PROVIDE FOR ALARA AND PERSONNEL SAFETY CONCERNS.

EWR 4651, CORE EXIT THERMOCOUPLE (CET) CABLES, REQUESTS THE PURCHASE AND INSTALLATION OF EXTENSION CABLES AT THE BOUNDARY OF THE REACTOR HEAD AND REACTOR CAVITY BRIDGE CABLE TRAYS AT GINNA STATION FOR THE 1988 REFUELING OUTAGE. QUICK CONNECTORS INSTALLED ON THE CET CABLES AT THIS LOCATION ARE DETACHED EACH YEAR FOR REFUELING TO PERMIT LIFTING THE REACTOR HEAD FROM THE REFUELING CAVITY. THE CABLES INSTALLED IN 1983, WHICH RUN FROM THE BRIDGE CABLE TRAY DOWN TO THE THERMOCOUPLES, FALL APPROXIMATELY SIX FEET SHORT OF THE BRIDGE CABLE TRAY. AS A RESULT, THE CET QUICK CONNECTORS HANG SEVERAL FEET BELOW THE BRIDGE CABLE TRAY AND POSE ACCESSIBILITY, ALARA, AND SAFETY CONCERNS. THE OBJECTIVE OF THIS EWR IS TO PLACE THE CET QUICK CONNECTORS FOR REFUELING INTO THE BRIDGE CABLE TRAY WHERE THEY CAN BE ACCESSED CONVENIENTLY AND SAFELY.

REVISION 2 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 1 TO CORRECT THE POST INSTALLATION TESTING REQUIREMENTS FOR SYSTEM VERIFICATION.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND EVENTS REQUIRING ANALYSIS BY USNRC REG. G-GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT, (3) A LOSS OF COOLANT ACCIDENT (LOCA).





NEW CET EXTENSION CABLE ASSEMBLIES WILL BE REQUIRED FOR THIS MODIFICATION WHICH COULD ADD TO THE FIRE LOADING OF THE PLANT. THEREFORE, THE DESIGN CRITERIA REQUIRES THAT ALL SUCH CABLE ASSEMBLIES MEET THE IEEE-383-1974 FLAME TEST REQUIREMENTS. BECAUSE OF THIS THERE WILL BE NO SIGNIFICANT INCREASE OF FIRE LOADING CAUSED BY THIS MODIFICATION.

THIS MODIFICATION HAS BEEN REVIEWED 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 SHUT DOWN THE PLANT DURING POSTULATED FIRES.

THE DESIGN CRITERIA REQUIRES THAT NEW CET EXTENSION CABLE ASSEMBLIES INSTALLED UNDER THIS MODIFICATION BE QUALIFIED PER IEEE 344-1975, THEREFORE, THIS MODIFICATION WILL REMAIN FUNCTIONAL DURING AND AFTER A SEISMIC EVENT.

THE DESIGN CRITERIA REQUIRES THAT THE NEW CET EXTENSION CABLE ASSEMBLIES INSTALLED UNDER THIS EWR BE QUALIFIED PER IEEE 323-1974 AND IEEE 383-1974 FOR FLAME AND LOCA, THEREFORE, THIS MODIFICATION SHALL REMAIN FUNCTIONAL DURING AND AFTER A LOSS OF COOLANT ACCIDENT.

THEREFORE, 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-4653

STEAM GENERATOR WIDE RANGE LEVEL INDICATION

THIS ENGINEERING WORK REQUEST ADDRESSES THE ADDITION OF STEAM GENERATOR WIDE RANGE LEVEL INDICATION ON THE MAIN CONTROL BOARD.

THIS MODIFICATION WILL INSTALL TWO NEW VERTICAL SCALE INDICATORS TO DISPLAY STEAM GENERATOR WIDE RANGE WATER LEVEL ON THE MCB. THE EXISTING CHART RECORDER LR-460 WILL BE RETAINED FOR RECORD KEEPING AND TO SERVE AS A BACKUP LEVEL INDICATOR. THIS MODIFICATION WILL NOT ALTER THE AVAILABILITY OF THE EXISTING CHART RECORDERS.

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 RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES AND (2) A SEISMIC EVENT.

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



AN APPENDIX R CONFORMANCE REVIEW SHALL BE PREPARED TO DEMONSTRATE THAT CONTINUED COMPLIANCE WITH 10CFR50 APPENDIX R REQUIREMENTS IS MAINTAINED.

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

THE STEAM GENERATOR (SG) WIDE RANGE WATER LEVEL INSTRUMENTATION IS DESIGNATED SEISMIC CATEGORY 1. THE DESIGN CRITERIA REQUIRES ALL NEW SG WIDE RANGE LEVEL INSTRUMENTATION BE QUALIFIED AND INSTALLED PER IEEE-344-1975. THEREFORE, A SEISMIC EVENT WILL NOT IMPAIR THE PROPER OPERATION OF THE SG WIDE RANGE WATER LEVEL INSTRUMENTATION.

THE DESIGN CRITERIA REQUIRES A HUMAN FACTORS REVIEW OF THIS MODIFICATION BE PERFORMED PRIOR TO ISSUANCE OF DESIGN OUTPUTS, TO MINIMIZE THE PROBABILITY OF OPERATOR ERROR.

THE ITEMS ABOVE ENSURE 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.

THE ACCURACY AND READABILITY OF THE NEW INDICATORS ARE AS GOOD OR BETTER THAN THE EXISTING RECORDER. THEREFORE, THE INDICATION UNCERTAINTY IS AS GOOD OR BETTER THAN THE EXISTING SYSTEM.

THEREFORE, 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.

IN ACCORDANCE WITH THE PROVISIONS OF 10CFR50.59, THIS MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BECAUSE:

- 1) THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT IS NOT INCREASED.

THE INDICATORS ADDED TO THE MCB DO NOT PROVIDE ANY AUTOMATIC CONTROL FUNCTION. THEY ARE REDUNDANT TO THE EXISTING CHART RECORDERS, BUT PROVIDE A MORE READABLE INDICATION TO THE OPERATOR. THESE INDICATORS ARE SEISMIC CLASS 1E AND WILL NOT INCREASE THE PROBABILITY OF FAILURE OF THE MCB OR ADJACENT INDICATORS DUE TO A SEISMIC EVENT. AN APPENDIX R CONFORMANCE REVIEW WILL DEMONSTRATE CONTINUED COMPLIANCE WITH APPENDIX R REQUIREMENTS.



- 2) THE POSSIBILITY FOR AN ACCIDENT OR MALFUNCTION OF A DIFFERENT TYPE THAN ANY EVALUATED PREVIOUSLY IN THE SAFETY ANALYSIS IS NOT CREATED.

AS DISCUSSED ABOVE, THESE INDICATORS ARE IN ADDITION TO THE EXISTING CHART RECORDERS AND ARE CLASSIFIED 1E. THIS ADDITION TO THE MCB WILL NOT CREATE THE POSSIBILITY OF A FAILURE NOT PREVIOUSLY ANALYZED.

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

THE ADDED INDICATORS PROVIDE A MORE CLEAR INDICATION AND INCREASE THE ABILITY OF THE OPERATOR TO MONITOR WIDE RANGE LEVEL. THE MARGIN OF SAFETY IS NOT AFFECTED BY THIS MODIFICATION.

EWR-4656

LOWER INTERNALS STORAGE STAND MODIFICATIONS PHASE II

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATIONS TO THE REACTOR VESSEL LOWER INTERNALS STORAGE STAND.

THIS MODIFICATION INVOLVES AN ADDITIONAL MODIFICATION TO THE LOWER INTERNALS STORAGE STAND SUBSEQUENT TO THE CHANGES DESCRIBED IN THE ORIGINAL SAFETY ANALYSIS.

- A. THIS MODIFICATION MOVES THE EASTERN SUPPORT COLUMN 1/2 INCH OUTWARD (AWAY FROM THE CENTER OF THE SUPPORT STAND) IN ORDER TO PROVIDE MORE CLEARANCE FOR THE LOWER INTERNALS. THIS IS ACCOMPLISHED BY ADDING ONE ADDITIONAL HALF-INCH THICK SPACER PLATE ON THE EAST SIDE OF THE NORTH AND SOUTH SUPPORT COLUMNS. THE SPACER PLATES WILL BE BETWEEN THE SUPPORT COLUMNS AND THE UPPER AND LOWER CONNECTION SUPPORT RINGS.

THIS ANALYSIS REVIEWS UNDER WHAT PLANT OPERATING CONDITION THE LOWER INTERNALS STORAGE HARDWARE WILL BE IN USE; AND DETERMINES WHAT DESIGN BASIS EVENTS ARE RELATED TO THE USE OF THE MODIFIED HARDWARE.

THE FOLLOWING DESIGN BASIS EVENTS ARE RELATED TO THE PROPOSED MODIFICATION: SEISMIC EVENTS AND FIRES.

THE LOWER INTERNALS STORAGE STAND MAY BE LEFT IN POSITION ON THE LOWER LEVEL OF THE REACTOR CAVITY. THE LOCATION OF THE LOWER INTERNALS STORAGE STAND IS NOT ADJACENT TO ANY SAFETY RELATED SYSTEM OR COMPONENT. THE LOWER INTERNALS STORAGE STAND'S LOW CENTER OF GRAVITY, WIDE BASE COMBINED WITH THE COEFFICIENT OF FRICTION ARE SUFFICIENT TO ENSURE THAT THE STAND WILL REMAIN IN PLACE DURING BOTH THE OPERATING BASIS AND SAFE SHUTDOWN EARTHQUAKES.



THE MATERIALS TO BE USED IN THIS PROPOSED MODIFICATION IS STAINLESS STEEL WHICH IS NON-COMBUSTIBLE. IT WILL NOT CHANGE THE FREQUENCY OR RESULTS OF ANY FIRE THAT IS POSTULATED.

BASED ON THE FOREGOING, THE MODIFICATIONS WILL CAUSE NO CHANGES TO THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION.

THE MODIFICATIONS WILL NOT CHANGE THE ADEQUACY OF STRUCTURES, SYSTEMS, OR COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS.

THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF SAFETY-RELATED EQUIPMENT PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT ARE NOT CHANGED.

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

THE PROPOSED MODIFICATION DOES NOT INVOLVE A CHANGE TO THE TECHNICAL SPECIFICATIONS AND IS NOT AN UNREVIEWED SAFETY QUESTION.

EWR-4670

MQ-483 INVERTER REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF THE EXISTING MQ-483 INVERTER WITH A NEW QUALIFIED ONE.

REVISION 2 OF THE DESIGN CRITERIA STATES THE SOLID STATE CONTROLS, INC. (SCI) INVERTER IS PART NO. EV 12004/5 AS OPPOSED TO PART 12004 AS WELL AS QUALIFYING IEEE 383-1974 AS THE STANDARD USED FOR BOTH THE DESIGN CRITERIA AND SAFETY ANALYSIS.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA FSAR AND 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) INCREASE/DECREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM
- 4) PIPE BREAKS INSIDE CONTAINMENT

SECTION 3.0 AND 9.0 OF THE DESIGN CRITERIA REQUIRE THAT THE NEW MQ-483 INVERTER BE SEISMICALLY QUALIFIED TO GINNA SPECIFIC SEISMIC RESPONSE SPECTRA.

IN ADDITION, IT IS REQUIRED THAT THE INVERTER BE MOUNTED TO PREVENT SEISMIC FAILURE.





THIS MODIFICATION INVOLVES THE REPLACEMENT OF EQUIPMENT AND MAY INVOLVE THE INSTALLATION OF CABLE IN THE RELAY ROOM FIRE AREA. IF NEW CABLE IS TO BE INSTALLED, A REVIEW WILL BE PERFORMED TO ASSURE CONTINUED COMPLIANCE WITH 10CFR50, APPENDIX R.

WIRING AND EQUIPMENT WILL BE INSTALLED IN COMPLIANCE WITH EE-29.

ALL NEW CABLING, IF REQUIRED, WILL BE QUALIFIED TO IEEE 383-1984 FLAME TEST REQUIREMENTS.

FIRE BARRIER PENETRATIONS WILL BE REPAIRED AND REPLACED IN ACCORDANCE WITH EXISTING PLANT PROCEDURES, NOT DEGRADING EXISTING SEALS.

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 TABLE 3-1 OF 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.

THIS MODIFICATION WILL NOT EFFECT THE CAPABILITIES OF THE ALTERNATIVE SHUTDOWN SYSTEM. THERE SHALL BE NO EFFECT ON EXISTING PROCEDURES FOR OBTAINING AN ALTERNATE SAFE SHUTDOWN, THEREBY COMPLYING WITH 10CFR50 APPENDIX R.

INSTRUMENT LOOP P479 MONITORS STEAM GENERATOR PRESSURE.

THIS MODIFICATION DOES NOT MODIFY THE INSTRUMENT LOOP. SINCE THE DESIGN CRITERIA REQUIRES THAT THE REPLACEMENT INVERTER ADDS NO NEW FAILURE MODES BEYOND THOSE OF THE EXISTING INVERTER, THE INTEGRITY OF LOOP P479 WILL BE UNAFFECTED BY THIS MODIFICATION. THEREFORE, NO NEW INSTRUMENT ERRORS OR FAILURES WILL BE INTRODUCED THAT COULD LEAD TO AN INCREASE OR DECREASE IN SECONDARY SYSTEM HEAT REMOVAL.

INSTRUMENT LOOP P950 MONITORS CONTAINMENT PRESSURE. THIS MODIFICATION DOES NOT MODIFY THE INSTRUMENT LOOP. SINCE THE DESIGN CRITERIA REQUIRES THAT THE REPLACEMENT INVERTER ADDS NO NEW FAILURE MODES BEYOND THOSE OF THE EXISTING INVERTER, THE INTEGRITY OF LOOP P950 WILL BE UNAFFECTED BY THIS MODIFICATION. THEREFORE, NO NEW INSTRUMENT ERRORS OR FAILURES WILL BE INTRODUCED THAT COULD LEAD TO A FALSE INDICATION OF CONTAINMENT PRESSURE DURING A PIPE BREAK.

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.



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 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.

EWR-4750

CONTAINMENT FANS 1B/1D DAMPER SOLENOID ISOLATION FUSES

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE ADDITION OF ISOLATION FUSES TO THE LOOP ENTRY DAMPER SOLENOID VALVE CIRCUITS FOR CONTAINMENT RECIRCULATION FANS 1B AND 1D.

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) SEISMIC EVENT
- 2) MAJOR AND MINOR FIRES
- 3) PIPE BREAKS INSIDE AND OUTSIDE CONTAINMENT
- 4) BREAK IN RCS PRESSURE BOUNDARY LINES THAT PENETRATE CONTAINMENT

THE NEW FUSE BLOCKS WILL BE SEISMICALLY MOUNTED AND THEREFORE WILL ENSURE A SEISMIC EVENT WILL NOT DEGRADE THE INTEGRITY OF BUS 16 UNIT 13C OR BUS 14 UNIT 2C ENCLOSURES IN WHICH THE FUSES ARE MOUNTED.

THE MODIFICATION IS DESIGNED TO COMPLY WITH 10CFR APPENDIX R CRITERIA AND ENGINEERING PROCEDURES. THEREFORE, THE PROBABILITY OF A MAJOR OR MINOR FIRE WILL NOT BE INCREASED.

THE FOLLOWING DESIGN BASIS EVENTS (DBE) WILL NOT AFFECT OR BE AFFECTED BY THIS MODIFICATION. ANY DBE THAT CAUSES A LEAD-TO-LEAD SHORT IN THE DAMPER SOLENOID VALVE CIRCUIT WILL CAUSE THE DAMPER SOLENOID VALVE CIRCUIT FUSES TO FAIL. FUSE COORDINATION ASSURES THAT THESE FUSES WILL FAIL BEFORE THE MAIN FAN CONTROL FUSES. THEREFORE, LOSS OF FANS 1B AND 1D, DURING ANY DBE DUE TO A LEAD-TO-LEAD SHORT IN THE DAMPER SOLENOID VALVE CIRCUIT, WILL NOT OCCUR.

BASED UPON THE ABOVE ANALYSIS:

- 1) STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.
- 2) MARGIN OF SAFETY DURING NORMAL OPERATING AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.



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-4754

CABLE RELOCATIONS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE UPGRADING OF SEVERAL CIRCUIT SPLICES IN THE INTERMEDIATE BUILDING AND RELOCATION OF CABLES ABOVE THE CONTAINMENT FLOOD LEVEL.

REVISION #2 ADDS A FIRE PROTECTION REQUIREMENT. CABLES AND SPLICES SHALL MEET THE REQUIREMENTS OF IEEE 383-1974.

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) MAJOR AND MINOR FIRES
- 3) PIPE BREAKS, INSIDE AND OUTSIDE CONTAINMENT

THE DESIGN CRITERIA REQUIRES THAT ANY NEW OR RELOCATE CONDUIT BE MOUNTED TO PREVENT SEISMIC FAILURE. THEREFORE, INSTALLED CABLE SHALL REMAIN FUNCTIONAL AFTER A SEISMIC EVENT.

THIS MODIFICATION INVOLVES THE ADDITION OF NEW CABLE AND SPLICES IN CONTAINMENT AND IN THE INTERMEDIATE BUILDING. THE DESIGN CRITERIA REQUIRES THAT ALL NEW CABLE AND SPLICES BE QUALIFIED TO IEEE-383-1974 FLAME AND LOCA REQUIREMENTS.

FIRE BARRIER PENETRATIONS WILL BE REPAIRED AND 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 SINCE THERE IS NO AFFECT ON SEPARATION OF EXISTING CIRCUITS, ASSOCIATED CIRCUITS, OR FIRE AREA BOUNDARIES AS ANALYZED IN THE APPENDIX R SUBMITTAL. THE DESIGN CRITERIA REQUIRES THAT AN APPENDIX R CONFORMANCE VERIFICATION BE PERFORMED.

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 EFFECTED. THIS MODIFICATION, THEREFORE, COMPLIES WITH 10CFR50, APPENDIX R.



THE DESIGN CRITERIA REQUIRES THAT NEW CABLE AND SPLICES, INSTALLED AS PART OF THE CABLE RELOCATIONS, SHALL NOT AFFECT INSTRUMENT LOOP INTEGRITY. THEREFORE, NO NEW FAILURE MODES SHALL BE INTRODUCED INTO THE INSTRUMENT LOOPS.

THE DESIGN CRITERIA COLLECTIVELY REQUIRES ALL CABLES TO BE RELOCATED, TO UTILIZE MATERIAL AND CONFIGURATIONS APPROVED UNDER 10CFR50.49; AND CALIBRATION OF EACH LOOP TO ENSURE THAT LOOP FUNCTION IS NOT AFFECTED; THAT LOOP ACCURACY BE ADDRESSED, AND VERIFIED AS ACCEPTABLE, IN THE SYSTEM INTEGRATED PACKAGES. THEREFORE, LOOP ACCURACY SHALL NOT BE DEGRADED BY THIS MODIFICATION.

ALL MATERIAL AND CONFIGURATIONS UTILIZED UNDER THIS MODIFICATION SHALL BE APPROVED UNDER 10CFR50.49. THEREFORE, PIPE BREAKS INSIDE OR OUTSIDE CONTAINMENT, THAT CREATE A LOCA, HELB, SLB, ETC, SHALL NOT DEGRADE THE INTEGRITY OF SPLICES OR CABLES USED IN THIS MODIFICATION.

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

BASED UPON A REVIEW OF THE UFSAR, THE STRUCTURAL REANALYSIS PLAN (SRP) 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 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-4761

HIGH HEAD RECIRCULATION EVALUATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE INTERCHANGING OF THE POWER AND CONTROL POWER WIRING OF MOVs 857A AND 857B. A REVIEW HAS BEEN MADE OF ALL EVENTS REQUIRING ANALYSIS BY NRC REGULATORY GUIDE 1.70. THE EVENTS RELATING TO THIS MODIFICATION ARE FIRE, SEISMIC, LOCA, AND LOSS OF POWER EVENTS.

THE FIRST EVENT ANALYZED IS THE EFFECT OF A SEISMIC EVENT. THE DESIGN CRITERIA REQUIRES THE MODIFICATION TO BE SEISMIC CATEGORY 1. 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 MODIFICATION IS REQUIRED TO 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 DESIGN CRITERIA PROVIDES REQUIREMENTS TO PRESERVE ANY SILICONE FOAM FIRE STOP OR SEAL THAT MAY NEED TO BE PENETRATED.

THE DESIGN CRITERIA REQUIRES AN APPENDIX R REVIEW. THEREFORE, THIS MODIFICATION WILL NOT AFFECT EXISTING COMPLIANCE METHODS.

THE THIRD EVENT ANALYZED IS THE EFFECT OF A LOCA. DURING THE SUMP RECIRCULATION PHASE FOLLOWING A LOCA, IF HIGH HEAD RECIRCULATION IS NECESSARY (IN CURRENT PROCEDURES WHEN RHR TOTAL IS LESS THAN 400 GPM), THE 857A, B, C VALVES MUST BE OPENED. PRESENT PROCEDURE ES-1.3 CALLS FOR STARTING RHR PUMPS ALIGNED TO THE SUMP AND DISCHARGING TO THE REACTOR THROUGH THE MOV 852A, B VALVES PRIOR TO OPENING 857A, B, C IF HIGH HEAD RECIRCULATION IS REQUIRED. SINGLE FAILURE CRITERIA REQUIRES THE TIMING OF THE ACTIVE FAILURE TO OCCUR AT THE BEGINNING OF THE HIGH HEAD RECIRCULATION PHASE. A FAILURE OF D/G 1A PRIOR OPENING THE 857 VALVES WOULD RESULT IN BOTH TRAINS LEADING TO THE SAFETY INJECTION/CONTAINMENT SPRAY PUMPS BEING BLOCKED AND POTENTIAL LOSS OF CORE COOLING. THIS IS THE PROBLEM WHICH WILL BE CORRECTED THRU THIS MODIFICATION.

THE FOURTH EVENT ANALYZED IS THE EFFECT OF A LOSS OF POWER ON THE OPERATIONS OF THE VALVES. AS STATED IN THE PREVIOUS PARAGRAPH A FAILURE OF D/G 1A PRIOR TO OPENING THE 857 VALVES WOULD RESULT IN BOTH TRAINS LEADING TO THE SAFETY INJECTION/CONTAINMENT SPRAY PUMPS BEING BLOCKED AND POTENTIAL LOSS OF CORE COOLING. THIS WILL BE CORRECTED BY THIS MODIFICATION. THEREFORE BASED UPON THE ABOVE ANALYSIS, IT HAS BEEN DETERMINED THAT:

- A) THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED AND
- B) THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR 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 MARGINS OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION IS NOT REDUCED.



EWR-4769  
SAFEGUARDS RACK SI RELAYS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE REMOVAL OF UNUSED RELAYS FROM THE SAFEGUARDS RACKS.

ALL BFD RELAYS, USED FOR SAFEGUARDS INITIATION LOCATED IN THE RELAY ROOM SAFEGUARDS RACKS, ARE BEING REPLACED IN ACCORDANCE WITH MAINTENANCE, PROCEDURE M-59.9. SIXTEEN OF THESE RELAYS ARE UNUSED AND REPRESENT AN UNNECESSARY EXPOSURE TO FAILURE FOR THE SAFEGUARDS SYSTEMS. THE EIGHT UNUSED RELAY COILS IN EACH TRAIN ARE CONTROLLED BY THE SAME FUSES CONTROLLING ALL THE OTHER OPERATING SAFEGUARDS SYSTEMS. THEREFORE, A COIL FAILURE IN ANY OF THESE UNITS COULD KEEP THE SAFETY INJECTION SEQUENCE FROM BEING INITIATED. THE RELAYS BEING REMOVED SERVE NO FUNCTIONAL PURPOSE. ONE OF THE TWO COIL LEADS FOR 6 OF THESE RELAYS WERE DISCONNECTED AS PART OF EWR 2950. THE REMAINING 10 RELAYS HAVE ALL UNUSED CONTACTS. COIL WIRING IS ACCOMPLISHED BY USE OF JUMPER CONNECTIONS FROM COIL TO COIL. SOME OF THESE WIRES CAN BE REMOVED WHILE PORTIONS OF OTHERS WILL BE NEEDED TO MAKE UP REMAINING CONNECTIONS.

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 EVENT RELATED TO THIS MODIFICATION IS FIRE.

NEW WIRING 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 ALL SUCH WIRE MEET THE IEEE-383-1974 FLAME TEST REQUIREMENTS. THEREFORE, THIS MODIFICATION WILL CAUSE NO SIGNIFICANT INCREASE IN FIRE PROPAGATION HAZARD.

AS A RESULT, THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT WILL BE UNCHANGED. 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 UNCHANGED BY THE PROPOSED MODIFICATION. IN FACT, BECAUSE EQUIPMENT CONNECTED TO SAFETY INJECTION CIRCUITS (ALTHOUGH IT SERVES NO FUNCTIONAL PURPOSE) IS BEING REMOVED, THE PROBABILITY OF MALFUNCTIONING OF THE SI CIRCUITRY IS REDUCED.

THEREFORE, 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. THIS MODIFICATION IS BEING PERFORMED TO REMOVE EXCESS RELAYS FROM THE RELAY RACKS THUS REMOVING FROM THE CIRCUITS A PIECE OF EQUIPMENT THAT COULD MALFUNCTION.



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

EWR-4789

TDAFP STEAM ADMISSION VALVES

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH REWIRES THE CONTROL CIRCUIT TO SEAL IN AROUND THE CONTROL SWITCH SO THAT WHEN THE CIRCUIT IS ENERGIZED TO OPEN THE VALVE WILL CONTINUE TO OPEN TO THE FULLY OPEN POSITION.

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 (1) FIRES AND (2) SEISMIC EVENTS, AND (3) LOSS OF AUXILIARY FEEDWATER.

THE MODIFICATION DOES NOT INCREASE THE POSSIBILITY OR IMPACT ON THE LEVEL OF FIRE PROTECTION AND ALTERNATE SHUTDOWN CAPABILITIES, NOR THE FIRE PROTECTION AND ALTERNATE SHUTDOWN LICENSE CONDITIONS AND TECHNICAL SPECIFICATIONS.

ADDITIONAL WIRING AND CABLE WILL BE ADDED IN THIS MODIFICATION, WHICH COULD ADD TO THE FIRE LOADING OF THE PLANT. THEREFORE, THE DESIGN CRITERIA REQUIRES THAT ALL SUCH WIRING AND CABLE MEET THE IEEE 383-1974 FLAME TEST REQUIREMENTS. CONSEQUENTLY, THERE WILL BE NO SIGNIFICANT INCREASE OF FIRE LOADING CAUSED BY THIS MODIFICATION.

THE MODIFICATION DOES NOT INCREASE THE IMPACT OF A SEISMIC EVENT. THE DESIGN OF THE MODIFICATION SHALL BE SEISMIC CATEGORY 1 IN ACCORDANCE WITH THE DESIGN CRITERIA.

THE MODIFICATION DOES NOT INCREASE THE IMPACT OF LOSS OF AUXILIARY FEEDWATER. THE DESIGN OF THE MODIFICATION DOES NOT ALTER THE MANUAL OR AUTOMATIC OPERATING CHARACTERISTICS OF THE AUXILIARY FEEDWATER SYSTEM. REQUIRING THE VALVE TO GO FULL OPEN ONCE THE CIRCUIT IS ENERGIZED VS. HAVING IT STOP WHEN THE SWITCH IS RELEASED MAKES MANUAL AND AUTOMATIC ACTUATION SIMILAR. THIS DOES NOT ADVERSELY IMPACT THE SYSTEM.

THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY, PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL NOT BE INCREASED BY THE PROPOSED MODIFICATION.

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

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



THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION OR REQUIRE A TECHNICAL SPECIFICATION CHANGE.

EWR-4794  
SECURITY GATE REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF FIVE (5) EXISTING SECURITY GATE OPERATORS AND THE OUTER CANTILEVER VEHICLE GATE AT THE SHIPPING AND RECEIVING BUILDING WITH AN OVERHEAD SLIDE GATE. SUPPORTS WILL ALSO BE ADDED TO EXISTING GATES TO REDUCE VIBRATIONS.

THE PURPOSE OF THIS MODIFICATION IS TO IMPROVE SECURITY GATE RELIABILITY AND MAINTAINABILITY.

EXCESSIVE VIBRATION IN THE SECURITY GATES HAS CONTINUALLY BEEN THE SOURCE OF PROBLEMS FOR THE SECURITY INTRUSION DETECTORS. DURING HIGH WINDS THE EXCESS SECURITY GATE VIBRATIONS TRIP THE SECURITY E-FIELD. THIS RESULTS IN THE NECESSITY FOR SECURITY PERSONNEL TO PATROL THE AREA.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION FSAR AND THE EVENTS REQUIRING ANALYSIS BY NRC REGULATORY GUIDE 1.70. THE ONLY EVENTS RELATED TO THIS MODIFICATION ARE INTERNAL AND EXTERNAL EVENTS, SPECIFICALLY NATURAL EVENTS AND LOSS OF AC.

FIRE

ALL CABLE AND WIRE ORDERED FOR THIS MODIFICATION SHALL MEET THE REQUIREMENTS OF IEEE 383-1974 FLAME TEST, THUS MITIGATING ANY POTENTIAL FOR PROPAGATING A FIRE.

EARTHQUAKE

DURING A SEISMIC EVENT, THE SECURITY GATE MODIFICATION WILL HAVE NO SAFETY FUNCTION, AND NEED NOT REMAIN FUNCTIONAL.

LOSS OF AC

THIS MODIFICATION SHALL BE REVIEWED SO AS TO ENSURE THE ISOLATION OF CLASS 1E AND NON-CLASS 1E SYSTEMS. THE SECURITY GATE SYSTEM SOURCE OF POWER IS FROM A NON-SAFEGUARDS BUS, WITH A STANDBY POWER SOURCE DEDICATED TO THE SECURITY SYSTEM. THEREFORE, THE CLASS 1E ELECTRICAL SYSTEM IS NOT EFFECTED BY THIS MODIFICATION.

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





EWR-4798  
SOLENOID UPGRADE

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE INSTALLATION OF BLOCKING DIODES ON SELECTED SOLENOID VALVE COILS TO PROVIDE PROTECTION AGAINST VOLTAGE TRANSIENTS DUE TO AN INDUCTIVE KICK BACK. THE DIODES ARE A RETROFIT PROVIDED BY THE VALVE MANUFACTURER, VALCOR, AND WILL BE INSTALLED ACROSS THE SOLENOID COILS OF THE MAINSTEAM ISOLATION AND REACTOR HEAD VENT VALVES.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCLUDES THE INSTALLATION OF DIODE ASSEMBLIES ACROSS THE HYDROGEN MONITORING SYSTEM SOLENOIDS, V921, V922, V923 AND V924.

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 RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT, (3) A MAIN STEAM LINE BREAK.

CABLE REQUIRED FOR THIS MODIFICATION COULD ADD TO THE FIRE LOADING OF THE PLANT. THEREFORE, THE DESIGN CRITERIA REQUIRES THAT ALL SUCH CABLE MEET THE IEEE-383-1974 FLAME TEST REQUIREMENTS. BECAUSE OF THIS THERE WILL BE NO SIGNIFICANT INCREASE OF FIRE LOADING CAUSED BY THIS MODIFICATION.

THIS MODIFICATION HAS BEEN REVIEWED TO ENSURE THAT FAILURE OF ANY ELECTRICAL CABLE INSTALLED AS PART OF THIS MODIFICATION WILL NOT RESULT IN THE DISABLING OF VITAL EQUIPMENT NEEDED TO SAFELY SHUT DOWN THE PLANT DURING POSTULATED FIRES. THE DESIGN CRITERIA REQUIRES THAT NEW RECTIFIER ASSEMBLIES INSTALLED UNDER THIS MODIFICATION BE QUALIFIED PER IEEE 344-1975, THEREFORE, THIS MODIFICATION WILL REMAIN FUNCTIONAL DURING AND AFTER A SEISMIC EVENT.

THE DESIGN CRITERIA REQUIRES THAT THE NEW RECTIFIER ASSEMBLIES INSTALLED UNDER THIS EWR BE QUALIFIED PER IEEE 323-1974, THEREFORE THIS MODIFICATION SHALL REMAIN FUNCTIONAL DURING AND AFTER A MAIN STEAM LINE BREAK.

THEREFORE, 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.

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

THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION OR REQUIRE A TECHNICAL SPECIFICATION CHANGE.

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 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-4862  
NIS TRIP BYPASS

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF THE EXISTING 108% OVERPOWER TRIP FUNCTION TEST RELAY PUSHBUTTON SWITCHES WITH MAINTAINABLE TYPE SWITCHES. MAINTAINABLE TYPE SWITCHES ARE NECESSARY TO MAINTAIN ENERGIZATION OF THE TEST RELAYS WHICH DEENERGIZE THE REACTOR TRIP BISTABLE RELAYS DURING MAINTENANCE OF THE 108% OVERPOWER NIS POWER RANGE CHANNELS. DEENERGIZING EACH TRAIN'S 108% OVERPOWER REACTOR TRIP BISTABLE RELAY DURING CHANNEL MAINTENANCE PLACES THE CHANNEL IN THE TRIP MODE WHICH SATISFIES THE REQUIREMENTS OF GINNA TECHNICAL SPECIFICATIONS.

THE EXISTING REACTOR TRIP RELAY LOGIC OF THE 108% OVERPOWER NIS POWER RANGE CHANNELS AT GINNA STATION CONSISTS OF THE FOLLOWING:

EACH OF THE FOUR 108% OVERPOWER NIS POWER RANGE CHANNELS HAVE A TEST RELAY ON EACH TRAIN UTILIZED FOR DEENERGIZING THE 108% OVERPOWER REACTOR TRIP BISTABLE RELAYS. EXISTING MOMENTARY TYPE SWITCHES, LOCATED IN THE RELAY LOGIC TEST RACKS (RLTR1, RLTR2) IN THE RELAY ROOM, ENERGIZE THE TEST RELAYS WHICH DEENERGIZE THE 108% OVERPOWER REACTOR TRIP BISTABLE RELAYS PLACING THE CHANNEL IN THE TRIP MODE. THE EXISTING SWITCHES ARE PANEL MOUNT, SINGLE POLE, MOMENTARY PUSHBUTTON TYPE.

THE FOUR EXISTING MOMENTARY PUSHBUTTON TYPE SWITCHES ON EACH OF BOTH TRAINS (TOTAL OF EIGHT) WILL BE REPLACED BY MAINTAINABLE SELECTOR TYPE SWITCHES. THIS WILL ALLOW THE 108% OVERPOWER TRIP FUNCTION TEST RELAY TO REMAIN ENERGIZED AND MAINTAIN THE CHANNEL IN A TRIP MODE DURING MAINTENANCE.



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 RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT, (3) A REACTOR OVERPOWER TRANSIENT (108% OVERPOWER REACTOR TRIP).

NO NEW WIRING, FIELD CABLE, OR OTHERWISE FLAMMABLE MATERIALS WILL BE ADDED TO THE PLANT UNDER THIS MODIFICATION, THEREFORE, NO INCREASE IN FIRE LOADING IS IMPOSED.

THE NEW SELECTOR SWITCHES ARE DESIGNATED SEISMIC CATEGORY 1. THEREFORE, A SEISMIC EVENT WILL NOT IMPACT THE PROPER OPERATION OF THE SWITCHES.

CHANGING THE SUBJECT SWITCHES FROM MOMENTARY TO MAINTAINABLE DOES NOT AFFECT THE OPERATION OF THE NIS 108% OVERPOWER REACTOR TRIP BECAUSE ACTUATION OF THE SWITCHES WILL PLACE THE CHANNEL IN THE TRIP MODE. THEREFORE, THIS MODIFICATION DOES NOT EFFECT THE NIS RESPONSE TO AN OVERPOWER TRANSIENT.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) MAJOR AND MINOR FIRES
- 2) A SEISMIC EVENT
- 3) A REACTOR OVERPOWER TRANSIENT (108% OVERPOWER REACTOR TRIP)

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-4933  
S/G PRESSURE TUBING RELOCATION

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES MODIFICATION OF THE "B" STEAM GENERATOR PRESSURE TRANSMITTER(S) TUBING AND SUPPORTS. THE PURPOSE OF THE MODIFICATION IS TO MITIGATE THE POTENTIAL FOR THE RECURRENCE OF FREEZING SENSOR LINES IN THE INTERMEDIATE BUILDING IN THE FOLLOWING FASHION:

- 1) REROUTING TUBING FOR SENSOR LINES PT-479 AND PT-483
- 2) THE ANALYSIS ON NEW TUBE ROUTING.
- 3) PROVIDE INSULATION IF DEEMED NECESSARY TO ENSURE THAT THE TUBING CONTENTS REMAIN ABOVE 32°F.
- 4) PROVIDE SEISMIC RESTRAINT FOR THE AFFECTED TUBING.



THE FOLLOWING ARE RESPONSES TO PRE-PORC COMMENTS ON EWR 4933  
DESIGN CRITERIA AND SAFETY ANALYSIS REVISION 0.

1. COMMENT: WHY NOT ELIMINATE THE ADDITION OF THE FOUR VALVE SET-UP AND JUST REPLACE THE TUBING. THE TUBING CAN BE PRE-RUN AND THEN THE CONNECTIONS MADE IN A SHORT TIME.

RESPONSE: THE PROPOSED DESIGN REQUIRED THAT THE VALVES BE INSTALLED DURING THE 1989 SPRING OUTAGE AND THEN PERFORM THE REMAINING MODIFICATIONS POST-OUTAGE. THE PRIMARY OBJECTIVE FOR THIS APPROACH AT THE TIME WAS TO MAKE MODIFICATIONS TO THE SYSTEM WITHOUT RENDERING ANY TRAIN INOPERABLE. BASED ON MY CONVERSATION WITH YOU ON 5/2/89, FILLING AND VENTING OF THE LINES AND RECALIBRATION OF THE TRANSMITTERS WILL BE REQUIRED. THIS WILL CAUSE ONE LINE AT A TIME TO BE INOPERABLE.

ON THE BASIS THAT FILLING, VENTING, AND RECALIBRATION IS REQUIRED IT IS PRUDENT TO ELIMINATE THE INSTALLATION OF THE VALVES. THE DESIGN CRITERIA WILL BE REVISED TO REFLECT THIS CHANGE.

2. COMMENT: SHOULD INCLUDE INSERVICE LEAK CHECK FOR PORTIONS OF TUBING WHICH CANNOT BE HYDROED.

RESPONSE: THIS OPTION WILL BE INCLUDED IN THE ECN WHEN THE DRAWINGS ARE ISSUED FOR CONSTRUCTION.

3. COMMENT: IS THERE A MINIMUM SLOPE REQUIREMENT FOR TUBING INSTALLATION.

RESPONSE: YES. THIS REQUIREMENT WILL BE SPECIFIED ON THE CONSTRUCTION DRAWINGS.

4. COMMENT: WHAT IS AN APPROPRIATE AIR SEAL.

RESPONSE: THE DETAILS OF AN APPROPRIATE AIR SEAL WILL BE EVALUATED DURING THE DESIGN PROCESS.

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

- A) FIRES
- B) SEISMIC EVENTS
- C) BELOW FREEZING AMBIENT TEMPERATURE
- D) POSTULATED RUPTURE OF STEAM OR FEEDWATER LINES
- E) DIFFERENTIAL DISPLACEMENT OF CONTAINMENT STRUCTURE AND INTERMEDIATE BUILDING





THIS MODIFICATION WILL NOT DEGRADE EXISTING FIRE BARRIERS OR AFFECT THE PERFORMANCE OF ANY EXISTING FIRE PROTECTION EQUIPMENT. ANY NEW MATERIALS USED IN ELECTRICAL MODIFICATIONS SHALL MEET THE REQUIREMENTS OF IEEE-383-1974, THUS MITIGATING THE POTENTIAL FOR PROPAGATING A FIRE.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50 APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING MODIFICATIONS TO THE TUBING AND CONTROL SYSTEMS.

SEISMIC EVENTS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION PROGRAM. THE MODIFICATION AND SUPPORTS WILL BE EVALUATED, IN REGARD TO A SEISMIC EVENT, TO CRITERIA IDENTICAL TO THE SEISMIC UPGRADE PROGRAM. THIS WILL ENSURE THAT ANY MODIFICATIONS WILL BE DESIGNED SO AS TO EQUAL OR IMPROVE THE SYSTEM'S CAPABILITY TO WITHSTAND A SEISMIC EVENT.

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

- A) THE MARGINS OF SAFETY DURING NORMAL OPERATION AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.
- B) THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS OR POSTULATED HIGH ENERGY PIPE BREAK AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS OR POSTULATED HIGH ENERGY BREAKS CONTINUE TO REMAIN ADEQUATE.
- C) ALL INSTRUMENT SENSING LINE PENETRATIONS SHALL BE LOCATED AT A MINIMUM HEIGHT OF SEVEN FEET (2.2 METERS) ABOVE FLOOR LEVEL, OR THAT ROUTING AND SUPPORT OF SENSING LINES SHALL ENSURE THAT THE FUNCTION OF THE LINES IS NOT AFFECTED BY VIBRATION, ABNORMAL HEAT, COLD, OR STRESS.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) FIRE PROTECTION FEATURES
- 2) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC AND TORNADO EVENTS
- 3) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A HIGH ENERGY LINE BREAK.



BASED UPON A REVIEW OF THE UFSAR, THE STRUCTURAL RE-ANALYSIS PLAN (SRP) 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 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-5053

REPAIR HD PUMP BARREL LEAK

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION ON THE HEATER DRAIN TANK PUMP BARREL LEAK REPAIR.

THE PURPOSE OF THIS MODIFICATION IS TO INSTALL A PASSIVE VENT SYSTEM ON THE HEATER DRAIN PUMP BARREL. THE VENTS SHALL PROVIDE A CONTROLLED PATH FOR STEAM AND DEBRIS TO ESCAPE FROM THE ANNULAR REGION BETWEEN EACH PUMP BARREL AND LINER AT THE SAME TIME PREVENTING SAFETY AND/OR EROSION PROBLEMS.

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENT RELATED TO THIS MODIFICATION IS A LOSS OF NORMAL FEEDWATER FLOW.

LOSS OF NORMAL FEEDWATER FLOW CAN OCCUR FROM A RUPTURE OF A PUMP BARREL DUE TO THE EROSION ACTION OF THE VENTING STEAM. THE ANALYZED EVENT IS FAR MORE SEVERE THAN A PUMP BARREL RUPTURE. THIS MODIFICATION WILL NOT INCREASE THE PROBABILITY OF A PUMP BARREL RUPTURE SINCE THE DESIGN CRITERIA REQUIRES PROPER INSPECTION OF THE PUMP BARREL.

THIS MODIFICATION IS NON-SEISMIC SINCE IT DOES NOT EFFECT THE SAFE SHUTDOWN OF THE REACTOR.

THIS MODIFICATION DOES NOT INCREASE THE FIRE LOADING IN FIRE AREAS CONTAINING SAFE SHUTDOWN EQUIPMENT OR DEGRADE EXISTING FIRE PROTECTION BECAUSE OF REQUIREMENT IN SECTION 27.0 OF THE DESIGN CRITERIA. ANALYSIS NECESSARY TO ASSURE CONTINUAL COMPLIANCE WITH 10CFR50, APPENDIX R HAS BEEN REQUIRED. THEREFORE, THE PROBABILITY AND CONSEQUENCES OF A FIRE AFFECTING COLD SHUTDOWN OF THE PLANT ARE UNCHANGED.

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 88-07  
CCW CHECK VALVE 743A INTERNALS REMOVAL

THIS TECHNICAL STAFF REQUEST ADDRESSES CHANGES TO CCW CHECK VALVE 743A. THIS CHANGE INVOLVES REMOVING CHECK VALVE 743A'S INTERNALS TO ALLOW CONCLUSIVE LEAK RATE TESTING OF CCW CHECK VALVE 743. IN THE ORIGINAL PLANT DESIGN VALVE 743A WAS UTILIZED AS THE CONTAINMENT ISOLATION VALVE FOR THE CCW LINE COMING FROM THE EXCESS LETDOWN HEAT EXCHANGER. HOWEVER, DUE TO LEAKAGE PROBLEMS WITH VALVE 743A, CHECK VALVE 743 WAS INSTALLED IN SERIES WITH 743A TO PERFORM THE CONTAINMENT ISOLATION FUNCTION. CONSEQUENTLY, CHECK VALVE 743A NO LONGER PERFORMS ANY SAFETY OR OPERATIONAL FUNCTION.

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 EVENTS RELATED TO THIS MODIFICATION ARE (1) SEISMIC EVENTS, (2) PIPE BREAKS INSIDE THE CONTAINMENT BUILDING, AND A MAIN STEAM PIPE RUPTURE.

THIS MODIFICATION WILL BE DESIGNED SUCH THAT IT WILL NOT AFFECT THE CAPABILITY OF CHECK VALVE 743A OR ITS CONNECTED PIPING AND SUPPORTS TO WITHSTAND A SEISMIC EVENT.

THIS MODIFICATION WILL NOT AFFECT THE BODY PRESSURE BOUNDARY FUNCTIONING OF CHECK VALVE 743A THEREFORE THE ASA B31.1 PRESSURE DESIGN WILL REMAIN VALID.

CCW CHECK VALVE 743 WILL STILL PROVIDE THE CONTAINMENT ISOLATION FUNCTIONS DURING A PRIMARY SYSTEM PIPE RUPTURE OR A MAIN STEAM LINE RUPTURE.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC.
- 2) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A PIPE BREAK INSIDE OR OUTSIDE CONTAINMENT.

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 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.



RHR, SPENT FUEL, AND CVCS NON-REGENERATIVE HEAT EXCHANGERS BOLTING UPGRADE

THIS TECHNICAL STAFF REQUEST ADDRESSES FLANGE BOLTING UPGRADES FOR THE RHR, SPENT FUEL, AND NON-REGENERATIVE HEAT EXCHANGERS. THE SHELL SIDE INLET AND OUTLET FLANGES WERE ORIGINALLY SUPPLIED WITH SA-307 GRADE B BOLTS. THESE BOLTS WILL BE REPLACED WITH SA-193 GRADE B7 BOLTS FOLLOWING STANDARD RG&E BOLTING PRACTICES.

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 EVENTS RELATED TO THIS MODIFICATION ARE (1) SEISMIC EVENTS, (2) PIPE BREAKS INSIDE THE CONTAINMENT BUILDING, (3) AND A MAIN STEAM PIPE RUPTURE.

THE NEW BOLTING IS OF THE SAME PHYSICAL SIZE AS THE ORIGINAL BOLTING AND THE CHEMICAL AND PHYSICAL PROPERTIES OF THE NEW MATERIAL, SA 193 GR B7, IS EQUAL TO OR GREATER THAN THE OLD MATERIAL SA 307 GR B. THEREFORE, THE NEW BOLTING WILL PERFORM TO THE SAME CAPACITY AS THE OLD BOLTING FOR EACH OF THE APPLICABLE EVENTS LISTED ABOVE.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC.
- 2) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A PIPE BREAK INSIDE CONTAINMENT.
- 3) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A MAIN STEAM PIPE RUPTURE.

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 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.

MAIN FEEDWATER PUMP SUCTION TRANSMITTER VALVE MANIFOLD

THIS TECHNICAL STAFF REQUEST (TSR) ADDRESSES THE REPLACEMENT OF THE ISOLATION AND EQUALIZATION VALVES FOR FT-2004 AND FT-2005 (FEEDWATER PUMP SUCTION FLOW TRANSMITTERS) WITH MANIFOLDS. IT WILL ALSO REPLACE THE BLOWDOWN VALVES IN THE SENSING LINES WHICH ARE LEAKING. THE NEW ARRANGEMENT WILL PROVIDE THE SAME FUNCTION AS THE PREVIOUS ONE.





THE VALVES ASSOCIATED WITH THIS MODIFICATION SERVE TRANSMITTERS FT-2004 AND FT-2005. THESE TRANSMITTERS PROVIDE:

- (1) AN INPUT TO FEEDWATER BYPASS VALVE 3959, WHICH OPENS ON LOW FEEDWATER NPSH.
- (2) A SIGNAL TO FEEDWATER RECIRCULATION VALVES 4147 AND 4148, WHICH OPEN WHEN FEEDWATER FLOW FALLS BELOW 25% FULL FLOW WITHOUT RECIRCULATION.

A FEEDWATER BYPASS VALVE MALFUNCTION IS DISCUSSED IN THE FEEDWATER TEMPERATURE DECREASE ACCIDENT SCENARIO OF SECTION 15.1.1.1 IN THE UFSAR. THIS MODIFICATION WILL NOT INCREASE OR DECREASE THE LIKELIHOOD OF SUCH AN ACCIDENT SINCE THE FUNCTION OF THE VALVES AND PIPING ASSOCIATED WITH THE TRANSMITTERS WILL NOT CHANGE.

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

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

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

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

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



PRESSURIZER LEVEL TRANSMITTER MANIFOLD REPLACEMENT

THIS TECHNICAL STAFF REQUEST REVISION WAS TO CHANGE THE REFERENCE IN THE DESIGN CRITERIA, REVISION 0 FROM THE 1986 ASME CODE EDITION TO THE 1983 EDITION. THIS WILL BE CONSISTENT WITH THE INSTALLATION AND ALSO BE IN CONFORMANCE WITH ASME SECTION XI, ARTICLE IWA-7000, REPLACEMENTS.

A REVIEW WAS PERFORMED OF ALL THE 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:

CHEMICAL AND VOLUME CONTROL SYSTEM MALFUNCTION

PRIMARY SYSTEM PIPE RUPTURE

SEISMIC EVENT

THE DESIGN CRITERIA REQUIRES THAT THE NEW MANIFOLD VALVE AND FITTINGS FOR THIS MODIFICATION BE SEISMICALLY SUPPORTED, THEREFORE, THIS MODIFICATION WILL NOT BE AFFECTED BY A SEISMIC EVENT.

THE DESIGN CRITERIA REQUIRES THAT THE NEW MANIFOLD VALVE AND TUBING BE SEISMICALLY MOUNTED AND FURTHERMORE SECTIONS 4 AND 5 REQUIRE THE NEW TUBING TO BE ASME CODE CLASS 2, QUALITY GROUP B. THEREFORE, THE PROBABILITY OF A LOCA WILL NOT BE INCREASED BY THIS MODIFICATION.

THEREFORE, 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.

THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION. THIS IS BASED ON THE FOLLOWING:

THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY, PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL NOT BE INCREASED BY THE PROPOSED MODIFICATION BECAUSE THE INSTALLATION WILL MEET ALL APPLICABLE SEISMIC AND ASME CODE REQUIREMENTS.

THE POSSIBILITY OF AN ACCIDENT OR MALFUNCTION OF A DIFFERENT TYPE THAN ANY EVALUATED PREVIOUSLY IN THE SAFETY ANALYSIS WILL NOT BE CREATED BY THE PROPOSED MODIFICATION BECAUSE THE INSTALLATION WILL MEET ALL APPLICABLE SEISMIC AND ASME CODE REQUIREMENTS.



THE MARGIN OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION WILL NOT BE REDUCED BY THE PROPOSED MODIFICATION BECAUSE THE INSTALLATION WILL MEET ALL APPLICABLE SEISMIC AND ASME CODE REQUIREMENTS.



## 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-87-01.1

SECONDARY WATER CHEMISTRY MONITORING PANEL (SWCMP) INTERNAL WIRING FOR 7082 ANALYZERS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF COMPONENTS AND WIRING IN THE NEW SWCMP.

SM-87-01.2

COMPUTERIZED SECONDARY WATER CHEMISTRY ELECTRICAL INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE NEW SWCMP AND ASSOCIATED CIRCUITS.

SM-87-01.3

COMPUTERIZED SECONDARY WATER CHEMISTRY MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF TWELVE NEW CONDUCTIVITY CELLS AND THE TESTING AND TURNOVER OF THE COMPUTERIZED SECONDARY WATER CHEMISTRY MODIFICATION.

SM-89-08

AMMONIUM HYDROXIDE SIGHTGLASS INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE AMMONIUM HYDROXIDE TANK SIGHTGLASS.

SM-1594.6

SPENT FUEL POOL COOLING - SEISMIC SUPPORTS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF SEISMIC SUPPORTS REQUIRED FOR THE NEW SPENT FUEL POOL PIPING.

SM-1594.7

SPENT FUEL POOL COOLING - SERVICE WATER PIPING AND ASSOCIATED INSTRUMENTATION INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF SERVICE WATER PIPING AND ASSOCIATED INSTRUMENTATION TO THE NEW SFP HEAT EXCHANGER.

SM-1594.8

SPENT FUEL POOL COOLING - STAINLESS STEEL AND ASSOCIATED INSTRUMENTATION PIPING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF SPENT FUEL POOL STAINLESS STEEL AND ASSOCIATED INSTRUMENTATION PIPING.



SM-1594.8A

INSTALLATION AND OPERATION OF STANDBY S.F.P. COOLING SYSTEM

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, OPERATION, AND DISASSEMBLY OF THE STANDBY SKID MOUNTED S.F.P. COOLING SYSTEM.

SM-1594.9A

FLOOR PENETRATION INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF FLOOR PENETRATIONS FOR THE NEW SPENT FUEL POOL COOLING SYSTEM.

SM-1594.11

SPENT FUEL POOL COOLING - PUMP AND RADIATION MONITOR INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF PUMP AND RADIATION MONITOR FOR THE NEW SPENT FUEL POOL COOLING SYSTEM.

SM-1594.14

SPENT FUEL POOL COOLING SYSTEM ELECTRICAL MODIFICATION AND COMPLETION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION COMPLETION AND TURNOVER OF THE SPENT FUEL POOL COOLING ELECTRICAL MODIFICATION.

SM-2504.25

CONTAINMENT MINI-PURGE EXHAUST VALVE ELECTRICAL INSTALLATION AT PENETRATION 132 (V7920) - CONTAINMENT BUILDING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION AND TURNOVER OF THE CONTAINMENT MINI-PURGE EXHAUST VALVE V7920 AT PENETRATION P-132 INSIDE CONTAINMENT.

SM-2504.26

CONTAINMENT MINI-PURGE EXHAUST VALVES ELECTRICAL INSTALLATION OUTSIDE CONTAINMENT

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION AND TURNOVER OF THE CONTAINMENT MINI-PURGE SUPPLY SYSTEM EXHAUST VALVES CDV-1A AND CDV-1B OUTSIDE CONTAINMENT.

SM-2512.123

SEISMIC UPGRADE OF PIPE SUPPORTS - ANALYSIS LINE SAFW-400 "D" PUMP DISCHARGE - STANDBY AUXILIARY FEEDWATER BUILDING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF STANDBY AUXILIARY FEEDWATER SUPPORTS, "B" TRAIN IN THE SAFW BUILDING.



SM-2512.124

SEISMIC UPGRADE OF PIPE SUPPORTS ON ANALYSIS LINE SW-2200 SERVICE WATER, AUXILIARY BUILDING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF MODIFICATIONS TO SERVICE WATER SUPPORTS IN THE AUXILIARY BUILDING ASSOCIATED WITH FEED TO THE "C" SAFW PUMP.

SM-2512.125

SEISMIC UPGRADE OF PIPE SUPPORTS-ANALYSIS LINE SAFW-800, STANDBY AUXILIARY FEEDWATER FROM CONTAINMENT PENETRATION 123 TO "B" S/G FEEDWATER LINE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF SAFW SUPPORTS IN CONTAINMENT FROM PENETRATION 123 TO THE "B" FEEDWATER LINE.

SM-2512.126

SEISMIC UPGRADE OF PIPE SUPPORTS, ANALYSIS LINE SAFW-900, STANDBY AUXILIARY FEEDWATER FROM PENETRATION #119 TO "A" STEAM GENERATOR FEEDWATER LINE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF PIPE SUPPORT MODIFICATIONS TO THE SAFW LINE BETWEEN PENETRATION #119 AND THE "A" S/G FEEDWATER LINE.

SM-2512.131

IST TEST CONNECTIONS - RCDT PUMP SUCTION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF TEST CONNECTIONS FOR VALVES MOV-1813A AND MOV-1813B.

SM-2512.132

IST TEST CONNECTIONS - AUXILIARY FEEDWATER DISCHARGE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF TEST CONNECTIONS FOR AUXILIARY FEEDWATER DISCHARGE CHECK VALVES 4003, 4004, 4000C AND 4000D.

SM-2512.133

ISI TEST CONNECTIONS - VALVE V-3506 AND V-3507 BYPASS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF TEST CONNECTIONS FOR VALVES 3506 AND 3507 BYPASS LOOPS (DOWNSTREAM OF V-3506A AND V-3507A).



SM-2512.134

SEISMIC UPGRADE OF PIPE SUPPORTS - ANALYSIS LINE CVC-200 - "B" RCP SEAL RETURN

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE SUPPORT MODIFICATIONS FOR "B" RCP SEAL RETURN LINE CONSISTING OF SUPPORTS CVU-131 AND CVU-XI.

SM-3319.48

MCC-1B BREAKER REPLACEMENT

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF BREAKER REPLACEMENT AT SPECIFIED POSITIONS ON MCC-1B.

SM-3319.55

TESTING OF BREAKERS AT MCC-1B

THE PURPOSE OF THIS NEW PROCEDURE IS TO 1) DOCUMENT AN AUXILIARY SWITCH TEST, 2) VERIFY PROPER PHASE ROTATION, AND 3) TO PERFORM A FUNCTIONAL TEST OF BREAKERS PLACED AT MCC-1B.

SM-3319.58

SETTING ADJUSTMENT AND FUNCTIONAL TESTING OF BREAKERS AT MCC-1H

THE PURPOSE OF THIS NEW PROCEDURE IS TO PROVIDE THE DIRECTION TO ADJUST AND FUNCTIONALLY TEST BREAKERS AT MCC-1H.

SM-3319.59

AUXILIARY SWITCH TESTING FOR SELECTED BREAKERS ON MCC-1B

THE PURPOSE OF THIS NEW PROCEDURE IS TO DOCUMENT AN AUXILIARY SWITCH TEST FOR THE TURBINE ROOM WALL EXHAUST FANS 1F, 1G, 1H, AND 1J.

SM-3319A.2

BREAKER CHANGEOUT/REMOVAL ON MCC-1C, 1L, AND 1K

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF BREAKER CHANGEOUTS/REMOVAL, TOL HEATER CHANGEOUTS, AND TRIP SETTING ADJUSTMENTS FOR VARIOUS UNITS ON MCC-1C, 1L, AND 1K.

SM-3319A.3

BREAKER CHANGEOUT/REMOVAL ON MCC-1D AND 1M

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF BREAKER CHANGEOUTS/REMOVALS, TOL HEATER CHANGEOUTS, AND TRIP SETTING ADJUSTMENTS FOR VARIOUS UNITS ON MCC-1D AND 1M.





SM-3319A.4  
BREAKER CHANGEOUT/REMOVAL ON MCC-1B, 1E, AND 1F

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF BREAKER CHANGEOUTS/REMOVALS, HKA TRIP UNIT REPLACEMENTS, AND TRIP SETTING ADJUSTMENTS FOR VARIOUS UNITS ON MCC-1B, 1E, AND 1F.

SM-3319A.5  
REPLACEMENT OF POWER CABLES PER EWR-3319A

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE REPLACEMENT OF EXISTING POWER CABLES FOR THE BORIC ACID EVAPORATOR PACKAGE, THE AUXILIARY BUILDING LIGHTING TRANSFORMER 1B, AND THE SERVICE BUILDING KITCHEN EQUIPMENT TRANSFORMER.

SM-3319A.6  
BREAKER REMOVAL ON MCC-1G AND RESOLUTION OF SM-3319A.2, 3319A.3, AND 3319A.4 PUNCHLIST ITEMS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF BREAKER REMOVALS, TOL HEATER CHANGEOUTS, BREAKER HANDLE INSTALLATIONS, AND REMOVED BREAKER COVER PLATE INSTALLATIONS.

SM-3319A.8  
BREAKER CHANGEOUT AT MCC-1F FOR THE LAUNDRY AIR CONDITIONER AND THE PASS WASTE TANK EVACUATION COMPRESSOR

THE PURPOSE OF THIS NEW PROCEDURE IS CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE BREAKER CHANGEOUT AT MCC-1F FOR THE LAUNDRY AIR CONDITIONER AND THE PASS WASTE TANK EVACUATION COMPRESSOR.

SM-3341.1  
FUSE INSTALLATION FOR THE MAIN CONTROL BOARD "A" AND "B" BATTERY VOLTMETERS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF FUSES FOR THE MCB "A" AND "B" BATTERY VOLTMETERS.

SM-3341.2  
PRE-OPERATIONAL TESTING OF D.C. FUSES (XSB) FOR LOCKOUT RELAY 86/11A

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE A2Y (15A) (XSB) 125 VDC FUSES WHICH FEED THE BUS 11A DIFFERENTIAL LOCKOUT RELAY 86/11A.



SM-3341.3

PRE-OPERATIONAL TESTING OF D.C. FUSES (XSC) FOR LOCKOUT RELAY 86/11B

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE A2Y (15A) (XSC) 125 VDC FUSES WHICH FEED THE BUS 11B DIFFERENTIAL LOCKOUT RELAY 86/11B.

SM-3596.2

D/G "A" PRESSURE INSTRUMENT PANEL - ELECTRICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF JUNCTION BOXES ASSOCIATED WITH THE NEW DIESEL GENERATOR "A" INSTRUMENT PANEL, INCLUDING CONDUIT AND CONDUIT SUPPORTS BETWEEN THE JUNCTION BOXES AND INSTRUMENT PANEL. ALSO, INCLUDES CABLE BETWEEN NEW PRESSURE INSTRUMENTS AND THE NEW TERMINAL STRIPS WITHIN THE JUNCTION BOXES.

SM-3596.4

D/G "A" PRESSURE INSTRUMENT PANEL - ELECTRICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF JUNCTION BOXES ASSOCIATED WITH THE NEW DIESEL GENERATOR "B" INSTRUMENT PANEL, INCLUDING CONDUIT AND CONDUIT SUPPORTS BETWEEN THE JUNCTION BOXES AND INSTRUMENT PANEL. ALSO, INCLUDES CABLE BETWEEN NEW PRESSURE INSTRUMENTS AND THE NEW TERMINAL STRIPS WITHIN THE JUNCTION BOXES.

SM-3692.2

STANDBY AUXILIARY FEEDWATER CONTROL CIRCUITRY AND VALVE MOV-9746 TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE NEW MOV CONTROL SWITCH RE-ARRANGEMENTS AND THEIR RESPECTIVE CONTROL AND INDICATION CIRCUITS. THIS INCLUDES MOVATS TESTING OF MOV-9746 AND HYDRO TESTING OF NEW VALVE INSTALLATION.

SM-3692.4

STANDBY AUXILIARY FEEDWATER VALVE - ELECTRICAL MODIFICATIONS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER FOR TESTING OF CONDUIT, CONDUIT SUPPORTS, CABLE, BREAKER JUMPERS AND REWORK OF THE MAIN CONTROL BOARD SWITCHES AND INDICATION.

SM-3692.5

SBAFW BUILDING ELECTRICAL SUPPORTS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF ELECTRICAL SUPPORT MODIFICATIONS IN THE STANDBY AUXILIARY FEEDWATER BUILDING.



SM-3692.6

STANDBY AUXILIARY FEEDWATER FUNCTIONAL TESTING OF CONTROL CIRCUITRY FOR MOV-9746

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE FUNCTIONAL TESTING OF MOV-9746 LOCATED IN THE SAFW BUILDING; CONTROL ROOM (REAR OF MCB); AUXILIARY BUILDING (MCC AREAS). HYDRO TESTING OF THE PRESSURE BOUNDARY IS COMPLETE. ADDITIONAL COPIES OF THIS PROCEDURE MAY BE PLACED FOR COORDINATION AND CONTROL PURPOSES.

SM-3797.8

MRPI ROD DROP RELAY TIME DELAY REMOVAL

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE REMOVAL OF THE TIME DELAY DEVICES WHICH WERE PREVIOUSLY INSTALLED ON THE CONTROL ROD DROP RELAYS, AND THE SUBSEQUENT TESTING OF THE RELAYS.

SM-3797.9

MRPI DATA CABINET FAN INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF COOLING FANS ON THE MRPI DATA CABINET IN CONTAINMENT.

SM-3797.10

MRPI ANNUNCIATOR MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF A MODIFICATION TO ANNUNCIATOR C29 FOR MRPI FAILURE.

SM-3797.11

MRPI DATA CABINET FAN REMOVAL

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE REMOVAL AND TURNOVER OF COOLING FANS FOR MRPI DATA CABINET IN CONTAINMENT.

SM-3881.1

SI RECIRCULATION MODIFICATION MECHANICAL INSTALLATION AND REMOVALS

THE PURPOSE OF THIS NEW PROCEDURE IS PROVIDE INSTRUCTIONS FOR THE MECHANICAL PORTION OF THE SI RECIRCULATION MODIFICATION.

SM-3881.2

SI RECIRCULATION MODIFICATION - ELECTRICAL INSTALLATION AND REMOVALS MOV 897, 898

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF ELECTRICAL INSTALLATION AND REMOVALS FOR MOV 897 AND 898.



SM-3881.7

SAFETY INJECTION FLOW METERS FI-924 AND FI-925 RESCALING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF METER SCALES FOR FI-924 AND FI-925 AND RECALIBRATION OF SAFETY INJECTION FLOW TRANSMITTERS FT-924 AND FT-925.

SM-3990.1

DIESEL GENERATOR BUILDING FOUNDATION INVESTIGATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL TEST BORING AND CORE SAMPLING IN AND AROUND THE DIESEL GENERATOR BUILDING.

SM-3990.2

GROUND WATER EXPLORATION OF THE DIESEL GENERATOR BUILDING IMPINGEMENT MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE EXPLORATION AND EXCAVATION OF THE DEWATERING PITS GENERALLY BETWEEN THE DIESEL GENERATOR BUILDING AND LAKE ONTARIO. THE GENERAL PURPOSE OF THIS EXPLORATORY PHASE OF THE OVERALL MODIFICATION IS TO OBTAIN SUFFICIENT PERTINENT DATA ON THE SUBSURFACE GROUND WATER. THIS DATA WILL PROMULGATE NECESSARY ENGINEERING OUTPUTS FOR MODIFICATION ERECTION AND INSTALLATION.

SM-3991.2

SEISMIC UPGRADE OF EXISTING CONNECTIONS AND ANCHORAGES - AUXILIARY BUILDING SOUTH WALL

THE PURPOSE OF THIS NEW PROCEDURE IS TO DIRECT/DOCUMENT STRUCTURAL MODIFICATIONS.

SM-4064.5

TURBINE BUILDING SMOKE DETECTION UPGRADE AND ALARM OFF INDICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE CHANGEOUT OF TURBINE BUILDING SMOKE DETECTORS AND STPs. ALSO INCLUDED IS THE INSTALLATION OF CONTROL ROOM INDICATION OF ALARM OFF STATUS.

SM-4064.6

TSC FIRE DETECTION AND SUPPRESSION SYSTEM UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF MODIFICATIONS TO THE TSC FIRE DETECTION AND SUPPRESSION SYSTEMS PRIOR TO FINAL TERMINATIONS AND TESTING.





SM-4064.9

TURBINE BUILDING SMOKE DETECTOR ZONE Z34 MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF MODIFICATIONS TO TURBINE BUILDING SMOKE DETECTOR ZONE Z34 - TO REMOVE DETECTORS FROM THE GENERATOR FIELD VOLTAGE REGULATOR CABINET.

SM-4218.3

LT-426 TUBING REMOVAL

THE PURPOSE OF THIS NEW PROCEDURE IS TO PROVIDE THE NECESSARY INSTRUCTIONS FOR THE REMOVAL OF THE EXISTING 3/8" TUBING USED FOR LT-426 SEALED REFERENCE LEG.

SM-4230.1

ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS) MITIGATION ACTUATION CIRCUITRY (AMSAC) MODIFICATION INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO INSTALL A REACTOR PROTECTION SYSTEM THAT WILL TRIP THE MAIN STEAM TURBINE AND START THE FLOW OF AUXILIARY FEEDWATER AFTER AN ATWS EVENT.

SM-4230.2

ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS) MITIGATION SYSTEM ACTUATION CIRCUITRY (AMSAC) MODIFICATION TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO TEST A REACTOR PROTECTION SYSTEM THAT WILL TRIP THE MAIN STEAM TURBINE AND START THE FLOW OF AUXILIARY FEEDWATER AFTER AN ATWS EVENT.

SM-4230.3

ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS) MITIGATION SYSTEM ACTUATION CIRCUITRY (AMSAC) TRIP STATUS MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO INSTALL THE "AMSAC TRIPPED" STATUS LIGHT ON THE MAIN CONTROL BOARD, WHILE PROGRAMMING IN NEW ARMING SETPOINTS AND MODIFYING THE FUNCTION CURVE WHICH GENERATES THE VARIABLE TIME DELAY FOR AMSAC. IN ADDITION TO CHANGING THE DIGITAL OUTPUT FOR THE PPCS FROM "AMSAC ACTUATED" TO "AMSAC TRIPPED", BECOMING A DIRECT FUNCTION OF THE RESET STATUS.

SM-4322.1

STATION SERVICE TRANSFORMERS #13 AND #15 COOLING FANS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF COOLING FANS AT STATION SERVICE TRANSFORMERS #13 AND #15.



SM-4324.3

ELECTRICAL INSTALLATION FOR STEAM GENERATOR BLOWDOWN SYSTEM MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION FOR STEAM GENERATOR BLOWDOWN SYSTEM MODIFICATION. THIS PROCEDURE ALLOWS PARTIAL INSTALLATION PRIOR TO PLANT OUTAGE AND IS TO COMPLETE THE REMAINING DURING THE PLANT OUTAGE. TESTING OF THE INSTALLATION WILL BE PERFORMED UNDER ANOTHER PROCEDURE.

SM-4324.5

STEAM GENERATOR BLOWDOWN SYSTEM MODIFICATION FUNCTIONAL TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO PERFORM FUNCTIONAL TESTING OF THE ELECTRICAL INSTALLATION OF S/G BLOWDOWN MODIFICATION.

SM-4347.1

MODIFICATION OF THE CONTROL ROOM PLANT EVACUATION ALARM, PLANT ATTENTION ALARM AND PLANT FIRE ALARM

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE CONTROL ROOM PLANT EVACUATION ALARM, PLANT ATTENTION ALARM AND PLANT FIRE ALARM MODIFICATIONS.

SM-4347.2

CONTROL ROOM ALARM SYSTEM TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL TESTING AND TURNOVER OF THE MODIFICATIONS ASSOCIATED WITH THE CONTROL ROOM ALARM SYSTEMS AND TO CONDUCT A CONTROL ROOM ALARM SURVEY.

SM-4375.1

BORIC ACID FLOW CONTROL PIPING MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MECHANICAL PORTION OF THE BORIC ACID FLOW CONTROL MODIFICATION.

SM-4375.2

BORIC ACID FLOW CONTROL ELECTRICAL MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION, TESTING, AND TURNOVER OF THE BORIC ACID FLOW CONTROL AND HEAT TRACE MODIFICATION.

SM-4375.3

MECHANICAL AND ELECTRICAL TESTING - BORIC ACID FLOW CONTROL PIPING MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE BORIC ACID FLOW CONTROL PIPING MODIFICATION.



SM-4375.6

BORIC ACID FLOW CONTROL MECHANICAL PHASE 2 MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MECHANICAL PORTION OF THE BORIC ACID FLOW CONTROL PHASE 2 MODIFICATION.

SM-4375.8

BORIC ACID FLOW CONTROL PHASE 2 ACCEPTANCE TEST

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE BORIC ACID FLOW CONTROL PHASE 2 MODIFICATION.

SM-4375.9

REPLACEMENT OF HEAT TRACE CIRCUITS #40 AND #78

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW CHEMELEX SELF-REGULATING HEAT TRACE CABLE FOR CONDUITS #40 AND #78 (BORIC ACID BLENDER PIPING), WHICH INCLUDES VALVES V354, V355, FCV110A, V109, AND FT110.

SM-4525.2

GINNA POWER SUPPLY BUS DUCT FOUNDATIONS

THE PURPOSE OF THIS NEW PROCEDURE IS TO DIRECT/DOCUMENT INSTALLATION OF NEW BUS DUCT FOUNDATION.

SM-4525.3

GINNA POWER SUPPLY O.C.B. FIREWALL FOUNDATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE GINNA POWER SUPPLY O.C.B. FIREWALL FOUNDATION.

SM-4525.4

RACEWAY INSTALLATION FOR OFFSITE POWER RECONFIGURATION MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF RACEWAY FOR THE OFFSITE POWER MODIFICATION. THIS PROCEDURE INCLUDES INSTALLATION OF A NEW PIPE SUPPORT FOR THE EXISTING TRANSFORMER 12B DELUGE SYSTEM.

SM-4525.5

NEW GINNA POWER SUPPLY BUS DUCT INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL INSTALLATION OF THE NEW GINNA POWER SUPPLY BUS. DUCT.



SM-4525.6

OFFSITE POWER RECONFIGURATION: P.P.S. SWITCH GEAR, TRANSFORMER  
12B GROUNDING

THE PURPOSE OF THIS PROCEDURE IS TO ANCHOR THE P.P.S. SWITCHGEAR, COMPLETE INTERNAL WIRING, AND PERFORM ELECTRICAL INSPECTION OF P.P.S. 4160V SWITCHGEAR. THIS PROCEDURE ALSO CONTROLS THE INSTALLATION OF THE TRANSFORMER 12B GROUNDING RESISTOR.

SM-4525.7

OFFSITE POWER RECONFIGURATION: CABLE INSTALLATION, RELAY PANELS  
12A AND 12B

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF CABLES FOR THE OFFSITE POWER MODIFICATION AND COMPLETE THE INSTALLATION OF RELAY PANELS 12A AND 12B.

SM-4525.8

OFFSITE POWER RECONFIGURATION: MAIN CONTROL BOARD SWITCH  
RELOCATION, BUS 12A, BUS 12B MODIFICATION AND TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF:

- A) 52/11B CONTROL SW, SYNCH SW, AND IND. LITES
- B) 52/11A CONTROL SW, SYNCH SW, AND IND. LITES
- C) 12B BUS RELAYING AND CIRCUIT BREAKERS (86/12B, 86B/12B, 52/BTB-B, 52/16SS, AND 52/17SS)
- D) 12A BUS RELAYING AND CIRCUIT BREAKERS (86/12A, 86B/12A, 52/BTA-A, 52/14SS, 52/18SS AND 52/AVP-9A)

SM-4525.9

OFFSITE POWER RECONFIGURATION: MAIN CONTROL BOARD MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND RELOCATION OF SWITCHES, METERS, AND RELAYS WHICH MONITOR AND CONTROL THE 34.5 KV AND 4160V ELECTRIC SYSTEMS.

SM-4525.10

OFFSITE POWER RECONFIGURATION: SWITCHYARD MODIFICATION, 4160V  
CUBICLE MODIFICATION, 480V AND 120V BREAKER INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE MODIFICATION OF THE 34 KV BUS AND ASSOCIATED EQUIPMENT, COMPLETE REMOVALS AT THE 12B XFMR CABINET, COMPLETE MODIFICATION OF 12A AND 12B 4160V CUBICLES, AND INSTALL 480V AND 120V BREAKERS FOR THE OFFSITE POWER MODIFICATION.





SM-4525.12

OFFSITE POWER BACKFEED VIA UNIT AUXILIARY TRANSFORMER

THE PURPOSE OF THIS NEW PROCEDURE IS TO SUPPLY POWER FROM THE 115 KV GRID THROUGH THE MAIN AND UNIT AUXILIARY TRANSFORMERS TO THE STATION AUXILIARIES, WHILE THE STATION AUXILIARY TRANSFORMERS #12A AND #12B ARE MODIFIED PER EWR 4525.

SM-4525.14

OFFSITE POWER MODIFICATION: 4KV AND 34KV MCB METERING PRE-OPERATIONAL TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO TEST THE MCB 4 KV AND 34 KV METERING, MODIFIED UNDER EWR-4525 PER SM-4525.9.

SM-4525.15

OFFSITE POWER RESTORATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSERVICE TESTING AND TURNOVER OF THE OFFSITE POWER MODIFICATION AND RESTORE OFFSITE POWER VIA STATION AUXILIARY TRANSFORMER 12B.

SM-4526.2

D/G "A" FUEL OIL SYSTEM ELECTRICAL RECONSTRUCTION AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL PORTION OF THE D/G "A" FUEL OIL SYSTEM INCLUDING INSTALLATION OF NEW EQUIPMENT AND REMOVAL OF OLD EQUIPMENT.

SM-4526.4

D/G "B" FUEL OIL SYSTEM ELECTRICAL RECONSTRUCTION AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL PORTION OF THE D/G "B" FUEL OIL SYSTEM INCLUDING INSTALLATION OF NEW EQUIPMENT AND REMOVAL OF OLD EQUIPMENT.

SM-4526.8

DUPLEX STRAINER INSTALLATION ELECTRICAL PORTION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE ELECTRICAL PORTION OF THE DUPLEX STRAINERS IN THE DIESEL GENERATOR FUEL OIL SYSTEM.

SM-4526.17

DIESEL GENERATOR FUEL OIL SYSTEM DISCHARGE LINE PIPE SUPPORTS UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL INSTALLATION AND TURNOVER OF PIPE SUPPORTS ON THE DIESEL GENERATOR FUEL OIL SYSTEM DISCHARGE PIPING.



SM-4530.1

AC FUSED AND BREAKERS (INTERMEDIATE BUILDING'S MISCELLANEOUS DISTRIBUTION TRANSFORMER REPLACEMENT

THE PURPOSE OF THIS NEW PROCEDURE IS TO REPLACE THE INTERMEDIATE BUILDING'S MISCELLANEOUS DISTRIBUTION TRANSFORMER AND REMOVE THE ELECTRICAL FEED FROM MCC 1F (UNIT 4MM) TO MCC 18 (UNIT 8D).

SM-4534.1

REACTOR COOLANT PUMP MOTOR OIL LEVEL INDICATION SYSTEM UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE NEW REACTOR COOLANT PUMP MOTOR OIL LEVEL INDICATION SYSTEM FOR THE A & B REACTOR COOLANT PUMP MOTORS. NO COMPONENT INSTALLATION REQUIRED ON RCP MOTORS. THE ROSEMOUNT 710DU INSTRUMENT RACK IS COMMON TO BOTH REACTOR COOLANT PUMPS.

SM-4538.1

1B DIESEL GENERATOR UPGRADE

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE 1B DIESEL GENERATOR UPGRADE. THIS MODIFICATION INCLUDES REPLACEMENT OF A THROW OVER RELAY, THERMAL OVERLOAD RELAYS, REMOVAL OF A 51BU RELAY, AND REWIRING OF TERMINAL BOXES ON THE "A" AND "B" DIESEL SKIDS.

SM-4538.3

INSTALLATION AND TESTING OF NEW AUXILIARY RELAY 51VX, CLAROSTAT 200 OHM RESISTOR, AND SLIDING LINK TERMINALS FOR AIR START VALVE, ASV-1 AND ASV-2, FOR THE 1A DIESEL GENERATOR

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION, TESTING, AND TURNOVER OF MODIFICATIONS TO THE 1A DIESEL GENERATOR. THESE MODIFICATIONS INCLUDE REPLACEMENT OF OVERCURRENT AUXILIARY RELAY 51VX, INSTALLATION NEW 200 OHM RESISTOR, SLIDING LINKS TERMINALS FOR AIR START VALVES, AND INSTALLATION OF A NEW MOUNTING PLATE FOR RELAYS ATR-A, ATR-B, AND A FUSE BLOCK.

THIS PROCEDURE WILL ALLOW WORK TO BE ACCOMPLISHED IN THE FOLLOWING GENERAL AREAS OF THE PLANT: 1A DIESEL GENERATOR.

SM-4553.1

REACTOR BMI TUBING SUPPORT UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO SEISMICALLY UPGRADE THE REACTOR BOTTOM MOUNTED INSTRUMENTATION TUBING SUPPORT BMI-3.



SM-4618.1

FEED PUMP ROOM VENTILATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE NEW FEED PUMP ROOM VENTILATION SYSTEM COMPONENTS.

SM-4671.6

"A" RCS HOT LEG RHR FLOW CORRECTION

THE PURPOSE OF THIS NEW 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-4675.1

RHR PUMP "B" RECIRCULATION PIPING TIE-INS

THE PURPOSE OF THIS NEW PROCEDURE IS TO INSTALL THE 8 INCH CHECK VALVE AND 3 INCH PIPING TIE-INS TO THE B RHR HX DISCHARGE LINE.

SM-4675.2

RHR RECIRCULATION MODIFICATION MCB MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE MAIN CONTROL ROOM WORK SCOPE OF EWR-4675 RHR RECIRCULATION MODIFICATION.

SM-4675.3

RHR SYSTEM CLEANLINESS INSPECTION AND HYDROSTATIC TEST

THE PURPOSE OF THIS NEW PROCEDURE IS TO PROVIDE INSTRUCTIONS FOR PERFORM CLEANLINESS INSPECTIONS AND A HYDROSTATIC TEST OF THE RHR RECIRC SYSTEM INSTALLED BY EWR-4675.

SM-4675.5

RHR PUMP 'A' RECIRCULATION PIPING TIE-INS AND BALANCE OF PIPING

THE PURPOSE OF THIS NEW PROCEDURE IS CONTROL THE INSTALLATION AND TURNOVER OF THE RHR 'A' RECIRCULATION PIPING TIE-INS, COMMON TRENCH TIE-INS AND THE REMAINDER OF THE RHR A AND B RECIRCULATION PIPING AND SUPPORTS.

SM-4675.6

RHR PUMP "A" AND "B" RECIRCULATION INSTRUMENTATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF INSTRUMENTATION ASSOCIATED WITH THE A AND B RECIRCULATION PIPING MODIFICATION.



SM-4675.7  
RHR HX "A" OUTLET PIPE SUPPORT

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE RHR HX "A" OUTLET PIPE SUPPORT.

SM-4675.8  
RHR PUMP SUCTION HYDRO STATIC TEST

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE HYDROSTATIC TEST OF THE INSTALLATION OF THE TI-680 AND 681 THERMOWELLS.

SM-4675.9  
RHR SYSTEM SHUTDOWN COOLING FULL FLOW TEST

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING OF THE RHR SYSTEM FULL FLOW TEST DURING THE SHUTDOWN COOLING TEST.

SM-4755.1  
IST TEST CONNECTIONS FOR MOV-1813A/B - "A" AND "B" RCDT PUMP SUCTION

THE PURPOSE OF THIS NEW PROCEDURE IS TO DIRECT/DOCUMENT MODIFICATION RELOCATION OF VALVES V-1813C/E.

SM-4756.1  
INSTALLATION OF MCB EXHAUST FAN SHROUD

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE SHROUD FOR THE MCB EXHAUST FAN.

SM-4759.2  
HIGH MAST LIGHTING TOWER BASEPLATE GROUTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF HIGH MAST SECURITY LIGHTING BASEPLATE GROUTING AND JAM NUTS FOR THE EIGHT HIGH MAST LIGHTING TOWERS.

SM-4764.1  
FIRE SERVICE WATER SYSTEM MODIFICATIONS, RELOCATIONS, AND SPRINKLER SUPPLY TO SUPPORT THE CONTAMINATION STORAGE BUILDING INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE RELOCATION INSTALLATION TESTING AND TURNOVER OF FIRE SERVICE HYDRANTS GATE VALVES AND SPRINKLER SUPPLY TO THE CONTAMINATED STORAGE BUILDING.





SM-4764.3

CONTAMINATED STORAGE BUILDING - DOOR S29 ELECTRICAL INSTALLATION,  
TESTING AND FLOOD BARRIER TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION, TESTING AND TURNOVER OF THE NEW SECURITY DOOR S-29 AND THE TESTING OF THE FLOOD BARRIER ASSOCIATED WITH DOOR S-29.

SM-4764.4

ELECTRICAL POWER DISTRIBUTION AND GROUND GRID INSTALLATION-  
CONTAMINATED STORAGE BUILDING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL POWER DISTRIBUTION AND GROUNDING PORTION OF THE CONTAMINATED STORAGE FACILITY MODIFICATION.

SM-4764.6

FIRE PROTECTION (ELECTRICAL) INSTALLATION AND FUNCTIONAL TESTING  
WITHIN THE CONTAMINATED STORAGE BUILDING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL AND DOCUMENT THE INSTALLATION, TESTING AND TURNOVER OF THE ELECTRICAL PORTION OF THE LOCAL PREACTION FIRE PROTECTION SYSTEM IN THE CONTAMINATED STORAGE BUILDING.

SM-4785.1

INSTALLATION AND TESTING OF NEW THROWOVER RELAY IN BUS 14  
UNDERVOLTAGE CABINET

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW THROWOVER RELAY IN THE BUS 14 UNDERVOLTAGE CABINET.

SM-4785.2

INSTALLATION AND TESTING OF NEW THROWOVER RELAY IN BUS 16  
UNDERVOLTAGE CABINET

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW THROWOVER RELAY IN THE BUS 16 UNDERVOLTAGE CABINET.

SM-4785.3

INSTALLATION AND TESTING OF NEW THROWOVER RELAY IN BUS 17  
UNDERVOLTAGE CONTROL CABINET

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW THROWOVER RELAY IN THE BUS 17 UNDERVOLTAGE CONTROL CABINET.



SM-4785.4  
INSTALLATION AND TESTING OF NEW THROWOVER RELAY IN BUS 18  
UNDERVOLTAGE CONTROL CABINET

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW THROWOVER RELAY IN THE BUS 18 UNDERVOLTAGE CONTROL CABINET.

SM-4785.5  
INSTALLATION AND TESTING OF NEW THROWOVER RELAY AND LOSS OF D.C.  
VOLTAGE ALARM FOR DIESEL GENERATOR 1A

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW THROWOVER RELAY AND LOSS OF D.C. VOLTAGE ALARM FOR DIESEL GENERATOR 1A.

SM-4785.6  
INSTALLATION AND TESTING OF NEW THROWOVER RELAY AND LOSS OF D.C.  
VOLTAGE ALARM FOR DIESEL GENERATOR 1B

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW THROWOVER RELAY AND LOSS OF D.C. VOLTAGE ALARM FOR DIESEL GENERATOR 1B.

SM-4809.1  
DIESEL FIRE PUMP BATTERY CHARGER SUPPORT STRUCTURES INSTALLATION  
MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE DIESEL FIRE PUMP BATTERY CHARGER SUPPORT STRUCTURES.

SM-4931.1  
TDAFWP CHECK VALVE REPLACEMENT

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE REPLACEMENT, TESTING AND TURNOVER OF THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP DISCHARGE CHECK VALVES V-4003 AND V-4004.

SM-4933.1  
PT-478, PT-479, AND PT-483 (S/G "B") TUBING REROUTE AND UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF UPGRADED STEAM GENERATOR PT-478/479/483 INSTRUMENTATION TUBING, SUPPORTS, AND BARRIERS IN THE INTERMEDIATE BUILDING (STEAM HEADER LEVEL).

SM-4937.1  
REPLACEMENT OF HEAT TRACE CIRCUITS 12 & 34

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE NEW CHEMELEX SELF REGULATING HEAT TRACE CABLE FOR CIRCUITS 12 AND 34.



SM-4937.2

REPLACEMENT OF HEAT TRACE CIRCUIT 29

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW CHEMELEX SELF REGULATING HEAT TRACE CABLE FOR CIRCUITS 29 (BORIC ACID BLENDER PIPING), WHICH INCLUDES VALVES FCV-110C, V364, FCV-110B, AND V365A..



SECTION C - COMPLETED TECHNICAL STAFF ENGINEERING  
EVALUATIONS (TSEEs)

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 TSEE in this section is presentation to the PORC, closure of the associated TSR, and submittal to the Document Control Department. Within the time frame of this report there were none.





SECTION D - TEMPORARY BYPASS OF SAFETY FUNCTION,  
STRUCTURE FEATURES, SHIELDING, AND FLUID  
SYSTEM FEATURES

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



CATEGORY 3.3.5  
REVIEWED 4/2

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: Jeff Jones DATE: 11/29/89 REQUEST #: 89-46

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION Lift wires for BAD T/C. (D7) to incore T/C READ out  
(T.39) ckt sub. R3787 TB. T2A 516

PURPOSE To Remove Bad T/C from SCAN

LOCATION: Control Room, Incore T/C Panel Rear

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 12-6-89

TECHNICAL MANAGER: [Signature] DATE: 11-30-89

SHIFT SUPERVISOR: [Signature] DATE: 12-11-89

INSTALLATION

DATE & TIME 12/11/89 1309

ENTERED IN OFFICIAL LOG: M

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: 4-30-90 @ 1819

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) Ensure 4 thermocouples per quadrant are maintained and that this thermocouple is not an input to RYHIS.

**RECEIVED**

MAY 3 1990

CENTRAL RECORDS  
QA  
DISPOSITION 5 YRS




10CFR50.59 Safety Evaluation  
for lifting wire for Thermocouple D07

The indications for TC D07 are inconsistent with the response of other related core parameters (i.e. incore flux map & nearby thermocouple indications). Thermocouples are used to sense core outlet temperature, determine relative fuel assembly power and compensate RVLIS. Since TC D07 is not consistent with either incore or other thermocouples it has been declared inoperable. It has been deleted from processing in PPCS. To remove it from the averaging circuit at the thermocouple panel requires lifting its lead. The panel will then sense an open TC and remove it from averaging.

With TC D07 inoperable the minimum requirement per Tech. Specs. of 4 thermocouples per quadrant is met. TC D07 is not used to compensate RVLIS. The functions of the thermocouple system as described in the UFSAR are fulfilled. Therefore, neither the probability nor the consequences of an accident or malfunction evaluated in the UFSAR is increased. The possibility of a new accident or malfunction is not created. The margin of safety defined in Tech. Specs. is not reduced.

References: Tech. Specs. 3.5.3, UFSAR Section 7.7.4

  
Jeffrey P. Wayland  
11/30/89

PORC Approval: 12-6-89



CATEGORY 3.3.5

REFERENCE PROCEDURE  
A-1402

REVIEWED \_\_\_\_\_

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: Alan Wilkenty DATE: 12/12/89 REQUEST #: 89-47  
JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  PULL ANN. CARD OTHER

FUNCTION MCB ANNUNCIATOR WINDOW L4 IS USED TO INDICATE THAT  
THE 12A-12B BUS TRANSFER SCHEME IS IN MANUAL AS OPPOSED TO  
PURPOSE TO TEMPORARILY DEFEAT L4, PRESENTLY LIT, UNTIL A <sup>Automatic Mode.</sup>  
MODIFICATION TO SPARE L4 CAN BE IMPLEMENTED DURING 1190 OUTAGE.

LOCATION: MAIN CONTROL BOARD

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): N/A

TECHNICAL MANAGER: [Signature] DATE: 12-10-89

SHIFT SUPERVISOR: [Signature] DATE: 12-12-89

INSTALLATION

DATE & TIME 12/13/89

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: D. Palmer

VERIFIED BY: Alan Wilkenty

REMOVAL

DATE & TIME: \_\_\_\_\_

ENTERED IN OFFICIAL LOG: \_\_\_\_\_

NUMBER OF TAGS REMOVED: \_\_\_\_\_

REMOVED BY: \_\_\_\_\_

VERIFIED BY: \_\_\_\_\_

REVIEW (AS NECESSARY) MCB ANNUNCIATOR WINDOW L4 WAS INSTALLED TO  
ALERT THE OPERATOR THAT THE AUTO SWITCHOVER FOR 12A & 12B  
BUSES WAS NOT FUNCTIONING AND THE OPERATOR MUST SWITCH THE SUPPLY  
OF THE BUSES MANUALLY. DURING THE EVALUATION OF THE OFFSITE  
POWER MODIFICATION, IT WAS DETERMINED THAT THE 'AUTO SWITCH'  
FUNCTION WOULD NOT WORK AS ORIGINALLY DESIGNED. THEREFORE,  
THE CURRENT STATUS OF ALARM WINDOW L4 PROVIDES NO VALUABLE  
INFORMATION TO THE OPERATING SHIFT. THE ALARM WINDOW SHOULD  
BE 'TEMPORARILY' DISCONNECTED UNTIL THE MODIFICATION ELIMINATES  
THIS FUNCTION DURING THE 1190 RELO. [Signature]





RECEIVED

REFERENCE PROCEDURE  
A-1402

CATEGORY 3.3.5  
REVIEWED [Signature]

ROCHESTER GAS AND ELECTRIC JUN 4 1990  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

DISPOSITION - 5 YRS.

730  
[Signature]

JOB FOREMAN: Jeff Jones/Kathleen M. Mynihan DATE: 1/31/90 REQUEST #: 90-03

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION: C-10 Annunciator (CUT Recirc Lo Flow Alarm)

PURPOSE: Remove Annunciator Remove the power coming from MCC IC-16B pulling 1A-Aux Bldg. sump pump to ANNUNCIATOR CARD C-10. RM back C-10

LOCATION: M.C.B. States Block, TES-#3 / C-10 ANNUN.

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 1-31-90

TECHNICAL MANAGER: [Signature] DATE: 1-31-90

SHIFT SUPERVISOR: [Signature] DATE: 1-31-90

INSTALLATION

DATE & TIME 1/31/90 1836

ENTERED IN OFFICIAL LOG: M

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: 4/29/90 1707

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) Annunciator C-10 is described in the UFSAR as a method of providing indication of low SW flow to the control room during an accident. A wiring anomaly is causing spurious alarms and annunciator card failure. Without this alarm the operator will not know if adequate SW flow exists during an accident. Leaving the alarm card installed could create a condition where the card could fail without the operator's knowledge. By pulling the alarm card, the card will be prevented from failing but indication of flow will be lost. To ensure sufficient SW flow, if an SI signal is received, operations will verify locally that 7900 gpm to each fan cooler is available. This requirement will be posted on the MCB and oncoming operators will be informed during turnover. During normal ops, the flow is ~1000 gpm. When an SI signal is received flow would go up so sufficient flow should be available. By verifying 7900 gpm the assumptions of the UFSAR remain valid and no unreviewed safety question exists.

Post maintenance testing will include sufficient testing to ensure the alarm will operate when actual low flow is sensed. Ref UFSAR 6.2.1.1.1  
Attach additional page(s) as necessary  
49-142 Rev 2/88



CATEGORY 3.3.5  
REVIEWED \_\_\_\_\_

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

*P. G. 7/4*  
*2/1/90*

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: JEFF JONES DATE: 1-15-90 REQUEST #: 90-04

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION WIRES RUN FROM MAIN INCOMING POWER TO RETENTION TK  
TO SEPARATE CONTROL BOX ON TOP OF R-21 PANEL

PURPOSE TO PROVIDE 120 AC POWER TO R-21 RADIATION MONITOR  
(RETENTION TANK MONITOR)

LOCATION: SERVICE BUILDING BASEMENT (RETENTION TK PANEL)

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 2-7-90

TECHNICAL MANAGER: [Signature] DATE: 2-7-90

SHIFT SUPERVISOR: [Signature] DATE: 2-8-90

**INSTALLATION**

DATE & TIME 2/8/90 0920

ENTERED IN OFFICIAL LOG; [Signature]

NUMBER OF TAGS INSTALLED: 3

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

**REMOVAL**

DATE & TIME: \_\_\_\_\_

ENTERED IN OFFICIAL LOG; \_\_\_\_\_

NUMBER OF TAGS REMOVED: \_\_\_\_\_

REMOVED BY: \_\_\_\_\_

VERIFIED BY: \_\_\_\_\_

REVIEW (AS NECESSARY) \_\_\_\_\_



## Safety Evaluation for Bypass of Safety Function and Jumper Control for power to R-21.

The power cable for the power supply to the retention tank panel was installed using very poor workmanship. The original installation used an extension cord which was terminated on both ends to terminal blocks and grounded at the power source. Because this installation 'looks like' a temporary hookup, it is desirable to install Jumper Control tags to identify this condition. An active EWR is scheduled to replace this power supply in late 1990 or early 1991. (EWR-4545)

Since the retention tank radiation monitor is not required for safe shutdown of the plant and is not classified as QA in accordance with 2.1 of Appendix A of the QA manual, the probability of occurrence of an accident evaluated previously in the UFSAR is not increased due to this installation.

The consequences of an accident previously evaluated in the UFSAR are not increased since this radiation monitor (R-21) is not needed to assure post accident levels are maintained below 10CFR100 limits. If this monitor were to fail, a grab sample will be taken to ensure 10CFR20 limits are maintained.

The probability of occurrence of a malfunction of equipment important to safety previously evaluated in the UFSAR is not increased due to this installation. As discussed above, this monitor is not important for plant safety and therefore its failure will not adversely affect plant safety.

Since this detector is ~~not~~ not assumed in the accident analysis in chapter 15 of the UFSAR, a failure will not increase the probability, nor increase the consequences of an accident previously evaluated. This condition will also not create an accident of a different type since the equipment has been installed since day one.



The margin of safety as defined in the basis for any Technical Specification will not be decreased due to this installation. Technical Specification 3.5 provides provisions of obtaining a grab sample if R-21 fails to continue releases through this path.

*J.S. O'Brien*  
2-7-90





CATEGORY 3.3.5  
REVIEWED [Signature]

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: MICHAEL J Meleca DATE: 3-21-90 REQUEST #: 90-07

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION: TO INSTALL A 250Ω PRECISION RESISTOR IN SERIES WITH INPUT WIRES TO INDICATOR TI-409B-1

PURPOSE: TO PROVIDE A VOLTAGE INPUT TO A TEMPORARY RECORDER FOR T-COLD MEASUREMENT.

LOCATION: MAIN CONTROL BOARD.

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 3-22-90

TECHNICAL MANAGER: [Signature] DATE: 3-22-90

SHIFT SUPERVISOR: [Signature] DATE: 3-22-90

INSTALLATION

DATE & TIME: 3/22/90 @ 1440

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: 5-9-90 0050

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) \_\_\_\_\_

**RECEIVED**

JUN 4 1990

CENTRAL RECORDS  
QA  
DISPOSITION - 5 YRS.



Bypass of Safety Function and Jumper Control

for Temporary T-Cold Recorder

Since the T-Cold wide range recorder for TI-450 & TI-451 has been unreliable, it is desirable to provide a T-Cold recorder for plant shutdown. This will be accomplished by installing a 250 $\Omega$  precision resistor in series with the control board indicator for T-Cold (409B & 410B).

A failure of the newly installed temporary recorder or the temporary wiring will not effect the T-Cold signal from T-409B or T-410B because the temporary wiring is installed downstream of a V/I isolation amplifier (TY-409B-1 & TY-410B-1). Therefore, the installation of this recorder will not increase the probability or the consequence of an accident previously evaluated in Chapter 15 of the UFSAR. Since a failure of the new temporary recorder or its wiring will not effect existing plant instrumentation used for safety system controls, the probability of creating an accident not previously evaluated in Chapter 15 of the UFSAR will not be increased.

Since a failure of this recorder will not adversely effect RVLIS input from T-Cold 409B and 410B, the margin of safety as defined in the basis of any Technical Specification will not be reduced.

*Steven T. Adams*  
Steven T. Adams  
3/22/90



CATEGORY 3.3.5  
REVIEWED OK

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: MIKE Meleca DATE: 3-21-90 REQUEST #: 90-08

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION TO INSTALL A 250Ω PRECISION RESISTOR IN SERIES WITH INPUT WIRES TO INDICATOR TI-410 B-1

PURPOSE TO PROVIDE A VOLTAGE INPUT TO A TEMPORARY RECORDER FOR THE PURPOSE OF MONITORING T-COLD.

LOCATION: MAIN CONTROL BOARD

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 3-22-90

TECHNICAL MANAGER: [Signature] DATE: 3-22-90

SHIFT SUPERVISOR: [Signature] DATE: 3-27-90

**INSTALLATION**

DATE & TIME 3/22/90 @ 1448

ENTERED IN OFFICIAL LOG: IC Ann. G

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

**REMOVAL**

DATE & TIME: 5-9-90 0051

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) See attached

**RECEIVED**

JUN 4 1990

CENTRAL

DISPOSITION - 5 YRS.



Bypass of Safety Function and Jumper Control  
for Temporary T-Cold Recorder

Since the T-Cold wide range recorder for TI-450 & TI-451 has been unreliable, it is desirable to provide a T-Cold recorder for plant shutdown. This will be accomplished by installing a 250 $\Omega$  precision resistor in series with the control board indicator for T-Cold (409B & 410B).

A failure of the newly installed temporary recorder or the temporary wiring will not effect the T-Cold signal from T-409B or T-410B because the temporary wiring is installed downstream of a V/I isolation amplifier (TY-409B-1 & TY-410B-1). Therefore, the installation of this recorder will not increase the probability or the consequence of an accident previously evaluated in Chapter 15 of the UFSAR. Since a failure of the new temporary recorder or its wiring will not effect existing plant instrumentation used for safety system controls, the probability of creating an accident not previously evaluated in Chapter 15 of the UFSAR will not be increased.

Since a failure of this recorder will not adversely effect RVLIS input from T-Cold 409B and 410B, the margin of safety as defined in the basis of any Technical Specification will not be reduced.

*Steven T. Adams*  
Steven T. Adams  
3/22/90





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CATEGORY 3.3.5

REVIEWED

AUG 3 1990

PROCEDURE A-1402

ROCHESTER GAS AND ELECTRIC

CENTRAL RECORDS GINNA STATION

BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL DISPOSITION - 5 YRS.

JOB FOREMAN: Kenneth E. Delsenroth DATE: 3/31/90 REQUEST #: 90-16

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION: Provide power to ELCP digital displays

PURPOSE: To hook up temporary power to Circuit #9 in Panel 14D

LOCATION: A D/G Room, panel 14D

SAFETY EVALUATION REQUIRED:  YES  NO

SKETCH ATTACHED:  YES  NO Drawing 33013-1772, SH.3-13 also - review work instructions for W.O. 9021052

PORC DATE (IF REQUIRED): 3-26-90

TECHNICAL MANAGER: [Signature] DATE: 3-26-90

SHIFT SUPERVISOR: [Signature] DATE: 3-31-90

INSTALLATION

DATE & TIME: 3/31/90 12:45

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 2

INSTALLED BY: Kenneth E. Delsenroth

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: 7/27/90 13:15

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) This jumper will supply AC power to the ELCP. The AC power is needed to the ELCP during the outage to perform calibrations of instrumentation inside the ELCP. The AC power is fed from a lighting panel fed from Bus 13. The transformer will be replaced during the outage to supply AC power from the safeguards bus.

The installation of this jumper will not adversely affect the controls of the IA D/G, only supply AC power to the indicators inside the ELCP. Therefore, the probability or the consequences of an accident previously evaluated in Chapter 15 of the UFSAR will not be increased. The installation of this jumper will not create an accident of a different type previously evaluated in the UFSAR since the failure of the jumper will not adversely affect operability of the IA D/G.

Since the IA D/G will remain operable while the IA D/G ELCP is powered from the AC outlet, the margin of safety as defined on the basis of any technical specification will not be reduced.

Attach additional page(s) as necessary



CATEGORY 335  
REVIEWED [Signature]

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: M BAUMAN DATE: 4-18-90 REQUEST #: 90-21

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION States deck points on Bus 17 for MCB voltmeter indication,  
Term. Deck TB3, terminals 1 and 2

PURPOSE Connect wires to TB3, terminals 1 and 2 for voltage indication for  
recording bus voltage for SWP 1D, W.O.# 9021560

LOCATION: UNIT 25, rear of Bus 17, Ref. dwg. 21946-56

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 4-17-90

TECHNICAL MANAGER: [Signature] DATE: 4-17-90

SHIFT SUPERVISOR: [Signature] DATE: 4-18-90

INSTALLATION

DATE & TIME 4-18-90 1325

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: [Signature]

INSTALLED BY: BAUMAN

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME 4-18-90

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: [Signature]

REMOVED BY: BAUMAN

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) See attached safety analysis. This monitoring device shall be  
removed prior to exceeding 200°F RCS temperature. APR 4-17-90

**RECEIVED**

MAY 3 1990

CENTRAL RECORDS  
QA  
DISPOSITION - 5 YRS.



GINNA STATION:	DATE:	PAGE OF
JOB:	MADE BY:	

### Safety Evaluation for Bypass of Safety Function and Jumper Control for recorder on ID SW Pump.

A current transformer will be installed on the leads of the ID Service water pump and will be wired to a current <sup>transducer</sup> transformer and a recorder. A voltage transducer will be installed to TB 3-1 and TB 3-2 (Unit 25, Bus 17). The voltage transducer will also be wired to the recorder. The recorder will be powered from a normal 120 VAC power supply. (See attached sketch for details).

The proposed bypass of Safety Function and Jumper Control will not increase the probability of occurrence of an accident previously evaluated in the UFSAR. This jumper will be removed prior to heatup past  $350^{\circ}\text{F}$  and therefore will not adversely affect the probability of any accident evaluated in chapter 15 of the UFSAR.

This jumper will not increase the consequences of an accident previously evaluated in the UFSAR. The radiological consequences of an accident will not be increased with a failure of the recorder, nor will a failure of the ID SW Pump cause the consequences of an accident to be increased provided at least one other S.W. pump remains operable.

The proposed modification will not increase the probability of occurrence <sup>nor the consequences</sup> of a malfunction of equipment important to safety previously evaluated in the UFSAR since the current transformer is a passive device and will not adversely affect the SW pump operability. A failure of the voltage transducer may result in a failure of the volt meter for the service water pump. This is non-essential equipment for the running of the ID SW pump.

The proposed jumper will not create the possibility of an accident of a different type since the worst outcome of this jumper would be a failure of the ID SW pump. A single failure of an active component is evaluated in the UFSAR.

The proposed <sup>jumper</sup> modification will not create the possibility of a different type of malfunction of equipment important to safety than any previously evaluated in the UFSAR since the loss of one SW pump has been previously evaluated.

The proposed jumper will not reduce any margin of safety as defined in the basis of any technical specifications since the service water system as



GINNA STATION:	DATE:	PAGE OF
JOB:	MADE BY:	
<p>defined in section 3.3 of tech specs is defines only one SW pump needed for the injection phase of an accident. Failure of one SW pump will not create a complete loss of SW condition and therefore, cabling to the CCW heat exchangers will continue to provide a heat sink for the RHR system.</p>		





CATEGORY 3.3.5  
REVIEWED SS

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: Ron Browne DATE: 4/17/90 REQUEST #: 90-22  
JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER   
FUNCTION OPERATES LOW FLOW MONITOR ALARM FOR THE 1B BATTERY BANK.

PURPOSE PREVENT NUISANCE ALARMS (MAINT ID TAG 3794)

LOCATION: LOAD FLOW MONITOR FOR 1B BATTERY TB 4-1

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 4-20-90

TECHNICAL MANAGER: [Signature] DATE: 4-20-90

SHIFT SUPERVISOR: [Signature] DATE: 4/20/90

INSTALLATION

DATE & TIME 4-20-90 1528

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 1 tag

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: 5-11-90 0950 AM 2951

ENTERED IN OFFICIAL LOG: RV

NUMBER OF TAGS REMOVED: 1

REMOVED BY: Bauman

VERIFIED BY: R. SPENCER

REVIEW (AS NECESSARY) See safety evaluation for 1A Battery Monitor Alarm

**RECEIVED**

JUN 4 1990

CENTRAL RECORDS:  
QA  
DISPOSITION 5 YRS.



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REFERENCE PROCEDURE A-1202

JUN 4 1990

CATEGORY 3.3.5  
REVIEWED Sc

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

CENTRAL RECORDS  
POSITION .5 YRS.

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: Ron Browne DATE: 4/17/90 REQUEST #: 90-23

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION Operator load flow alarm for A Battery

PURPOSE Prevent frequent <sup>RS</sup> nuisance alarms. mant I.D tag 3794

LOCATION: A Battery Room load flow monitor wire # TB4-1

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 4-20-90

TECHNICAL MANAGER: [Signature] DATE: 4-20-90

SHIFT SUPERVISOR: [Signature] DATE: 4/20/90

**INSTALLATION**

DATE & TIME 4-20-90 1621

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 1 tag

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

**REMOVAL**

DATE & TIME: 5-9-90 @ 430<sup>30</sup> 1324

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) Lifting the wire at TB4-1 will disable the 18" 1A vital battery monitor alarm. This wire lifting is necessary since the alarm is not functioning properly and needs to be repaired. The load flow monitor will still provide a readout for the operations personnel and the voltage <sup>meter</sup> of the 1A Battery will provide a backup to the load flow monitor. Since the load flow monitor alarm is not assumed to be functioning for the assumptions in the accident analysis of Chapter 15 of the VFSAR, the malfunction of this alarm will not increase the probability nor the consequences of an accident previously evaluated in the VFSAR. The lifting of this wire will only disable the alarm function of the battery monitor and will therefore not create an accident of a different type not evaluated in chapter 15 of the VFSAR. The vital battery monitor system is not addressed in the basis of any tech. specs, therefore, the margin of safety as defined in the basis of tech specs will not be decreased from lifting the wire to the alarm function of the battery monitor.

Attach additional page(s) as necessary



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MAY 3 1990  
REFERENCE PROCEDURE  
A-142

CATEGORY 3.3.5  
REVIEWED [Signature]

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: BOB POPP DATE: 4/24/90 REQUEST #: 90-28

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION AMMETER SELECTOR SWITCH "B" DIESEL PHASE A,B,C

CURRENT DEVICE "GOC"

PURPOSE RESOLVE NCR 90-226 WO# 90-21771

LIFT WIRES ON "GOC" TERMINALS G7, G6, G5 per 33013-1737 SH 3

LOCATION: M.C.B LEFT REAR

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO 33013-1737-3

PORC DATE (IF REQUIRED): 4-25-90

TECHNICAL MANAGER: [Signature] DATE: 4-24-90

SHIFT SUPERVISOR: [Signature] DATE: 4-25-90

**INSTALLATION**

DATE & TIME X 4/25/90 1020

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 6

INSTALLED BY: [Signature]

VERIFIED BY: [Signature] / B. Popp

**REMOVAL**

DATE & TIME: 4/25/90 1100

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 6

REMOVED BY: [Signature]

VERIFIED BY: [Signature] / B. Popp

REVIEW (AS NECESSARY) B DIE OUT OF SERVICE

The B D/O is held for maintenance. The wires which are to be lifted to resolve the phase current device anomaly will be replaced in the same terminal location. This wire lifting is a test to verify the proper wiring from the phase to the current device. This maintenance activity will be completed prior to testing of the B D/O. The testing being performed following the wire lifting and retermination will verify proper operation of the diesel, therefore, the probability or the consequences of an accident previously evaluated in the USAR will not be increased by lifting and reinstalling the above listed wires. The probability of creating an accident not previously addressed in the USAR will not be increased. The margin of safety as addressed in the basis of any technical specification will not be decreased by performing this maintenance.



CATEGORY 3.3.5

REVIEWED 1/27

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

# BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL

JOB FOREMAN: MIKE BAUMAN DATE: 5-18-90 REQUEST #: 90-35

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION OPERATES LOW FLOW MONITOR ALARM FOR THE 1B BATTERY BANK

PURPOSE PREVENT NUISANCE ALARMS

LOCATION: LOAD FLOW MONITOR FOR 1B BATTERY TB4-1 LIFTED

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): SEE ANALYSIS FOR 1A BATTERY ON 4-20-90 (ATTACHED)

TECHNICAL MANAGER: [Signature] DATE: 5-18-90

SHIFT SUPERVISOR: [Signature] DATE: 5/18/90

### INSTALLATION

DATE & TIME 5-18-90 1320

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: BAUMAN

VERIFIED BY: [Signature]

### REMOVAL

DATE & TIME: 10-12-90 0950

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: R. Browne

VERIFIED BY: R. Mastrella

REVIEW (AS NECESSARY) SEE ATTACHED

**RECEIVED**

NOV 12 1990

CENTRAL RECORDS

DISPOSITION, 5 YRS.





RECEIVED

REFERENCE PROCEDURE  
A-1202

JUN 4 1990

CATEGORY 3.3.5  
REVIEWED SC

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

CENTRAL RESCUE  
POSITION - 5 YRS.

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: Ron Browne DATE: 4/17/90 REQUEST #: 90-23

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION Operator load flow alarm for A Battery

PURPOSE Prevent frequent <sup>RB</sup> nuisance alarms.  
maint I.D tag 3794

LOCATION: A Battery Room Load flow monitor wire # TB4-1

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 4-20-90

TECHNICAL MANAGER: [Signature] DATE: 4-20-90

SHIFT SUPERVISOR: [Signature] DATE: 4/20/90

**INSTALLATION**

DATE & TIME 4-20-90 1621

ENTERED IN OFFICIAL LOG: Pam: G

NUMBER OF TAGS INSTALLED: 1 tag

INSTALLED BY: [Signature]

VERIFIED BY: RW Marriott

**REMOVAL**

DATE & TIME: 5-9-90 @ 1130<sup>PM</sup> 1324

ENTERED IN OFFICIAL LOG: 1 Pam: G

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: M Bauman

REVIEW (AS NECESSARY) Lifting the wire at TB4-1 will disable the TB "IA vital battery monitor alarm. This wire lifting is necessary since the alarm is not functioning properly and needs to be repaired. The load flow monitor will still provide a readout for the operations personnel and the voltage<sup>meter</sup> of the IA Battery will provide a backup to the load flow monitor. Since the load flow monitor alarm is not assumed to be functioning for the assumptions in the accident analysis of Chapter 15 of the UFSAR, the malfunction of this alarm will not increase the probability nor the consequences of an accident previously evaluated in the UFSAR. The lifting of this wire will only disable the alarm function of the battery monitor and will therefore not create an accident of a different type not evaluated in chapter 15 of the UFSAR. The vital battery monitor system is not addressed in the basis of any tech specs, therefore, the margin of safety as defined in the basis of tech specs will not be decreased from lifting the wire to the alarm function of the battery monitor.

Attach additional page(s) as necessary



CATEGORY 3.3.5  
REVIEWED AM

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

*3/90*

### BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL

JOB FOREMAN: Don Pulver DATE: 6/8/90 REQUEST #: 90-37  
JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER   
FUNCTION: C-10 Annunciator Card (CNMT Recirc Fan SW low flow Alarm) Card Pulled

PURPOSE: Defeat Spurious Alarms on window C-10 by removing card

LOCATION: M.C.B. <sup>left</sup> right sect. "C" window

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 6-8-90

TECHNICAL MANAGER: [Signature] DATE: 6-8-90

SHIFT SUPERVISOR: [Signature] DATE: 6-8-90

**INSTALLATION**

DATE & TIME: 6-8-90 1530

ENTERED IN OFFICIAL LOG: W

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: D. Pulver

VERIFIED BY: A. Alvarado

**REMOVAL**

DATE & TIME: 8-23-90 1433

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: George [Signature]

VERIFIED BY: D. Pulver

REVIEW (AS NECESSARY): see attached review

**RECEIVED**

SEP 18 1990

CENTRAL...  
DISPOSITION 5 YRS.



BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL  
ANNUNCIATOR C-10

Annunciator C-10 is described in the UFSAR as a method of providing indication of low SW flow to the control room during an accident. A wiring anomaly is causing spurious alarms. Without this alarm, the operator will not know if adequate SW flow exists during an accident. By pulling the alarm card, the card will be prevented from alarming spuriously but indication of SW flow will be lost. To ensure sufficient SW flow, if an SI signal is received, operations personnel will verify locally that greater than 900 gpm is available to each fan cooler. This requirement will be posted on the MCB and oncoming operators will be informed during turnover. During normal operations, the flow is ~1000 gpm. When an SI signal is received, flow would go up so sufficient flow should be available. By verifying greater than 900 gpm, the assumptions of the UFSAR remain valid and no unreviewed safety question exists. Post maintenance testing will include sufficient testing to ensure the alarm will operate when actual low flow is sensed.

Ref. UFSAR 6.2.1.1.1

*J. J. J.*  
6/8/90



CATEGORY 3.3.5

REVIEWED [Signature]

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

*P.F. 2/2*

JOB FOREMAN: MICHAEL J MELEGA DATE: 6-9-90 REQUEST #: 90-580 <sup>-40</sup>

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION LIFT WIRES AT TERMINAL BLOCK TR-1A TERMINALS

5 AND 6 AT INCORE PATEC THERMOCOUPLE PANEL

PURPOSE TO REMOVE T/C K-3 FROM INPUT OF  
DISPLAY UNIT

LOCATION: CONTROL ROOM

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 6-19-90

TECHNICAL MANAGER: [Signature] DATE: 6-19-90

SHIFT SUPERVISOR: Daniel J. Berry DATE: 6-19-90

**INSTALLATION**

DATE & TIME 6/19/90 1328

ENTERED IN OFFICIAL LOG; 1

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: D.F.M.W.

**REMOVAL**

DATE & TIME: \_\_\_\_\_

ENTERED IN OFFICIAL LOG; \_\_\_\_\_

NUMBER OF TAGS REMOVED: \_\_\_\_\_

REMOVED BY: \_\_\_\_\_

VERIFIED BY: \_\_\_\_\_

REVIEW (AS NECESSARY) see attached evaluation.

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10CFR 50.59 Safety Evaluation  
for  
Bypass of Safety Function and Jumper Control  
for Thermocouple K-3

The circuit to thermocouple K3 is open. To ensure ~~it~~ erroneous readings are not generated in the future, the leads from this thermocouple to the thermocouple panel will be lifted. This will prevent erroneous ~~field~~ thermocouple readings from being included in the averaging calculations in the thermocouple panel. The four thermocouples per quadrant required by Tech Specs will be maintained and thermocouple K3 is not used by RVLIS.

Based on this evaluation, the probability and consequences of an accident or malfunction previously evaluated in the UFSAR will not be increased. The probability of an accident or malfunction not previously evaluated in the UFSAR will not be increased. The margin of safety as ~~calculated~~ defined in the basis of Tech Specs will not be decreased.

UFSAR section 4.4.5.4 & table 7.7-3

Tech Specs section 3.5.3 & table 3.5-3

*J. J. J.* 6/18/90



CATEGORY 3.3.5  
REVIEWED \_\_\_\_\_

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: G. RAWA DATE: 7-17-90 REQUEST #: 90-41

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION INCORE TEMPERATURE INDICATION C3

PURPOSE LIFT INCORE T/C C3, TO KEEP 'A' TRAIN IN THE MEGASYSTEMS FROM ALARMING, THUS BE ABLE TO DECLARE OPERABLE

LOCATION: CONTROL ROOM, INCORE RACK #4 TIA #31 + 32

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 7-17-90

TECHNICAL MANAGER: [Signature] DATE: 7-17-90

SHIFT SUPERVISOR: [Signature] DATE: 7-17-90

INSTALLATION

DATE & TIME 7-17-90 1615

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: \_\_\_\_\_

ENTERED IN OFFICIAL LOG: \_\_\_\_\_

NUMBER OF TAGS REMOVED: \_\_\_\_\_

REMOVED BY: \_\_\_\_\_

VERIFIED BY: \_\_\_\_\_

REVIEW (AS NECESSARY) see attached safety evaluation



10CFR50.59 SAFETY EVALUATION  
for  
Bypass of Safety Function for Thermocouple C-3

The circuit for thermocouple C-3 is inoperable. To ensure erroneous readings are not generated, the leads from this thermocouple to the thermocouple panel will be lifted. This will prevent erroneous thermocouple readings from being included in the averaging calculations in the thermocouple panel. The four thermocouples per quadrant required by Tech Specs will be maintained and thermocouple C-3 is not used by RVLIS.

Based on this evaluation, the probability and consequences of an accident or malfunction previously evaluated in the UFSAR will not be increased. The possibility of an accident or malfunction not previously evaluated in the UFSAR will not be created. And, the margin of safety as defined in the basis of Tech Specs will not be reduced. Therefore, this bypass of safety function does not create an unreviewed safety question.

References:

UFSAR Section 4.4.5.4 & Table 7.7-3  
Tech Specs Section 3.5.3 & Table 3.5-3

Prepared by: Jeffrey R. Wenzel

Date: 7-17-90



August 1, 1989

SAFETY EVALUATION FOR TEMPORARY STRUCTURE FEATURE  
AUTHORIZATION FORM 89-180

This temporary structure will be placed under the reference leg piping to support the condensate pot and associated tubing. The reference leg piping will be lifted by hand while measuring and recording the maximum lift force. The lift will not create any substantial deflection of the root valve and will therefore not create an unexceptable stress on the welds in the reference leg. The reference leg will not be lifted past the condensates pot's original design elevation. Therefore, this temporary structure will not endanger the integrity of the reference leg piping. This temporary structure will be removed prior to leaving the hot shutdown condition.

This temporary structure will not increase the probability of an accident or the consequences of an accident previously evaluated in the UFSAR. This temporary structure will not effect the pressure transmitter PT-429 and therefore will not effect the response of safety injection to an accident. This structure will not effect the integrity of the reference leg and will only be used to support the static load of the piping will remain intact.

This temporary structure will not create an accident of a different type than those specified in the UFSAR. The Safety Injection System will react as designed to any accident addressed in the UFSAR.

This temporary structure will not reduce the margin of safety as defined in any technical specification basis. This structure does not render any plant system inoperable, nor will it degrade any operating system.





8/11/89

SCREENHOUSE NORTH OF MCC-1G PLANT  
BETTERMENT PAINT SCAFFOLD  
89-183

Scaffolding is needed for ceiling and wall painting in the area north of MCC-1G not covered by previously approved scaffolds 89-167 and 89-168. Because of the proximity of the service Water Pumps in both trains and MCC-1G the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.K. Fitzsimmons on Authorization Form 89-167).

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall accept the installation.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Seismic Events



There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



8/11/89

SCREENHOUSE SOUTH WALL OVER DIESEL FIRE PUMP  
PLANT BETTERMENT PAINT SCAFFOLD  
89-184

Scaffolding is needed for ceiling and wall painting in the area over the Diesel Fire Pump between the areas covered by previously approved scaffolds 89-170 and 89-171. Because of the proximity of the service Water Pumps and Fire Service Water Pumps in both trains the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.K. Fitzsimmons on Authorization Form 89-167).

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall accept the installation.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Seismic Events



There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





September 6, 1989

A MAIN STEAM ARV-3411 REPAIR  
WORK PLATFORM 89-190

Repair work on ARV-3411 will necessitate a work platform, constructed of pole scaffold and planks such as to surround the A Main Steam lead and the relief valve inlet piping, somewhat below the ARV inlet flange. The small tubing for the ARV air operator will be disconnected during the valve repair preparations. As such the platform will have no potential effect on the ARVs, and the structures will be restricted from movement in the direction of any other safety related equipment. The Main Steam leads and the relief piping are sufficiently sturdy to preclude any damage from the relatively light scaffold materials; however, piping of smaller diameter than the scaffold pole material is incorporated as the isolation valve 3507 bypass. The duration of scaffold existence is projected to be 2 weeks.

Because of the above factors, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, and fire fighting provisions in the area.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Generator tube rupture
- Rupture of a steam pipe
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



September 7, 1989

LAUNDRY EXHAUST FAN VIBRATION/EXPANSION  
RING REPLACEMENT WORK PLATFORM 89-191

Repair is required on ductwork at the Laundry Exhaust Fan, located in the vicinity of the A Feedwater Line. The entries from the Motor and Turbine Auxiliary Feedwater Pump discharges are nearby, and there is a high density of snubbers for this piping in area (5 mechanical and 1 hydraulic). A temperature sensor (TE-2096) is located at the top of the feedwater line downstream of check valve 3003.

Because of the existence of the above features within the vicinity of the proposed scaffold, scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Loss of Normal Feedwater
- Loss of all A.C. power to the station auxiliaries
- Steam Generator tube rupture
- Rupture of a steam pipe
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





September 12, 1989

SI RECIRC FLOW ORIFICE FE-916  
LEAK REPAIR WORK PLATFORM 89-192

A work platform is required to correct a leak condition at SI recirc flow orifice FE-916, located between the Refueling Water Tank and 480v Bus 16. Also within the vicinity are Temperature Indicator TI-917, and SI recirc MOVs 897 and 898. The MOVs are within the ASME Seismic Class 2 boundary as indicated on P&ID 33013-1261 Containment Spray (SI). The platform is to be about 4 ft. high, estimated to be in existence 2 days.

Because of factors given above the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



9/26/89

AUXILIARY BUILDING TOP SOUTH WALL WEST  
FROM COLUMN LINE 8a PLANT BETTERMENT  
PAINT SCAFFOLD 89-194

A scaffold is planned for painting the south wall at the Auxiliary Building top level, to extend from the Decon Pit to the Monitor Tanks. Because of the large area to be covered, including the area immediately adjacent to both Component Cooling Heat Exchangers, and the relatively lengthy projected duration of the scaffold existence, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167).

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. In addition, part of the orientation shall stress the importance of taking care not to bump any live smoke detectors. The erection process shall be monitored by an assigned Liaison Engineer. In addition, the Job Supervisor shall notify the Fire Protection group during installation to allow for consultation on any potential interferences with fire detection/sprinkler provisions encountered.

During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Liaison Engineer.

In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.



Clearance shall be maintained for operations, testing, and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

The scaffold shall be constructed so as not to interfere with Auxiliary Building Crane use during fuel transfer mechanism work planned.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Rupture of a Steam Pipe
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





1/16/90

SERVICE WATER PIPE SUPPORTS SWU-625,  
SWU-626, SWU-623, AND SWU-624  
SCREENHOUSE BASEMENT WORK PLATFORMS  
89-202

In order to perform the pipe support upgrade work near the ceiling for the Service Water Pump discharges, work platforms are needed, to be constructed of wood, about 3 ft. above the floor. The individual pump discharges are 14 in. pipe, and the headers are 20 in. pipe, sufficiently sturdy to preclude any damage by the relatively short wooden platforms. No safety related instrumentation will be affected by this platform installation.

Based on the factors described above 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. Material of construction will be light enough so that it will have no effect on any component in the event of a seismic event.

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

- Seismic Event

The installation does not involve a change in the Plant Technical Specifications because the lightness of the installation in relation to the sturdiness of the pipe will ensure that there will be no effect on assumptions provided in the Plant Technical Specifications bases.

The installation will 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 it will not affect safety related equipment in the event of a seismic event.

The installation does not increase the probability of an occurrence or the consequences of an accident or malfunction of a different type than previously evaluated in the Safety Analysis Report, because of the sturdiness of the adjacent piping.

The installation of this temporary modification will not reduce the margin of safety as defined in the basis for any Plant Technical Specification because it does not affect any Technical Specification.



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1/16/90

SERVICE WATER PIPE SUPPORTS SWU-636  
AND SWU-638 WORK PLATFORMS  
89-203

In order to perform the pipe support upgrade work near the ceiling for the Service Water Pump discharge portion in the northeast corner of the room, a work platform constructed of wood will be needed, about 3 ft. above the floor. The individual pump discharges are 14 in. pipe, and the headers are 20 in. pipe, sufficiently sturdy to preclude any damage by the relatively short wooden platforms. No safety related instrumentation will be affected by this platform installation.

Based on the factors described above 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. Material of construction will be light enough so that it will have no effect on any component in the event of a seismic event.

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

- Seismic Event

The installation does not involve a change in the Plant Technical Specifications because the lightness of the installation in relation to the sturdiness of the pipe will ensure that there will be no effect on assumptions provided in the Plant Technical Specifications bases.

The installation will 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 it will not affect safety related equipment in the event of a seismic event.

The installation does not increase the probability of an occurrence or the consequences of an accident or malfunction of a different type than previously evaluated in the Safety Analysis Report, because of the sturdiness of the adjacent piping.

The installation of this temporary modification will not reduce the margin of safety as defined in the basis for any Plant Technical Specification because it does not affect any Technical Specification.



1/17/90

SCREENHOUSE PLANT BETTERMENT PAINTING  
SCAFFOLD ABOVE THE HOUSE HEATING BOILER  
90-01

Scaffolding is required in the Screenhouse for cleaning and painting under the Plant Betterment Project. This permit (90-01) is for a seismic scaffold above and around the house heating boiler. (Ref. sketch attached to permit). This location is within 1 1/2 times its height of safety related service water pumps 1A and 1B.

The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.K. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Station Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall accept the installation.

Clearance shall be maintained for operations, testing and maintenance access to the Screenhouse all valves, instrumentation, panels, rotating equipment, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Seismic Events



There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





February 7, 1990

CONDUIT AND CABLE INSTALLATION IN  
AUXILIARY BUILDING SUB-BASEMENT  
FOR MIDLOOP INSTRUMENTATION EWR-4892  
SCAFFOLD 90-14

A scaffold is needed with a work platform about 8 feet from the floor. The corner poles shall be extended to the ceiling and horizontal poles shall be extended to at least one wall and other anchorage points or bumper contact points on the opposite side to prevent movement.

Because both trains of Residual Heat Removal Pumps are within the immediate vicinity of the scaffold, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment), incorporating the features described above.

The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.



During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, fire protection systems, and rotating equipment in the area.

The above construction and operational 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 assumptions of the analyses given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



February 7, 1990

CONDUIT AND CABLE INSTALLATION IN  
AUXILIARY BUILDING BASEMENT AT WEST STAIR  
FOR MID-LOOP INSTRUMENTATION  
EWR-4892 SCAFFOLDS 90-15

In order to install conduit and cable for this project in the Auxiliary Building basement a scaffold is needed near the ceiling above the Spent Fuel Pool Pumps.

The SFP cooling system is non-seismic safety related (1) however, Seismic Category I items are within the immediate vicinity, given below.

- A and B Residual Heat Removal Pump Cooling Units (2)
- A Residual Heat Removal Pump Discharge Temperature TT-630 (3)

Other instruments in the area for which care should be taken to avoid disturbing are as follows:

- Component Cooling Return from Residual Heat Removal Pumps flow FI-651 and its associated tubing. (4)
- A Residual Heat removal Pump discharge pressure PIC-629 and PI-629A and their associated tubing. (3)

Because of the above factors the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.



The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to the Auxiliary Building sub-basement, all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.





The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.

NOTES:

- 1) Quality Assurance Manual Appendix A Quality and Safety Related Listing and Diagrams Section 2.2.4 Spent Fuel Pool Cooling outlined in RG&E Drawing 33013-1248 (portion attached).
- 2) UFSAR Section 9.4.9.1 Engineered Safety Features Equipment Ventilation and Cooling.
- 3) UFSAR Figure 5.4-7 Residual Heat Removal System (portion attached).
- 4) UFSAR Figure 9.2-4 Sheet 1 Component Cooling Water System (portion attached).



February 7, 1990

CONDUIT AND CABLE INSTALLATION IN  
AUXILIARY BUILDING INTERMEDIATE LEVEL  
AT WEST STAIR FOR MID-LOOP INSTRUMENTATION  
EWR-4892 SCAFFOLD 90-16

In order to install conduit and cable for this project in the Auxiliary Building Intermediate Level a scaffold is needed near the ceiling from the stairwell north to adjacent to the Containment wall, over the west end of the Spent Fuel Pool Heat Exchanger. Standby Auxiliary Feedwater System Containment isolation MOVs are located on the north side of the SFPHX.

The space between the heat exchanger and containment is very congested with piping, pipe support structures, regulators, valves, instruments, and lead shielding for a process monitor in the service water piping from the heat exchanger. A major portion of the equipment here is associated with the waste gas system supporting the Reactor Coolant Drain Tank and the Pressurizer Relief Tank, both of which are in Containment. Immersed within this space is one of the Containment Mini-purge discharge isolation valves.

Because of the location of the above discussed SAFW Containment isolation MOVs, the scaffold shall be constructed as seismic using the attached Seismic Scaffold Guidelines provided from Structural Engineering (M. B. Fitzsimmons October 31, 1988 memo attachment). The erection process shall be monitored by the Construction Engineer and the Liaison Engineer.

The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.



If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

Locked area access to the Spent Fuel Pool filter vault is controlled by a locked gate. Ensure that the scaffold does not allow any easier access to this area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Steam Generator Tube Rupture
- Rupture of a Steam Pipe
- Primary System Pipe Rupture
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.



The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





February 7, 1990

CONDUIT AND CABLE INSTALLATION IN CONTROL ROOM  
AIR HANDLING ROOM FOR MID-LOOP  
INSTRUMENTATION EWR-4892  
SCAFFOLD 90-17

In order to install conduit and cable for this project in the Control Room Air Handling Room a scaffold is needed. The equipment in the immediate area is, for the most part, dedicated to continuing habitability for the Main Control Room in the post-accident environment. Because of this, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications..



February 13, 1990

PENETRATION SEAL INSPECTION OVER  
CONTROL ROOM AIR HANDLING UNIT  
SCAFFOLD 90-23

In order to inspect penetration seals above the Control Room Air Handling Unit, a scaffold is needed. The equipment in the immediate area is, for the most part, dedicated to continuing habitability for the Main Control Room in the post-accident environment. Because of this, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





February 15, 1990

CONDUIT AND CABLE INSTALLATION UNDER  
INTERMEDIATE BUILDING NORTH CATWALK  
EWR-4530 SCAFFOLD 90-24

In order to install conduit and cable under the catwalk a work platform needed. It will be located in the immediate vicinity of containment penetrations for heating steam and the ILRT vent to roof. It will be directly above the Containment Cooler Unit flow indicators which are Seismic Category I instruments. To the immediate north are Control Rod Drive Power Cabinets.

Because of the close involvement with the Seismic Category I items the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.



During construction and teardown care should be taken to prevent bumping containment isolation valves, the instruments and cabinets described above and any other sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Line Rupture
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.



The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



February 16, 1990

A BATTERY ROOM EAST WALL PENETRATION  
SEALING INSPECTION EWR-4941  
SCAFFOLD 90-26

In order to inspect penetration seals on the A Battery Room wall adjacent to the A Battery, a scaffold is needed, to provide a work platform approximately 9 ft. from the floor. It is to be of wooden construction to eliminate the potential for short circuiting the battery. It shall be constructed in accordance with the attached sketch so that it will be identical to the structure provided as Request 86-56, which was determined to be seismically acceptable (see attached 10/7/86 S.K. Ferguson memo).

The Job Supervisor shall verify that an orientation session has been conducted on the construction requirements given below.

Pre-planning and prefabrication for the scaffold shall be done such as to allow completion of the structure, apart from the decking, in one day of work within the Battery Room. As alternatives to this the following may be observed:

- The portion completed shall be adequately restrained to make it seismic with bracing and interlocking and contact with adjacent structural features.
- In lieu of the above, the B Main Battery System shall be maintained operable, with no non-seismic temporary structures in the B Battery Room.
- During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by a qualified individual.

Extreme care must be exercised in working adjacent to or above the batteries during construction, use, and teardown of the scaffold.

Sufficient clearances are to be provided for Electrician access to the battery.

Prior to use, the structure shall be inspected by the Job Supervisor to confirm that its construction was in accordance with the sketch. Upon successful confirmation the Job Supervisor shall document this confirmation for the original copy of the Authorization Form, and so notify the Shift Supervisor.





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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



2/26/90

A BATTERY ROOM NORTHWEST CORNER PENETRATION  
SEALING INSPECTION EWR 4941 SCAFFOLD 90-27

A work platform is needed to inspect penetration seals in the northwest corner of the A Battery Room adjacent to the A Battery Charger, to be about 6 1/2 ft. from the floor. The duration of existence of this scaffold is estimated to be a month. In consideration of any possibility for inoperability of DC electric system equipment in the B Battery Room within this fairly lengthy duration the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167).

It shall not be started until the wooden scaffold over the A Battery bank is completed; as such, that scaffold (90-26) shall serve as a barrier to prevent short circuiting the battery with metal scaffold materials. This subject scaffold shall be removed prior to removal of the wooden scaffold.

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Extreme care must be exercised in working adjacent to the batteries and other DC electric equipment during construction, use, and teardown of the scaffold.

Clearance shall be maintained for operations, testing and maintenance access to all instrumentation and panels in the area.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



2/26/90

A BATTERY ROOM NORTHEAST CORNER PENETRATION  
SEALING INSPECTION EWR 4941 SCAFFOLD 90-28

A work platform is needed to inspect penetration seals in the northeast corner of the A Battery Room adjacent to the A Battery Disconnect Switches to be about 8 ft. from the floor. The duration of existence of this scaffold is estimated to be a month. In consideration of any possibility for inoperability of DC electric system equipment in the B Battery Room within this fairly lengthy duration the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167).

It shall not be started until the wooden scaffold over the A Battery bank is completed; as such, that scaffold (90-26) shall serve as a barrier to prevent short circuiting the battery with metal scaffold materials. This subject scaffold shall be removed prior to removal of the wooden scaffold.

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Extreme care must be exercised in working adjacent to the batteries and other DC electric equipment during construction, use, and teardown of the scaffold.

Clearance shall be maintained for operations, testing and maintenance access to all instrumentation and panels in the area.





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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



03/08/90

STANDBY SFP COOLING COMPONENT  
MOUNTING  
90-40

It has been decided to provide mountings for, and to install the standby SFP Pump in the Auxiliary Building basement, immediately east of the RHR Pump Cooler Units, by the containment wall, and to do likewise with the standby SFP Heat Exchanger on the top floor immediately west of the A Component Cooling Pump. The mountings are to be of seismic design as provided for Temporary Fluid System Provision Form 88-27 for EWR 1594B and discussed in J.J Ferraro's April 5, 1989 memo on review of the pump mounting.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will



90-40

have no interface with any equipment or systems discussed in the bases of Technical Specifications.



March 8, 1990

TUBING INSTALLATION IN  
AUXILIARY BUILDING SUB-BASEMENT  
FOR MIDLOOP INSTRUMENTATION EWR-4892  
SCAFFOLD 90-41

A scaffold is needed with a work platform about 5 feet from the floor. The corner poles shall be extended to the ceiling and horizontal poles shall be extended to at least one wall and other anchorage points or bumper contact points on the opposite side to prevent movement. As such it may be integrated with scaffold 90-14.

Because both trains of Residual Heat Removal Pumps are within the immediate vicinity of the scaffold, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment), incorporating the features described above.

The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.





During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, fire protection systems, and rotating equipment in the area.

The above construction and operational 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 assumptions of the analyses given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



03/29/90

RHR PUMP SUCTION MOV'S 704A & B  
SCAFFOLDS  
90-80

In order to perform maintenance on MOV's 704A and B a scaffold is needed to provide a work platform about 10 ft. from the floor. The maintenance is to be performed with all fuel removed from Reactor. The scaffold installation is to take place prior to this to maximize the time available for valve maintenance. Because of the need for operability of the RHR System during this period the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, rotating equipment and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described



in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



03/29/90

RHR RETURN OUTSIDE MISSILE BARRIER  
MOV-720 SCAFFOLD  
90-81

In order to perform maintenance on MOV-720 a scaffold is needed to provide a work platform about 7 ft. from the floor. The maintenance is to be performed with all fuel removed from the Reactor. The scaffold installation is to take place prior to this to maximize the time available for valve maintenance. Because of the need for operability of the RHR System during this period the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves and instrumentation in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described





in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



April 24, 1990

B MAIN STEAM ARV-3410 REPAIR  
WORK PLATFORM 90-151

Repair work on ARV-3411 will necessitate a work platform, constructed of pole scaffold and planks such as to surround the A Main Steam lead and the relief valve inlet piping, somewhat below the ARV inlet flange. As such the platform will have no potential effect on the ARVs, and the structures will be restricted from movement in the direction of any other safety related equipment. The Main Steam leads and the relief piping are sufficiently sturdy to preclude any damage from the relatively light scaffold materials; however, piping of smaller diameter than the scaffold pole material is incorporated as the isolation valve 3506 bypass. The duration of scaffold existence is projected to be approximately 1 1/2 weeks.

Because of the above factors, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, and fire fighting provisions in the area.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Generator tube rupture
- Rupture of a steam pipe
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



5/10/90

NaOH TANK ROOM PENETRATION SEAL INSPECTION  
EWR-4941 SCAFFOLD 90-156

In order to inspect penetration seals in the southeast corner of the NaOH Tank Room, a scaffold is needed, to provide a work platform approximately 12 ft. from the floor. In this location it will be directly over the Charging Pump Leakoff Collection System and will be immediately southeast of the 2 trains of Spray Additive Tank outlet valves (HCV-836A and HCV-836B). The leakoff collection system is indicated as non-seismic on P&ID 33013-1265 sheet 2. Damage to the leakoff tank which could present potential for release from the vent header is bounded by analysis of rupture of a Gas Decay Tank.

Because of the potential effect on HCV-836A and HCV-836B the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



May 9, 1990

**B BATTERY ROOM WEST WALL PENETRATION  
SEALING INSPECTION EWR-4941  
SCAFFOLD 90-157**

*J.F.S.*

In order to inspect penetration seals on the B Battery Room wall adjacent to the B Battery, a scaffold is needed, to provide a work platform approximately 9 ft. from the floor. It is to be of wooden construction to eliminate the potential for short circuiting the battery. It shall be constructed in accordance with the attached sketch so that it will be identical to the structure provided as Request 86-56, which was determined to be seismically acceptable (see attached 10/7/86 S.K. Ferguson memo).

The Job Supervisor shall verify that an orientation session has been conducted on the construction requirements given below.

Pre-planning and prefabrication for the scaffold shall be done such as to allow completion of the structure, apart from the decking, in one day of work within the Battery Room. As alternatives to this the following may be observed:

- The portion completed shall be adequately restrained to make it seismic with bracing and interlocking and contact with adjacent structural features.
- In lieu of the above, the A Main Battery System shall be maintained operable, with no non-seismic temporary structures in the A Battery Room.
- During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by a qualified individual.

Extreme care must be exercised in working adjacent to or above the batteries during construction, use, and teardown of the scaffold.

Sufficient clearances are to be provided for Electrician access to the battery.

Prior to use, the structure shall be inspected by the Job Supervisor to confirm that its construction was in accordance with the sketch. Upon successful confirmation the Job Supervisor shall document this confirmation for the original copy of the Authorization Form, and so notify the Shift Supervisor.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



5/9/90

JFL

B BATTERY ROOM SOUTHWEST CORNER PENETRATION  
SEALING INSPECTION EWR 4941 SCAFFOLD 90-158

A work platform is needed to inspect penetration seals in the southwest corner of the B Battery Room adjacent to the B Battery to be about 8 ft. from the floor. The duration of existence of this scaffold is estimated to be a month. In consideration of any possibility for inoperability of DC electric system equipment in the A Battery Room within this fairly lengthy duration the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167).

It shall not be started until the wooden scaffold over the B Battery bank is completed; as such, that scaffold (90-157) shall serve as a barrier to prevent short circuiting the battery with metal scaffold materials. This subject scaffold shall be removed prior to removal of the wooden scaffold.

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Extreme care must be exercised in working adjacent to the batteries and other DC electric equipment during construction, use, and teardown of the scaffold.

Clearance shall be maintained for operations, testing and maintenance access to all instrumentation and panels in the area.





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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



2/26/90  
JFL

B BATTERY ROOM NORTH END PENETRATION  
SEALING INSPECTION EWR 4941 SCAFFOLD 90-159

Work platforms are needed to inspect penetration seals in the north end of the B Battery Room adjacent to the B Battery Charger and B Battery Disconnect Switches to be about 8 ft. from the floor. The duration of existence of this scaffolding is estimated to be a month. In consideration of any possibility for inoperability of DC electric system equipment in the A Battery Room within this fairly lengthy duration the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167).

It shall not be started until the wooden scaffold over the B Battery bank is completed; as such, that scaffold (90-157) shall serve as a barrier to prevent short circuiting the battery with metal scaffold materials. This subject scaffold shall be removed prior to removal of the wooden scaffold.

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Extreme care must be exercised in working adjacent to the batteries and other DC electric equipment during construction, use, and teardown of the scaffold.



Clearance shall be maintained for operations, testing and maintenance access to all instrumentation and panels in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



May 15, 1990

BUS 16 SOUTH PORTION AREA PENETRATION  
SEALING INSPECTION EWR-4941 SCAFFOLD 90-160

In order to inspect penetration seals above the south portion of Bus 16 a scaffold is needed, to provide a work platform approximately 15 ft. from the floor.

In order to prevent any interference with activities involving the alternate train Bus 14 and MCC-1C, it is planned to construct the scaffold as a seismic installation. The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing, and maintenance access to all electrical panels on the Bus 16 and MCC-1D, to include clearance to rack out breakers.

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 assumptions of the analyses given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change to the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



May 15, 1990

BUS 16 NORTH END AREA PENETRATION  
SEALING INSPECTION EWR-4941 SCAFFOLD 90-161

In order to inspect penetration seals above the north end of Bus 16 a scaffold is needed, to provide a work platform approximately 15 ft. from the floor.

In order to prevent any interference with activities involving the alternate train Bus 14 and MCC-1C, it is planned to construct the scaffold as a seismic installation. The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing, and maintenance access to all electrical panels on the Bus 16 and MCC-1D, to include clearance to rack out breakers.

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 assumptions of the analyses given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change to the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



5/16/90

TURBINE DRIVEN AUXILIARY FEEDWATER PUMP  
AREA PENETRATION SEAL INSPECTION EWR-4941  
SCAFFOLD 90-162

In order to inspect penetration seals at the north wall by the Turbine Auxiliary Feedwater Pump area, a scaffold is needed to provide a work platform approximately 10 ft. high adjacent to the Turbine Driven Auxiliary Feedwater Pump. Concurrent with this are two other sites of scaffolds for inspections in the vicinities of the A and B Motor Driven Auxiliary Feedwater Pumps.

Because of the concurrent activity which could potentially affect both trains of Auxiliary Feedwater System components, construction, and teardown activities shall take place at only one site at a time. In addition, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Line Rupture
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



5/16/90

B MOTOR DRIVEN AUXILIARY FEEDWATER PUMP  
AREA PENETRATION SEAL INSPECTION EWR-4941  
SCAFFOLD 90-163

In order to inspect penetration seals at the southwest corner of the Auxiliary Feedwater Pump area, a scaffold is needed to provide a work platform approximately 17 ft. high adjacent to the B Motor Driven Auxiliary Feedwater Pump. Concurrent with this are two other sites of scaffolds for inspections in the vicinities of the A Motor Driven Auxiliary Feedwater Pump and the Turbine Driven Auxiliary Feedwater Pump.

Because of the concurrent activity which could potentially affect both trains of Auxiliary Feedwater System components, construction, and teardown activities shall take place at only one site at a time. In addition, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Line Rupture
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



5/16/90

A HOUSE HEATING BOILER FEED PUMP  
AREA PENETRATION SEAL INSPECTION EWR-4941  
SCAFFOLD 90-164

In order to inspect penetration seals at the west and north walls of the Auxiliary Feedwater Pump area, a scaffold is needed to provide a work platform approximately 20 ft. high adjacent to the A Motor Driven Auxiliary Feedwater Pump. Concurrent with this are two other sites of scaffolds for inspections in the vicinities of the B Motor Driven Auxiliary Feedwater Pump and the Turbine Driven Auxiliary Feedwater Pump.

Because of the concurrent activity which could potentially affect both trains of Auxiliary Feedwater System components, construction, and teardown activities shall take place at only one site at a time. In addition, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Line Rupture
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



6/11/90

A AND B DIESEL GENERATOR ROOMS  
EWR-3990 OVERHEAD COVER REMOVAL  
SCAFFOLDS 90-168

Scaffolds are needed just inside the Diesel Generator Room overhead doors to rise approximately 10' from the floor. The work is planned to be done in each room simultaneously. Because of this the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guideline statement 6.0 shall be augmented with the requirement that the scaffolds shall be complete and seismic to the extent installed by the end of each shift.

An additional requirement shall be that the scaffolds are to be erected in one Diesel Generator Room at a time. Upon completion of the first installation, prior to beginning erection of the scaffold in the second Diesel Generator Room, the Construction Engineer, or the Liaison Engineer in his stead, shall confirm and document the seismic capability in relation to the guidelines. This confirmation shall include review of attributes such as configuration of the scaffold frames and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or Liaison Engineer shall notify the Shift Supervisor of this confirmation prior to proceeding with the installation in the second Diesel Generator Room. After such confirmation, erection of the second scaffold may begin, accompanied by monitoring, confirmation, notification and documentation as with the first scaffold.

The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided.

During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.



During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

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. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Loss of all A.C. power to the station auxiliaries
- Decrease in heat removal by the secondary system with coincident loss of on-site and external (off-site) A.C. power to the station
- Steam Generator tube rupture
- Rupture of a steam pipe
- Primary system pipe rupture
- Anticipated transients without SCRAM with a loss of A.C. power
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.



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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





June 21, 1990

AUXILIARY BUILDING INTERMEDIATE LEVEL  
WEST STAIRWELL PENETRATION FIRE SEAL  
INSPECTION EWR-4941 SCAFFOLD 90-173

A work platform is needed to inspect fire barrier penetration seals near the ceiling from the stairwell north to adjacent to the Containment wall, over the west end of the Spent Fuel Pool Heat Exchanger. Standby Auxiliary Feedwater System Containment isolation MOVs are located on the north side of the SFPHX.

The space between the heat exchanger and containment is very congested with piping, pipe support structures, regulators, valves, instruments, and lead shielding for a process monitor in the service water piping from the heat exchanger. A major portion of the equipment here is associated with the waste gas system supporting the Reactor Coolant Drain Tank and the Pressurizer Relief Tank, both of which are in Containment. Immersed within this space is one of the Containment Mini-purge discharge isolation valves.

Because of the location of the above discussed SAFW Containment isolation MOVs, the scaffold shall be constructed as seismic using the attached Seismic Scaffold Guidelines provided from Structural Engineering (M. B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.



During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

Locked area access to the Spent Fuel Pool filter vault is controlled by a locked gate. Ensure that the scaffold does not allow any easier access to this area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Steam Generator Tube Rupture
- Rupture of a Steam Pipe
- Primary System Pipe Rupture
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.



90-173

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



July 2, 1990

CONTROL ROOM AIR HANDLING ROOM NORTH WALL  
PENETRATION FIRE SEAL INSPECTION  
EWR-4941 SCAFFOLD 90-177

In order to perform fire seals inspection in the Control Room Air Handling Room a scaffold is needed. The equipment in the immediate area is, for the most part, dedicated to continuing habitability for the Main Control Room in the post-accident environment. Because of this, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift.

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



7/11/90

PRESSURIZER LIQUID SAMPLE CONTAINMENT ISOLATION  
AOV-966B LEAK REPAIR SCAFFOLD  
90-183

A work platform is needed for repair of the valve inside the Nuclear Sample System isolation valve hood enclosure, to be about 6 ft. above the floor. This is to accommodate working with the valve body at about waist level. Within the vicinity are, like the valve to be repaired, other Seismic Category I Containment isolation valves which are directly connected with the Reactor Coolant System and the Steam Generator Blowdowns. Because of this, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access, to all valves, and instrumentation in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Generator tube rupture
- Rupture of a steam pipe
- Primary system pipe rupture
- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



7/23/90

SERVICE BUILDING BASEMENT, PRIMARY WATER  
TREATMENT ROOM EAST WALL FIRE SEAL INSPECTION  
EWR-4941 SCAFFOLD 90-186

A work platform is needed to inspect fire barrier penetration seals on the east wall behind the Condensate Storage Tanks. Due to the proximity of the scaffold to the CST's, the scaffold shall be constructed as seismic.

The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Job Supervisor, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown, care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Loss of Normal Feedwater
- Seismic Events
- Rupture of Steam Pipe

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



RELAY ROOM NORTH WALL  
WEST OF DOOR TO TURBINE BUILDING  
PENETRATION FIRE SEAL INSPECTION

EWR-4941 SCAFFOLD 90-188

A work platform is needed to inspect fire barrier penetration seals in the Relay Room on the North Wall. The scaffold will be located near the AMSAC and EH Panels. As a result, it shall be constructed as seismic. AMSAC itself is not a Safety Related System. The importance of the AMSAC System and other modifications that have been installed in this cabinet make it desirable for this scaffold to be seismic.

During construction and tear-down, extra care should be taken to prevent bumping any panels or conduit in the area.

The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form.. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance, the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.



Clearance shall be maintained for operations, testing and maintenance access to all instrumentation, panels, and adjoining rooms in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



July 26, 1989

TEMPORARY OXYGEN MONITOR  
TEMPORARY FLUID PROVISION  
REQUEST #89-28

AFFECTED DRAWING: 33013-1274, Waste Disposal - Gas H<sub>2</sub>  
and N<sub>2</sub> and Gas Analyzer (WD) P&ID

AFFECTED PROCEDURES: O-9.1, S-4.2.12, HP-11.13, HP-11.6

INSTRUCTIONS TO OPERATIONS: The HP procedures referenced shall  
be conducted by lab personnel.

TECH. SPEC. REF: Sect. 3.9.2.5, Table 3.5-5, Table  
4.1-5

The MSA Gas Analyzer is out of service for oxygen monitoring. In order to continue to monitor O<sub>2</sub> per Tech. Spec. requirements of Table 3.5-5 at temporary connection will be utilized. The temporary monitor will tie into the Gas Decay Tank sample 3/8 in. tubing with poly tubing connected with tubing nuts. The temporary tubing will be operated by lab personnel at pressures suitable for the sampler; however, the tubing to be used is more than capable of withstanding full Gas Decay Tank Pressure. The outlet of the monitor is to be tied to the vent header as does the present Gas Analyzer. Pressure reduction from Gas Decay Tank pressure is accomplished at an installed reducer upstream of the Gas Analyzer and the temporary connection. Tubing associated with this modification is designated as non-code class (ANSI B31.1) per RG&E Drawing 33013-1273. It shall be installed so that safety related equipment is not potentially affected by a design basis accident (seismic event). The events analyzed in the Safety Analysis Report which are associated with the proposed installation are the following:

- Radioactive Gas Waste System Failure
- Seismic Event

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 function of the system will be maintained, pressure retaining capability is within design limits and there is no potential impact to safety related equipment during a seismic event.

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 it can be readily isolated in the event of a failure and because the overall function of the system is being maintained.





The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification because the capability to monitor O<sub>2</sub> will be retained.



## SAFETY ANALYSIS FOR TEMPORARY RADWASTE

### DEMINERALIZER SYSTEM

#### 1.0 SCOPE OF ANALYSIS

1.1 The purpose of this analysis is to evaluate the safety aspects of installing a temporary demineralizing system for processing the excessive liquid radwaste from the 1989 outage. The evaporator and recycle systems have not been able to effectively process the added waste due to reduced capacity of the evaporator package. As a result, the on-site storage capability is near capacity severely limiting operation flexibility.

1.2 The temporary liquid waste processing system is a fluidized transfer demineralization system consisting of 5 to 6 resin vessels, booster pump, mechanical filter, dewatering pump and process control unit. The entire system is interconnected with flexible reinforced non-collapsible butyl rubber hoses designed for temperatures between  $-20^{\circ}\text{F}$  and  $180^{\circ}\text{F}$  and pressure from 0 to 300 psig. The supplied system is designed and operated in accordance with the following standards and operating parameters.

- a) Reg. Guide 1.143
- b) ANSI 55.2
- c) ANSI/ASME B31.1
- d) ASME B&PV Code Section VIII & IX
- e) Pressure 0-150 psig
- f) Temperature  $50-135^{\circ}\text{F}$  (Resin limited)
- g) Flow 15-200 gpm
- h) Hydro tested to 225 psig

The shut-off head of the booster pump and the monitor tank transfer pump is 100 and 115 psig respectively. This is well below the design of all the temporary system components.

1.3 The temporary system will process waste from the Waste Holdup Tank using one of monitoring tanks as a batch tank. The process cycle will consist of cycling the waste from the monitoring tank thru the resin beds 5 to 6 times until the activity level is acceptable for discharge to the lake. The spent resin will then be sluiced to a shipping cask. The piping arrangement will consist of a temporary hose connected from the discharge of the waste evaporator feed pump at valve 1762A to the discharge of the monitoring tank pump at valve 1279. This hose will be used to transfer radwaste from the waste holdup tank via the evaporator feed pump to the A or B monitor tank. A second hose will then be connected from the discharge of the monitoring tank pump with a tee at valve 1279 to the inlet of the temporary waste processing system. This hose will be used to cycle the radwaste from



the monitor tank to the waste processing system via the monitor tank pump. A third hose will be connected from the outlet of the waste processing system to the A and B monitor tank return line at valve 1291A and/or 1234 depending on flow requirements. This hose will be used to cycle the waste back to the monitor tanks.

- 1.4 The entire temporary system will be located in the drumming area of the Auxiliary Building operating floor elv. 271 ft. The allowable floor loading for this area is 300 lb/ft<sup>2</sup>. Each of the demineralizer tanks has a minimum base diameter of 24 inches and weighs 2,200 lbs. full. Consequently, in order to adhere to the maximum floor loading, a minimum clearance of 6 inches must be maintained around each vessel.
- 1.5 The temporary system will also required 440V power, service air, and DI water connections. Electrical power will be supplied with a temporary cable from the 440V welding outlet located outside the drumming station on the truck bay wall. The DI water and service air will be connected with flexible rubber hoses from connections already existing within the drumming area.
- 1.6 The DI water and service air are required for sluicing and vessel flushing. The DI water connection also serves as a backup water source for cooling resins if a leak in the system develops during process down time.

## 2.0 REFERENCES

- 2.1 RG&E R.E. Ginna Nuclear Power Plant Updated Final Safety Analysis Report Section 15.7.2
- 2.2 RG&E Ginna P&ID 33013-1268
- 2.3 RG&E Ginna P&ID 33013-1270

## 3.0 SAFETY ANALYSIS

- 3.1 A review has been performed of all the events analyzed in the Ginna Station FSAR and the events requiring analysis by NRC Regulatory Guide 1.70. The only events related to this temporary modification are a radioactive liquid waste system failure and a seismic event.
- 3.2 The drumming area and monitoring tank areas are designed such that any piping or tank leakage will be collected through the drainage system in the Auxiliary Building sump to be pumped back into the liquid waste system. The building sump and basement volume is sufficient to hold the full volume of a CVCS liquid holdup tank (33,000 gallons) without overflowing to areas outside the building. The volume of a



monitoring tank and demineralizer tank is 7,500 gallons and 115 gallons respectively. Since either tank is less than the volume of a holdup tank, the sump still has sufficient capacity to handle the monitor tank or demineralizer tank. 4 inch drains are located with sloping floors in front of the drumming area doorway and in the monitoring tank area.

- 3.3 In the event the process water is lost from the spent resins in the demineralizer tanks, the resins can be cooled by the backup DI water connection. Based on the analysis presented in section 15.7.2 for the primary water CVCS spent resin storage tank, it will take 4 days for decay heat to generate enough heat to reach the resin 140°F temperature limit. This is based on a 1% fuel failure. Waste from the waste holdup tank is collected from floor drains and is not expected to contain high activity levels. However Administrative controls will be established to ensure resin tanks are maintained with proper water level when concentrated resins are to be stored for more than 24 hours.
- 3.4 The drumming area is enclosed by seismically designed walls. No safety related equipment exists within the walls of drumming area. Consequently, the demineralizer system will not affect safety related systems during a seismic event should it fail. The flexible hoses running outside the drumming area will be restrained and located to prevent interference with any safety related equipment operation.
- 3.5 Based upon the evaluations in sections 3.1 thru 3.4 above, the margins of safety during normal operations and transient conditions anticipated during the life of the station will remain unchanged by the installation of this temporary modification; and, the adequacy of structures, systems, and components provided for the prevention of accidents and for the mitigation of the consequences of accidents will be unchanged by the installation of this temporary modification.

#### 4.0 PRELIMINARY SAFETY EVALUATION

- 4.1 The proposed temporary modification does not involve an unreviewed safety question since:
  - a) the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report will not be increased since the waste tank volumes are less than previously considered, or;
  - b) the possibility of an accident or malfunction of a different type than any evaluated previously in the safety analysis report will not be created since accepted codes and standards are followed, or;





- c) the margin of safety as defined in the basis for any Technical Specification is not reduced since waste tank volumes are less than previously assumed.



March 9, 1990

LOSS OF DECAY HEAT REMOVAL EXPEDITIOUS ACTION - *XJS*  
INTERIM "A" HOT LEG LEVEL TRANSMITTER 90-03

Generic letter 88-17 recommended expeditious actions including installing two independent RCS water level indications with the capability to provide water level information to Control Room operators. One such provision, a pressure transmitter (PT-432A) with indication at the Main Control Board has been in permanent existence; however, a similar provision is to be installed prior to entering the next reduced reactor coolant inventory operation. This will be installed at a test connection downstream of the Loop A Hot Leg Sample tap manual root valve 504, using tubing of material identical to the permanent installation for PT-432A in the B Loop Sample tap except that 3/8" tubing may be used in place of 1/4". The tubing is rated for pressure greater than 5,000 psig. A transmitter, similar to PT-432A, is to be installed, designated LIT-432A at the test point discussed above, to be mounted securely to the adjacent wall or on a stand which will be fabricated and installed such as to insure against toppling by use of struts, bumpers or tie-downs. In case of a break in the 3/8" tubing the leakage will be slow, and the level change will be monitored on the other channel.

The signal cable will be installed under the controls of procedure A-1405 installation and removal of temporary cables.

The existing procedure O-2.3.1, Draining the Reactor Coolant System, is to be revised to address the indications to be monitored, including the subject provision. Regarding level indication difference between measurement points, the difference calculated from Westinghouse ESBW/WOG-88-173 dated October 14, 1988 will be provided to operators for guidance.

The above construction and operational 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 assumptions of the analyses given in the Safety Analysis Report because of the substantial tubing installation and the adequate support system to provided as discussed above, it will not have any adverse effect on the safety-related equipment in the vicinity, or result in a decrease in reactor coolant inventory. The design bases events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory

The installation does not involve a change in the Plant Technical Specifications because the substantial tubing installation and the adequacy of the support system is such as to ensure there will be no effect on assumptions provided in the Plant Technical Specification bases.



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 substantial tubing installation and the adequacy of the support system to be utilized ensure there will be no adverse effect on safety-related equipment.

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 substantial tubing installation and the support system adequacy, as described above, ensure there will be no adverse effect on safety related equipment within the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification because of the substantial tubing installation and the adequacy of the support system which ensure against any adverse effect on equipment or systems discussed in the bases of Technical Specifications.



3/20/90

SAFETY ANALYSIS FOR TEMPORARY RADWASTE

DEMINERALIZER SYSTEM

INSTALLATION 90-04

1.0 SCOPE OF ANALYSIS

1.1 The purpose of this analysis is to evaluate the safety aspects of installing a temporary demineralizing system for processing the excessive liquid radwaste from the 1989 outage. The evaporator and recycle systems have not been able to effectively process the added waste due to reduced capacity of the evaporator package. As a result, the on-site storage capability is near capacity severely limiting operation flexibility.

1.2 The temporary liquid waste processing system is a fluidized transfer demineralization system consisting of 5 to 6 resin vessels, booster pump, mechanical filter, dewatering pump and process control unit. The entire system is interconnected with flexible reinforced non-collapsible butyl rubber hoses designed for temperatures between  $-20^{\circ}\text{F}$  and  $180^{\circ}\text{F}$  and pressure from 0 to 300 psig. The supplied system is designed and operated in accordance with the following standards and operating parameters.

- a) Reg. Guide 1.143
- b) ANSI 55.2
- c) ANSI/ASME B31.1
- d) ASME B&PV Code Section VIII & IX
- e) Pressure 0-150 psig
- f) Temperature  $50-135^{\circ}\text{F}$  (Resin limited)
- g) Flow 15-200 gpm
- h) Hydro tested to 225 psig

The shut-off head of the booster pump and the monitor tank transfer pump is 100 and 115 psig respectively. This is well below the design of all the temporary system components.





1.3 The temporary system will process waste from the Waste Holdup Tank using one of monitoring tanks as a batch tank. The process cycle will consist of cycling the waste from the monitoring tank thru the resin beds 5 to 6 times until the activity level is acceptable for discharge to the lake. The spent resin will then be sluiced to a shipping cask. The piping arrangement will consist of a temporary hose connected from the discharge of the waste evaporator feed pump at valve 1762A to the discharge of the monitoring tank pump at valve 1279. This hose will be used to transfer radwaste from the waste holdup tank via the evaporator feed pump to the A or B monitor tank or the temporary demineralizer skid. A second hose will then be connected from the discharge of the monitoring tank pump with a tee at valve 1279 to the inlet of the temporary waste processing system. This hose will be used to cycle the radwaste from the monitor tank to the waste processing system via the monitor tank pump. A third hose will be connected from the outlet of the waste processing system to the A and B monitor tank return line at valve 1291A and/or 1234 depending on flow requirements. This hose will be used to cycle the waste back to the monitor tanks.

1.4 The entire temporary system will be located in the drumming area of the Aux. Bldg. operating floor elv. 271 ft. The allowable live floor loading for this area is 300 lbs/ft<sup>2</sup>. Each of the six demin. tanks has a minimum base dia. of 24 in. and weighs 2200 lbs. full. The tanks will be located on top of the 4 ft. wide by 19 ft. long by 2.5 ft. thick concrete slab in the drumming station. The reinforced slab will distribute the tank loads over the entire slab area. Using the weight of six tanks and 200 lbs. of lead shielding per tank, the floor loading will be approx. 190 lbs/ft<sup>2</sup>. for the raised slab area. The remaining equipment has the following weights:

Process Control Unit	2000
System booster pumps (2) @300/pump	600
Filter vessels (3) @180/filter	540
Dewatering pump	100
Sluice pump	100
Shielding 120/filter	360
	total 3700 lbs.

Because of the equipments physical dimensions, their weights may be considered distributed over the lower 6 ft. x 19 ft. floor area. This will produce a floor loading of 32 lbs/ft<sup>2</sup>. All loads are within the 300 lbs/ft<sup>2</sup> loading limit.



- 1.5 The temporary system will also required 440V power, service air, and DI water connections. Electrical power will be supplied with a temporary cable from the 440V welding outlet located outside the drumming station on the truck bay wall. The DI water and service air will be connected with flexible rubber hoses from connections already existing within the drumming area.
- 1.6 The DI water and service air are required for sluicing and vessel flushing. The DI water connection also serves as a backup water source for cooling resins if a leak in the system develops during process down time.

## 2.0 REFERENCES

- 2.1 RG&E R.E. Ginna Nuclear Power Plant Updated Final Safety Analysis Report Section 15.7.2
- 2.2 RG&E Ginna P&ID.33013-1268
- 2.3 RG&E Ginna P&ID 33013-1270
- 2.4 CHEM-NUCLEAR SYSTEMS, INC., A proposal to Rochester Gas and Electric for Liquid Waste Processing at the Robert E. Ginna Nuclear Power Plant, Section 2.0, Technical Approach. N-89-0020-P02, July 19, 1989
- 2.5 GAI Dwg. D-422-022

## 3.0 SAFETY ANALYSIS

- 3.1 A review has been performed of all the events analyzed in the Ginna Station FSAR and the events requiring analysis by NRC Regulatory Guide 1.70. The only events related to this temporary modification are a radioactive liquid waste system failure and a seismic event.
- 3.2 The drumming area and monitoring tank areas are designed such that any piping or tank leakage will be collected through the drainage system in the Auxiliary Building sump to be pumped back into the liquid waste system. The building sump and basement volume is sufficient to hold the full volume of a CVCS liquid holdup tank (33,000 gallons) without overflowing to areas outside the building. The volume of a monitoring tank and demineralizer tank is 7,500 gallons and 115 gallons respectively. Since either tank is less than the volume of a holdup tank, the sump still has sufficient capacity to handle the monitor tank or demineralizer tank. 4 inch drains are located with sloping floors in front of the drumming area doorway and in the monitoring tank area.



- 3.3 In the event the process water is lost from the spent resins in the demineralizer tanks, the resins can be cooled by the backup DI water connection. Based on the analysis presented in section 15.7.2 for the primary water CVCS spent resin storage tank, it will take 4 days for decay heat to generate enough heat to reach the resin 140°F temperature limit. This is based on a 1% fuel failure. Waste from the waste holdup tank is collected from floor drains and is not expected to contain high activity levels. However Administrative controls will be established to ensure resin tanks are maintained with proper water level when concentrated resins are to be stored for more than 24 hours.
- 3.4 The drumming area is enclosed by seismically designed walls. No safety related equipment exists within the walls of drumming area. Consequently, the demineralizer system will not affect safety related systems during a seismic event should it fail. The flexible hoses running outside the drumming area will be restrained and located to prevent interference with any safety related equipment operation.
- 3.5 Based upon the evaluations in sections 3.1 thru 3.4 above, the margins of safety during normal operations and transient conditions anticipated during the life of the station will remain unchanged by the installation of this temporary modification; and, the adequacy of structures, systems, and components provided for the prevention of accidents and for the mitigation of the consequences of accidents will be unchanged by the installation of this temporary modification.

#### 4.0 PRELIMINARY SAFETY EVALUATION

- 4.1 The proposed temporary modification does not involve an unreviewed safety question since:
- a) the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report will not be increased since the waste tank volumes are less than previously considered, or;
  - b) the possibility of an accident or malfunction of a different type than any evaluated previously in the safety analysis report will not be created since accepted codes and standards are followed, or;
  - c) the margin of safety as defined in the basis for any Technical Specification is not reduced since waste tank volumes are less than previously assumed.



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).

There were none within this time period.





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 two conducted.



SAFETY ANALYSIS

GINNA STATION

TEMPERATURE STRATIFICATION MONITORING

TEMPORARY MODIFICATION

REVISION 1

MAY 12, 1989

PREPARED BY:	<u><i>A. Savatier</i></u> Electrical Engineer	<u>5-12-89</u> Date
REVIEWED BY:	<u><i>John P. Cook</i></u> Reactor Engineer	<u>5-12-89</u> Date
APPROVED BY:	<u><i>Steven T. Adams</i></u> Manager, Technical Engineering	<u>5-15-89</u> Date



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## SAFETY ANALYSIS

### 1.0 SCOPE OF ANALYSIS:

- 1.1 NRC Bulletin No. 88-11, "Pressurizer Surge Line Thermal Stratification", requests all addressees to establish and implement a program to confirm pressurizer surge line integrity in view of the occurrence of thermal stratification, and requires them to inform the staff of the actions taken to resolve this issue. Pursuant to satisfying the requirement and schedule of Bulletin 88-11, Rochester Gas and Electric Corporation is participating in a program for partial resolution of this issue through the Westinghouse Owner's Group (WOG).

The WOG program is designed to benefit from the experience gained in the performance of several plant-specific analyses on Westinghouse PWR surge lines. These detailed analyses included definition of revised thermal transients (including stratification). The overall analytical approach used in all of these analyses has been reviewed by the NRC staff. A significant amount of pressurizer surge line thermal monitoring data has been obtained in support of these plant-specific analyses. Additional pressurizer surge line thermal monitoring and plant system data continues to be made available within the WOG, resulting in a steadily increasing database.

Pressurizer surge line temperature stratification data will be collected at Ginna for inclusion in the WOG database.

- 1.2 Thermal stratification and cycling phenomena were also discovered in auxiliary piping connected to the Reactor Coolant System (RCS). These phenomena may cause pipe cracks in the unisolable sections of auxiliary piping systems. USNRC issued Bulletin 88-08 and subsequent supplements to address this phenomena. As a result, electric utilities are required to provide response to the NRC regarding the review and identification of auxiliary pipe sections connected to the RCS that may be subjected to thermal stratification not considered in the design of the plant.

Westinghouse has identified three piping sections that may be subjected to thermal stratification. These are:





- a) charging line to Loop B hot leg between check valve 393 and the RCS nozzle
- b) alternate charging line to Loop A cold leg between check valve 383A and the RCS nozzle
- c) auxiliary spray line between check valve 297 and the main pressurizer spray line

1.3 This analysis addresses the consequences of installing temporary thermocouples on the pressurizer surge line, Loop B charging line, Loop A alternate charging line, and auxiliary spray line. Thermocouple extension wire shall be temporarily routed to a data acquisition controller. The controller shall provide a digital output to a remote personal computer. The data output line shall utilize temporary cable and existing spare circuits to exit containment.

1.4 In addition to the thermocouples, four temporary displacement transducers are to be installed on the pressurizer surge line. The transducers will monitor line movement during heat-up, cool-down, and during temperature stratification conditions.

2.0 REFERENCE DOCUMENTS:

- 2.1 Ginna Station Procedure, A-303, "Preparation, Review, and Approval of Safety Analysis for Minor Modifications or Special Tests".
- 2.2 Ginna Station Procedure, A-1405, "Installation and Removal of Temporary Cables".
- 2.3 Ginna Station Procedure, "A-1406, "Control of Temporary Modifications".
- 2.4 R.E. Ginna Nuclear Power Plant Updated Safety Analysis Report.
- 2.5 USNRC Regulatory Guide 1.70, Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants, LWR Edition, Revision 3, November 1978.
- 2.6 Appendix R Alternative Shutdown System, "Ginna Nuclear Power Plant, Revision 4, January 1987."



2.7 GAI, "Fire Protection Evaluation" Report No. 1936, March 1977.

2.8 Letter, Eliaz to Wrobel, "852-A&B Limitorque - Aluminum Covers", dated 3/7/86.

3.0 SAFETY ANALYSIS:

3.1 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) major and minor fires

3.1.1 All temporary instrument cable installed shall be routed to follow the respective line to be monitored and then drop vertically to containment floor elevation 235'. The temporary cable will then be routed along the floor, following the shield wall to the free standing data acquisition controller. No seismic impact is anticipated since instrument cable weight is negligible compared to pipe/insulation weight. Instrument cable routed on the floor and the free standing controller (approx. 10"Hx 12"W x 24"D) will not affect seismic structures in the immediate vicinity. The data acquisition controller will be placed outside of the shield wall near the lower end of the pressurizer.

3.1.2 Temporary cable used for the data link shall follow the shield wall at elevation 235', rise to elevation 253' via south-east stairs, and follow the shield wall to Incore Reference Junction Box 1B. No seismic impact is anticipated since this cable will follow a floor/stair routing.

3.1.3 Cable separation in Incore Reference Junction Box 1B shall be maintained. The temporary data link cable shall be spliced to spare circuit A780. Cable and conductor insulation shall be restored using Raychem WCSF sleeves. The spliced cables shall be dressed in Incore Box 1B so that distance between A780 and Incore Thermocouple cables is maximized.



- 3.1.4 This temporary modification will not propagate a major or minor fire. Cables used for thermocouples and thermocouple extensions are individually sheathed in Inconel Overbraid (thermocouples) or Tinned Copper Overbraid (extensions). No additional fire loading is anticipated by the overbraided cable. Temporary cable used for the data link is rated and qualified to IEEE-383 flame requirements as a minimum. Total estimated containment fire loading for this temporary data link cable is 200000 BTUs.
- 3.1.5 Temporary cable used for the data link will be spliced to existing spare cable A779 in the Air Handling Room. Routing is through a floor penetration to the Mux. Room. Total fire loading for the temporary cable in the Air Handling Room is negligible. Total fire loading for the temporary cable in the Mux. Room is estimated at 2000 BTUs.
- 3.1.6 Fire barrier penetrations will be repaired and replaced in accordance with existing plant procedures. Therefore existing seals will not be degraded.
- 3.1.7 This modification does not affect the safe shutdown analysis in the Appendix R submittal since there is no effect on separation of existing circuits, associated circuits, or fire area boundaries as analyzed in the Appendix R submittal.
- 3.1.8 This modification will not effect the capabilities of the Alternative Shutdown System. Furthermore, none of the existing procedures for obtaining an Alternative Safe Shutdown will be effected. This modification, therefore, complies with 10CFR50, Appendix R.
- 3.1.9 Table 6.1-3 of the Ginna UFSAR gives the Aluminum inventory in Containment. The total exposed area is 2197 Ft<sup>2</sup>. This temporary modification will add a total of 10 Ft<sup>2</sup> of exposed Aluminum. The total weight of Aluminum in equipment is estimated to be 40 lbs. This includes Aluminum in data acquisition equipment, displacement transducers, and power supply. The 40 additional pounds of aluminum added to containment will add approximately 800 scf of hydrogen during an accident. This amount of hydrogen generation is negligible compared with 30,000 scf of total hydrogen production during an accident. (See Reference 2.8)



3.2 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.

3.2.1 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.

4.0 PRELIMINARY SAFETY EVALUATION:

4.1 The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety will not be increased by the proposed modification.

4.2 The possibility of an accident or a malfunction of a different type other than any evaluated previously will not be created by the proposed modification.

4.3 The margin of safety as defined in the basis for any Technical Specification will not be reduced by the proposed modification.

4.4 The proposed modification does not involve an unreviewed safety question or require a Technical Specification change.





3.2 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.

3.2.1 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.

4.0 PRELIMINARY SAFETY EVALUATION:

4.1 The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety will not be increased by the proposed modification.

4.2 The possibility of an accident or a malfunction of a different type other than any evaluated previously will not be created by the proposed modification.

4.3 The margin of safety as defined in the basis for any Technical Specification will not be reduced by the proposed modification.

4.4 The proposed modification does not involve an unreviewed safety question or require a Technical Specification change.



3.2 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.

3.2.1 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.

4.0 PRELIMINARY SAFETY EVALUATION:

4.1 The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety will not be increased by the proposed modification.

4.2 The possibility of an accident or a malfunction of a different type other than any evaluated previously will not be created by the proposed modification.

4.3 The margin of safety as defined in the basis for any Technical Specification will not be reduced by the proposed modification.

4.4 The proposed modification does not involve an unreviewed safety question or require a Technical Specification change.



3.2 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.

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Safety Analysis For Special Test

TSR # N/A

Special Test ST-89.02  
Control Building Heat Generation Rate

	Original	Rev.1	Rev. 2
Prepared By: <u>Mark D. Roberts</u>	<u>10/24/89</u>	_____	_____
Nuclear Engineer	Date	Initial Date	Initial Date
Reviewed By: <u>John P. Wylod</u>	<u>11/7/89</u>	_____	_____
Reactor Engineer	Date	Initial Date	Initial Date
Approved By: <u>Steven S. Chan</u>	<u>11/13/89</u>	_____	_____
Technical Manager	Date	Initial Date	Initial Date

1.0 Scope of Analysis

1 The purpose of Special Test ST-89.02 is to obtain the information necessary to determine the heat generated in various areas of the Control Building during normal operation. This information will then be used to analyze the thermal environment of the Control Building during Design Basis Accident (DBA), station blackout (SBO), and normal operating conditions.

1.2 The heat generation rate in the Control Building is to be determined by measuring and recording area wall and air temperatures over a minimum twenty-four (24) hour period to adequately account for room heat fluctuations.

1.3 The following areas of the Control Building are to be tested:

- a. Control Room
- b. Relay Room
- c. Computer Room
- d. Battery Room 1A
- e. Battery Room 1B

2.0 References

2.1 EWR 4529, "Ventilation System Requirements".



- 2      Ginna Station Updated Final Safety Analysis Report, 1989.
- 2.2.1      Section 3.8.4.1.2, "Design of Seismic Category I Structures - Control Building".
- 2.2.2      Section 3.10.2, "Seismic Qualification of Electrical Equipment and Instrumentation".
- 2.2.3      Section 3.11.3.5, "Identification of Limiting Environmental Conditions - Control Building".
- 2.2.4      Section 6.4, "Habitability Systems".
- 2.2.5      Section 9.4.3, "Control Room Area Ventilation System".
- 2.2.6      Section 9.4.9.2, "Engineered Safety Features Ventilation Systems - Relay Room".
- 2.2.7      Section 9.4.9.3, "Engineered Safety Features Ventilation Systems - Battery Rooms".
- 2.3      Ginna Station Technical Specifications, dated May 30, 1989.
- 2.4      Special Test Procedure ST-89.02, "Control Building Heat Generation Rate Testing".

3.0      Safety Analysis

- 3.1      A review has been performed of all events analyzed in the Ginna Station UFSAR. The topics related to this special test are fires, circuit separation, and seismic events.
- 3.2      This special test involves placing electrical wire (used as thermocouples), temperature recorders, and digital temperature readouts in various locations throughout the Control Building and Turbine Building (Section 6 of Reference 2.4). This equipment is in place on a temporary basis only (approximately 24 hours per each of the five areas) and will be removed at the conclusion of the special test.
- 3.3      At no time will any equipment used during normal operation or potentially required during abnormal or emergency conditions be removed from service. All ventilation systems being tested or being used by the special test are non-safety-related (emergency ventilation systems are not affected by the test). No Control Building penetrations are affected by the special test.



3.4

The equipment is in the Turbine Building and Control Building on a temporary basis only, is of minimal additional fire loading, and will be removed at the conclusion of the test; therefore, there are no significant fire loading concerns. Also, the areas subject to the test are either permanently staffed or frequently walked down on a normal basis by operations and security personnel. In addition, Section 6 of Reference 2.4 requires a walkdown of the test equipment at least once per shift to ensure that it is functioning properly. These precautions assist in the early detection of any fire hazards whether induced by the special test equipment or not.

3.5

At no time will any wiring be routed through or over cable trays, etc. allowing potential circuit cross-connection (Section 5.4 of Reference 2.4). Therefore, circuit separation will be maintained throughout the duration of the special test.

3.6

This special test includes the use of non-seismic equipment (i.e., thermocouples and their associated lead wires) on seismic structures (e.g., Control Room walls and floors). However, the thermocouples and lead wires are not of sufficient weight to cause concern with respect to loading on seismic structures. Also, the thermocouples and lead wires are being used on a temporary basis and will be removed at the conclusion of the test. Section 5.0 of Reference 2.4 also requires that the wiring be placed away from normal/emergency pathways and work locations. No wiring will be placed on the Seismic Category I Control Room ceiling.

4.0

Preliminary Safety Evaluation

4.1

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety, previously evaluated in the Safety Analysis Report will not be increased by the proposed special test.

4.2

The possibility of an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report will not be created by the proposed special test.

4.3

The margin of safety as defined in the basis for any Technical Specification will not be reduced by the proposed special test.

4.4

The proposed special test does not involve an unreviewed safety question or require a Technical Specification change.



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 made 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 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:

These 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. These changes do not reduce the margin of safety because:

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





1990 REPORT  
OF  
FACILITY CHANGES, TESTS AND EXPERIMENTS  
CONDUCTED WITHOUT PRIOR APPROVAL  
FOR AUGUST 1989 THROUGH JULY 1990

SECTION A	COMPLETED ENGINEERING WORK REQUESTS (EWR) AND TECHNICAL STAFF REQUESTS (TSR)
SECTION B	COMPLETED STATION MODIFICATIONS (SM)
SECTION C	TECHNICAL STAFF ENGINEERING EVALUATIONS (TSEE)
SECTION D	TEMPORARY BYPASS OF SAFETY FUNCTION, STRUCTURE FEATURES, SHIELDING, AND FLUID SYSTEM FEATURES
SECTION E	PROCEDURE CHANGES
SECTION F	COMPLETED SPECIAL TESTS (ST) AND EXPERIMENTS

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

DATED DECEMBER , 1990



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

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

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



EWR-1483  
STEAM GENERATOR SNUBBER REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF SIX OF THE EIGHT HYDRAULIC SNUBBER PER STEAM GENERATOR.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 0 TO CORRECT THE FOLLOWING:

- 1) TYPOGRAPHICAL ERRORS
- 2) ADD ADDITIONAL REFERENCE - ANSI B31.1
- 3) PIPING ANALYSIS AND PRIMARY EQUIPMENT SUPPORTS WILL BE EVALUATED PER TABLES 1,2 & 3 (ATTACHMENTS TO D.C.) AND NOT IN ACCORDANCE WITH EWR-2512.

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. POSTULATED PIPING FAILURE IN FLUID SYSTEMS INSIDE CONTAINMENT.
2. DECREASE IN HEAT REMOVAL BY SECONDARY SYSTEM.
3. DECREASE IN REACTOR COOLANT SYSTEM FLOW RATE.
4. DECREASE IN REACTOR COOLANT INVENTORY.
5. INTERNAL AND EXTERNAL EVENTS SUCH AS MAJOR AND MINOR FIRES, FLOODS, STORMS, OR EARTHQUAKES.

THE INSTALLATION OF MECHANICAL BUMPERS WILL NOT CHANGE THE EFFECT OF A SEISMIC EVENT ON THE FUNCTION AND DESIGN REQUIREMENTS OF EXISTING STEAM GENERATOR RING GIRDER, REACTOR COOLANT LOOPS, MAIN STEAM LINES, FEEDWATER AND SECONDARY SHIELD WALL.

THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR THE FOLLOWING EVENTS:

1. LOSS OF NORMAL FEEDWATER FLOW
2. FEEDWATER SYSTEM PIPE BREAKS
3. RCS FLOW COASTDOWN ACCIDENTS
4. STEAM GENERATOR TUBE RUPTURE
5. PRIMARY SYSTEM PIPE RUPTURE
6. MAJOR AND MINOR FIRES
7. FLOODS, STORMS, AND EARTHQUAKES

THIS MODIFICATION NEITHER EFFECTS NOR IS EFFECTED BY ANY FLOOD OR STORM PREVIOUSLY EVALUATED.

THE MATERIALS UTILIZED IN THIS MODIFICATION WILL MEET APPENDIX "R" REQUIREMENTS BASED UPON 10CFR50 APPENDIX R AND ENGINEERING PROCEDURE AND WILL NOT INCREASE AT THE PROBABILITY OF MAJOR OR MINOR FIRE.

MODIFICATION OF ADDITION OF SUPPORTS WILL NOT DEGRADE PERFORMANCE OR FUNCTION OF ANY PLANT EQUIPMENT OR SYSTEM.



BASED UPON THE ABOVE ANALYSIS:

- 1) STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.
- 2) MARGIN OF SAFETY DURING NORMAL OPERATING AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.

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-1832A

CIRCUIT SEPARATIONS ANALYSIS ELECTRICAL MODIFICATIONS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL IMPROVE THE ELECTRICAL SEPARATION BETWEEN REDUNDANT SAFETY RELATED EQUIPMENT.

REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON 2/27/85 ITEM NUMBER 6.1.0-85-021-001.

THE CHANGES TO THE DESIGN CRITERIA FOR REVISION 2 ARE DESCRIBED BELOW:

SECTION

DESCRIPTION

1.1 (ADDED TO SPECIAL NOTE): "DC FUSE COORDINATION REQUIREMENTS ARE DELETED FROM REVISION 2 OF THIS DESIGN CRITERIA. DC FUSE COORDINATION IS IN THE SCOPE OF EWR 3341."

1.1.3 DELETED FUSE COORDINATION REQUIREMENTS.

SECTION

DESCRIPTION

2.1.2 DELETED ANALYSIS 51 (FUSE COORDINATION REQUIREMENTS).

2.1.4 DELETED ANALYSIS . 113 (FUSE COORDINATION REQUIREMENTS).

16.1.2 DELETED FUSE TYPE REQUIREMENT. THIS IS IN THE SCOPE OF EWR 3341.

16.2.1 DELETED FUSE COORDINATION REQUIREMENTS.





SECTION

DESCRIPTION

16.2.2 DELETED FUSE COORDINATION REQUIREMENTS.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY THE USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE 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 BEEN DETERMINED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE UNCHANGED. THE ADEQUACIES OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE UNCHANGED.

EWR-1832B

FIRE SIGNALING SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL UPGRADE THE FIRE SIGNALING SYSTEM.

REVISION 6 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WERE PRESENTED AND APPROVED BY PORC ON 12-12-84 ITEM NUMBER 6.1.0-84-144-003.

THE CHANGES TO THE DESIGN CRITERIA FOR REVISION 7 ARE DESCRIBED BELOW:

SECTION

DESCRIPTION

- 11.4 ADD: "INSTALLING UL APPROVED RELEASE MODULES FOR THE HALON SYSTEMS IN THE RELAY AND COMPUTER (MUX) ROOMS WILL BE ACCOMPLISHED UNDER EWR 4064".
- 22.4.4 CHANGE "ENGINEER" TO "ENGINEERING".
- 23.6 ADD: "A NUMBER OF ELECTRICAL MODULES WILL BE CHANGED OUT UNDER EWR 4064 TO FACILITATE MAINTENANCE. THIS IS NECESSITATED BY THE FACT THAT CERTAIN ELECTRICAL MODULES WERE FURTHER DEVELOPED BY GAMEWELL AFTER THE INSTALLATION OF THE INITIAL-DESIGN MODULES. MODULES OF CURRENT-DESIGN WERE USED WHEN NEEDED FOR MAINTENANCE REPLACEMENT RESULTING IN A MIXTURE OF OLD AND NEW MODULE DESIGNS. THIS IN TURN CREATED A MAINTENANCE PROBLEM, SINCE THE LATEST WIRING DIAGRAM IS NOT APPLICABLE TO OLDER MODULES".
- 26.2.13 CHANGE "ALOW" TO "ALLOW".



A REVIEW HAS BEEN MADE OF THE EVENTS ANALYZED IN THE GINNA FSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REGULATORY GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE THE FIRES ANALYZED IN G.A.I. REPORT #1936 AND THE SEISMIC EVENT.

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

EWR-2606

POST ACCIDENT SAMPLING SYSTEM IMPLEMENTATION

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THIS DESIGN MODIFICATION.

AS A RESULT OF THE INABILITY AT THREE MILE ISLAND TO RAPIDLY OBTAIN REACTOR COOLANT SAMPLES TO ASCERTAIN THE EXTENT OF CORE DAMAGE, THE NRC IS REQUIRING THAT ALL LICENSEES EVALUATE AND, IF REQUIRED, UPGRADE THEIR PLANTS TO ENABLE ACQUISITION OF APPROPRIATE EXPEDITIOUS SAMPLES AFTER AN ACCIDENT. ABILITY TO ASSESS THE CONDITIONS OF THE CORE EARLY IN AN ACCIDENT CAN RESULT IN TAKING REMEDIAL ACTIONS WHICH COULD LIMIT OR EVEN PRECLUDE CORE DAMAGE.

THE SAMPLING SYSTEM AT GINNA HAS BEEN EVALUATED TO BE MARGINALLY ADEQUATE FOR POST-ACCIDENT CONDITIONS AND CONSEQUENTLY REMEDIAL MODIFICATIONS ARE PLANNED.

A NEW POST ACCIDENT SAMPLING SYSTEM (PASS) WILL BE INSTALLED WHICH WILL ENABLE THE STATION TO OBTAIN AND ANALYZE REACTOR COOLANT, CONTAINMENT AIR, AND CONTAINMENT SUMP SAMPLES WITHIN 3 HOURS OF THE DECISION TO SAMPLE. THE PASS WILL ALSO ENABLE SAMPLING OF THESE STREAMS DURING NORMAL OPERATION.

IN-LINE CHEMICAL INSTRUMENTATION WILL BE PROVIDED IN A NEW LIQUID AND GAS SAMPLE PANEL (LGSP) WHICH WILL REMOTELY DETERMINE IMPORTANT CHEMICAL PARAMETERS OF REACTOR COOLANT, CONTAINMENT AIR, AND CONTAINMENT SUMP.

THE LGSP WILL ENABLE ACQUISITION OF DILUTED AND UNDILUTED GRAB SAMPLES OF BOTH REACTOR COOLANT AND CONTAINMENT AIR FOR IOPIC ANALYSIS IN THE EXISTING COUNTING LAB.

THE LGSP WILL BE CONTROLLED FROM A NEW ELECTRIC CONTROL PANEL (ECP) AND INSTRUMENT PANEL (IP) TO BE LOCATED IN THE HOT SHOP. REMOTELY OPERATED VALVES AND INSTRUMENTS EXTERNAL TO THE LGSP WILL ALSO BE CONTROLLED FROM THE ECP. THE LGSP WILL BE LOCATED ON THE 253'-6" ELEVATION OF THE CONTROLLED PORTION OF THE INTERMEDIATE BUILDING.



THE PASS IS DESIGNED TO MEET THE REQUIREMENTS OF NUREG 0578 AND NUREG 0737 (SECTION II.B.3). FURTHERMORE, THE PASS INSTALLATION AT GINNA IS TO HAVE ADEQUATE PROVISIONS TO ALLOW COMPLIANCE WITH THE CONTAINMENT SUMP SAMPLING, pH AND OXYGEN ANALYSIS REQUIREMENTS NOW INVOKED BY REGULATORY GUIDE 1.97 (REV. 2) DATED DECEMBER 1980.

SAMPLE LINES ASSOCIATED WITH THE PASS WILL BE INSTALLED IN SUCH A MANNER THAT THE POST ACCIDENT DOSE CRITERIA WILL BE MET FOR SAMPLING AND ACCESS TO VITAL AREAS.

THE NECESSARY MODIFICATIONS ARE SHOWN SCHEMATICALLY ON THE ATTACHED FIGURE 1. THE GENERAL ARRANGEMENT OF EQUIPMENT IS SHOWN ON FIGURE 2.

STEAM GENERATOR BLOWDOWN SAMPLE LINES FROM CONTAINMENT PENETRATIONS 206 AND 207 TO THE EXISTING SAMPLE ROOM ARE TO BE REROUTED (FOR ALARA CONSIDERATIONS) USING THE SAME DESIGN CRITERIA DISCUSSED HEREIN. THESE TWO LINES ARE BEING REROUTED TO REDUCE OPERATOR EXPOSURE FOR ROUTINE SAMPLING AND ARE NOT REQUIRED AS A PART OF NUREG-0737 OR REG. GUIDE 1.97 (REV. 2).

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

- (1) EARTHQUAKE AND
- (2) RADIOACTIVE RELEASE FROM A SUBSYSTEM OR COMPONENT

ALL EQUIPMENT AND PIPING SUPPORTS IN THE CONTAINMENT, AUXILIARY AND INTERMEDIATE BUILDINGS ARE SEISMIC CATEGORY I. THEIR DESIGN WILL ASSURE OTHER EQUIPMENT WILL NOT BE STRUCTURALLY DAMAGED AS A RESULT OF FAILURE DURING AN EARTHQUAKE. THE CONSEQUENCES OF AN EARTHQUAKE ARE NOT CHANGED AS A RESULT OF THIS MODIFICATION.

FAILURE OF ANY PASS COMPONENT AFTER AN ACCIDENT SHALL NOT RESULT IN 10CFR PART 100 DOSES TO BE EXCEEDED AND ON THIS BASIS THE SYSTEM IS CLASSIFIED AS NON-SAFETY RELATED. THIS HAS BEEN CONFIRMED BY ANALYSIS.

IN THE EVENT OF A LOSS OF COOLANT ACCIDENT THE NEW PASS WILL PROVIDE A MEANS TO OBTAIN AND ANALYZE REACTOR COOLANT, CONTAINMENT AIR, AND CONTAINMENT SUMP SAMPLES. THE PASS WILL HAVE PROVISIONS TO BE PRESSURIZED WITH NITROGEN OR AIR PRIOR TO POST ACCIDENT OPERATION TO ASSURE LEAKTIGHTNESS.

THE MAJOR SYSTEM VALVES AND INSTRUMENTS ARE CONTAINED IN AN ENCLOSED, SEALED PANEL WHICH IS CONNECTED TO A CHARCOAL FILTERED STATION HVAC SYSTEM. THUS COMPONENT LEAKAGE WILL BE PREVENTED FROM UNCONTROLLED AREAS.



THEREFORE, 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 HAVE NOT BEEN AFFECTED.

EWR-2799

REACTOR LEVEL MONITORING SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL PROVIDE A REACTOR VESSEL LEVEL MONITORING SYSTEM. THE SYSTEM WILL CONSIST OF TWO REDUNDANT DIFFERENTIAL PRESSURE TRENDING CHANNELS. EACH CHANNEL WILL DRIVE A SEPARATE INDICATOR IN THE MAIN CONTROL ROOM SHOWING REACTOR VESSEL LEVEL TO THE PLANT OPERATORS UNDER ALL PLANT CONDITIONS.

REVISION 2 OF THE DESIGN CRITERIA AND REVISION 1 OF THE SAFETY ANALYSIS WERE PRESENTED AND APPROVED BY PORC ON MARCH 20, 1985, PORC NUMBER 6.1.0-85-037-002.

UNDER REVISION 3 OF THE DESIGN CRITERIA AND REVISION 2 OF THE SAFETY ANALYSIS, THE FOLLOWING PARAGRAPHS ARE AFFECTED:

DESIGN CRITERIA

STEP 4.1 REVISED FROM:

THE ATTACHMENT TO THE EXISTING HEAD VENT SYSTEM INCLUDING THE RESTRICTING DEVICE SHALL BE QUALITY GROUP A. REMAINING FLUID SYSTEMS AND COMPONENTS SHALL BE QUALITY GROUP B.

TO READ:

THE ATTACHMENTS TO THE GUIDE TUBE AND THE HEAD VENT SYSTEM, INCLUDING THE RESTRICTING DEVICE, SHALL BE QUALITY GROUP A. REMAINING FLUID SYSTEMS AND COMPONENTS SHALL BE QUALITY GROUP B.

STEP 5.1 REVISED FROM:

THE ATTACHMENT TO THE EXISTING HEAD VENT SYSTEM SHALL CONSIST OF A RESTRICTING DEVICE AND SHALL BE ASME CODE CLASS 1. CONSISTENT WITH REFERENCE 6.2.2.7 THE COMPONENTS DOWNSTREAM OF THE RESTRICTING DEVICE SHALL BE ASME CODE CLASS 2. THE COUPLING THAT ATTACHES TO THE REACTOR INSTRUMENTATION GUIDE TUBE SHALL BE ASME CODE CLASS 2.

TO READ:

THE ATTACHMENTS TO THE EXISTING HEAD VENT SYSTEM AND GUIDE TUBE SHALL CONSIST OF A RESTRICTING DEVICE AND SHALL BE ASME CODE CLASS 1. CONSISTENT WITH REFERENCES 6.2.2.7 THE COMPONENTS DOWNSTREAM OF THE RESTRICTING DEVICE SHALL BE ASME CODE CLASS 2.





STEP 7.1 REVISED FROM:

THE SYSTEM MECHANICAL DESIGN CONDITIONS WILL BE OVER A RANGE OF 0 TO 3000 PSI, AND 50° TO 697° F. THE SYSTEM SHALL ALSO PROVIDE INVENTORY INDICATIONS FOR TEMPERATURE OVER 697° F, ASSUMING SATURATED FLUID CONDITIONS, UP TO 2200° F, IN THE CORE.

TO READ:

THE SYSTEM MECHANICAL DESIGN CONDITIONS ARE 0 TO 2500 PSIG AND 50° TO 680° F. THE MOST SEVERE ACCIDENT CONDITION IS 3015 PSIG AT 697° F. THE SYSTEM SHALL ALSO PROVIDE INVENTORY INDICATIONS FOR TEMPERATURE OVER 697° F, ASSUMING SATURATED FLUID CONDITIONS, UP TO 2200° F, IN THE CORE.

STEP 7.6 HAS BEEN ADDED

THE ADDITION OF THE ATTACHMENT TO THE GUIDE TUBE SHALL NOT CAUSE THE GUIDE TUBE TO EXCEED WESTINGHOUSE ALLOWABLE LOADS FOR THE ATTACHMENT TO THE REACTOR VESSEL OR SEAL TABLE.

STEP 8.1 REVISED FROM:

THE INSTRUMENT TUBING SHALL BE SUPPORTED SUCH THAT IT REMAINS FUNCTIONAL FOLLOWING AN SSE EVENT AS WELL AS DURING NORMAL OPERATION.

TO READ:

THE INSTRUMENT TUBING SHALL BE SUPPORTED SUCH THAT IT REMAINS FUNCTIONAL FOLLOWING AN SSE EVENT AS WELL AS DURING NORMAL OPERATION AND ALL POSTULATED ACCIDENT CONDITIONS.

STEP 8.3 REVISED FROM:

THE MOST SEVERE OPERATING CONDITIONS CONSIDERED FOR THE CONNECTION TO THE HEAD VENT SYSTEM IS THE CONTROL ROD EJECTION AND THE CORRESPONDING PRESSURE AND TEMPERATURE IS 3015 PSIG AND 697° F.

TO READ:

THE MOST SEVERE ACCIDENT CONDITION CONSIDERED FOR THE CONNECTIONS TO THE REACTOR COOLANT SYSTEM IS THE CONTROL ROD EJECTION. THE CORRESPONDING PRESSURE AND TEMPERATURE ARE 3015 PSIG AND 697° F.

STEP 10.1 REVISED FROM:

3.) PRIMARY REACTOR COOLANT LOOP, INCLUDING THE REACTOR VESSEL HEAD VENT SYSTEM.



TO READ:

- 3.) PRIMARY REACTOR COOLANT LOOP, INCLUDING THE REACTOR VESSEL HEAD VENT SYSTEM AND THE REACTOR VESSEL BOTTOM MOUNTED INSTRUMENTATION.

STEP 31.0 REVISED FROM:

"NOT APPLICABLE"

TO READ:

CONSTRUCTION PROCEDURES FOR ATTACHMENT TO THIS GUIDE TUBE WILL BE DEVELOPED THAT ENSURE THAT NO FOREIGN MATERIAL ENTER THE GUIDE TUBE.

ATTACHED FIGURE 1 TO THE DESIGN CRITERIA HAS BEEN REVISED STATING THAT INPUTS TO THE FOXBORO RACK ARE 3 INSTEAD OF 4 LINE THERMOCOUPLES.

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 RELATED TO THIS MODIFICATION ARE: 1) MAJOR AND MINOR FIRES, 2) SEISMIC EVENT, AND 3) THE SPECTRUM OF LOSS OF COOLANT ACCIDENTS INSIDE OF CONTAINMENT.

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-2846B

BLOCK WALL MODIFICATION/RESTRAINTS/EQUIPMENT PROTECTION  
INTERMEDIATE BUILDING

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATIONS TO PROVIDE PROTECTION OF AUXILIARY FEEDWATER CHECK VALVES, A AND B MAIN STEAM ISOLATION VALVE (MSIV) OPERATORS AND A AND B MSIV SOLENOID VALVES.

THE PURPOSE OF THIS MODIFICATION IS TO PROVIDE 1) UPGRADED PROTECTION FOR THE A AND B MSIV OPERATORS AND AIR SOLENOID VALVES SUCH THAT MSIV CLOSURE IS ENSURED FOR SCENARIOS INVOLVING SSE (SAFE SHUTDOWN EARTHQUAKE), TORNADO MISSILES/WIND LOADS AND HELB (HIGH ENERGY LINE BREAKS) OUTSIDE CONTAINMENT, 2) PROTECTION FOR THE "A" AND "B" AUXILIARY FEEDWATER CHECK VALVES FOR SCENARIOS INVOLVING TORNADO WIND LOADS AND SSE SEISMIC EVENTS.



REVISION 1 TO THE DESIGN CRITERIA AND SAFETY ANALYSIS WILL ALLOW REMOVAL OF VENT VALVE 3516A. THIS VALVE, AND ASSOCIATED PIPING, WILL BE REMOVED FROM THE "B" MSIV AND NOT REPLACED. THE SCOPE OF THE PIPING MODIFICATION WILL BE TO PLACE A PLUG IN THE EXISTING COVER FOR THE "B" MSIV.

PRE-PORC COMMENTS ARE ADDRESSED IN INTEROFFICE CORRESPONDENCE 13N1-RR-L2275 AND WILL BE INCORPORATED INTO THE NEXT REVISION.

THESE CHANGES INCLUDE TYPOGRAPHICAL CORRECTIONS TO THE DESIGN CRITERIA, PARAGRAPHS 1.2 AND 23.0. TO FURTHER CLARIFY THE TEST REQUIREMENTS, A SENTENCE WILL BE ADDED TO THE DESIGN CRITERIA PARAGRAPH 23.0 STATING "IN LIEU OF A HYDROSTATIC TEST, A LEAK CHECK MAY BE PERFORMED AT NORMAL OPERATING CONDITIONS".

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. EVENTS RELATED TO THIS MODIFICATION ARE EARTHQUAKES, PIPE BREAKS OUTSIDE THE CONTAINMENT BUILDING, TORNADOES, FIRES, AND TORNADO MISSILES.

ALL PROPOSED PROTECTIVE DEVICES ARE TO BE MOUNTED AS SEISMIC CATEGORY I IN ACCORDANCE WITH THE STRUCTURAL RE-ANALYSIS PROGRAM (SRP). REMOVABLE PANELS WILL BE UTILIZED TO PROVIDE MAINTENANCE/TESTING ACCESS AS REQUIRED.

PLACEMENT OF PASSIVE PROTECTIVE DEVICES AROUND THE MSIV OPERATORS/SOLENOID VALVES AND "B" AFW CHECK VALVES ENSURES FUNCTIONAL OPERATION DURING AND FOLLOWING HELB SCENARIOS OUTSIDE CONTAINMENT.

FIRE SYSTEMS AND FIRE BARRIERS DISCUSSED IN THE UFSAR ARE COVERED UNDER PLANT ADMINISTRATIVE CONTROLS, ENSURING THAT DEGRADATION OF PROTECTION/DETECTION FEATURES NECESSARY TO COMPLY WITH 10CFR50 APPENDIX R WILL NOT OCCUR.

TORNADO LOADS, SUCH AS DIRECT WIND, DIFFERENTIAL PRESSURE, AND TORNADO MISSILES HAVE BEEN INCORPORATED IN THE UFSAR UNDER SEP RE-EVALUATION DESIGN AND ANALYSIS.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SSE AND TORNADO EVENTS.
- 2) OPERATION DURING A HELB SCENARIO OUTSIDE CONTAINMENT.
- 3) FIRE PROTECTION FEATURES.



BASED UPON A REVIEW OF THE UFSAR AND THE STRUCTURAL RE-ANALYSIS PLAN (SRP), 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-3072

RCP #1 SEAL LEAKOFF

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL INSTALL CHECK VALVES ON THE NUMBER ONE SEAL LEAKOFF LINES FROM THE REACTOR COOLANT PUMPS (RCP) A AND B. THE NEW CHECK VALVES WILL BE ASME N-STAMPED SEISMICALLY QUALIFIED. THE NEW CHECK VALVES WILL BE LOCATED IN CONTAINMENT INSIDE THE RCP SHIELD WALLS. THE MODIFIED PIPE SYSTEM, INCLUDING SUPPORTS, WILL BE SEISMICALLY QUALIFIED. THIS MODIFICATION IS SCHEDULED FOR INSTALLATION DURING THE 1987 REFUELING OUTAGE.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON JUNE 16, 1986 PORC NUMBER 6.1.0-86-081-001.

THE PURPOSE OF REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE REFERENCE TO THE ASME III CLASS 2 STANDARDS.

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 RELATED TO THIS MODIFICATION ARE: 1) PRIMARY SYSTEM PIPE RUPTURE, 2) INTERNAL AND EXTERNAL EVENTS; FIRES, FLOOD, STORM OR EARTHQUAKE, AND 3) LOSS OF A REACTOR COOLANT PUMP.

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-3092  
BORIC ACID PIPING

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE UPGRADE OF BORIC ACID PIPING FROM SCHEDULE 10 TO SCHEDULE 40 PIPE. INCLUDED IN THIS MODIFICATION IS THE RE-ROUTING OF THE PIPE TO AVOID HIGH RADIATION AREAS, INSTALLATION OF A NEW HEAT TRACING SYSTEM, UPGRADING OF PIPE SUPPORTS AND ADDITION OF A ONE INCH (1") ISOLATION VALVE IN THE MOV-825A/B BYPASS LINE.

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. REVISION 0 IDENTIFIED THE EVENTS RELATED TO THIS MODIFICATION AS: FIRE, SEISMIC, LOSS OF OFFSITE POWER, CVCS CONTROL SYSTEM MALFUNCTIONS, STEAM LINE BREAK AND LOCA.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50, APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING THIS MODIFICATION.

SEISMIC EVENTS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. PIPING AND PIPE SUPPORT ANALYSES SHALL BE PERFORMED IN ACCORDANCE WITH EWR-2512 DESIGN CRITERIA USING ANSI B31.1 AND ASME SECTION III. SUBSECTION NF AS A BASIS. STRUCTURAL WORK REQUIRED SHALL BE BASED UPON THE AISC CODE, EIGHTH EDITION.

THE DESIGN AND OPERATING CONDITIONS TO WHICH THE PIPING SYSTEMS WILL BE ANALYZED ARE DEFINED IN THE OPERATING TRANSIENTS DOCUMENT GENERATED FOR EWR 2512. SYSTEM THERMAL ANALYSES SHALL EVALUATE THE NORMAL 100% POWER CONDITION, AS WELL AS OTHER ABNORMAL OPERATING TRANSIENT CONDITIONS. THE LOADING COMBINATIONS AND STRESS LIMITS OF THE EWR 2512 DESIGN CRITERIA SHALL BE MET FOR ALL NORMAL AND ACCIDENT CONDITIONS.

ALL MODIFICATIONS OR ADDITIONS TO THE EXISTING PIPING OR PIPE SUPPORTS WILL BE REQUIRED TO INTERFACE WITH THE EXISTING PIPE, PIPE SUPPORTS, AND/OR STRUCTURES AND SHALL NOT DEGRADE THE ABILITY OF THESE ITEMS TO FUNCTION ACCORDING TO THEIR ORIGINAL DESIGN REQUIREMENTS.

THIS MODIFICATION WILL NOT DEGRADE PLANT SYSTEMS ON A LOSS OF OFFSITE POWER. THE HEAT TRACE CIRCUITS SHALL NOT DEGRADE THE PLANT NORMAL OR EMERGENCY POWER DISTRIBUTION SYSTEM. REDUNDANT POWER TRAINS SHALL BE MAINTAINED AND STRUCTURES AND ELECTRICAL EQUIPMENT WITHIN THE SCOPE OF THIS WORK SHALL REMAIN FUNCTIONAL FOLLOWING A SAFE SHUTDOWN EARTHQUAKE (SSE).

THE HEAT TRACING SYSTEM SHALL BE SUPPLIED WITH POWER FROM THE EMERGENCY DIESEL GENERATORS FOLLOWING A LOSS OF OFFSITE POWER. THE EFFECT OF THE NEW SYSTEM ON THE DIESEL GENERATOR LOADS SHALL BE EVALUATED.



THE MODIFICATION PERFORMED SHALL NOT INHIBIT THE AFFECTED SYSTEMS FROM PERFORMING THEIR FUNCTIONS DURING ALL NORMAL AND POSTULATED ACCIDENT CONDITIONS. THE BORIC ACID SYSTEM SHALL BE OPERABLE DURING ALL NORMAL, DESIGN TRANSIENT, UPSET AND FAULTED CONDITIONS. THE BORIC ACID PIPING CHANGES SHALL NOT AFFECT THE CONTROL OF ANY PLANT SYSTEM.

IN REVISION 1 TO THIS DESIGN CRITERIA THE SOLUBILITY TEMPERATURE LIMIT FOR 12-13 WEIGHT PERCENT BORIC ACID SOLUTION IS REVISED FROM 140°F TO 145°F TO COMPLY WITH TECHNICAL SPECIFICATIONS AND ADMINISTRATIVE CONTROLS ESTABLISHED AT GINNA STATION.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) FIRE PROTECTION FEATURES
- 2) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC AND TORNADO EVENTS.
- 3) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A LOSS OF OFFSITE POWER, STEAM BREAK OR LOSS OF COOLANT ACCIDENT (LOCA).

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 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-3199

VITAL BATTERY LOAD FLOW MONITOR

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE DESIGN MODIFICATION WHICH WILL PROVIDE A MEANS TO MONITOR CURRENT MAGNITUDES AND DIRECTION OF BOTH SAFEGUARDS D.C. BATTERY SYSTEMS AS WELL AS THE TECHNICAL SUPPORT CENTER (TSC) BATTERY. THE SYSTEM WILL CONSIST OF THE NECESSARY EQUIPMENT TO DISPLAY THE DIRECTION AND MAGNITUDE OF CURRENT GOING INTO OR OUT OF EACH BATTERY. THE SYSTEM WILL ALSO BE CAPABLE OF ANNUNCIATING ABNORMAL BATTERY CONDITIONS AND LOSS OF CONTINUITY OF BATTERY CIRCUITS. THE IMPLEMENTATION OF THIS MODIFICATION WILL SATISFY THE REQUIREMENTS OF SEP TOPIC # VIII-3.B.

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 ADDITION ARE (1) MAJOR AND MINOR FIRES, AND (2) SEISMIC EVENT.

IT HAS, THEREFORE, BEEN DETERMINED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION HAVE NOT BEEN AFFECTED.



EWR-3272  
SAS/PPCS COMPUTER SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE INSTALLATION OF A SAFETY ASSESSMENT SYSTEM (SAS) AND THE REPLACEMENT OF THE P-250 PLANT PROCESS COMPUTER SYSTEM (PPCS). DEDICATED CRTs AND LINE PRINTERS WILL BE CONNECTED TO THE SAS AND PPCS CPUs. THE SAS SYSTEM IS DESIGNED TO PROVIDE AN INTEGRATED DISPLAY OF CRITICAL PLANT SAFETY PARAMETERS AND PERFORM REFERENCE DIAGNOSTICS DURING EMERGENCIES. THE (SAS) SYSTEM WILL PROVIDE THE OPERATORS IN THE CONTROL ROOM, AND PERSONNEL IN THE TSC, THE EOF AND THE ENGINEERING CENTER WITH: 1) AN INDICATION OF THE SAFETY STATUS OF THE PLANT, 2) ACCIDENT DIAGNOSTIC DISPLAYS, AND 3) POST-ACCIDENT MONITORING. THE NEW PPCS WILL INITIALLY PERFORM THE SAME FUNCTIONS THAT THE P-250 PRESENTLY PERFORMS.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON 5/23/84, PORC NUMBER 6.1.0-84-082-002.

UNDER REVISION 1 OF THE DESIGN CRITERIA, PARAGRAPH 3.2 FIRST SENTENCE STATING, "THE REMAINING EQUIPMENT" HAS BEEN CHANGED TO READ "THE EQUIPMENT ASSOCIATED".

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 RELATED TO THIS MODIFICATION ARE 1) MAJOR AND MINOR FIRES, 2) SEISMIC EVENT.

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-3296A  
STRUCTURAL UPGRADE PROGRAM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE GINNA STATION STRUCTURAL UPGRADE PROGRAM WHICH IS IN RESPONSE TO THE SYSTEMATIC EVALUATION PROGRAM (SEP) BEGUN BY THE USNRC IN 1977. THE PURPOSE OF THIS MODIFICATION IS TO UPGRADE THOSE MEMBERS, CONNECTIONS AND ANCHORAGES FOUND TO BE OVERSTRESSED WHEN SUBJECTED TO THE DESIGN LOADS SET FORTH IN THE VARIOUS SEP TOPICS.



REVISION 0 TO THIS DESIGN CRITERIA/SAFETY ANALYSIS COVERED MODIFICATIONS INCLUDED IN THE SEP TOPICS LOCATED IN THE AUXILIARY BUILDING, CONTROL BUILDING, INTERMEDIATE BUILDING, TURBINE BUILDING, AND THE FACADE STRUCTURE. REVISION 1 OF THIS DESIGN CRITERIA/SAFETY ANALYSIS:

1. ADDRESSES THE DESIGN AND INSTALLATION OF BACKDRAFT DAMPERS REQUIRED ONLY IN THE AUXILIARY BUILDING. THESE DAMPERS, WHEN INSTALLED, WILL ELIMINATE, THE EFFECTS OF THE DIFFERENTIAL PRESSURES ASSOCIATED WITH THE DESIGN BASIS TORNADO.
2. INCORPORATES CHANGES IN FORMAT AND CONTENT OF VARIOUS SUB-SECTIONS OF THE DESIGN CRITERIA.

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: WIND AND TORNADO LOADING, FIRES AND THE SAFE SHUTDOWN EARTHQUAKE (SEISMIC EVENTS).

THE DESIGN FOR WIND AND TORNADO LOADINGS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. MODIFICATIONS TO STRUCTURAL MEMBERS AND ATTACHMENTS WILL NOT ALTER EITHER THE SEISMIC QUALIFICATION OF EXISTING STRUCTURES OR SAFETY RELATED EQUIPMENT LOCATED WITHIN THESE STRUCTURES. THE INCLUSION OF BACKDRAFT DAMPERS UNDER THIS MODIFICATION INSURES THAT THE AUXILIARY BUILDING WILL NOT BE ADVERSELY AFFECTED BY TORNADO WINDS.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50, APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING THE STRUCTURAL UPGRADE MODIFICATIONS.

THUS, THIS MODIFICATION NEITHER INCREASE THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SSE, WIND AND TORNADO EVENTS
- 2) FIRE PROTECTION FEATURES

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





EWR-3595  
CONTROL ROOM HABITABILITY

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODIFICATION OF THE CONTROL ROOM HABITABILITY SYSTEM. IN ORDER, TO IMPROVE RELIABILITY AND MAINTAINABILITY OF THE RADIATION AND TOXIC GAS MONITORS EWR-3595 PHASE B WAS ESTABLISHED.

REVISION 5 OF THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES THE FOLLOWING CHANGES FROM REVIEW OF DC AND SA REVISION 4 PREVIOUSLY NOT PORC APPROVED. MODIFICATIONS APPLICABLE TO EWR-3595 PHASE B ARE AS FOLLOWS:

- 1) REPLACE 2 EXISTING TOXIC GAS SAMPLE PUMPS WITH TWO PUMPS, EACH WITH 100% CAPACITY. ONE PUMP WILL BE IN OPERATING MODE, THE OTHER WILL BE IN STANDBY MODE. THREE POSITION TOXIC GAS SAMPLE PUMP SWITCH SHALL ALSO BE INSTALLED.
- 2) REPLACE EXISTING RADIATION MONITOR FLOW SWITCH.
- 3) ADDITION OF CONTROL ROOM DAMPERS MANUAL ACTUATION SWITCH AT THE HVAC PANEL.
- 4) ADDITION OF RADIATION, AMMONIA, AND CHLORINE LOW SAMPLE AIR FLOW SIGNALS FOR CONTROL ROOM DAMPERS ISOLATION AND INDICATION TO THE PLANT PROCESS COMPUTER.
- 5) REPLACE EXISTING CHLORINE FLOW METER WITH ONE THAT HAS CFM UNIT INDICATION.
- 6) INSTALL CLEAR POLYCARBONATE "LEXAN" COVER FOR CHECKING PARTICULATE MONITOR PAPER ON THE RADIATION MONITOR CABINET.
- 7) REPLACE RADIATION MONITOR PUMP MOTOR FUSE WITH A MOTOR STARTER.

THE PROBABILITY OF OCCURRENCE OF AN ACCIDENT EVALUATED PREVIOUSLY IN THE UPDATED FINAL SAFETY ANALYSIS REPORT (UFSAR) IS NOT INCREASED. THERE IS NO REDUCTION IN SYSTEM RELIABILITY OR PERFORMANCE. THE CONTROL ROOM TOXIC GAS AND RADIATION MONITORS WILL REMAIN WITHIN THEIR DESIGN LIMITS AND WILL HAVE NO IMPACT ON PLANT ABILITY TO WITHSTAND FIRE.

THE CONSEQUENCES OF AN ACCIDENT PREVIOUSLY EVALUATED IN THE UFSAR ARE NOT INCREASED. THE MODIFICATION DOES NOT IMPACT OR INCREASE THE CALCULATED RADIOLOGICAL DOSE TO THE GENERAL PUBLIC FOR ANY EVENT EVALUATED IN THE UFSAR. THE FUNCTION AND CAPABILITY OF THE TOXIC GAS AND RADIATION MONITORS REMAIN THE SAME, AND NO FISSION PRODUCT BARRIERS ARE AFFECTED.



THE PROBABILITY OF OCCURRENCE OF A MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE UFSAR IS NOT INCREASED. THE MODIFICATION DOES NOT DEGRADE THE PERFORMANCE OF ANY SYSTEM FUNCTIONS, AND IN FACT, UPGRADES THE INSTRUMENTATION AND CONTROL OF THE MONITORS.

THE CONSEQUENCES OF A MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE UFSAR ARE NOT INCREASED. THE MODIFICATION DOES NOT IMPACT OR INCREASE THE CALCULATED RADIOLOGICAL DOSE TO THE GENERAL PUBLIC FOR ANY EVENT EVALUATED IN THE UFSAR. THE FUNCTION AND CAPABILITY OF THE MONITORS TO DETECT AND ALARM/ISOLATION REMAINS THE SAME, AND NO FISSION PRODUCT BARRIERS ARE AFFECTED.

THE POSSIBILITY OF AN ACCIDENT OF A DIFFERENT TYPE THAN ANY PREVIOUSLY EVALUATED IN THE UFSAR IS NOT CREATED. NO OTHER SYSTEMS ARE AFFECTED, NOR ANY NEW FAILURE MODE INDUCED.

THE POSSIBILITY OF A DIFFERENT TYPE OF MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY THAN ANY PREVIOUSLY EVALUATED IN THE UFSAR IS NOT CREATED. THE ADDITION OF THE SWITCHES, REMOTE INDICATION, AND CLEAR LEXAN COVER DOES NOT ADVERSELY AFFECT THE SUBJECT SYSTEM.

THE MARGIN OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION IS NOT REDUCED. THE FUNCTIONS AND PERFORMANCE CHARACTERISTICS OF THE MONITORS (E.G., DETECTION, ISOLATIONS, ETC.) REMAIN UNCHANGED.

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-3645A  
GINNA STATION GROUND WATER LEVELS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES AN ANALYSIS OF BELOW GRADE STRUCTURES AT GINNA TO EVALUATE THE EFFECTS OF THE INCREASED GROUND WATER LEVEL (GWL).

THIS EWR COVERS ONLY THE EVALUATION OF EFFECTS OF THE NEW DESIGN BASIS GROUND WATER LEVEL (DBGWL) ON SAFETY RELATED STRUCTURES BELOW GRADE. THE NEW DBGWL IS DEFINED AS 265.0 FT MSL. THIS EVALUATION COMPRISES A PORTION OF A CONTINUING COMMITMENT TO THE USNRC RELATIVE TO SEP TOPIC III-3.A, "EFFECTS OF HIGH WATER LEVEL ON STRUCTURES - R.E. GINNA".



PRE-PORC COMMENTS LISTED BELOW WERE FORWARDED TO THE RESPONSIBLE ENGINEER (RE) VIA LETTER 13N1-RR-L50391. ANSWERS ARE PROVIDED FOR CLARIFICATION (SEE LETTER 13N1-RR-L1650).

- Q. DO THE RESULTS OF THIS EVALUATION HAVE ANY POTENTIAL TO IMPACT ANY ASSUMPTIONS MADE IN OUR PAST ANALYSIS OF THE CONTAINMENT VESSEL TENDONS OR THEIR ROCK ANCHORS?
- A. ENGINEERING REVIEW HAS ASCERTAINED THAT EVALUATION OF GROUND WATER LEVEL WILL HAVE NO POTENTIAL TO IMPACT ANY ASSUMPTIONS PREVIOUSLY MADE CONCERNING CONTAINMENT VESSEL TENDONS OR ROCK ANCHORS.
- Q. 1) THE UFSAR IS NOT REFERENCED IN SECTION 2.0 OF THE DESIGN CRITERIA BUT IS SPECIFICALLY CALLED OUT IN PARAGRAPH 7.4.
- 2) SAFETY ANALYSIS STEP 3.2 DOES NOT ADDRESS OPERATING BASIS EARTHQUAKES (OBE'S).
- A. ENGINEERING WILL INCORPORATE THESE COMMENTS AS CHANGES AT THE NEXT REVISION OF THE DESIGN CRITERIA/SAFETY ANALYSIS.

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 INTERNAL AND EXTERNAL EVENTS SUCH AS FIRE, FLOODS, STORMS, AND EARTHQUAKES, INCORPORATING BOTH OPERATING BASIS AND SAFE SHUTDOWN EARTHQUAKES.

THIS ANALYSIS WILL NOT DEGRADE ANY EXISTING FIRE PROTECTION SYSTEMS OR COMPONENTS. THEREFORE, ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50 APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION WILL BE MAINTAINED DURING AND FOLLOWING THIS ANALYSIS.

THE PRESENT DESIGN FOR FLOODING, STORMS, OPERATING BASIS EARTHQUAKE AND SAFE SHUTDOWN EARTHQUAKE (SEISMIC EVENTS) HAS BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. EVALUATION OF THE EFFECTS OF INCREASED GROUND WATER LEVEL ON SAFETY RELATED STRUCTURES BELOW GRADE WILL INSURE THAT THESE STRUCTURES ARE ADEQUATE TO RESIST LOAD COMBINATIONS REFERENCED IN THE DESIGN CRITERIA (BASED UPON USNRC STANDARD REVIEW PLAN GUIDELINES).

THUS, THIS ANALYSIS WILL NEITHER INCREASE THE CONSEQUENCES, NOR REDUCE THE MARGINS OF SAFETY FOR INTERNAL AND EXTERNAL EVENTS INVOLVING:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING OBE, SSE, FLOODING AND STORMS, INCLUDING TORNADO EVENTS.
- 2) FIRE PROTECTION FEATURES



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

EWR-3698

DIVERSE TRIP MODIFICATION ON REACTOR TRIP BREAKERS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH MODIFIED THE CONTROL CIRCUITRY ON THE SHUNT TRIP ATTACHMENT (STA) TO THE REACTOR TRIP BREAKERS. PRESENTLY, THE STA IS ENERGIZED THROUGH TWO MANUAL REACTOR TRIP SWITCHES. ONLY THE UNDERVOLTAGE COIL (UVTA) AUTOMATICALLY CAUSES A REACTOR TRIP WHEN A SCRAM IS REQUIRED. THE UVTA WOULD ALSO CAUSE A REACTOR TRIP ON LOSS OF D.C. CONTROL POWER. THIS MODIFICATION IS REQUIRED TO COMPLY WITH USNRC 83-28. 85% OF THIS MODIFICATION HAS BEEN COMPLETED UNDER THE PREVIOUS REVISIONS. THIS PROJECT IS SCHEDULED FOR COMPLETION DURING THE 1987 OUTAGE.

REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON FEBRUARY 5, 1986 PORC NUMBER 6.1.0-86-015-001.

THE PURPOSE OF REVISION 2 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE:

- A) NEW INDICATOR LIGHT TO VERIFY THAT THE STA IS OPERATIONAL. (PARAGRAPH 7.3.1)
- B) NEW TRIP TEST REQUIREMENTS FOR BOTH UVTA AND STA.

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 RELATED TO THIS MODIFICATION ARE:

- 1) ALL POSTULATED ACCIDENTS REQUIRING A REACTOR TRIP.
- 2) LOSS OF D.C. CONTROL POWER.
- 3) NATURAL EVENT/FIRE, AND EARTHQUAKE.

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.





PORV BLOCK VALVE(S) REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF PRESSURIZER MOTOR-OPERATED BLOCK VALVES 515 AND 516 WITH NEW SEISMICALLY AND ENVIRONMENTALLY QUALIFIED GATE VALVES. THE REPLACEMENT IS REQUIRED BECAUSE THE EXISTING BLOCK VALVE SEAT RINGS ARE APPROACHING THE MAXIMUM ALLOWABLE LIMITS FOR REMACHINING.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDES 1.29 AND 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE AS FOLLOWS:

- 1) INCREASE IN HEAT REMOVAL BY SECONDARY SYSTEM.
- 2) DECREASE IN HEAT REMOVAL BY SECONDARY SYSTEM.
- 3) DECREASE IN REACTOR COOLANT SYSTEM FLOW RATE.
- 4) REACTIVITY AND POWER DISTRIBUTION ANOMALIES.
- 5) INCREASE IN REACTOR COOLANT INVENTORY.
- 6) DECREASE IN REACTOR COOLANT INVENTORY.
- 7) INTERNAL AND EXTERNAL EVENTS SUCH AS MAJOR AND MINOR FIRES, FLOODS, STORMS, OR EARTHQUAKES.

THE FOLLOWING ACCIDENTS APPLICABLE TO THIS MODIFICATION ARE AS FOLLOWS:

1. INCREASE IN HEAT REMOVAL BY SECONDARY SYSTEM

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) DECREASE IN FEEDWATER TEMPERATURE
- B) INCREASE IN FEEDWATER FLOW
- C) EXCESSIVE LOAD INCREASE INCIDENT
- D) INADVERTANT OPENING OF A STEAM GENERATOR RELIEF/SAFETY VALVE
- E) SPECTRUM OF STEAM SYSTEM PIPING FAILURES INSIDE AND OUTSIDE OF CONTAINMENT

2. DECREASE IN HEAT REMOVAL BY SECONDARY SYSTEM

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) STEAM PRESSURE REGULATOR MALFUNCTION OR FAILURE THAT RESULTS IN DECREASING STEAM FLOW
- B) LOSS OF EXTERNAL ELECTRICAL LOAD
- C) TURBINE TRIP
- D) LOSS OF CONDENSER VACUUM
- E) LOSS OF OFFSITE ALTERNATING CURRENT POWER TO THE STATION AUXILIARIES
- F) LOSS OF NORMAL FEEDWATER FLOW
- G) FEEDWATER SYSTEM PIPE BREAKS



3. REACTIVITY AND POWER DISTRIBUTION ANOMALIES

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) UNCONTROLLED ROD CLUSTER CONTROL ASSEMBLY WITHDRAWAL FROM A SUBCRITICAL CONDITION
- B) UNCONTROLLED ROD CLUSTER CONTROL ASSEMBLY WITHDRAWAL AT POWER
- C) STARTUP OF AN INACTIVE REACTOR COOLANT PUMP
- D) CHEMICAL AND VOLUME CONTROL SYSTEM MALFUNCTION
- E) RUPTURE OF A CONTROL ROD DRIVE MECHANISM HOUSING
- F) ROD CLUSTER CONTROL ASSEMBLY DROP

4. INCREASE IN REACTOR COOLANT INVENTORY

5. DECREASE IN REACTOR COOLANT SYSTEM FLOW RATE

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) FLOW COASTDOWN ACCIDENTS
- B) LOCKED ROTOR ACCIDENTS

6. DECREASE IN REACTOR COOLANT INVENTORY

THE FOLLOWING ACCIDENTS, APPLICABLE TO THIS EVENT, WERE ANALYZED:

- A) INADVERTANT OPENING OF A PRESSURIZER SAFETY OR RELIEF VALVE
- B) PRIMARY SYSTEM PIPE RUPTURES

THIS MODIFICATION WILL NOT DEGRADE THE DESIGN, CAPABILITY OR PERFORMANCE OF THE EXISTING PRESSURIZER RELIEF SYSTEM AND, THEREFORE, THE CONSEQUENCES OF THE ABOVE EVENTS WILL NOT BE INCREASED BY THE MODIFICATION.

THIS MODIFICATION AND THE MATERIALS UTILIZED WILL MEET APPENDIX R 10CFR50 CRITERIA AS DEFINED IN ENGINEERING PROCEDURE QE-326.

THE MODIFICATION NEITHER AFFECTS, NOR IS AFFECTED BY ANY FLOOD OR STORM PREVIOUSLY EVALUATED.

THE MODIFICATION IS DECLARED AS HAVING TO MEET SEISMIC CATEGORY 1 CRITERIA OF USNRC REG. GUIDE 1.29 AND CONDITIONS SPECIFIED IN THE UFSAR SECTION 3.11.3 TITLED "IDENTIFICATION OF LIMITING ENVIRONMENTAL CONDITIONS".



BASED UPON ALL THE ABOVE ANALYSES:

- 1) STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.
- 2) MARGIN OF SAFETY DURING NORMAL OPERATING AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.

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-3768

CONTAINMENT PENETRATION COOLING

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE UPGRADE OF THE PENETRATION COOLING SYSTEM TO ENSURE THAT THE UNMONITORED PATH FOR AIRBORNE RADIATION FROM THE AUXILIARY BUILDING TO UNCONTROLLED AREAS WILL BE ELIMINATED.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATED COMMENTS TO REVISION 0, AND INCLUDED INSTALLING NEW DUCTWORK TO AN OUTSIDE AIR SOURCE, A BACKDRAFT DAMPER OR OTHER MEANS OF BACKFLOW PREVENTION, TO PREVENT UNMONITORED RELEASES OF RADIOACTIVITY, CHANGES TO THE EXISTING PENETRATION COOLING FAN SYSTEM INLET ARRANGEMENT BOX TO ACCEPT THE NEW DUCTWORK, INSTALLING A NEW STEAM HEATING COIL, INSTALLING ASSOCIATED STEAM SUPPLY AND STEAM CONDENSATE RETURN PIPING, INSTALLING A NEW CONDENSATE DRAIN PAN AND PIPING, AND INSTALLING NEW PNEUMATIC AND/OR ELECTRIC TEMPERATURE CONTROL DEVICES IN THE MODIFIED SYSTEM.

IN ADDITION TO THE DESIGN WORK REQUIRED TO MODIFY THE EXISTING CONTAINMENT PENETRATION COOLING SYSTEM AN ANALYSIS WAS PERFORMED TO DETERMINE THE ACTUAL BULK CONCRETE TEMPERATURES OF THE PENETRATIONS WITHOUT THE OPERATION OF THE CONTAINMENT PENETRATION COOLING SYSTEM. BULK CONCRETE TEMPERATURE LIMITATIONS HAVE BEEN RELAXED IN RECENT YEARS FROM THE ORIGINAL DESIGN LIMIT OF 150°F TO 200°F PER ASME BOILER AND PRESSURE VESSEL CODE, SECTION III/DIVISION 2, 1986 EDITION. THE ANALYSIS DEMONSTRATES THAT THE BULK CONCRETE TEMPERATURES DURING THE WORST CASE SCENARIO COULD EXCEED 200°F. THEREFORE THIS SYSTEM WILL BE MAINTAINED OPERABLE ABOVE A PRIMARY SYSTEM TEMPERATURE OF 200°F.



REVISION 2 OF THIS DESIGN CRITERIA AND SAFETY ANALYSIS UPDATES THE REFERENCE SECTIONS OF BOTH THE DESIGN CRITERIA AND SAFETY ANALYSIS AND INCORPORATES 1) A VERIFICATION THAT A STEAM COIL FAILURE (LOSS OF STEAM HEATING) WILL NOT ADVERSELY AFFECT SYSTEM OPERATION DURING COLD WEATHER, AND 2) A PUSH TO TEST SWITCH ON THE EQUIPMENT HATCH TEMPERATURE ALARM PANEL TO GIVE POSITIVE ASSESSMENT OF LAMP FUNCTION DURING OPERATION.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE PIPING FAILURES IN FLUID SYSTEMS OUTSIDE CONTAINMENT, SEISMIC EVENTS, FIRES, AND PLANT BUILDING SECURITY.

SEISMIC EVENTS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. MODIFICATION OF THE PENETRATION COOLING SYSTEM REQUIRES SEISMIC DESIGN FOR SUPPORTS TO ENSURE THAT MODIFIED PIPING/DUCTWORK WILL NOT COLLAPSE DURING A SEISMIC EVENT. THIS MODIFICATION WILL NOT ALTER EITHER THE SEISMIC QUALIFICATION OF EXISTING STRUCTURES OR SAFETY RELATED EQUIPMENT LOCATED WITHIN THE EXISTING AUXILIARY BUILDING STRUCTURE.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50, APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING THIS MODIFICATION.

A BREAK IN THE HOUSE HEATING STEAM LINE TO BE INSTALLED UNDER THIS MODIFICATION (PIPE BREAK OUTSIDE CONTAINMENT) WILL NOT HAVE ADVERSE EFFECTS ON SAFE SHUTDOWN OF THE PLANT. THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP ASSURES DELIVERY OF AUXILIARY FEEDWATER TO THE STEAM GENERATORS TO MAINTAIN SAFE SHUTDOWN. INVENTORY FOR THE PRIMARY SYSTEM IS ASSURED VIA CHARGING PUMPS LOCATED IN A ROOM SEPARATED FROM THE AUXILIARY BUILDING BY CONCRETE WALLS AND SEALED FIRE BARRIERS.

APPROPRIATE PROVISIONS WILL BE INSTALLED TO PRECLUDE UNMONITORED ACCESS TO THE AUXILIARY BUILDING VIA THE NEW INLET PENETRATION IN ACCORDANCE WITH GINNA STATION SECURITY REQUIREMENTS.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC EVENTS INCLUDING PIPE BREAKS OUTSIDE CONTAINMENT.
- 2) FIRE PROTECTION FEATURES
- 3) PLANT SECURITY





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

EWR-3817  
CATALYTIC OXYGEN REMOVAL SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL PROVIDE A MEANS OF REDUCING OXYGEN CONCENTRATIONS TO LESS THAN 100 PPB IN THE CONDENSATE STORAGE SYSTEM. A WESTINGHOUSE CATALYTIC OXYGEN REMOVAL SYSTEM (CORS) HAS BEEN EVALUATED TO BE THE BEST METHOD AVAILABLE TO REDUCE DISSOLVED OXYGEN TO ACCEPTABLE LEVELS. THE PRINCIPLE IS TO MIX HYDROGEN WITH THE CONDENSATE AND REDUCE THE FREE OXYGEN TO WATER THROUGH EXPOSURE OF THE MIXTURE TO A METAL CATALYST SURFACE.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON NOVEMBER 6, 1985 PORC NUMBER 6.1.0-85-114-002.

DUE TO PRE-PORC COMMENTS, REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS, WERE NOT PRESENTED TO PORC.

THE PURPOSE OF REVISION 2 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE COMMENTS AS A RESULT OF PRE-PORC OF REVISION 1.

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 RELATED TO THIS MODIFICATION ARE A LOSS OF NORMAL FEEDWATER AND FIRES.

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-4037  
CT-1 TERMINAL REPLACEMENT

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION OF THE EXISTING EBERLINE CT-1 EFFLUENT MONITOR CONTROL TERMINALS AT GINNA STATION WITH UPGRADED "B" VERSION EQUIPMENT. THE PURPOSE OF THE "B" VERSION UPGRADE IS TO IMPROVE THE OPERABILITY AND RELIABILITY OF THE EXISTING CONTROL TERMINALS IN THE CONTROL ROOM AND TECHNICAL SUPPORT CENTER. ALSO PROPOSED IS THE INSTALLATION OF A REPORT GENERATOR INTERFACE (RGIF) WHICH WOULD ENABLE THE CT-1 IN THE TSC TO COMMUNICATE WITH THE NEW PLANT COMPUTER PLANNED FOR INSTALLATION IN 1986. IF THE CONTROL ROOM OPERATORS HAVE ACCESS TO DATA FROM THE EFFLUENT MONITORS VIA THE PLANT COMPUTER, THE CT-1 IN THE CONTROL ROOM WOULD NO LONGER BE REQUIRED, AND COULD BE REMOVED TO DECREASE SOME OF THE CONGESTION IN THE CONTROL ROOM AND ELIMINATE THE NEED FOR DUPLICATING AT CT-1 FOR THE GINNA SIMULATOR PROJECT. IT IS PROPOSED THAT BOTH THE CONTROL ROOM AND THE TSC CONTROL TERMINALS BE UPGRADED WITH THE "B" VERSION EQUIPMENT IN 1985. WHEN THE NEW PLANT COMPUTER IS OPERATIONAL, THE RGIF WOULD BE INSTALLED BETWEEN THE TSC CT-1 AND THE PLANT COMPUTER, AND THE CONTROL ROOM CT-1 WOULD BE REMOVED.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION FSAR AND EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT.

BASED UPON THE ANALYSIS DESCRIBED UNDER PARAGRAPH 3.1 TO 4.4 OF THE SAFETY ANALYSIS, IT HAS BEEN DETERMINED THAT THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY, PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL NOT BE INCREASED BY THE PROPOSED ADDITION.

EWR-4070  
NO. 1 AND 2 FEEDWATER HEATER REPLACEMENT

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE REPLACEMENT OF NUMBER 1 AND 2 FEEDWATER HEATER.

THE PURPOSE OF THIS MODIFICATION IS TO SPECIFY, PROCURE, AND INSTALL NEW FEEDWATER HEATER TUBE BUNDLES AND SHELL MODIFICATIONS AT THE FIRST AND SECOND EXTRACTION POINTS. THE PRIMARY GOAL IS TO ELIMINATE THE COPPER ALLOY TUBES. STAINLESS STEEL TUBES ARE RECOMMENDED.

REVISION 1 TO THE SAFETY ANALYSIS INCORPORATES A CHANGE RESULTING FROM PRE-PORC COMMENT OF REVISION 0 TO CLARIFY A STEP TO STATE THAT THE PROBABILITY OF UNINTENDED OPENING OF THE CONDENSATE BYPASS VALVE WILL NOT INCREASE DUE TO THE DESIGN CRITERIA REQUIREMENT TO LIMIT TUBESIDE PRESSURE DROP TO 45 PSI.

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE



GINNA STATION UFSAR, THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70, AND A 10CFR50.59 SAFETY EVALUATION. THE EVENTS RELATED TO THIS MODIFICATION ARE A DECREASE IN FEEDWATER TEMPERATURE AND A LOSS OF NORMAL FEEDWATER FLOW.

THE DECREASE IN FEEDWATER TEMPERATURE EVENT IS ANALYZED IN THE UFSAR AS AN ACCIDENTAL OPENING OF THE CONDENSATE BYPASS VALVE, WHICH RESULTED IN A SUDDEN REDUCTION INLET FEEDWATER TEMPERATURE TO THE STEAM GENERATORS.

THIS MODIFICATION HAS NO BEARING ON CONDENSATE BYPASS VALVE OPERATION OR PLANT RESPONSE TO THIS EVENT. A REDUCTION IN FEEDWATER TEMPERATURE WHICH RESULTED FROM A LOSS OF ONE FEEDWATER HEATER HAS BEEN ANALYZED IN UFSAR. THE ANALYSIS SHOWED THAT FOR A FEEDWATER ENTHALPY DECREASE CORRESPONDING TO THE LOSS OF ONE FEEDWATER HEATER AT FULL POWER MINIMUM DNBR DOES NOT FALL BELOW THE LIMIT VALUE. AT ZERO POWER THE RESULTS ARE LESS LIMITING THAN THOSE PRESENTED IN UFSAR SECTION 15.4.1, UNCONTROLLED ROD CLUSTER CONTROL ASSEMBLY WITHDRAWAL FROM A SUBCRITICAL CONDITION.

THE LOSS OF NORMAL FEEDWATER FLOW IS ANALYZED IN THE UFSAR AS A DISRUPTION OF SECONDARY SYSTEM HEAT REMOVAL CAPABILITY. THIS MODIFICATION WILL NOT INCREASE THE PROBABILITY OF THE DISRUPTION AS A RESULT OF CONDENSATE LINE BREAK SINCE THE DESIGN CRITERIA REQUIRES PROPER INSPECTION AND TESTING OF NEW WELDS.

THIS MODIFICATION IS NON-SEISMIC SINCE IT DOES NOT EFFECT THE SAFE SHUTDOWN OF THE REACTOR.

THIS MODIFICATION DOES NOT INCREASE THE FIRE LOADING IN FIRE AREAS CONTAINING SAFE SHUTDOWN EQUIPMENT OR DEGRADE EXISTING FIRE PROTECTION BECAUSE OF REQUIREMENTS IN SECTION 27.0 OF THE DESIGN CRITERIA.

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-4075  
TSC HVAC MODIFICATIONS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION OF THE GINNA STATION TSC HVAC SYSTEM. THIS MODIFICATION WILL CONSIST OF: 1) ADDING TWO COMPUTER TYPE AIR CONDITIONING UNITS TO THE NEW SAS COMPUTER ROOM, 2) INSTALLING NEW ZONE CONTROL BOXES, EACH WITH ITS OWN THERMOSTAT, 3) MODIFYING THE CENTRAL SYSTEM CONTROL SO THAT IT WILL AUTOMATICALLY CHANGE OVER FROM HEATING TO COOLING, AND BACK, AND 4) INSTALLING A FLOW CONTROLLER TO ASSURE THAT THE MAXIMUM DESIGN FLOW RATE THROUGH THE CHARCOAL FILTER IS NOT EXCEEDED.

REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON 11/19/86 PORC NUMBER 6.1.0-86-135-002.

THE PURPOSE OF REVISION 2, OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE INSTALLATION REFERENCE TO SPECIFICATION EE-29, EE-80 AND IEEE 383.

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 RELATED TO THIS MODIFICATION ARE: INTERNAL AND EXTERNAL EVENTS, SUCH AS FIRES, FLOODS, STORMS AND EARTHQUAKES.

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.





TOTAL CHARGING FLOW INDICATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODIFICATION TO INSTALL TWO TRANSMITTERS FOR REACTOR COOLANT PUMP (RCP) SEAL INJECTION FLOW.

EWR 4118 WAS WRITTEN IN RESPONSE TO A NUMBER OF HUMAN ENGINEERING DISCREPANCIES (HEDS) IDENTIFIED DURING THE DETAILED CONTROL ROOM DESIGN REVIEW. HEDS 451 AND 471 STATE THAT INDICATION FOR REACTOR COOLANT PUMP (RCP) SEAL INJECTION FLOW AND TOTAL CHARGING FLOW ARE REQUIRED. HEDS 84, 85, 309, 310, AND 345 ADDRESS THE PROBLEM THAT THE CHARGING FLOW CONTROLLER IS LOCATED ON THE MIDDLE SECTION OF THE MAIN CONTROL BOARD (MCB), AND THE INDICATOR IS ON THE LEFT SECTION WHICH IS EIGHT TO TEN FEET AWAY. THE COMBINATION OF THESE HEDS RESULTED IN AN NRC COMMITMENT TO PROVIDE INDICATION FOR SEAL INJECTION AND A DUPLICATE INDICATOR FOR CHARGING FLOW ON THE MIDDLE SECTION OF THE MCB BY JUNE 1988. THIS PROJECT INVOLVES THE INSTALLATION OF TWO TRANSMITTERS FOR RCP SEAL INJECTION FLOW (FT115A AND FT116A). THESE TWO TRANSMITTERS WOULD BE INSTALLED IN PARALLEL WITH THE EXISTING RCP SEAL INJECTION FLOW LOCAL INDICATION (FT115 AND FT116). INDICATORS FOR SEAL INJECTION FLOW WILL BE INSTALLED ON THE MIDDLE SECTION OF THE MCB. THE TWO SEAL INJECTION FLOWS WILL BE INPUT TO THE PLANT PROCESS COMPUTER SYSTEM (PPCS). IN ADDITION, A DUPLICATE OF THE EXISTING CONTROL BOARD INDICATION FOR CHARGING FLOW (F0128) WILL BE INSTALLED ON THE MIDDLE SECTION OF THE MCB.

THE RCP SEAL INJECTION FLOWS, COUPLED WITH THE EXISTING CONTROL BOARD INDICATION FOR CHARGING FLOW, WILL ALLOW CONTROL ROOM OPERATORS TO DETERMINE TOTAL SYSTEM INFLOW. THE NEW INDICATORS FOR SEAL INJECTION FLOW AND CHARGING FLOW WILL BE LOCATED BESIDE EACH OTHER ON THE MIDDLE SECTION OF THE MCB. THE DUPLICATE INDICATOR FOR CHARGING FLOW WILL, IN ADDITION, BE LOCATED ABOVE THE CONTROLLER FOR CHARGING FLOW. A NEW PSEUDO ANALOG POINT WILL BE CREATED ON THE PPCS TO CALCULATE TOTAL CHARGING FLOW BY COMBINING CHARGING FLOW, AN EXISTING PPCS INPUT, WITH THE NEW RCP SEAL INJECTION FLOW POINTS.

DUE TO PRE-PORC COMMENTS, REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WERE NOT PRESENTED TO PORC.

THE PURPOSE OF REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE COMMENTS AS A RESULT OF PRE-PORC OF REVISION 0.



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) MAJOR AND MINOR FIRES
- 3) PIPE BREAKS OUTSIDE THE CONTAINMENT BUILDING

THIS MODIFICATION IS LIMITED TO WORK DOWNSTREAM OF THE ROOT VALVES FOR THE RCP SEAL INJECTION FLOW. SINCE THE ROOT VALVES DEFINE THE SAFETY CLASS BOUNDARY, THE EXISTING RCP SEAL INJECTION FLOW INSTRUMENTATION IS DESIGNATED NOT SEISMIC CATEGORY I. THE REMAINING WORK, FOR THIS MODIFICATION, WILL BE DESIGNED TO MEET THE REQUIREMENTS OF USNRC REGULATORY GUIDE 1.29, REVISION C.2.

THIS MODIFICATION INVOLVES THE INSTALLATION OF EQUIPMENT IN THE AUXILIARY BUILDING, FIRE AREA ABBM-ZONE ABB, AND THE CONTROL BUILDING, FIRE AREA - CC ZONES CR AND RR. THIS MODIFICATION ALSO REQUIRES ROUTING CABLE THROUGH THE CABLE TUNNEL WHICH IS FIRE AREA CT. A REVIEW WILL BE PERFORMED TO ASSURE CONTINUED COMPLIANCE WITH 10CFR50, 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 MODIFICATIONS DOES NOT AFFECT THE SAFE SHUTDOWN ANALYSIS IN THE APPENDIX R SUBMITTAL FOR THE FOLLOWING REASONS:

- A. THE APPENDIX R REQUIREMENTS FOR LOCAL INDICATION OF RCP SEAL INJECTION FLOW WILL BE MAINTAINED.
- B. THERE IS NO EFFECT ON SEPARATION OF EXISTING CIRCUITS, ASSOCIATED CIRCUITS, OR FIRE AREA BOUNDARIES AS ANALYZED IN THE APPENDIX R SUBMITTAL.

THIS MODIFICATION WILL INTERFACE WITH THE EXISTING 3/8 INCH RCP SEAL INJECTION FLOW SENSING LINE IN THE SAME MANNER AS DOES THE EXISTING LOCAL INDICATORS. THEREFORE THIS MODIFICATION DOES NOT INTRODUCE ANY NEW FAILURE MODES CONCERNING PIPE BREAKS OUTSIDE OF THE CONTAINMENT BUILDING.

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

THE ADEQUACY OF STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE CONSEQUENCES OF ACCIDENTS HAVE NOT BEEN AFFECTED BY THE IMPLEMENTATION OF THIS MODIFICATION.



CONTROL BUILDING EAST WALL MODIFICATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE STRUCTURAL UPGRADE REQUIREMENT OF THE EAST WALL OF THE CONTROL BUILDING. THE EAST WALL OF THE CONTROL BUILDING MUST BE CAPABLE OF WITHSTANDING THE LOADS ASSOCIATED WITH A 132 MPH TORNADO (DIRECT WIND AND  $\Delta P = 0.4$  PSI) AND TWO TORNADO MISSILES. THIS MODIFICATION WILL, IN EFFECT, UPGRADE THE RELAY ROOM EAST WALL AS PART OF THE STRUCTURAL UPGRADE PROGRAM TO PROVIDE THE NECESSARY ADDED STRENGTH REQUIRED TO RESIST THE IMPOSES LOADS OF SNOW, TORNADO (DIRECT AND  $\Delta P$ ), TORNADO MISSILES AND 2) PROVIDE A WATER-TIGHT BARRIER AGAINST FLOODING OF DEER CREEK.

REVISION 2 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 1 DELETING EXTRA CONDUIT FOR FUTURE CIRCUITS; ADDING GROUNDING AND DOOR POSITION SWITCHES FOR BOTH SECURITY AND FIRE DOORS.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYSIS IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE WIND, SNOW AND TORNADO LOADINGS, FLOODING AND SEISMIC, FIRES, LOSS OF A.C. POWER AND PLANT BUILDING SECURITY.

THE DESIGN FOR WIND, SNOW, TORNADOES AND EXTERNAL FLOODING HAS BEEN EVALUATED IN THE UFSAR AND WILL BE IN ACCORDANCE WITH COMMITMENTS MADE TO THE USNRC WHICH ARE REFERENCED IN SECTIONS 2.4, 3.3, 3.4.1 AND 3.8 OF THE UFSAR.

SEISMIC EVENTS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION DESIGN ANALYSIS. MODIFICATION OF THIS EXTERNAL WALL OF THE RELAY ROOM WILL NOT ALTER EITHER THE SEISMIC QUALIFICATION OF EXISTING STRUCTURES OR SAFETY RELATED EQUIPMENT LOCATED WITHIN THE EXISTING STRUCTURES.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50 APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING THE STRUCTURAL UPGRADE MODIFICATIONS.

THE MODIFICATION AFFECTS ONLY LOADING OF NON-SAFETY RELATED BUS 15. SINCE THERE IS NO CHANGE IN THE SAFETY-RELATED BUSES, THERE IS NO CHANGE IN THE CONSEQUENCES OF A LOSS OF A.C. POWER.

THE RELOCATION OF AN EXISTING EXTERIOR SECURITY DOOR TO THE OUTSIDE OF THE NEW STRUCTURE WILL MAINTAIN THE LEVEL OF PRESENT SECURITY FROM INTRUSION AT GINNA STATION. INTERIM MEASURES DURING CONSTRUCTION WILL BE ADMINISTRATIVELY CONTROLLED TO PREVENT POSSIBLE DEGRADATION OF SECURITY BARRIERS.



THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SSE, FLOODING AND TORNADO EVENTS
- 2) FIRE PROTECTION FEATURES
- 3) PLANT SECURITY

BASED UPON A REVIEW OF THE UFSAR AND THE STRUCTURAL RE-ANALYSIS PLAN (SRP), IT HAS BEEN CONCLUDED THAT THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFT 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-4176

APPENDIX R DETECTION UPGRADE

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH WILL INSTALL THREE (3) NEW FIRE DETECTION ZONES AND SUPERVISED BY THE FIRE SIGNALLING SYSTEM. THESE ZONES ARE:

- Z-36 (SMOKE) INT. BLDG. SUB-BASEMENT FLOORS.
- Z-37 (SMOKE) INT. BLDG. NORTH UPPER ELEVATIONS.
- Z-38 (SMOKE) INT. BLDG. SOUTH ALL ELEVATIONS.

INCLUDED IN THIS MODIFICATION IS THE MOUNTING OF EQUIPMENT, ROUTING AND MOUNTING OF CONDUIT, AND ALL WIRING ASSOCIATED WITH THE NEW ZONES AND MODIFICATIONS TO THE EXISTING FIRE SIGNALLING SYSTEM. THIS MODIFICATION IS REQUIRED TO COMPLY WITH APPENDIX R ALTERNATIVE SHUTDOWN SYSTEM, GINNA NUCLEAR POWER PLANT REVISION 2.

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 RELATED TO THIS MODIFICATION ARE SEISMIC AND FIRE.

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. 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.





O<sub>2</sub>/H<sub>2</sub> ANALYZER REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE DIRECT REPLACEMENT OF THE EXISTING O<sub>2</sub>/H<sub>2</sub> ANALYZER SYSTEM. THIS MODIFICATION WILL REPLACE THE INACCURATE AND UNRELIABLE EXISTING O<sub>2</sub>/H<sub>2</sub> ANALYZER SYSTEM WITH A NEW RELIABLE AND ACCURATE SYSTEM.

REVISION 1 OF THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 0 TO CORRECT TYPOGRAPHICAL ERRORS AND SUMMARY DESCRIPTION OF MODIFICATION BACKGROUND INFORMATION.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND EVENTS REQUIRED BY USNRC REG. GUIDES 1.29, 1.60, 1.61, AND 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE MAJOR AND MINOR FIRES AND A SEISMIC EVENT.

ALL EXISTING AND NEW WIRING, CABLE, AND ELECTRICAL COMPONENTS REQUIRED FOR THIS MODIFICATION COMPLIES WITH 10CFR50 APPENDIX R.

THIS MODIFICATION HAS BEEN ANALYZED FOR SEISMIC EVENTS UNDER SECTION C.2 OF REG. GUIDE 1.29. THE INSTALLATION WILL MAINTAIN STRUCTURAL INTEGRITY SUCH THAT SURROUNDING SAFETY RELATED EQUIPMENT WILL NOT BE AFFECTED.

THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) MAJOR OR MINOR FIRES
- 2) SEISMIC EVENT

BASED UPON A REVIEW OF THE UFSAR AND USNC REG. GUIDE 1.29 AND 1.70, 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.



STATUS LIGHT MODIFICATION

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH CONSISTS OF INSTALLING A DROPPING RESISTOR IN EACH LIGHT ASSEMBLY IN THE MAIN CONTROL BOARD (MCB). INCLUDED WITH THIS MODIFICATION IS THE REPLACEMENT OF THE EXISTING 35 VOLT BULBS WITH 30 VOLT BULBS, AND NEW INDICATOR LIGHT LENS CAP. THIS MODIFICATION WILL PROVIDE GREATER LIGHT OUTPUT IN THE BRIGHT AND DIM MODE, THEREBY ELIMINATING THE PRESENT VISUAL CONTRAST BETWEEN BRIGHT AND DIM CONDITIONS. THESE STATUS LIGHTS IN SUBJECT, PROVIDE A VISUAL INDICATION OF SELECTED VALVE POSITIONS.

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 RELATED TO THIS MODIFICATION ARE: LOSS OF DC OR AC CONTROL POWER, NATURAL EVENTS, FIRE, AND EARTHQUAKE.

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.



C AND D STANDBY AUXILIARY FEEDWATER PUMP INTERLOCK

THIS ENGINEERING WORK REQUEST ADDRESSES THE MODIFICATION TO THE PUMP INTERLOCK.

PRESENTLY, THE ELECTRICAL AUXILIARY FEEDWATER SYSTEM CONFIGURATION CONSISTS OF TWO MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS (MDAFWP1A AND 1B) AND TWO STANDBY AUXILIARY PUMPS 1A AND 1B SUPPLY CONDENSATE WATER TO A AND B STEAM GENERATORS RESPECTIVELY. IN THE EVENT THAT EITHER ONE OR BOTH OF THESE PUMPS ARE INOPERABLE THE STANDBY PUMPS MAY BE USED TO PROVIDE AN EMERGENCY SOURCE FOR COOLING. THE STANDBY PUMPS (C AND D) ARE ELECTRICALLY INTERLOCKED WITH PRIMARY PUMPS (A AND B). THE INTERLOCKS ARE INTENDED TO PREVENT THE SIMULTANEOUS OPERATION OF THE PRIMARY PUMPS AND STANDBY PUMPS. DURING NORMAL OPERATION THIS CONFIGURATION SATISFIES THIS DESIGN CRITERIA, HOWEVER, WHEN PRIMARY BREAKERS ARE RACKED OUT INTO THE HELD POSITION (OR REMOVED), THE INTERLOCKS ARE ALSO REMOVED, MAKING THE STANDBY BREAKERS INOPERABLE. THIS PROPOSED MODIFICATION WILL ELIMINATE THIS CONDITION BY INSTALLING CELL SWITCHES IN THE PRIMARY BREAKER COMPARTMENTS, WHICH WILL CHANGE STATE WHEN THE BREAKER IS RACKED IN OR OUT. THE CELL SWITCH CONTACTS WILL BE WIRED IN PARALLEL WITH THE EXISTING INTERLOCK CONTACTS AND WILL PERMIT THE PRIMARY BREAKERS TO BE REMOVED FROM SERVICE FOR MAINTENANCE AND INSURE THAT THE STANDBY BREAKERS WILL BE OPERATIONAL.

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

- A) LOSS OF AUXILIARY FEEDWATER FLOW
- B) NATURAL EVENTS/FIRE, EARTHQUAKE.

THE FIRST EVENT ANALYZED WILL BE THE LOSS OF AUXILIARY FEEDWATER FLOW DUE TO THE PROPOSED MODIFICATION. THE ADDITION OF A CELL SWITCH WILL NOT EFFECT OPERABILITY OF THE MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS. THESE CELL SWITCHES SERVE AS PERMISSIVES TO THE STANDBY AUXILIARY FEEDWATER PUMPS, THEREFORE IN THE EVENT OF A FAILURE ONLY THE STARTING OF THE STANDBY PUMPS ARE AFFECTED. MANUFACTURER INSTALLATION AND TESTING PROCEDURES WILL BE PERFORMED AND A PERIODIC TESTING PROGRAM WILL BE INITIATED TO ASSURE PROPER OPERATION OF CELL SWITCHES, THEREBY REDUCING THE PROBABILITY OF FAILURE TO START STANDBY AUXILIARY FEEDWATER PUMPS TO AN ACCEPTABLY LOW LEVEL. THEREFORE THIS MODIFICATION WILL HAVE A NEGLIGIBLE IMPACT UPON OPERABILITY OF AUXILIARY FEEDWATER SYSTEM.

THE SECOND EVENT ANALYZED WILL BE THE EFFECT OF A SEISMIC EVENT ON THE PLANT DUE TO THIS MODIFICATION. THE CELL SWITCHES HAVE BEEN QUALIFIED BY THE MANUFACTURER, THEREFORE THE CONSEQUENCES OF A FAILURE DUE TO A SEISMIC EVENT ARE MITIGATED.



THE THIRD EVENT ANALYZED WILL BE THE EFFECT OF A FIRE ON THE PLANT DUE TO THIS MODIFICATION. THE CONTROL WIRING USED FOR THIS MODIFICATION IS REQUIRED TO MEET THE REQUIREMENTS OF IEEE STD. 383-1984 FLAME TEST. THUS THERE IS NO SIGNIFICANT INCREASE IN THE FIRE LOADING DUE TO THIS MODIFICATION.

AN APPENDIX R CONFORMANCE VERIFICATION WILL BE PERFORMED TO ENSURE THAT THE PROPOSED MODIFICATION DOES NOT ADVERSELY IMPACT EXISTING APPENDIX R COMPLIANCE METHODS.

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

- A) THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED AND
- B) THE STRUCTURES, SYSTEMS, AND COMPONENTS 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.

THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION.

EWR-4281  
STEAM GENERATOR MANWAY STUD TENSIONER

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION COVERING THE INSTALLATION OF STEAM GENERATOR PRIMARY MANWAY STUDS AND NUTS. IN THE PAST THE PRIMARY MANWAY COVERS HAVE BEEN ATTACHED WITH BOLTS WHICH ARE TORQUED TO OBTAIN THE PROPER GASKET SEATING. THIS IS A TIME CONSUMING AND DIFFICULT TASK SINCE IT MUST BE DONE IN A HIGH RADIATION AREA. THIS MODIFICATION CONSISTS OF REPLACING THE EXISTING BOLTS AND NUTS. INSTEAD OF TORQUING THE NUTS TO INDUCE THE REQUIRED AXIAL LOADS, DIRECT HYDRAULIC LOADS ARE USED TO STRETCH THE STUDS.

REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS WAS PRESENTED AND APPROVED BY PORC ON NOVEMBER 5, 1986, PORC NUMBER 6.1.0-86-125-001.





THE PURPOSE OF REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO REVISE PARAGRAPHS 2.6.1 AND 2.6.2 TO INCLUDE NEW EG&G DRAWING TITLES.

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 RELATED TO THIS MODIFICATION ARE: SEISMIC EVENTS, DECREASE IN REACTOR COOLANT SYSTEM INVENTORY AND FIRES.

BASED UPON THE ANALYSES DESCRIBED UNDER PARAGRAPHS 3.1 TO 4.0D 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-4282

CV RECIRC FAN CONDENSATE COLLECTOR LEVELS

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODIFICATION OF THE CV RECIRC FAN CONDENSATE COLLECTOR LEVELS.

THIS MODIFICATION IS FOR REPLACEMENT OF EXISTING OBSOLETE PRESSURE TRANSMITTERS, SIGNAL PROCESSORS AND MAIN CONTROL BOARD INDICATORS WITH INSTRUMENTS CAPABLE OF ACCURATELY MONITORING WATER LEAKAGE WITHIN CONTAINMENT. THE EXISTING TRANSMITTERS, POWER SUPPLIES, BISTABLES AND INDICATORS WILL BE REPLACED TO PROVIDE MORE ACCURATE AND RELIABLE CONDENSATE LEVEL INDICATION. THE SCALES IN THE EXISTING LEVEL INDICATOR SHALL BE PLACED IN THE NEW LEVEL INDICATORS WITH NO CHANGE IN THE APPEARANCE ON THE MCB. NEW REFERENCE LEG TUBING FROM THE TRANSMITTERS TO THE CONDENSATE COLLECTION STANDPIPES WILL BE INSTALLED.

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 RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT, (3) PIPE BREAKS INSIDE THE CONTAINMENT BUILDING.

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

AN APPENDIX R CONFORMANCE REVIEW SHALL BE PREPARED TO DEMONSTRATE THAT CONTINUED COMPLIANCE WITH 10CFR50 APPENDIX R REQUIREMENTS IS MAINTAINED.



THIS MODIFICATION WILL BE REVIEWED 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 SHUT DOWN THE PLANT DURING POSTULATED FIRES.

THE PRESSURE BOUNDARY PORTIONS OF THE CONDENSATE COLLECTOR LEVEL INSTRUMENTATION ARE NOT DESIGNATED SEISMIC CATEGORY I. HOWEVER, ANY MODIFICATION TO THIS SYSTEM WHOSE FAILURE COULD CAUSE DAMAGE TO SAFETY RELATED EQUIPMENT WILL BE DESIGNED TO MEET THE REQUIREMENTS OF USNRC REGULATORY GUIDE 1.29, POSITION C.2.

THE NEW TRANSMITTERS WILL INTERFACE WITH THE EXISTING CONDENSATE COLLECTOR STANDPIPES IN THE SAME MANNER AS THE EXISTING TRANSMITTERS WITH THE ADDITION OF THE REFERENCE LEG TUBING PENETRATION. THIS MODIFICATION DOES NOT INTRODUCE ANY NEW FAILURE MODES CONCERNING PIPE BREAKS INSIDE THE CONTAINMENT BUILDING.

THIS MODIFICATION WILL NOT RESULT IN A CHANGE TO THE COMMITMENTS MADE IN THE UFSAR, SECTIONS 3.6.1.3.2.13 AND 5.4.11.1.2. THESE COMMITMENTS STATE THAT CONDENSATE FLOWS FROM APPROXIMATELY 1 GPM TO 30 GPM ARE TO BE MEASURED BY THE CONDENSATE MEASURING SYSTEM, USFAR SECTION 5.2.5.4.3.

THE DESIGN CRITERIA REQUIRES THAT A HUMAN FACTORS REVIEW OF THIS MODIFICATION BE PERFORMED PRIOR TO ISSUANCE OF DESIGN OUTPUTS, TO MINIMIZE THE PROBABILITY OF OPERATOR ERROR.

THE 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, 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.

IN ACCORDANCE WITH THE PROVISIONS OF 10CFR50.59 THIS MODIFICATION DOES NOT PRESENT AN UNREVIEWED SAFETY QUESTION FOR THE FOLLOWING REASONS:

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



THIS MODIFICATION WILL NOT AFFECT THE PERFORMANCE OF EQUIPMENT IMPORTANT TO SAFETY. THIS MODIFICATION WILL COMPLY WITH THE REQUIREMENTS OF USNRC REG. GUIDE 1.29 POSITION C.2 TO INSURE ANY FAILURE WILL NOT AFFECT SEISMIC CATEGORY I EQUIPMENT. AN APPENDIX R CONFORMANCE REVIEW WILL INSURE CONTINUED COMPLIANCE WITH 10CFR50 APPENDIX R REQUIREMENTS.

2. THE POSSIBILITY FOR AN ACCIDENT OR MALFUNCTION OF A DIFFERENT TYPE THAN ANY EVALUATED PREVIOUSLY IN THE SAFETY ANALYSIS IS NOT CREATED.

THIS MODIFICATION DOES NOT ADD TO, OR MODIFY, ANY EQUIPMENT IMPORTANT TO SAFETY, OR EQUIPMENT WHOSE FAILURE IS ADDRESSED IN THE FINAL SAFETY ANALYSIS REPORT.

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

AS STATED ABOVE, THIS MODIFICATION DOES NOT AFFECT EQUIPMENT IMPORTANT TO SAFETY. THE EFFECT OF THIS MODIFICATION WILL BE TO INCREASE THE RELIABILITY OF ONE OF THE DIVERSE MEANS AVAILABLE FOR OPERATORS TO DETECT LEAKAGE INSIDE CONTAINMENT.

EWR-4324

STEAM GENERATOR BLOWDOWN SYSTEM

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION ON STEAM GENERATOR BLOWDOWN SYSTEM.

THE PURPOSE OF THIS MODIFICATION IS TO CONVERT THE STEAM GENERATOR BLOWDOWN SYSTEM TO A FLASH TANK BASED PROCESS. THE PRIMARY GOAL IS TO IMPROVE RELIABILITY BY MOVING THE INHERENT TEMPERATURE CHANGES TO THE TANK AND PIPING. NEW PIPING INSTALLED TO ACCOMPLISH THIS CONVERSION SHALL BE RESIZED TO REDUCE THE EROSION-CORROSION POTENTIAL.

REVISION 3 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATE CHANGES TO REVISION 2 AS A RESULT OF THE COMMENTS FROM THE REVIEW OF REVISION 2 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS. THE CHANGES ARE OPERATIONAL CONCERNS AND CLARIFICATION.

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE AN INCREASE OR DECREASE IN SECONDARY SYSTEM HEAT REMOVAL.

AN INCREASE IN SECONDARY SYSTEM HEAT REMOVAL WOULD OCCUR IF A BLOWDOWN LINE RUPTURED. THIS EVENT IS ENVELOPED IN THE UFSAR BY EXAMINING THE INCREASE IN FEEDWATER FLOW EVENT AND THE SPECTRUM OF STEAM SYSTEM PIPING FAILURES. BOTH ANALYZED EVENTS ARE FAR MORE SEVERE THAN A BLOWDOWN LINE RUPTURE.



A DECREASE IN SECONDARY SYSTEM HEAT REMOVAL WOULD OCCUR IF BLOWDOWN WERE SUDDENLY ISOLATED. THIS EVENT IS SIMILAR TO A TURBINE TRIP. THE UFSAR DEFINES LOSSES TO 50% AT FULL POWER TO BE WITHIN NORMAL PLANT DESIGN. SINCE THE DESIGN CRITERIA LIMITS BLOWDOWN CAPACITY TO 7% AT FULL POWER; THEREFORE, THE SUDDEN BLOWDOWN ISOLATION EVENT ANALYSIS IS NOT CONSIDERED.

THIS MODIFICATION IS NON-SEISMIC SINCE IT DOES NOT EFFECT THE SAFE SHUTDOWN OF THE REACTOR.

THIS MODIFICATION DOES NOT INCREASE THE FIRE LOADING IN FIRE AREAS CONTAINING SAFE SHUTDOWN EQUIPMENT OR DEGRADE EXISTING FIRE PROTECTION BECAUSE OF REQUIREMENT IN SECTION 27.0 OF THE DESIGN CRITERIA. ANALYSIS NECESSARY TO ASSURE CONTINUAL COMPLIANCE WITH 10CFR50, APPENDIX R HAS BEEN REQUIRED. THEREFORE, THE PROBABILITY AND CONSEQUENCES OF A FIRE AFFECTING COLD SHUTDOWN OF THE PLANT ARE UNCHANGED.

HIGH ENERGY LINE PIPE BREAKS HAVE BEEN CONSIDERED BY REQUIRING THAT ALL EQUIPMENT NECESSARY FOR SAFE SHUTDOWN OF THE PLANT WILL BE PROTECTED CONSISTENT WITH REFERENCE 2.2.4 OF THE SAFETY ANALYSIS.

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-4350  
MFW AND FW BYPASS VALVE INDICATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE MODIFICATION TO INSTALL VALVE POSITION SENSORS FOR THE MAIN FEEDWATER AND FEEDWATER BYPASS VALVES (V4269, V4270, V4271, AND V4272) AND ASSOCIATED POSITION INDICATION DISPLAYED ON THE MAIN CONTROL BOARD.

THIS EWR WAS ISSUED AS A RESULT OF HUMAN ENGINEERING DISCREPANCY HED-65 WHICH CITED A NEED FOR ACTUAL VALVE POSITION INDICATION ON THE MCB RATHER THAN THE CONTROLLER DEMAND SIGNAL INDICATION.

DUE TO PRE-PORC COMMENTS, REVISION 0 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS, WERE NOT PRESENTED TO PORC.

THE PURPOSE OF REVISION 1 OF THE DESIGN CRITERIA AND SAFETY ANALYSIS IS TO INCLUDE COMMENTS AS A RESULT OF PRE-PORC OF REVISION 0.





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) MAJOR AND MINOR FIRES
- 2) SEISMIC EVENT
- 3) INCREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM
- 4) DECREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM

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

REVIEWS AND/OR ANALYSES TO ASSURE CONTINUED COMPLIANCE WITH APPENDIX R HAVE BEEN REQUIRED. SAFE SHUTDOWN CAPABILITY FOLLOWING ALL POSTULATED FIRES, THEREFORE, WILL NOT BE JEOPARDIZED AS A RESULT OF THIS MODIFICATION.

THE DESIGN CRITERIA REQUIRES THAT NEW INDICATORS INSTALLED PER THIS MODIFICATION BE MOUNTED SO AS NOT TO DEGRADE THE INTEGRITY OF THE MAIN CONTROL BOARD (MCB). THEREFORE, THIS MODIFICATION WILL NOT AFFECT THE MAIN CONTROL BOARD'S SEISMIC QUALIFICATION.

THE ADDITION OF LDT'S TO THE STEM OF THE MAIN FEEDWATER AND FEEDWATER BYPASS VALVES WILL NOT DEGRADE THE VALVE'S ABILITY TO PERFORM ITS INTENDED FUNCTION. SINCE THESE VALVES ARE NOT REQUIRED TO FUNCTION DURING A SEISMIC EVENT, THE ABILITY TO FUNCTION DURING A SEISMIC EVENT HAS NOT BEEN DEGRADED.

THE ADDITION OF MFW AND FW BYPASS VALVE INDICATION WILL AID THE OPERATOR IN MONITORING ANY INCREASE OR DECREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM AND SHALL NOT AFFECT THE VALVES OPERATING CHARACTERISTICS.

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. 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 BY THE IMPLEMENTATION OF THIS MODIFICATION.



TECHNICAL SUPPORT CENTER SUPPLEMENTAL UNINTERRUPTABLE POWER SUPPLY

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE INSTALLATION OF A SECOND UNINTERRUPTABLE POWER SUPPLY (UPS) FOR THE T.S.C. ELECTRICAL DISTRIBUTION SYSTEM. ALSO EXISTING ELECTRICAL LOADS WILL BE RE-DISTRIBUTED IN ORDER TO ACHIEVE EVEN BUS LOADING.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDES 1.29 AND 1.70. EVENTS RELATED TO THIS MODIFICATION ARE MAJOR AND MINOR FIRES AND A SEISMIC EVENT.

MODIFICATIONS REQUIRED BY THE DESIGN CRITERIA WILL NOT DEGRADE FUNCTIONS OR PERFORMANCE OF ANY STRUCTURES, SYSTEMS, OR COMPONENTS REQUIRED FOR THE PREVENTION AND MITIGATION OF ACCIDENTS OR ANY OTHER NON-SAFETY RELATED STRUCTURES, SYSTEMS, OR COMPONENTS.

THIS MODIFICATION AND THE MATERIALS UTILIZED WILL MEET APPENDIX R 10CFR50 CRITERIA. EVEN THOUGH THIS MODIFICATION INVOLVES EQUIPMENT WHICH IS NOT IDENTIFIED AS SAFE SHUTDOWN EQUIPMENT.

NEW EQUIPMENT WILL NOT BE LOCATED IN ANY AREA THAT CONTAINS SAFETY RELATED EQUIPMENT THEREFORE, THIS MODIFICATION IS DESIGNATED NON-SEISMIC.

MODIFICATION WILL NOT DEGRADE PERFORMANCE OR FUNCTION OF ANY PLANT EQUIPMENT OR SYSTEM.

BASED UPON THE ABOVE ANALYSIS:

- 1) STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.
- 2) MARGIN OF SAFETY DURING NORMAL OPERATING AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.

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.



4A AND 4B FEEDWATER HEATERS REPLACEMENT

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE REPLACEMENT OF 4A AND 4B HEATERS.

THE PURPOSE OF THIS MODIFICATION IS TO SPECIFY, PROCURE, AND INSTALL NEW FEEDWATER HEATERS AT THE FOURTH EXTRACTION POINT. THE PRIMARY GOAL IS TO ELIMINATE THE COPPER ALLOY TUBES. STAINLESS STEEL TUBES ARE RECOMMENDED.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES RESULTING FROM PRE-PORC COMMENTS OF REVISION 0 TO:

- 1) CLARIFY THE PERFORMANCE REQUIREMENTS OF THE 75 PSI TUBE SIDE PRESSURE DROP
- 2) ADD ADDITIONAL INTERFACE REQUIREMENTS IN DESIGN CRITERIA
- 3) CLARIFY REFERENCES AND TEST REQUIREMENTS
- 4) ADD ASME CODE
- 5) ADD ACCESSIBILITY, MAINTENANCE, REPAIR, AND INSERVICE INSPECTION REQUIREMENTS IN DESIGN CRITERIA

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE A DECREASE IN FEEDWATER TEMPERATURE, AND A LOSS OF NORMAL FEEDWATER FLOW.

THE DECREASE IN FEEDWATER TEMPERATURE EVENT IS ANALYZED IN THE UFSAR AS AN ACCIDENTAL OPENING OF THE CONDENSATE BYPASS VALVE, WHICH RESULTED IN A SUDDEN REDUCTION IN INLET FEEDWATER TEMPERATURE TO THE STEAM GENERATORS.

THE MODIFICATION HAS NO BEARING ON CONDENSATE BYPASS VALVE OPERATION OR PLANT RESPONSE TO THIS EVENT. A REDUCTION IN FEEDWATER TEMPERATURE WHICH RESULTED FROM A LOSS OF ONE FEEDWATER HEATER HAS BEEN ANALYZED IN UFSAR. THE ANALYSIS SHOWED THAT FOR A FEEDWATER ENTHALPY DECREASE CORRESPONDING TO THE LOSS OF ONE FEEDWATER HEATER AT FULL POWER MINIMUM DNBR DOES NOT FALL BELOW THE LIMIT VALUE. AT ZERO POWER THE RESULTS ARE LESS LIMITING THAN THOSE PRESENTED IN UFSAR SECTION 15.4.1, UNCONTROLLED ROD CLUSTER CONTROL ASSEMBLY WITHDRAWAL FROM A SUBCRITICAL CONDITION.

THE LOSS OF NORMAL FEEDWATER FLOW IS ANALYZED IN THE UFSAR AS A DISRUPTION OF SECONDARY SYSTEM HEAT REMOVAL CAPABILITY.



THIS MODIFICATION WILL NOT INCREASE THE PROBABILITY OF THE DISRUPTION AS A RESULT OF CONDENSATE LINE BREAKS SINCE THE DESIGN CRITERIA REQUIRES PROPER INSPECTION AND TESTING OF NEW WELDS. THE PROBABILITY OF A LOSS OF FEEDWATER THROUGH DEGRADATION OF HEATER TUBES IS REDUCED BY REMOVING THE EXISTING ERODED COPPER TUBING.

THIS MODIFICATION IS NON-SEISMIC SINCE IT DOES NOT EFFECT THE SAFE SHUTDOWN OF THE REACTOR.

THIS MODIFICATION DOES NOT INCREASE THE FIRE LOADING IN FIRE AREAS CONTAINING SAFE SHUTDOWN EQUIPMENT OR DEGRADE EXISTING FIRE PROTECTION BECAUSE OF REQUIREMENTS IN SECTION 27.0 OF THE DESIGN CRITERIA.

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-4638

GENERATOR #1 SURGE CAPACITORS AND NEUTRAL TRANSFORMER REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF THE NEUTRAL TRANSFORMER AND SURGE CAPACITORS CONTAINING PCBs. THESE COMPONENTS WILL BE REPLACED WITH SIMILAR COMPONENTS NOT CONTAINING PCBs.

REVISION 2 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGE FROM REVISION 1 TO SPECIFY INSTALLATION TESTS TO BE PERFORMED ON THE COMPONENTS. REVISION 1 DID NOT SPECIFY THE TEST TO BE PERFORMED.

A REVIEW HAS BEEN MADE OF ALL THE EVENTS ANALYZED IN THE GINNA STATION FSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENTS RELATED TO THIS MODIFICATION ARE MAJOR AND MINOR FIRES, TOXIC GAS RELEASES, AND LOSS OF ELECTRICAL LOAD.

NO NEW WIRING OR CABLE IS REQUIRED FOR THIS MODIFICATION. THEREFORE, THERE WILL BE NO INCREASE OF FIRE LOADING DUE TO THIS MODIFICATION.

REVIEWS AND/OR ANALYSES TO ASSURE CONTINUED COMPLIANCE WITH APPENDIX R HAVE BEEN REQUIRED. SAFE SHUTDOWN CAPABILITY FOLLOWING ALL POSTULATED FIRES, THEREFORE, WILL NOT BE JEOPARDIZED AS A RESULT OF THIS MODIFICATION. THEREFORE, THE POTENTIAL FOR A LOSS OF ELECTRICAL LOAD EVENT CAUSED BY CAPACITOR FAILURE WILL NOT BE INCREASED.





THEREFORE, 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.

THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL NOT BE INCREASED BY THE PROPOSED MODIFICATION.

THE POSSIBILITY OF AN ACCIDENT OR 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.

THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION OR REQUIRE A TECHNICAL SPECIFICATION CHANGE.

EWR-4651

CORE EXIT THERMOCOUPLE CABLES

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSING THE MODIFICATION OF THE CORE EXIT THERMOCOUPLE CABLES TO PROVIDE FOR ALARA AND PERSONNEL SAFETY CONCERNS.

EWR 4651, CORE EXIT THERMOCOUPLE (CET) CABLES, REQUESTS THE PURCHASE AND INSTALLATION OF EXTENSION CABLES AT THE BOUNDARY OF THE REACTOR HEAD AND REACTOR CAVITY BRIDGE CABLE TRAYS AT GINNA STATION FOR THE 1988 REFUELING OUTAGE. QUICK CONNECTORS INSTALLED ON THE CET CABLES AT THIS LOCATION ARE DETACHED EACH YEAR FOR REFUELING TO PERMIT LIFTING THE REACTOR HEAD FROM THE REFUELING CAVITY. THE CABLES INSTALLED IN 1983, WHICH RUN FROM THE BRIDGE CABLE TRAY DOWN TO THE THERMOCOUPLES, FALL APPROXIMATELY SIX FEET SHORT OF THE BRIDGE CABLE TRAY. AS A RESULT, THE CET QUICK CONNECTORS HANG SEVERAL FEET BELOW THE BRIDGE CABLE TRAY AND POSE ACCESSIBILITY, ALARA, AND SAFETY CONCERNS. THE OBJECTIVE OF THIS EWR IS TO PLACE THE CET QUICK CONNECTORS FOR REFUELING INTO THE BRIDGE CABLE TRAY WHERE THEY CAN BE ACCESSED CONVENIENTLY AND SAFELY.

REVISION 2 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCORPORATES CHANGES FROM REVISION 1 TO CORRECT THE POST INSTALLATION TESTING REQUIREMENTS FOR SYSTEM VERIFICATION.

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 RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT, (3) A LOSS OF COOLANT ACCIDENT (LOCA).



NEW CET EXTENSION CABLE ASSEMBLIES WILL BE REQUIRED FOR THIS MODIFICATION WHICH COULD ADD TO THE FIRE LOADING OF THE PLANT. THEREFORE, THE DESIGN CRITERIA REQUIRES THAT ALL SUCH CABLE ASSEMBLIES MEET THE IEEE-383-1974 FLAME TEST REQUIREMENTS. BECAUSE OF THIS THERE WILL BE NO SIGNIFICANT INCREASE OF FIRE LOADING CAUSED BY THIS MODIFICATION.

THIS MODIFICATION HAS BEEN REVIEWED 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 SHUT DOWN THE PLANT DURING POSTULATED FIRES.

THE DESIGN CRITERIA REQUIRES THAT NEW CET EXTENSION CABLE ASSEMBLIES INSTALLED UNDER THIS MODIFICATION BE QUALIFIED PER IEEE 344-1975, THEREFORE, THIS MODIFICATION WILL REMAIN FUNCTIONAL DURING AND AFTER A SEISMIC EVENT.

THE DESIGN CRITERIA REQUIRES THAT THE NEW CET EXTENSION CABLE ASSEMBLIES INSTALLED UNDER THIS EWR BE QUALIFIED PER IEEE 323-1974 AND IEEE 383-1974 FOR FLAME AND LOCA, THEREFORE, THIS MODIFICATION SHALL REMAIN FUNCTIONAL DURING AND AFTER A LOSS OF COOLANT ACCIDENT.

THEREFORE, 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-4653

STEAM GENERATOR WIDE RANGE LEVEL INDICATION

THIS ENGINEERING WORK REQUEST ADDRESSES THE ADDITION OF STEAM GENERATOR WIDE RANGE LEVEL INDICATION ON THE MAIN CONTROL BOARD.

THIS MODIFICATION WILL INSTALL TWO NEW VERTICAL SCALE INDICATORS TO DISPLAY STEAM GENERATOR WIDE RANGE WATER LEVEL ON THE MCB. THE EXISTING CHART RECORDER LR-460 WILL BE RETAINED FOR RECORD KEEPING AND TO SERVE AS A BACKUP LEVEL INDICATOR. THIS MODIFICATION WILL NOT ALTER THE AVAILABILITY OF THE EXISTING CHART RECORDERS.

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 RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES AND (2) A SEISMIC EVENT.

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



AN APPENDIX R CONFORMANCE REVIEW SHALL BE PREPARED TO DEMONSTRATE THAT CONTINUED COMPLIANCE WITH 10CFR50 APPENDIX R REQUIREMENTS IS MAINTAINED.

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

THE STEAM GENERATOR (SG) WIDE RANGE WATER LEVEL INSTRUMENTATION IS DESIGNATED SEISMIC CATEGORY 1. THE DESIGN CRITERIA REQUIRES ALL NEW SG WIDE RANGE LEVEL INSTRUMENTATION BE QUALIFIED AND INSTALLED PER IEEE-344-1975. THEREFORE, A SEISMIC EVENT WILL NOT IMPAIR THE PROPER OPERATION OF THE SG WIDE RANGE WATER LEVEL INSTRUMENTATION.

THE DESIGN CRITERIA REQUIRES A HUMAN FACTORS REVIEW OF THIS MODIFICATION BE PERFORMED PRIOR TO ISSUANCE OF DESIGN OUTPUTS, TO MINIMIZE THE PROBABILITY OF OPERATOR ERROR.

THE ITEMS ABOVE ENSURE 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.

THE ACCURACY AND READABILITY OF THE NEW INDICATORS ARE AS GOOD OR BETTER THAN THE EXISTING RECORDER. THEREFORE, THE INDICATION UNCERTAINTY IS AS GOOD OR BETTER THAN THE EXISTING SYSTEM.

THEREFORE, 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.

IN ACCORDANCE WITH THE PROVISIONS OF 10CFR50.59, THIS MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION BECAUSE:

- 1) THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT IS NOT INCREASED.

THE INDICATORS ADDED TO THE MCB DO NOT PROVIDE ANY AUTOMATIC CONTROL FUNCTION. THEY ARE REDUNDANT TO THE EXISTING CHART RECORDERS, BUT PROVIDE A MORE READABLE INDICATION TO THE OPERATOR. THESE INDICATORS ARE SEISMIC CLASS 1E AND WILL NOT INCREASE THE PROBABILITY OF FAILURE OF THE MCB OR ADJACENT INDICATORS DUE TO A SEISMIC EVENT. AN APPENDIX R CONFORMANCE REVIEW WILL DEMONSTRATE CONTINUED COMPLIANCE WITH APPENDIX R REQUIREMENTS.



- 2) THE POSSIBILITY FOR AN ACCIDENT OR MALFUNCTION OF A DIFFERENT TYPE THAN ANY EVALUATED PREVIOUSLY IN THE SAFETY ANALYSIS IS NOT CREATED.

AS DISCUSSED ABOVE, THESE INDICATORS ARE IN ADDITION TO THE EXISTING CHART RECORDERS AND ARE CLASSIFIED 1E. THIS ADDITION TO THE MCB WILL NOT CREATE THE POSSIBILITY OF A FAILURE NOT PREVIOUSLY ANALYZED.

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

THE ADDED INDICATORS PROVIDE A MORE CLEAR INDICATION AND INCREASE THE ABILITY OF THE OPERATOR TO MONITOR WIDE RANGE LEVEL. THE MARGIN OF SAFETY IS NOT AFFECTED BY THIS MODIFICATION.

EWR-4656

LOWER INTERNALS STORAGE STAND MODIFICATIONS PHASE II

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATIONS TO THE REACTOR VESSEL LOWER INTERNALS STORAGE STAND.

THIS MODIFICATION INVOLVES AN ADDITIONAL MODIFICATION TO THE LOWER INTERNALS STORAGE STAND SUBSEQUENT TO THE CHANGES DESCRIBED IN THE ORIGINAL SAFETY ANALYSIS.

- A. THIS MODIFICATION MOVES THE EASTERN SUPPORT COLUMN 1/2 INCH OUTWARD (AWAY FROM THE CENTER OF THE SUPPORT STAND) IN ORDER TO PROVIDE MORE CLEARANCE FOR THE LOWER INTERNALS. THIS IS ACCOMPLISHED BY ADDING ONE ADDITIONAL HALF-INCH THICK SPACER PLATE ON THE EAST SIDE OF THE NORTH AND SOUTH SUPPORT COLUMNS. THE SPACER PLATES WILL BE BETWEEN THE SUPPORT COLUMNS AND THE UPPER AND LOWER CONNECTION SUPPORT RINGS.

THIS ANALYSIS REVIEWS UNDER WHAT PLANT OPERATING CONDITION THE LOWER INTERNALS STORAGE HARDWARE WILL BE IN USE; AND DETERMINES WHAT DESIGN BASIS EVENTS ARE RELATED TO THE USE OF THE MODIFIED HARDWARE.

THE FOLLOWING DESIGN BASIS EVENTS ARE RELATED TO THE PROPOSED MODIFICATION: SEISMIC EVENTS AND FIRES.

THE LOWER INTERNALS STORAGE STAND MAY BE LEFT IN POSITION ON THE LOWER LEVEL OF THE REACTOR CAVITY. THE LOCATION OF THE LOWER INTERNALS STORAGE STAND IS NOT ADJACENT TO ANY SAFETY RELATED SYSTEM OR COMPONENT. THE LOWER INTERNALS STORAGE STAND'S LOW CENTER OF GRAVITY, WIDE BASE COMBINED WITH THE COEFFICIENT OF FRICTION ARE SUFFICIENT TO ENSURE THAT THE STAND WILL REMAIN IN PLACE DURING BOTH THE OPERATING BASIS AND SAFE SHUTDOWN EARTHQUAKES.





THE MATERIALS TO BE USED IN THIS PROPOSED MODIFICATION IS STAINLESS STEEL WHICH IS NON-COMBUSTIBLE. IT WILL NOT CHANGE THE FREQUENCY OR RESULTS OF ANY FIRE THAT IS POSTULATED.

BASED ON THE FOREGOING, THE MODIFICATIONS WILL CAUSE NO CHANGES TO THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION.

THE MODIFICATIONS WILL NOT CHANGE THE ADEQUACY OF STRUCTURES, SYSTEMS, OR COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS.

THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF SAFETY-RELATED EQUIPMENT PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT ARE NOT CHANGED.

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

THE PROPOSED MODIFICATION DOES NOT INVOLVE A CHANGE TO THE TECHNICAL SPECIFICATIONS AND IS NOT AN UNREVIEWED SAFETY QUESTION.

EWR-4670

MQ-483 INVERTER REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF THE EXISTING MQ-483 INVERTER WITH A NEW QUALIFIED ONE.

REVISION 2 OF THE DESIGN CRITERIA STATES THE SOLID STATE CONTROLS, INC. (SCI) INVERTER IS PART NO. EV 12004/5 AS OPPOSED TO PART 12004 AS WELL AS QUALIFYING IEEE 383-1974 AS THE STANDARD USED FOR BOTH THE DESIGN CRITERIA AND SAFETY ANALYSIS.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA FSAR AND 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) INCREASE/DECREASE IN HEAT REMOVAL BY THE SECONDARY SYSTEM
- 4) PIPE BREAKS INSIDE CONTAINMENT

SECTION 3.0 AND 9.0 OF THE DESIGN CRITERIA REQUIRE THAT THE NEW MQ-483 INVERTER BE SEISMICALLY QUALIFIED TO GINNA SPECIFIC SEISMIC RESPONSE SPECTRA.

IN ADDITION, IT IS REQUIRED THAT THE INVERTER BE MOUNTED TO PREVENT SEISMIC FAILURE.



THIS MODIFICATION INVOLVES THE REPLACEMENT OF EQUIPMENT AND MAY INVOLVE THE INSTALLATION OF CABLE IN THE RELAY ROOM FIRE AREA. IF NEW CABLE IS TO BE INSTALLED, A REVIEW WILL BE PERFORMED TO ASSURE CONTINUED COMPLIANCE WITH 10CFR50, APPENDIX R.

WIRING AND EQUIPMENT WILL BE INSTALLED IN COMPLIANCE WITH EE-29.

ALL NEW CABLING, IF REQUIRED, WILL BE QUALIFIED TO IEEE 383-1984 FLAME TEST REQUIREMENTS.

FIRE BARRIER PENETRATIONS WILL BE REPAIRED AND REPLACED IN ACCORDANCE WITH EXISTING PLANT PROCEDURES, NOT DEGRADING EXISTING SEALS.

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 TABLE 3-1 OF 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.

THIS MODIFICATION WILL NOT EFFECT THE CAPABILITIES OF THE ALTERNATIVE SHUTDOWN SYSTEM. THERE SHALL BE NO EFFECT ON EXISTING PROCEDURES FOR OBTAINING AN ALTERNATE SAFE SHUTDOWN, THEREBY COMPLYING WITH 10CFR50 APPENDIX R.

INSTRUMENT LOOP P479 MONITORS STEAM GENERATOR PRESSURE.

THIS MODIFICATION DOES NOT MODIFY THE INSTRUMENT LOOP. SINCE THE DESIGN CRITERIA REQUIRES THAT THE REPLACEMENT INVERTER ADDS NO NEW FAILURE MODES BEYOND THOSE OF THE EXISTING INVERTER, THE INTEGRITY OF LOOP P479 WILL BE UNAFFECTED BY THIS MODIFICATION. THEREFORE, NO NEW INSTRUMENT ERRORS OR FAILURES WILL BE INTRODUCED THAT COULD LEAD TO AN INCREASE OR DECREASE IN SECONDARY SYSTEM HEAT REMOVAL.

INSTRUMENT LOOP P950 MONITORS CONTAINMENT PRESSURE. THIS MODIFICATION DOES NOT MODIFY THE INSTRUMENT LOOP. SINCE THE DESIGN CRITERIA REQUIRES THAT THE REPLACEMENT INVERTER ADDS NO NEW FAILURE MODES BEYOND THOSE OF THE EXISTING INVERTER, THE INTEGRITY OF LOOP P950 WILL BE UNAFFECTED BY THIS MODIFICATION. THEREFORE, NO NEW INSTRUMENT ERRORS OR FAILURES WILL BE INTRODUCED THAT COULD LEAD TO A FALSE INDICATION OF CONTAINMENT PRESSURE DURING A PIPE BREAK.

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.



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 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.

EWR-4750

CONTAINMENT FANS 1B/1D DAMPER SOLENOID ISOLATION FUSES

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE ADDITION OF ISOLATION FUSES TO THE LOOP ENTRY DAMPER SOLENOID VALVE CIRCUITS FOR CONTAINMENT RECIRCULATION FANS 1B AND 1D.

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) SEISMIC EVENT
- 2) MAJOR AND MINOR FIRES
- 3) PIPE BREAKS INSIDE AND OUTSIDE CONTAINMENT
- 4) BREAK IN RCS PRESSURE BOUNDARY LINES THAT PENETRATE CONTAINMENT

THE NEW FUSE BLOCKS WILL BE SEISMICALLY MOUNTED AND THEREFORE WILL ENSURE A SEISMIC EVENT WILL NOT DEGRADE THE INTEGRITY OF BUS 16 UNIT 13C OR BUS 14 UNIT 2C ENCLOSURES IN WHICH THE FUSES ARE MOUNTED.

THE MODIFICATION IS DESIGNED TO COMPLY WITH 10CFR APPENDIX R CRITERIA AND ENGINEERING PROCEDURES. THEREFORE, THE PROBABILITY OF A MAJOR OR MINOR FIRE WILL NOT BE INCREASED.

THE FOLLOWING DESIGN BASIS EVENTS (DBE) WILL NOT AFFECT OR BE AFFECTED BY THIS MODIFICATION. ANY DBE THAT CAUSES A LEAD-TO-LEAD SHORT IN THE DAMPER SOLENOID VALVE CIRCUIT WILL CAUSE THE DAMPER SOLENOID VALVE CIRCUIT FUSES TO FAIL. FUSE COORDINATION ASSURES THAT THESE FUSES WILL FAIL BEFORE THE MAIN FAN CONTROL FUSES. THEREFORE, LOSS OF FANS 1B AND 1D, DURING ANY DBE DUE TO A LEAD-TO-LEAD SHORT IN THE DAMPER SOLENOID VALVE CIRCUIT, WILL NOT OCCUR.

BASED UPON THE ABOVE ANALYSIS:

- 1) STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS ARE ADEQUATE.
- 2) MARGIN OF SAFETY DURING NORMAL OPERATING AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.



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-4754  
CABLE RELOCATIONS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE UPGRADING OF SEVERAL CIRCUIT SPLICES IN THE INTERMEDIATE BUILDING AND RELOCATION OF CABLES ABOVE THE CONTAINMENT FLOOD LEVEL.

REVISION #2 ADDS A FIRE PROTECTION REQUIREMENT. CABLES AND SPLICES SHALL MEET THE REQUIREMENTS OF IEEE 383-1974.

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) MAJOR AND MINOR FIRES
- 3) PIPE BREAKS, INSIDE AND OUTSIDE CONTAINMENT

THE DESIGN CRITERIA REQUIRES THAT ANY NEW OR RELOCATE CONDUIT BE MOUNTED TO PREVENT SEISMIC FAILURE. THEREFORE, INSTALLED CABLE SHALL REMAIN FUNCTIONAL AFTER A SEISMIC EVENT.

THIS MODIFICATION INVOLVES THE ADDITION OF NEW CABLE AND SPLICES IN CONTAINMENT AND IN THE INTERMEDIATE BUILDING. THE DESIGN CRITERIA REQUIRES THAT ALL NEW CABLE AND SPLICES BE QUALIFIED TO IEEE-383-1974 FLAME AND LOCA REQUIREMENTS.

FIRE BARRIER PENETRATIONS WILL BE REPAIRED AND 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 SINCE THERE IS NO AFFECT ON SEPARATION OF EXISTING CIRCUITS, ASSOCIATED CIRCUITS, OR FIRE AREA BOUNDARIES AS ANALYZED IN THE APPENDIX R SUBMITTAL. THE DESIGN CRITERIA REQUIRES THAT AN APPENDIX R CONFORMANCE VERIFICATION BE PERFORMED.

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 EFFECTED. THIS MODIFICATION, THEREFORE, COMPLIES WITH 10CFR50, APPENDIX R.





THE DESIGN CRITERIA REQUIRES THAT NEW CABLE AND SPLICES, INSTALLED AS PART OF THE CABLE RELOCATIONS, SHALL NOT AFFECT INSTRUMENT LOOP INTEGRITY. THEREFORE, NO NEW FAILURE MODES SHALL BE INTRODUCED INTO THE INSTRUMENT LOOPS.

THE DESIGN CRITERIA COLLECTIVELY REQUIRES ALL CABLES TO BE RELOCATED, TO UTILIZE MATERIAL AND CONFIGURATIONS APPROVED UNDER 10CFR50.49; AND CALIBRATION OF EACH LOOP TO ENSURE THAT LOOP FUNCTION IS NOT AFFECTED; THAT LOOP ACCURACY BE ADDRESSED, AND VERIFIED AS ACCEPTABLE, IN THE SYSTEM INTEGRATED PACKAGES. THEREFORE, LOOP ACCURACY SHALL NOT BE DEGRADED BY THIS MODIFICATION.

ALL MATERIAL AND CONFIGURATIONS UTILIZED UNDER THIS MODIFICATION SHALL BE APPROVED UNDER 10CFR50.49. THEREFORE, PIPE BREAKS INSIDE OR OUTSIDE CONTAINMENT, THAT CREATE A LOCA, HELB, SLB, ETC, SHALL NOT DEGRADE THE INTEGRITY OF SPLICES OR CABLES USED IN THIS MODIFICATION.

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

BASED UPON A REVIEW OF THE UFSAR, THE STRUCTURAL REANALYSIS PLAN (SRP) 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 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-4761  
HIGH HEAD RECIRCULATION EVALUATION

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE INTERCHANGING OF THE POWER AND CONTROL POWER WIRING OF MOVs 857A AND 857B. A REVIEW HAS BEEN MADE OF ALL EVENTS REQUIRING ANALYSIS BY NRC REGULATORY GUIDE 1.70. THE EVENTS RELATING TO THIS MODIFICATION ARE FIRE, SEISMIC, LOCA, AND LOSS OF POWER EVENTS.

THE FIRST EVENT ANALYZED IS THE EFFECT OF A SEISMIC EVENT. THE DESIGN CRITERIA REQUIRES THE MODIFICATION TO BE SEISMIC CATEGORY 1. 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 MODIFICATION IS REQUIRED TO 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 DESIGN CRITERIA PROVIDES REQUIREMENTS TO PRESERVE ANY SILICONE FOAM FIRE STOP OR SEAL THAT MAY NEED TO BE PENETRATED.

THE DESIGN CRITERIA REQUIRES AN APPENDIX R REVIEW. THEREFORE, THIS MODIFICATION WILL NOT AFFECT EXISTING COMPLIANCE METHODS.

THE THIRD EVENT ANALYZED IS THE EFFECT OF A LOCA. DURING THE SUMP RECIRCULATION PHASE FOLLOWING A LOCA, IF HIGH HEAD RECIRCULATION IS NECESSARY (IN CURRENT PROCEDURES WHEN RHR TOTAL IS LESS THAN 400 GPM), THE 857A, B, C VALVES MUST BE OPENED. PRESENT PROCEDURE ES-1.3 CALLS FOR STARTING RHR PUMPS ALIGNED TO THE SUMP AND DISCHARGING TO THE REACTOR THROUGH THE MOV 852A, B VALVES PRIOR TO OPENING 857A, B, C IF HIGH HEAD RECIRCULATION IS REQUIRED. SINGLE FAILURE CRITERIA REQUIRES THE TIMING OF THE ACTIVE FAILURE TO OCCUR AT THE BEGINNING OF THE HIGH HEAD RECIRCULATION PHASE. A FAILURE OF D/G 1A PRIOR OPENING THE 857 VALVES WOULD RESULT IN BOTH TRAINS LEADING TO THE SAFETY INJECTION/CONTAINMENT SPRAY PUMPS BEING BLOCKED AND POTENTIAL LOSS OF CORE COOLING. THIS IS THE PROBLEM WHICH WILL BE CORRECTED THRU THIS MODIFICATION.

THE FOURTH EVENT ANALYZED IS THE EFFECT OF A LOSS OF POWER ON THE OPERATIONS OF THE VALVES. AS STATED IN THE PREVIOUS PARAGRAPH A FAILURE OF D/G 1A PRIOR TO OPENING THE 857 VALVES WOULD RESULT IN BOTH TRAINS LEADING TO THE SAFETY INJECTION/CONTAINMENT SPRAY PUMPS BEING BLOCKED AND POTENTIAL LOSS OF CORE COOLING. THIS WILL BE CORRECTED BY THIS MODIFICATION. THEREFORE BASED UPON THE ABOVE ANALYSIS, IT HAS BEEN DETERMINED THAT:

- A) THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED AND
- B) THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR 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 MARGINS OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION IS NOT REDUCED.



EWR-4769  
SAFEGUARDS RACK SI RELAYS

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE REMOVAL OF UNUSED RELAYS FROM THE SAFEGUARDS RACKS.

ALL BFD RELAYS, USED FOR SAFEGUARDS INITIATION LOCATED IN THE RELAY ROOM SAFEGUARDS RACKS, ARE BEING REPLACED IN ACCORDANCE WITH MAINTENANCE, PROCEDURE M-59.9. SIXTEEN OF THESE RELAYS ARE UNUSED AND REPRESENT AN UNNECESSARY EXPOSURE TO FAILURE FOR THE SAFEGUARDS SYSTEMS. THE EIGHT UNUSED RELAY COILS IN EACH TRAIN ARE CONTROLLED BY THE SAME FUSES CONTROLLING ALL THE OTHER OPERATING SAFEGUARDS SYSTEMS. THEREFORE, A COIL FAILURE IN ANY OF THESE UNITS COULD KEEP THE SAFETY INJECTION SEQUENCE FROM BEING INITIATED. THE RELAYS BEING REMOVED SERVE NO FUNCTIONAL PURPOSE. ONE OF THE TWO COIL LEADS FOR 6 OF THESE RELAYS WERE DISCONNECTED AS PART OF EWR 2950. THE REMAINING 10 RELAYS HAVE ALL UNUSED CONTACTS. COIL WIRING IS ACCOMPLISHED BY USE OF JUMPER CONNECTIONS FROM COIL TO COIL. SOME OF THESE WIRES CAN BE REMOVED WHILE PORTIONS OF OTHERS WILL BE NEEDED TO MAKE UP REMAINING CONNECTIONS.

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 EVENT RELATED TO THIS MODIFICATION IS FIRE.

NEW WIRING 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 ALL SUCH WIRE MEET THE IEEE-383-1974 FLAME TEST REQUIREMENTS. THEREFORE, THIS MODIFICATION WILL CAUSE NO SIGNIFICANT INCREASE IN FIRE PROPAGATION HAZARD.

AS A RESULT, THE MARGINS OF SAFETY DURING NORMAL OPERATIONS AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE PLANT WILL BE UNCHANGED. 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 UNCHANGED BY THE PROPOSED MODIFICATION. IN FACT, BECAUSE EQUIPMENT CONNECTED TO SAFETY INJECTION CIRCUITS (ALTHOUGH IT SERVES NO FUNCTIONAL PURPOSE) IS BEING REMOVED, THE PROBABILITY OF MALFUNCTIONING OF THE SI CIRCUITRY IS REDUCED.

THEREFORE, 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. THIS MODIFICATION IS BEING PERFORMED TO REMOVE EXCESS RELAYS FROM THE RELAY RACKS THUS REMOVING FROM THE CIRCUITS A PIECE OF EQUIPMENT THAT COULD MALFUNCTION.



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

EWR-4789

TDAFP STEAM ADMISSION VALVES

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION WHICH REWIRES THE CONTROL CIRCUIT TO SEAL IN AROUND THE CONTROL SWITCH SO THAT WHEN THE CIRCUIT IS ENERGIZED TO OPEN THE VALVE WILL CONTINUE TO OPEN TO THE FULLY OPEN POSITION.

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 (1) FIRES AND (2) SEISMIC EVENTS, AND (3) LOSS OF AUXILIARY FEEDWATER.

THE MODIFICATION DOES NOT INCREASE THE POSSIBILITY OR IMPACT ON THE LEVEL OF FIRE PROTECTION AND ALTERNATE SHUTDOWN CAPABILITIES, NOR THE FIRE PROTECTION AND ALTERNATE SHUTDOWN LICENSE CONDITIONS AND TECHNICAL SPECIFICATIONS.

ADDITIONAL WIRING AND CABLE WILL BE ADDED IN THIS MODIFICATION, WHICH COULD ADD TO THE FIRE LOADING OF THE PLANT. THEREFORE, THE DESIGN CRITERIA REQUIRES THAT ALL SUCH WIRING AND CABLE MEET THE IEEE 383-1974 FLAME TEST REQUIREMENTS. CONSEQUENTLY, THERE WILL BE NO SIGNIFICANT INCREASE OF FIRE LOADING CAUSED BY THIS MODIFICATION.

THE MODIFICATION DOES NOT INCREASE THE IMPACT OF A SEISMIC EVENT. THE DESIGN OF THE MODIFICATION SHALL BE SEISMIC CATEGORY 1 IN ACCORDANCE WITH THE DESIGN CRITERIA.

THE MODIFICATION DOES NOT INCREASE THE IMPACT OF LOSS OF AUXILIARY FEEDWATER. THE DESIGN OF THE MODIFICATION DOES NOT ALTER THE MANUAL OR AUTOMATIC OPERATING CHARACTERISTICS OF THE AUXILIARY FEEDWATER SYSTEM. REQUIRING THE VALVE TO GO FULL OPEN ONCE THE CIRCUIT IS ENERGIZED VS. HAVING IT STOP WHEN THE SWITCH IS RELEASED MAKES MANUAL AND AUTOMATIC ACTUATION SIMILAR. THIS DOES NOT ADVERSELY IMPACT THE SYSTEM.

THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY, PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL NOT BE INCREASED BY THE PROPOSED MODIFICATION.

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

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





THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION OR REQUIRE A TECHNICAL SPECIFICATION CHANGE.

EWR-4794

SECURITY GATE REPLACEMENT

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF FIVE (5) EXISTING SECURITY GATE OPERATORS AND THE OUTER CANTILEVER VEHICLE GATE AT THE SHIPPING AND RECEIVING BUILDING WITH AN OVERHEAD SLIDE GATE. SUPPORTS WILL ALSO BE ADDED TO EXISTING GATES TO REDUCE VIBRATIONS.

THE PURPOSE OF THIS MODIFICATION IS TO IMPROVE SECURITY GATE RELIABILITY AND MAINTAINABILITY.

EXCESSIVE VIBRATION IN THE SECURITY GATES HAS CONTINUALLY BEEN THE SOURCE OF PROBLEMS FOR THE SECURITY INTRUSION DETECTORS. DURING HIGH WINDS THE EXCESS SECURITY GATE VIBRATIONS TRIP THE SECURITY E-FIELD. THIS RESULTS IN THE NECESSITY FOR SECURITY PERSONNEL TO PATROL THE AREA.

A REVIEW HAS BEEN MADE OF ALL EVENTS ANALYZED IN THE GINNA STATION FSAR AND THE EVENTS REQUIRING ANALYSIS BY NRC REGULATORY GUIDE 1.70. THE ONLY EVENTS RELATED TO THIS MODIFICATION ARE INTERNAL AND EXTERNAL EVENTS, SPECIFICALLY NATURAL EVENTS AND LOSS OF AC.

FIRE

ALL CABLE AND WIRE ORDERED FOR THIS MODIFICATION SHALL MEET THE REQUIREMENTS OF IEEE 383-1974 FLAME TEST, THUS MITIGATING ANY POTENTIAL FOR PROPAGATING A FIRE.

EARTHQUAKE

DURING A SEISMIC EVENT, THE SECURITY GATE MODIFICATION WILL HAVE NO SAFETY FUNCTION, AND NEED NOT REMAIN FUNCTIONAL.

LOSS OF AC

THIS MODIFICATION SHALL BE REVIEWED SO AS TO ENSURE THE ISOLATION OF CLASS 1E AND NON-CLASS 1E SYSTEMS. THE SECURITY GATE SYSTEM SOURCE OF POWER IS FROM A NON-SAFEGUARDS BUS, WITH A STANDBY POWER SOURCE DEDICATED TO THE SECURITY SYSTEM. THEREFORE, THE CLASS 1E ELECTRICAL SYSTEM IS NOT EFFECTED BY THIS MODIFICATION.

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



EWR-4798  
SOLENOID UPGRADE

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE INSTALLATION OF BLOCKING DIODES ON SELECTED SOLENOID VALVE COILS TO PROVIDE PROTECTION AGAINST VOLTAGE TRANSIENTS DUE TO AN INDUCTIVE KICK BACK. THE DIODES ARE A RETROFIT PROVIDED BY THE VALVE MANUFACTURER, VALCOR, AND WILL BE INSTALLED ACROSS THE SOLENOID COILS OF THE MAINSTEAM ISOLATION AND REACTOR HEAD VENT VALVES.

REVISION 1 TO THIS DESIGN CRITERIA AND SAFETY ANALYSIS INCLUDES THE INSTALLATION OF DIODE ASSEMBLIES ACROSS THE HYDROGEN MONITORING SYSTEM SOLENOIDS, V921, V922, V923 AND V924.

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 RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT, (3) A MAIN STEAM LINE BREAK.

CABLE REQUIRED FOR THIS MODIFICATION COULD ADD TO THE FIRE LOADING OF THE PLANT. THEREFORE, THE DESIGN CRITERIA REQUIRES THAT ALL SUCH CABLE MEET THE IEEE-383-1974 FLAME TEST REQUIREMENTS. BECAUSE OF THIS THERE WILL BE NO SIGNIFICANT INCREASE OF FIRE LOADING CAUSED BY THIS MODIFICATION.

THIS MODIFICATION HAS BEEN REVIEWED TO ENSURE THAT FAILURE OF ANY ELECTRICAL CABLE INSTALLED AS PART OF THIS MODIFICATION WILL NOT RESULT IN THE DISABLING OF VITAL EQUIPMENT NEEDED TO SAFELY SHUT DOWN THE PLANT DURING POSTULATED FIRES. THE DESIGN CRITERIA REQUIRES THAT NEW RECTIFIER ASSEMBLIES INSTALLED UNDER THIS MODIFICATION BE QUALIFIED PER IEEE 344-1975, THEREFORE, THIS MODIFICATION WILL REMAIN FUNCTIONAL DURING AND AFTER A SEISMIC EVENT.

THE DESIGN CRITERIA REQUIRES THAT THE NEW RECTIFIER ASSEMBLIES INSTALLED UNDER THIS EWR BE QUALIFIED PER IEEE 323-1974, THEREFORE THIS MODIFICATION SHALL REMAIN FUNCTIONAL DURING AND AFTER A MAIN STEAM LINE BREAK.

THEREFORE, 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.

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

THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION OR REQUIRE A TECHNICAL SPECIFICATION CHANGE.

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 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-4862  
NIS TRIP BYPASS

THIS ENGINEERING WORK REQUEST (EWR) ADDRESSES THE REPLACEMENT OF THE EXISTING 108% OVERPOWER TRIP FUNCTION TEST RELAY PUSHBUTTON SWITCHES WITH MAINTAINABLE TYPE SWITCHES. MAINTAINABLE TYPE SWITCHES ARE NECESSARY TO MAINTAIN ENERGIZATION OF THE TEST RELAYS WHICH DEENERGIZE THE REACTOR TRIP BISTABLE RELAYS DURING MAINTENANCE OF THE 108% OVERPOWER NIS POWER RANGE CHANNELS. DEENERGIZING EACH TRAIN'S 108% OVERPOWER REACTOR TRIP BISTABLE RELAY DURING CHANNEL MAINTENANCE PLACES THE CHANNEL IN THE TRIP MODE WHICH SATISFIES THE REQUIREMENTS OF GINNA TECHNICAL SPECIFICATIONS.

THE EXISTING REACTOR TRIP RELAY LOGIC OF THE 108% OVERPOWER NIS POWER RANGE CHANNELS AT GINNA STATION CONSISTS OF THE FOLLOWING:

EACH OF THE FOUR 108% OVERPOWER NIS POWER RANGE CHANNELS HAVE A TEST RELAY ON EACH TRAIN UTILIZED FOR DEENERGIZING THE 108% OVERPOWER REACTOR TRIP BISTABLE RELAYS. EXISTING MOMENTARY TYPE SWITCHES, LOCATED IN THE RELAY LOGIC TEST RACKS (RLTR1, RLTR2) IN THE RELAY ROOM, ENERGIZE THE TEST RELAYS WHICH DEENERGIZE THE 108% OVERPOWER REACTOR TRIP BISTABLE RELAYS PLACING THE CHANNEL IN THE TRIP MODE. THE EXISTING SWITCHES ARE PANEL MOUNT, SINGLE POLE, MOMENTARY PUSHBUTTON TYPE.

THE FOUR EXISTING MOMENTARY PUSHBUTTON TYPE SWITCHES ON EACH OF BOTH TRAINS (TOTAL OF EIGHT) WILL BE REPLACED BY MAINTAINABLE SELECTOR TYPE SWITCHES. THIS WILL ALLOW THE 108% OVERPOWER TRIP FUNCTION TEST RELAY TO REMAIN ENERGIZED AND MAINTAIN THE CHANNEL IN A TRIP MODE DURING MAINTENANCE.



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 RELATED TO THIS MODIFICATION ARE (1) MAJOR AND MINOR FIRES, (2) A SEISMIC EVENT, (3) A REACTOR OVERPOWER TRANSIENT (108% OVERPOWER REACTOR TRIP).

NO NEW WIRING, FIELD CABLE, OR OTHERWISE FLAMMABLE MATERIALS WILL BE ADDED TO THE PLANT UNDER THIS MODIFICATION, THEREFORE, NO INCREASE IN FIRE LOADING IS IMPOSED.

THE NEW SELECTOR SWITCHES ARE DESIGNATED SEISMIC CATEGORY 1. THEREFORE, A SEISMIC EVENT WILL NOT IMPACT THE PROPER OPERATION OF THE SWITCHES.

CHANGING THE SUBJECT SWITCHES FROM MOMENTARY TO MAINTAINABLE DOES NOT AFFECT THE OPERATION OF THE NIS 108% OVERPOWER REACTOR TRIP BECAUSE ACTUATION OF THE SWITCHES WILL PLACE THE CHANNEL IN THE TRIP MODE. THEREFORE, THIS MODIFICATION DOES NOT EFFECT THE NIS RESPONSE TO AN OVERPOWER TRANSIENT.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) MAJOR AND MINOR FIRES
- 2) A SEISMIC EVENT
- 3) A REACTOR OVERPOWER TRANSIENT (108% OVERPOWER REACTOR TRIP)

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-4933

S/G PRESSURE TUBING RELOCATION

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES MODIFICATION OF THE "B" STEAM GENERATOR PRESSURE TRANSMITTER(S) TUBING AND SUPPORTS. THE PURPOSE OF THE MODIFICATION IS TO MITIGATE THE POTENTIAL FOR THE RECURRENCE OF FREEZING SENSOR LINES IN THE INTERMEDIATE BUILDING IN THE FOLLOWING FASHION:

- 1) REROUTING TUBING FOR SENSOR LINES PT-479 AND PT-483
- 2) THE ANALYSIS ON NEW TUBE ROUTING.
- 3) PROVIDE INSULATION IF DEEMED NECESSARY TO ENSURE THAT THE TUBING CONTENTS REMAIN ABOVE 32°F.
- 4) PROVIDE SEISMIC RESTRAINT FOR THE AFFECTED TUBING.





THE FOLLOWING ARE RESPONSES TO PRE-PORC COMMENTS ON EWR 4933 DESIGN CRITERIA AND SAFETY ANALYSIS REVISION 0.

1. COMMENT: WHY NOT ELIMINATE THE ADDITION OF THE FOUR VALVE SET-UP AND JUST REPLACE THE TUBING. THE TUBING CAN BE PRE-RUN AND THEN THE CONNECTIONS MADE IN A SHORT TIME.

RESPONSE: THE PROPOSED DESIGN REQUIRED THAT THE VALVES BE INSTALLED DURING THE 1989 SPRING OUTAGE AND THEN PERFORM THE REMAINING MODIFICATIONS POST-OUTAGE. THE PRIMARY OBJECTIVE FOR THIS APPROACH AT THE TIME WAS TO MAKE MODIFICATIONS TO THE SYSTEM WITHOUT RENDERING ANY TRAIN INOPERABLE. BASED ON MY CONVERSATION WITH YOU ON 5/2/89, FILLING AND VENTING OF THE LINES AND RECALIBRATION OF THE TRANSMITTERS WILL BE REQUIRED. THIS WILL CAUSE ONE LINE AT A TIME TO BE INOPERABLE.

ON THE BASIS THAT FILLING, VENTING, AND RECALIBRATION IS REQUIRED IT IS PRUDENT TO ELIMINATE THE INSTALLATION OF THE VALVES. THE DESIGN CRITERIA WILL BE REVISED TO REFLECT THIS CHANGE.

2. COMMENT: SHOULD INCLUDE INSERVICE LEAK CHECK FOR PORTIONS OF TUBING WHICH CANNOT BE HYDROED.

RESPONSE: THIS OPTION WILL BE INCLUDED IN THE ECN WHEN THE DRAWINGS ARE ISSUED FOR CONSTRUCTION.

3. COMMENT: IS THERE A MINIMUM SLOPE REQUIREMENT FOR TUBING INSTALLATION.

RESPONSE: YES. THIS REQUIREMENT WILL BE SPECIFIED ON THE CONSTRUCTION DRAWINGS.

4. COMMENT: WHAT IS AN APPROPRIATE AIR SEAL.

RESPONSE: THE DETAILS OF AN APPROPRIATE AIR SEAL WILL BE EVALUATED DURING THE DESIGN PROCESS.

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

- A) FIRES
- B) SEISMIC EVENTS
- C) BELOW FREEZING AMBIENT TEMPERATURE
- D) POSTULATED RUPTURE OF STEAM OR FEEDWATER LINES
- E) DIFFERENTIAL DISPLACEMENT OF CONTAINMENT STRUCTURE AND INTERMEDIATE BUILDING



THIS MODIFICATION WILL NOT DEGRADE EXISTING FIRE BARRIERS OR AFFECT THE PERFORMANCE OF ANY EXISTING FIRE PROTECTION EQUIPMENT. ANY NEW MATERIALS USED IN ELECTRICAL MODIFICATIONS SHALL MEET THE REQUIREMENTS OF IEEE-383-1974, THUS MITIGATING THE POTENTIAL FOR PROPAGATING A FIRE.

ALL EXISTING FIRE PROTECTION FEATURES REQUIRED TO ASSURE COMPLIANCE WITH 10CFR50 APPENDIX R, OR TO MAINTAIN EQUIVALENT LEVELS OF PROTECTION FROM FIRES WILL BE MAINTAINED DURING AND FOLLOWING MODIFICATIONS TO THE TUBING AND CONTROL SYSTEMS.

SEISMIC EVENTS HAVE BEEN ANALYZED UNDER THE SEP RE-EVALUATION PROGRAM. THE MODIFICATION AND SUPPORTS WILL BE EVALUATED, IN REGARD TO A SEISMIC EVENT, TO CRITERIA IDENTICAL TO THE SEISMIC UPGRADE PROGRAM. THIS WILL ENSURE THAT ANY MODIFICATIONS WILL BE DESIGNED SO AS TO EQUAL OR IMPROVE THE SYSTEM'S CAPABILITY TO WITHSTAND A SEISMIC EVENT.

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

- A) THE MARGINS OF SAFETY DURING NORMAL OPERATION AND TRANSIENT CONDITIONS ANTICIPATED DURING THE LIFE OF THE STATION ARE NOT REDUCED.
- B) THE STRUCTURES, SYSTEMS, AND COMPONENTS PROVIDED FOR THE PREVENTION OF ACCIDENTS OR POSTULATED HIGH ENERGY PIPE BREAK AND THE MITIGATION OF THE CONSEQUENCES OF ACCIDENTS OR POSTULATED HIGH ENERGY BREAKS CONTINUE TO REMAIN ADEQUATE.
- C) ALL INSTRUMENT SENSING LINE PENETRATIONS SHALL BE LOCATED AT A MINIMUM HEIGHT OF SEVEN FEET (2.2 METERS) ABOVE FLOOR LEVEL, OR THAT ROUTING AND SUPPORT OF SENSING LINES SHALL ENSURE THAT THE FUNCTION OF THE LINES IS NOT AFFECTED BY VIBRATION, ABNORMAL HEAT, COLD, OR STRESS.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) FIRE PROTECTION FEATURES
- 2) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC AND TORNADO EVENTS
- 3) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A HIGH ENERGY LINE BREAK.



BASED UPON A REVIEW OF THE UFSAR, THE STRUCTURAL RE-ANALYSIS PLAN (SRP) 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 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-5053

REPAIR HD PUMP BARREL LEAK

THIS EWR (ENGINEERING WORK REQUEST) ADDRESSES THE MODIFICATION ON THE HEATER DRAIN TANK PUMP BARREL LEAK REPAIR.

THE PURPOSE OF THIS MODIFICATION IS TO INSTALL A PASSIVE VENT SYSTEM ON THE HEATER DRAIN PUMP BARREL. THE VENTS SHALL PROVIDE A CONTROLLED PATH FOR STEAM AND DEBRIS TO ESCAPE FROM THE ANNULAR REGION BETWEEN EACH PUMP BARREL AND LINER AT THE SAME TIME PREVENTING SAFETY AND/OR EROSION PROBLEMS.

A REVIEW HAS BEEN PERFORMED OF ALL EVENTS ANALYZED IN THE GINNA STATION UFSAR AND THE EVENTS REQUIRING ANALYSIS BY USNRC REG. GUIDE 1.70. THE EVENT RELATED TO THIS MODIFICATION IS A LOSS OF NORMAL FEEDWATER FLOW.

LOSS OF NORMAL FEEDWATER FLOW CAN OCCUR FROM A RUPTURE OF A PUMP BARREL DUE TO THE EROSION ACTION OF THE VENTING STEAM. THE ANALYZED EVENT IS FAR MORE SEVERE THAN A PUMP BARREL RUPTURE. THIS MODIFICATION WILL NOT INCREASE THE PROBABILITY OF A PUMP BARREL RUPTURE SINCE THE DESIGN CRITERIA REQUIRES PROPER INSPECTION OF THE PUMP BARREL.

THIS MODIFICATION IS NON-SEISMIC SINCE IT DOES NOT EFFECT THE SAFE SHUTDOWN OF THE REACTOR.

THIS MODIFICATION DOES NOT INCREASE THE FIRE LOADING IN FIRE AREAS CONTAINING SAFE SHUTDOWN EQUIPMENT OR DEGRADE EXISTING FIRE PROTECTION BECAUSE OF REQUIREMENT IN SECTION 27.0 OF THE DESIGN CRITERIA. ANALYSIS NECESSARY TO ASSURE CONTINUAL COMPLIANCE WITH 10CFR50, APPENDIX R HAS BEEN REQUIRED. THEREFORE, THE PROBABILITY AND CONSEQUENCES OF A FIRE AFFECTING COLD SHUTDOWN OF THE PLANT ARE UNCHANGED.

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 88-07  
CCW CHECK VALVE 743A INTERNALS REMOVAL

THIS TECHNICAL STAFF REQUEST ADDRESSES CHANGES TO CCW CHECK VALVE 743A. THIS CHANGE INVOLVES REMOVING CHECK VALVE 743A'S INTERNALS TO ALLOW CONCLUSIVE LEAK RATE TESTING OF CCW CHECK VALVE 743. IN THE ORIGINAL PLANT DESIGN VALVE 743A WAS UTILIZED AS THE CONTAINMENT ISOLATION VALVE FOR THE CCW LINE COMING FROM THE EXCESS LETDOWN HEAT EXCHANGER. HOWEVER, DUE TO LEAKAGE PROBLEMS WITH VALVE 743A, CHECK VALVE 743 WAS INSTALLED IN SERIES WITH 743A TO PERFORM THE CONTAINMENT ISOLATION FUNCTION. CONSEQUENTLY, CHECK VALVE 743A NO LONGER PERFORMS ANY SAFETY OR OPERATIONAL FUNCTION.

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 EVENTS RELATED TO THIS MODIFICATION ARE (1) SEISMIC EVENTS, (2) PIPE BREAKS INSIDE THE CONTAINMENT BUILDING, AND A MAIN STEAM PIPE RUPTURE.

THIS MODIFICATION WILL BE DESIGNED SUCH THAT IT WILL NOT AFFECT THE CAPABILITY OF CHECK VALVE 743A OR ITS CONNECTED PIPING AND SUPPORTS TO WITHSTAND A SEISMIC EVENT.

THIS MODIFICATION WILL NOT AFFECT THE BODY PRESSURE BOUNDARY FUNCTIONING OF CHECK VALVE 743A THEREFORE THE ASA B31.1 PRESSURE DESIGN WILL REMAIN VALID.

CCW CHECK VALVE 743 WILL STILL PROVIDE THE CONTAINMENT ISOLATION FUNCTIONS DURING A PRIMARY SYSTEM PIPE RUPTURE OR A MAIN STEAM LINE RUPTURE.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC.
- 2) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A PIPE BREAK INSIDE OR OUTSIDE CONTAINMENT.

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 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 89-05

RHR, SPENT FUEL, AND CVCS NON-REGENERATIVE HEAT EXCHANGERS BOLTING UPGRADE

THIS TECHNICAL STAFF REQUEST ADDRESSES FLANGE BOLTING UPGRADES FOR THE RHR, SPENT FUEL, AND NON-REGENERATIVE HEAT EXCHANGERS. THE SHELL SIDE INLET AND OUTLET FLANGES WERE ORIGINALLY SUPPLIED WITH SA-307 GRADE B BOLTS. THESE BOLTS WILL BE REPLACED WITH SA-193 GRADE B7 BOLTS FOLLOWING STANDARD RG&E BOLTING PRACTICES.

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 EVENTS RELATED TO THIS MODIFICATION ARE (1) SEISMIC EVENTS, (2) PIPE BREAKS INSIDE THE CONTAINMENT BUILDING, (3) AND A MAIN STEAM PIPE RUPTURE.

THE NEW BOLTING IS OF THE SAME PHYSICAL SIZE AS THE ORIGINAL BOLTING AND THE CHEMICAL AND PHYSICAL PROPERTIES OF THE NEW MATERIAL, SA 193 GR B7, IS EQUAL TO OR GREATER THAN THE OLD MATERIAL SA 307 GR B. THEREFORE, THE NEW BOLTING WILL PERFORM TO THE SAME CAPACITY AS THE OLD BOLTING FOR EACH OF THE APPLICABLE EVENTS LISTED ABOVE.

THUS, THIS MODIFICATION NEITHER INCREASES THE CONSEQUENCES, NOR DOES IT REDUCE THE MARGINS OF SAFETY FOR:

- 1) EQUIPMENT REQUIRED TO FUNCTION DURING AND FOLLOWING SEISMIC.
- 2) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A PIPE BREAK INSIDE CONTAINMENT.
- 3) EQUIPMENT REQUIRED TO FUNCTION FOLLOWING A MAIN STEAM PIPE RUPTURE.

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 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 89-09

MAIN FEEDWATER PUMP SUCTION TRANSMITTER VALVE MANIFOLD

THIS TECHNICAL STAFF REQUEST (TSR) ADDRESSES THE REPLACEMENT OF THE ISOLATION AND EQUALIZATION VALVES FOR FT-2004 AND FT-2005 (FEEDWATER PUMP SUCTION FLOW TRANSMITTERS) WITH MANIFOLDS. IT WILL ALSO REPLACE THE BLOWDOWN VALVES IN THE SENSING LINES WHICH ARE LEAKING. THE NEW ARRANGEMENT WILL PROVIDE THE SAME FUNCTION AS THE PREVIOUS ONE.



THE VALVES ASSOCIATED WITH THIS MODIFICATION SERVE TRANSMITTERS FT-2004 AND FT-2005. THESE TRANSMITTERS PROVIDE:

- (1) AN INPUT TO FEEDWATER BYPASS VALVE 3959, WHICH OPENS ON LOW FEEDWATER NPSH.
- (2) A SIGNAL TO FEEDWATER RECIRCULATION VALVES 4147 AND 4148, WHICH OPEN WHEN FEEDWATER FLOW FALLS BELOW 25% FULL FLOW WITHOUT RECIRCULATION.

A FEEDWATER BYPASS VALVE MALFUNCTION IS DISCUSSED IN THE FEEDWATER TEMPERATURE DECREASE ACCIDENT SCENARIO OF SECTION 15.1.1.1 IN THE UFSAR. THIS MODIFICATION WILL NOT INCREASE OR DECREASE THE LIKELIHOOD OF SUCH AN ACCIDENT SINCE THE FUNCTION OF THE VALVES AND PIPING ASSOCIATED WITH THE TRANSMITTERS WILL NOT CHANGE.

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

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

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

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

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



TSR 89-29  
PRESSURIZER LEVEL TRANSMITTER MANIFOLD REPLACEMENT

THIS TECHNICAL STAFF REQUEST REVISION WAS TO CHANGE THE REFERENCE IN THE DESIGN CRITERIA, REVISION 0 FROM THE 1986 ASME CODE EDITION TO THE 1983 EDITION. THIS WILL BE CONSISTENT WITH THE INSTALLATION AND ALSO BE IN CONFORMANCE WITH ASME SECTION XI, ARTICLE IWA-7000, REPLACEMENTS.

A REVIEW WAS PERFORMED OF ALL THE 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:

CHEMICAL AND VOLUME CONTROL SYSTEM MALFUNCTION

PRIMARY SYSTEM PIPE RUPTURE

SEISMIC EVENT

THE DESIGN CRITERIA REQUIRES THAT THE NEW MANIFOLD VALVE AND FITTINGS FOR THIS MODIFICATION BE SEISMICALLY SUPPORTED, THEREFORE, THIS MODIFICATION WILL NOT BE AFFECTED BY A SEISMIC EVENT.

THE DESIGN CRITERIA REQUIRES THAT THE NEW MANIFOLD VALVE AND TUBING BE SEISMICALLY MOUNTED AND FURTHERMORE SECTIONS 4 AND 5 REQUIRE THE NEW TUBING TO BE ASME CODE CLASS 2, QUALITY GROUP B. THEREFORE, THE PROBABILITY OF A LOCA WILL NOT BE INCREASED BY THIS MODIFICATION.

THEREFORE, 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.

THE PROPOSED MODIFICATION DOES NOT INVOLVE AN UNREVIEWED SAFETY QUESTION. THIS IS BASED ON THE FOLLOWING:

THE PROBABILITY OF OCCURRENCE OR THE CONSEQUENCES OF AN ACCIDENT OR MALFUNCTION OF EQUIPMENT IMPORTANT TO SAFETY, PREVIOUSLY EVALUATED IN THE SAFETY ANALYSIS REPORT WILL NOT BE INCREASED BY THE PROPOSED MODIFICATION BECAUSE THE INSTALLATION WILL MEET ALL APPLICABLE SEISMIC AND ASME CODE REQUIREMENTS.

THE POSSIBILITY OF AN ACCIDENT OR MALFUNCTION OF A DIFFERENT TYPE THAN ANY EVALUATED PREVIOUSLY IN THE SAFETY ANALYSIS WILL NOT BE CREATED BY THE PROPOSED MODIFICATION BECAUSE THE INSTALLATION WILL MEET ALL APPLICABLE SEISMIC AND ASME CODE REQUIREMENTS.



THE MARGIN OF SAFETY AS DEFINED IN THE BASIS FOR ANY TECHNICAL SPECIFICATION WILL NOT BE REDUCED BY THE PROPOSED MODIFICATION BECAUSE THE INSTALLATION WILL MEET ALL APPLICABLE SEISMIC AND ASME CODE REQUIREMENTS.





## 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-87-01.1

SECONDARY WATER CHEMISTRY MONITORING PANEL (SWCMP) INTERNAL WIRING FOR 7082 ANALYZERS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF COMPONENTS AND WIRING IN THE NEW SWCMP.

SM-87-01.2

COMPUTERIZED SECONDARY WATER CHEMISTRY ELECTRICAL INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE NEW SWCMP AND ASSOCIATED CIRCUITS.

SM-87-01.3

COMPUTERIZED SECONDARY WATER CHEMISTRY MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF TWELVE NEW CONDUCTIVITY CELLS AND THE TESTING AND TURNOVER OF THE COMPUTERIZED SECONDARY WATER CHEMISTRY MODIFICATION.

SM-89-08

AMMONIUM HYDROXIDE SIGHTGLASS INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE AMMONIUM HYDROXIDE TANK SIGHTGLASS.

SM-1594.6

SPENT FUEL POOL COOLING - SEISMIC SUPPORTS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF SEISMIC SUPPORTS REQUIRED FOR THE NEW SPENT FUEL POOL PIPING.

SM-1594.7

SPENT FUEL POOL COOLING - SERVICE WATER PIPING AND ASSOCIATED INSTRUMENTATION INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF SERVICE WATER PIPING AND ASSOCIATED INSTRUMENTATION TO THE NEW SFP HEAT EXCHANGER.

SM-1594.8

SPENT FUEL POOL COOLING - STAINLESS STEEL AND ASSOCIATED INSTRUMENTATION PIPING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF SPENT FUEL POOL STAINLESS STEEL AND ASSOCIATED INSTRUMENTATION PIPING.



SM-1594.8A

INSTALLATION AND OPERATION OF STANDBY S.F.P. COOLING SYSTEM

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, OPERATION, AND DISASSEMBLY OF THE STANDBY SKID MOUNTED S.F.P. COOLING SYSTEM.

SM-1594.9A

FLOOR PENETRATION INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF FLOOR PENETRATIONS FOR THE NEW SPENT FUEL POOL COOLING SYSTEM.

SM-1594.11

SPENT FUEL POOL COOLING - PUMP AND RADIATION MONITOR INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF PUMP AND RADIATION MONITOR FOR THE NEW SPENT FUEL POOL COOLING SYSTEM.

SM-1594.14

SPENT FUEL POOL COOLING SYSTEM ELECTRICAL MODIFICATION AND COMPLETION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION COMPLETION AND TURNOVER OF THE SPENT FUEL POOL COOLING ELECTRICAL MODIFICATION.

SM-2504.25

CONTAINMENT MINI-PURGE EXHAUST VALVE ELECTRICAL INSTALLATION AT PENETRATION 132 (V7920) - CONTAINMENT BUILDING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION AND TURNOVER OF THE CONTAINMENT MINI-PURGE EXHAUST VALVE V7920 AT PENETRATION P-132 INSIDE CONTAINMENT.

SM-2504.26

CONTAINMENT MINI-PURGE EXHAUST VALVES ELECTRICAL INSTALLATION OUTSIDE CONTAINMENT

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION AND TURNOVER OF THE CONTAINMENT MINI-PURGE SUPPLY SYSTEM EXHAUST VALVES CDV-1A AND CDV-1B OUTSIDE CONTAINMENT.

SM-2512.123

SEISMIC UPGRADE OF PIPE SUPPORTS - ANALYSIS LINE SAFW-400 "D" PUMP DISCHARGE - STANDBY AUXILIARY FEEDWATER BUILDING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF STANDBY AUXILIARY FEEDWATER SUPPORTS, "B" TRAIN IN THE SAFW BUILDING.



SM-2512.124

SEISMIC UPGRADE OF PIPE SUPPORTS ON ANALYSIS LINE SW-2200 SERVICE WATER, AUXILIARY BUILDING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF MODIFICATIONS TO SERVICE WATER SUPPORTS IN THE AUXILIARY BUILDING ASSOCIATED WITH FEED TO THE "C" SAFW PUMP.

SM-2512.125

SEISMIC UPGRADE OF PIPE SUPPORTS-ANALYSIS LINE SAFW-800, STANDBY AUXILIARY FEEDWATER FROM CONTAINMENT PENETRATION 123 TO "B" S/G FEEDWATER LINE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF SAFW SUPPORTS IN CONTAINMENT FROM PENETRATION 123 TO THE "B" FEEDWATER LINE.

SM-2512.126

SEISMIC UPGRADE OF PIPE SUPPORTS, ANALYSIS LINE SAFW-900, STANDBY AUXILIARY FEEDWATER FROM PENETRATION #119 TO "A" STEAM GENERATOR FEEDWATER LINE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF PIPE SUPPORT MODIFICATIONS TO THE SAFW LINE BETWEEN PENETRATION #119 AND THE "A" S/G FEEDWATER LINE.

SM-2512.131

IST TEST CONNECTIONS - RCDT PUMP SUCTION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF TEST CONNECTIONS FOR VALVES MOV-1813A AND MOV-1813B.

SM-2512.132

IST TEST CONNECTIONS - AUXILIARY FEEDWATER DISCHARGE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF TEST CONNECTIONS FOR AUXILIARY FEEDWATER DISCHARGE CHECK VALVES 4003, 4004, 4000C AND 4000D.

SM-2512.133

ISI TEST CONNECTIONS - VALVE V-3506 AND V-3507 BYPASS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF TEST CONNECTIONS FOR VALVES 3506 AND 3507 BYPASS LOOPS (DOWNSTREAM OF V-3506A AND V-3507A).





SM-2512.134

SEISMIC UPGRADE OF PIPE SUPPORTS - ANALYSIS LINE CVC-200 - "B" RCP SEAL RETURN

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE SUPPORT MODIFICATIONS FOR "B" RCP SEAL RETURN LINE CONSISTING OF SUPPORTS CVU-131 AND CVU-XI.

SM-3319.48

MCC-1B BREAKER REPLACEMENT

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF BREAKER REPLACEMENT AT SPECIFIED POSITIONS ON MCC-1B.

SM-3319.55

TESTING OF BREAKERS AT MCC-1B

THE PURPOSE OF THIS NEW PROCEDURE IS TO 1) DOCUMENT AN AUXILIARY SWITCH TEST, 2) VERIFY PROPER PHASE ROTATION, AND 3) TO PERFORM A FUNCTIONAL TEST OF BREAKERS PLACED AT MCC-1B.

SM-3319.58

SETTING ADJUSTMENT AND FUNCTIONAL TESTING OF BREAKERS AT MCC-1H

THE PURPOSE OF THIS NEW PROCEDURE IS TO PROVIDE THE DIRECTION TO ADJUST AND FUNCTIONALLY TEST BREAKERS AT MCC-1H.

SM-3319.59

AUXILIARY SWITCH TESTING FOR SELECTED BREAKERS ON MCC-1B

THE PURPOSE OF THIS NEW PROCEDURE IS TO DOCUMENT AN AUXILIARY SWITCH TEST FOR THE TURBINE ROOM WALL EXHAUST FANS 1F, 1G, 1H, AND 1J.

SM-3319A.2

BREAKER CHANGEOUT/REMOVAL ON MCC-1C, 1L, AND 1K

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF BREAKER CHANGEOUTS/REMOVAL, TOL HEATER CHANGEOUTS, AND TRIP SETTING ADJUSTMENTS FOR VARIOUS UNITS ON MCC-1C, 1L, AND 1K.

SM-3319A.3

BREAKER CHANGEOUT/REMOVAL ON MCC-1D AND 1M

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF BREAKER CHANGEOUTS/REMOVALS, TOL HEATER CHANGEOUTS, AND TRIP SETTING ADJUSTMENTS FOR VARIOUS UNITS ON MCC-1D AND 1M.



SM-3319A.4

BREAKER CHANGEOUT/REMOVAL ON MCC-1B, 1E, AND 1F

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF BREAKER CHANGEOUTS/REMOVALS, HKA TRIP UNIT REPLACEMENTS, AND TRIP SETTING ADJUSTMENTS FOR VARIOUS UNITS ON MCC-1B, 1E, AND 1F.

SM-3319A.5

REPLACEMENT OF POWER CABLES PER EWR-3319A

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE REPLACEMENT OF EXISTING POWER CABLES FOR THE BORIC ACID EVAPORATOR PACKAGE, THE AUXILIARY BUILDING LIGHTING TRANSFORMER 1B, AND THE SERVICE BUILDING KITCHEN EQUIPMENT TRANSFORMER.

SM-3319A.6

BREAKER REMOVAL ON MCC-1G AND RESOLUTION OF SM-3319A.2, 3319A.3, AND 3319A.4 PUNCHLIST ITEMS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF BREAKER REMOVALS, TOL HEATER CHANGEOUTS, BREAKER HANDLE INSTALLATIONS, AND REMOVED BREAKER COVER PLATE INSTALLATIONS.

SM-3319A.8

BREAKER CHANGEOUT AT MCC-1F FOR THE LAUNDRY AIR CONDITIONER AND THE PASS WASTE TANK EVACUATION COMPRESSOR

THE PURPOSE OF THIS NEW PROCEDURE IS CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE BREAKER CHANGEOUT AT MCC-1F FOR THE LAUNDRY AIR CONDITIONER AND THE PASS WASTE TANK EVACUATION COMPRESSOR.

SM-3341.1

FUSE INSTALLATION FOR THE MAIN CONTROL BOARD "A" AND "B" BATTERY VOLTMETERS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF FUSES FOR THE MCB "A" AND "B" BATTERY VOLTMETERS.

SM-3341.2

PRE-OPERATIONAL TESTING OF D.C. FUSES (XSB) FOR LOCKOUT RELAY 86/11A

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE A2Y (15A) (XSB) 125 VDC FUSES WHICH FEED THE BUS 11A DIFFERENTIAL LOCKOUT RELAY 86/11A.



SM-3341.3

PRE-OPERATIONAL TESTING OF D.C. FUSES (XSC) FOR LOCKOUT RELAY 86/11B

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE A2Y (15A) (XSC) 125 VDC FUSES WHICH FEED THE BUS 11B DIFFERENTIAL LOCKOUT RELAY 86/11B.

SM-3596.2

D/G "A" PRESSURE INSTRUMENT PANEL - ELECTRICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF JUNCTION BOXES ASSOCIATED WITH THE NEW DIESEL GENERATOR "A" INSTRUMENT PANEL, INCLUDING CONDUIT AND CONDUIT SUPPORTS BETWEEN THE JUNCTION BOXES AND INSTRUMENT PANEL. ALSO, INCLUDES CABLE BETWEEN NEW PRESSURE INSTRUMENTS AND THE NEW TERMINAL STRIPS WITHIN THE JUNCTION BOXES.

SM-3596.4

D/G "A" PRESSURE INSTRUMENT PANEL - ELECTRICAL INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF JUNCTION BOXES ASSOCIATED WITH THE NEW DIESEL GENERATOR "B" INSTRUMENT PANEL, INCLUDING CONDUIT AND CONDUIT SUPPORTS BETWEEN THE JUNCTION BOXES AND INSTRUMENT PANEL. ALSO, INCLUDES CABLE BETWEEN NEW PRESSURE INSTRUMENTS AND THE NEW TERMINAL STRIPS WITHIN THE JUNCTION BOXES.

SM-3692.2

STANDBY AUXILIARY FEEDWATER CONTROL CIRCUITRY AND VALVE MOV-9746 TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE NEW MOV CONTROL SWITCH RE-ARRANGEMENTS AND THEIR RESPECTIVE CONTROL AND INDICATION CIRCUITS. THIS INCLUDES MOVATS TESTING OF MOV-9746 AND HYDRO TESTING OF NEW VALVE INSTALLATION.

SM-3692.4

STANDBY AUXILIARY FEEDWATER VALVE - ELECTRICAL MODIFICATIONS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER FOR TESTING OF CONDUIT, CONDUIT SUPPORTS, CABLE, BREAKER JUMPERS AND REWORK OF THE MAIN CONTROL BOARD SWITCHES AND INDICATION.

SM-3692.5

SBAFW BUILDING ELECTRICAL SUPPORTS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF ELECTRICAL SUPPORT MODIFICATIONS IN THE STANDBY AUXILIARY FEEDWATER BUILDING.



SM-3692.6

STANDBY AUXILIARY FEEDWATER FUNCTIONAL TESTING OF CONTROL CIRCUITRY FOR MOV-9746

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE FUNCTIONAL TESTING OF MOV-9746 LOCATED IN THE SAFW BUILDING; CONTROL ROOM (REAR OF MCB); AUXILIARY BUILDING (MCC AREAS). HYDRO TESTING OF THE PRESSURE BOUNDARY IS COMPLETE. ADDITIONAL COPIES OF THIS PROCEDURE MAY BE PLACED FOR COORDINATION AND CONTROL PURPOSES.

SM-3797.8

MRPI ROD DROP RELAY TIME DELAY REMOVAL

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE REMOVAL OF THE TIME DELAY DEVICES WHICH WERE PREVIOUSLY INSTALLED ON THE CONTROL ROD DROP RELAYS, AND THE SUBSEQUENT TESTING OF THE RELAYS.

SM-3797.9

MRPI DATA CABINET FAN INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF COOLING FANS ON THE MRPI DATA CABINET IN CONTAINMENT.

SM-3797.10

MRPI ANNUNCIATOR MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF A MODIFICATION TO ANNUNCIATOR C29 FOR MRPI FAILURE.

SM-3797.11

MRPI DATA CABINET FAN REMOVAL

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE REMOVAL AND TURNOVER OF COOLING FANS FOR MRPI DATA CABINET IN CONTAINMENT.

SM-3881.1

SI RECIRCULATION MODIFICATION MECHANICAL INSTALLATION AND REMOVALS

THE PURPOSE OF THIS NEW PROCEDURE IS PROVIDE INSTRUCTIONS FOR THE MECHANICAL PORTION OF THE SI RECIRCULATION MODIFICATION.

SM-3881.2

SI RECIRCULATION MODIFICATION - ELECTRICAL INSTALLATION AND REMOVALS MOV 897, 898

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF ELECTRICAL INSTALLATION AND REMOVALS FOR MOV 897 AND 898.





SM-3881.7

SAFETY INJECTION FLOW METERS FI-924 AND FI-925 RESCALING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF METER SCALES FOR FI-924 AND FI-925 AND RECALIBRATION OF SAFETY INJECTION FLOW TRANSMITTERS FT-924 AND FT-925.

SM-3990.1

DIESEL GENERATOR BUILDING FOUNDATION INVESTIGATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL TEST BORING AND CORE SAMPLING IN AND AROUND THE DIESEL GENERATOR BUILDING.

SM-3990.2

GROUND WATER EXPLORATION OF THE DIESEL GENERATOR BUILDING IMPINGEMENT MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE EXPLORATION AND EXCAVATION OF THE DEWATERING PITS GENERALLY BETWEEN THE DIESEL GENERATOR BUILDING AND LAKE ONTARIO. THE GENERAL PURPOSE OF THIS EXPLORATORY PHASE OF THE OVERALL MODIFICATION IS TO OBTAIN SUFFICIENT PERTINENT DATA ON THE SUBSURFACE GROUND WATER. THIS DATA WILL PROMULGATE NECESSARY ENGINEERING OUTPUTS FOR MODIFICATION ERECTION AND INSTALLATION.

SM-3991.2

SEISMIC UPGRADE OF EXISTING CONNECTIONS AND ANCHORAGES - AUXILIARY BUILDING SOUTH WALL

THE PURPOSE OF THIS NEW PROCEDURE IS TO DIRECT/DOCUMENT STRUCTURAL MODIFICATIONS.

SM-4064.5

TURBINE BUILDING SMOKE DETECTION UPGRADE AND ALARM OFF INDICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE CHANGEOUT OF TURBINE BUILDING SMOKE DETECTORS AND STPs. ALSO INCLUDED IS THE INSTALLATION OF CONTROL ROOM INDICATION OF ALARM OFF STATUS.

SM-4064.6

TSC FIRE DETECTION AND SUPPRESSION SYSTEM UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF MODIFICATIONS TO THE TSC FIRE DETECTION AND SUPPRESSION SYSTEMS PRIOR TO FINAL TERMINATIONS AND TESTING.



SM-4064.9

TURBINE BUILDING SMOKE DETECTOR ZONE Z34 MODIFICATIONS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF MODIFICATIONS TO TURBINE BUILDING SMOKE DETECTOR ZONE Z34 - TO REMOVE DETECTORS FROM THE GENERATOR FIELD VOLTAGE REGULATOR CABINET.

SM-4218.3

LT-426 TUBING REMOVAL

THE PURPOSE OF THIS NEW PROCEDURE IS TO PROVIDE THE NECESSARY INSTRUCTIONS FOR THE REMOVAL OF THE EXISTING 3/8" TUBING USED FOR LT-426 SEALED REFERENCE LEG.

SM-4230.1

ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS) MITIGATION ACTUATION CIRCUITRY (AMSAC) MODIFICATION INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO INSTALL A REACTOR PROTECTION SYSTEM THAT WILL TRIP THE MAIN STEAM TURBINE AND START THE FLOW OF AUXILIARY FEEDWATER AFTER AN ATWS EVENT.

SM-4230.2

ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS) MITIGATION SYSTEM ACTUATION CIRCUITRY (AMSAC) MODIFICATION TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO TEST A REACTOR PROTECTION SYSTEM THAT WILL TRIP THE MAIN STEAM TURBINE AND START THE FLOW OF AUXILIARY FEEDWATER AFTER AN ATWS EVENT.

SM-4230.3

ANTICIPATED TRANSIENTS WITHOUT SCRAM (ATWS) MITIGATION SYSTEM ACTUATION CIRCUITRY (AMSAC) TRIP STATUS MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO INSTALL THE "AMSAC TRIPPED" STATUS LIGHT ON THE MAIN CONTROL BOARD, WHILE PROGRAMMING IN NEW ARMING SETPOINTS AND MODIFYING THE FUNCTION CURVE WHICH GENERATES THE VARIABLE TIME DELAY FOR AMSAC. IN ADDITION TO CHANGING THE DIGITAL OUTPUT FOR THE PPCS FROM "AMSAC ACTUATED" TO "AMSAC TRIPPED", BECOMING A DIRECT FUNCTION OF THE RESET STATUS.

SM-4322.1

STATION SERVICE TRANSFORMERS #13 AND #15 COOLING FANS

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF COOLING FANS AT STATION SERVICE TRANSFORMERS #13 AND #15.



SM-4324.3

ELECTRICAL INSTALLATION FOR STEAM GENERATOR BLOWDOWN SYSTEM MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION FOR STEAM GENERATOR BLOWDOWN SYSTEM MODIFICATION. THIS PROCEDURE ALLOWS PARTIAL INSTALLATION PRIOR TO PLANT OUTAGE AND IS TO COMPLETE THE REMAINING DURING THE PLANT OUTAGE. TESTING OF THE INSTALLATION WILL BE PERFORMED UNDER ANOTHER PROCEDURE.

SM-4324.5

STEAM GENERATOR BLOWDOWN SYSTEM MODIFICATION FUNCTIONAL TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO PERFORM FUNCTIONAL TESTING OF THE ELECTRICAL INSTALLATION OF S/G BLOWDOWN MODIFICATION.

SM-4347.1

MODIFICATION OF THE CONTROL ROOM PLANT EVACUATION ALARM, PLANT ATTENTION ALARM AND PLANT FIRE ALARM

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE CONTROL ROOM PLANT EVACUATION ALARM, PLANT ATTENTION ALARM AND PLANT FIRE ALARM MODIFICATIONS.

SM-4347.2

CONTROL ROOM ALARM SYSTEM TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL TESTING AND TURNOVER OF THE MODIFICATIONS ASSOCIATED WITH THE CONTROL ROOM ALARM SYSTEMS AND TO CONDUCT A CONTROL ROOM ALARM SURVEY.

SM-4375.1

BORIC ACID FLOW CONTROL PIPING MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MECHANICAL PORTION OF THE BORIC ACID FLOW CONTROL MODIFICATION.

SM-4375.2

BORIC ACID FLOW CONTROL ELECTRICAL MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION, TESTING, AND TURNOVER OF THE BORIC ACID FLOW CONTROL AND HEAT TRACE MODIFICATION.

SM-4375.3

MECHANICAL AND ELECTRICAL TESTING - BORIC ACID FLOW CONTROL PIPING MODIFICATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE BORIC ACID FLOW CONTROL PIPING MODIFICATION.



SM-4375.6

BORIC ACID FLOW CONTROL MECHANICAL PHASE 2 MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE MECHANICAL PORTION OF THE BORIC ACID FLOW CONTROL PHASE 2 MODIFICATION.

SM-4375.8

BORIC ACID FLOW CONTROL PHASE 2 ACCEPTANCE TEST

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING AND TURNOVER OF THE BORIC ACID FLOW CONTROL PHASE 2 MODIFICATION.

SM-4375.9

REPLACEMENT OF HEAT TRACE CIRCUITS #40 AND #78

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW CHEMELEX SELF-REGULATING HEAT TRACE CABLE FOR CONDUITS #40 AND #78 (BORIC ACID BLENDER PIPING), WHICH INCLUDES VALVES V354, V355, FCV110A, V109, AND FT110.

SM-4525.2

GINNA POWER SUPPLY BUS DUCT FOUNDATIONS

THE PURPOSE OF THIS NEW PROCEDURE IS TO DIRECT/DOCUMENT INSTALLATION OF NEW BUS DUCT FOUNDATION.

SM-4525.3

GINNA POWER SUPPLY O.C.B. FIREWALL FOUNDATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE GINNA POWER SUPPLY O.C.B. FIREWALL FOUNDATION.

SM-4525.4

RACEWAY INSTALLATION FOR OFFSITE POWER RECONFIGURATION MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF RACEWAY FOR THE OFFSITE POWER MODIFICATION. THIS PROCEDURE INCLUDES INSTALLATION OF A NEW PIPE SUPPORT FOR THE EXISTING TRANSFORMER 12B DELUGE SYSTEM.

SM-4525.5

NEW GINNA POWER SUPPLY BUS DUCT INSTALLATION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL INSTALLATION OF THE NEW GINNA POWER SUPPLY BUS DUCT.





SM-4525.6

OFFSITE POWER RECONFIGURATION: P.P.S. SWITCH GEAR, TRANSFORMER 12B GROUNDING

THE PURPOSE OF THIS PROCEDURE IS TO ANCHOR THE P.P.S. SWITCHGEAR, COMPLETE INTERNAL WIRING, AND PERFORM ELECTRICAL INSPECTION OF P.P.S. 4160V SWITCHGEAR. THIS PROCEDURE ALSO CONTROLS THE INSTALLATION OF THE TRANSFORMER 12B GROUNDING RESISTOR.

SM-4525.7

OFFSITE POWER RECONFIGURATION: CABLE INSTALLATION, RELAY PANELS 12A AND 12B

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF CABLES FOR THE OFFSITE POWER MODIFICATION AND COMPLETE THE INSTALLATION OF RELAY PANELS 12A AND 12B.

SM-4525.8

OFFSITE POWER RECONFIGURATION: MAIN CONTROL BOARD SWITCH RELOCATION, BUS 12A, BUS 12B MODIFICATION AND TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF:

- A) 52/11B CONTROL SW, SYNCH SW, AND IND. LITES
- B) 52/11A CONTROL SW, SYNCH SW, AND IND. LITES
- C) 12B BUS RELAYING AND CIRCUIT BREAKERS (86/12B, 86B/12B, 52/BTB-B, 52/16SS, AND 52/17SS)
- D) 12A BUS RELAYING AND CIRCUIT BREAKERS (86/12A, 86B/12A, 52/BTA-A, 52/14SS, 52/18SS AND 52/AVP-9A)

SM-4525.9

OFFSITE POWER RECONFIGURATION: MAIN CONTROL BOARD MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND RELOCATION OF SWITCHES, METERS, AND RELAYS WHICH MONITOR AND CONTROL THE 34.5 KV AND 4160V ELECTRIC SYSTEMS.

SM-4525.10

OFFSITE POWER RECONFIGURATION: SWITCHYARD MODIFICATION, 4160V CUBICLE MODIFICATION, 480V AND 120V BREAKER INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE MODIFICATION OF THE 34 KV BUS AND ASSOCIATED EQUIPMENT, COMPLETE REMOVALS AT THE 12B XFMR CABINET, COMPLETE MODIFICATION OF 12A AND 12B 4160V CUBICLES, AND INSTALL 480V AND 120V BREAKERS FOR THE OFFSITE POWER MODIFICATION.



SM-4525.12

OFFSITE POWER BACKFEED VIA UNIT AUXILIARY TRANSFORMER

THE PURPOSE OF THIS NEW PROCEDURE IS TO SUPPLY POWER FROM THE 115 KV GRID THROUGH THE MAIN AND UNIT AUXILIARY TRANSFORMERS TO THE STATION AUXILIARIES, WHILE THE STATION AUXILIARY TRANSFORMERS #12A AND #12B ARE MODIFIED PER EWR 4525.

SM-4525.14

OFFSITE POWER MODIFICATION: 4KV AND 34KV MCB METERING PRE-OPERATIONAL TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO TEST THE MCB 4 KV AND 34 KV METERING, MODIFIED UNDER EWR-4525 PER SM-4525.9.

SM-4525.15

OFFSITE POWER RESTORATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSERVICE TESTING AND TURNOVER OF THE OFFSITE POWER MODIFICATION AND RESTORE OFFSITE POWER VIA STATION AUXILIARY TRANSFORMER 12B.

SM-4526.2

D/G "A" FUEL OIL SYSTEM ELECTRICAL RECONSTRUCTION AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL PORTION OF THE D/G "A" FUEL OIL SYSTEM INCLUDING INSTALLATION OF NEW EQUIPMENT AND REMOVAL OF OLD EQUIPMENT.

SM-4526.4

D/G "B" FUEL OIL SYSTEM ELECTRICAL RECONSTRUCTION AND REMOVALS

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL PORTION OF THE D/G "B" FUEL OIL SYSTEM INCLUDING INSTALLATION OF NEW EQUIPMENT AND REMOVAL OF OLD EQUIPMENT.

SM-4526.8

DUPLEX STRAINER INSTALLATION ELECTRICAL PORTION

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION OF THE ELECTRICAL PORTION OF THE DUPLEX STRAINERS IN THE DIESEL GENERATOR FUEL OIL SYSTEM.

SM-4526.17

DIESEL GENERATOR FUEL OIL SYSTEM DISCHARGE LINE PIPE SUPPORTS UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL INSTALLATION AND TURNOVER OF PIPE SUPPORTS ON THE DIESEL GENERATOR FUEL OIL SYSTEM DISCHARGE PIPING.



SM-4530.1

AC FUSED AND BREAKERS (INTERMEDIATE BUILDING'S MISCELLANEOUS DISTRIBUTION TRANSFORMER REPLACEMENT

THE PURPOSE OF THIS NEW PROCEDURE IS TO REPLACE THE INTERMEDIATE BUILDING'S MISCELLANEOUS DISTRIBUTION TRANSFORMER AND REMOVE THE ELECTRICAL FEED FROM MCC 1F (UNIT 4MM) TO MCC 18 (UNIT 8D).

SM-4534.1

REACTOR COOLANT PUMP MOTOR OIL LEVEL INDICATION SYSTEM UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE NEW REACTOR COOLANT PUMP MOTOR OIL LEVEL INDICATION SYSTEM FOR THE A & B REACTOR COOLANT PUMP MOTORS. NO COMPONENT INSTALLATION REQUIRED ON RCP MOTORS. THE ROSEMOUNT 710DU INSTRUMENT RACK IS COMMON TO BOTH REACTOR COOLANT PUMPS.

SM-4538.1

1B DIESEL GENERATOR UPGRADE

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE 1B DIESEL GENERATOR UPGRADE. THIS MODIFICATION INCLUDES REPLACEMENT OF A THROW OVER RELAY, THERMAL OVERLOAD RELAYS, REMOVAL OF A 51BU RELAY, AND REWIRING OF TERMINAL BOXES ON THE "A" AND "B" DIESEL SKIDS.

SM-4538.3

INSTALLATION AND TESTING OF NEW AUXILIARY RELAY 51VX, CLAROSTAT 200 OHM RESISTOR, AND SLIDING LINK TERMINALS FOR AIR START VALVE, ASV-1 AND ASV-2, FOR THE 1A DIESEL GENERATOR

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION, TESTING, AND TURNOVER OF MODIFICATIONS TO THE 1A DIESEL GENERATOR. THESE MODIFICATIONS INCLUDE REPLACEMENT OF OVERCURRENT AUXILIARY RELAY 51VX, INSTALLATION NEW 200 OHM RESISTOR, SLIDING LINKS TERMINALS FOR AIR START VALVES, AND INSTALLATION OF A NEW MOUNTING PLATE FOR RELAYS ATR-A, ATR-B, AND A FUSE BLOCK.

THIS PROCEDURE WILL ALLOW WORK TO BE ACCOMPLISHED IN THE FOLLOWING GENERAL AREAS OF THE PLANT: 1A DIESEL GENERATOR.

SM-4553.1

REACTOR BMI TUBING SUPPORT UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO SEISMICALLY UPGRADE THE REACTOR BOTTOM MOUNTED INSTRUMENTATION TUBING SUPPORT BMI-3.



SM-4618.1  
FEED PUMP ROOM VENTILATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE NEW FEED PUMP ROOM VENTILATION SYSTEM COMPONENTS.

SM-4671.6  
"A" RCS HOT LEG RHR FLOW CORRECTION

THE PURPOSE OF THIS NEW 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-4675.1  
RHR PUMP "B" RECIRCULATION PIPING TIE-INS

THE PURPOSE OF THIS NEW PROCEDURE IS TO INSTALL THE 8 INCH CHECK VALVE AND 3 INCH PIPING TIE-INS TO THE B RHR HX DISCHARGE LINE.

SM-4675.2  
RHR RECIRCULATION MODIFICATION MCB MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE MAIN CONTROL ROOM WORK SCOPE OF EWR-4675 RHR RECIRCULATION MODIFICATION.

SM-4675.3  
RHR SYSTEM CLEANLINESS INSPECTION AND HYDROSTATIC TEST

THE PURPOSE OF THIS NEW PROCEDURE IS TO PROVIDE INSTRUCTIONS FOR PERFORM CLEANLINESS INSPECTIONS AND A HYDROSTATIC TEST OF THE RHR RECIRC SYSTEM INSTALLED BY EWR-4675.

SM-4675.5  
RHR PUMP 'A' RECIRCULATION PIPING TIE-INS AND BALANCE OF PIPING

THE PURPOSE OF THIS NEW PROCEDURE IS CONTROL THE INSTALLATION AND TURNOVER OF THE RHR 'A' RECIRCULATION PIPING TIE-INS, COMMON TRENCH TIE-INS AND THE REMAINDER OF THE RHR A AND B RECIRCULATION PIPING AND SUPPORTS.

SM-4675.6  
RHR PUMP "A" AND "B" RECIRCULATION INSTRUMENTATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF INSTRUMENTATION ASSOCIATED WITH THE A AND B RECIRCULATION PIPING MODIFICATION.





SM-4675.7  
RHR HX "A" OUTLET PIPE SUPPORT

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE RHR HX "A" OUTLET PIPE SUPPORT.

SM-4675.8  
RHR PUMP SUCTION HYDRO STATIC TEST

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE HYDROSTATIC TEST OF THE INSTALLATION OF THE TI-680 AND 681 THERMOWELLS.

SM-4675.9  
RHR SYSTEM SHUTDOWN COOLING FULL FLOW TEST

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE TESTING OF THE RHR SYSTEM FULL FLOW TEST DURING THE SHUTDOWN COOLING TEST.

SM-4755.1  
IST TEST CONNECTIONS FOR MOV-1813A/B - "A" AND "B" RCDT PUMP SUCTION

THE PURPOSE OF THIS NEW PROCEDURE IS TO DIRECT/DOCUMENT MODIFICATION RELOCATION OF VALVES V-1813C/E.

SM-4756.1  
INSTALLATION OF MCB EXHAUST FAN SHROUD

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE SHROUD FOR THE MCB EXHAUST FAN.

SM-4759.2  
HIGH MAST LIGHTING TOWER BASEPLATE GROUTING

THE PURPOSE OF THIS PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF HIGH MAST SECURITY LIGHTING BASEPLATE GROUTING AND JAM NUTS FOR THE EIGHT HIGH MAST LIGHTING TOWERS.

SM-4764.1  
FIRE SERVICE WATER SYSTEM MODIFICATIONS, RELOCATIONS, AND SPRINKLER SUPPLY TO SUPPORT THE CONTAMINATION STORAGE BUILDING INSTALLATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE RELOCATION INSTALLATION TESTING AND TURNOVER OF FIRE SERVICE HYDRANTS GATE VALVES AND SPRINKLER SUPPLY TO THE CONTAMINATED STORAGE BUILDING.



SM-4764.3

CONTAMINATED STORAGE BUILDING - DOOR S29 ELECTRICAL INSTALLATION, TESTING AND FLOOD BARRIER TESTING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE ELECTRICAL INSTALLATION, TESTING AND TURNOVER OF THE NEW SECURITY DOOR S-29 AND THE TESTING OF THE FLOOD BARRIER ASSOCIATED WITH DOOR S-29.

SM-4764.4

ELECTRICAL POWER DISTRIBUTION AND GROUND GRID INSTALLATION-CONTAMINATED STORAGE BUILDING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION AND TURNOVER OF THE ELECTRICAL POWER DISTRIBUTION AND GROUNDING PORTION OF THE CONTAMINATED STORAGE FACILITY MODIFICATION.

SM-4764.6

FIRE PROTECTION (ELECTRICAL) INSTALLATION AND FUNCTIONAL TESTING WITHIN THE CONTAMINATED STORAGE BUILDING

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL AND DOCUMENT THE INSTALLATION, TESTING AND TURNOVER OF THE ELECTRICAL PORTION OF THE LOCAL PREACTION FIRE PROTECTION SYSTEM IN THE CONTAMINATED STORAGE BUILDING.

SM-4785.1

INSTALLATION AND TESTING OF NEW THROWOVER RELAY IN BUS 14 UNDERVOLTAGE CABINET

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW THROWOVER RELAY IN THE BUS 14 UNDERVOLTAGE CABINET.

SM-4785.2

INSTALLATION AND TESTING OF NEW THROWOVER RELAY IN BUS 16 UNDERVOLTAGE CABINET

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW THROWOVER RELAY IN THE BUS 16 UNDERVOLTAGE CABINET.

SM-4785.3

INSTALLATION AND TESTING OF NEW THROWOVER RELAY IN BUS 17 UNDERVOLTAGE CONTROL CABINET

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW THROWOVER RELAY IN THE BUS 17 UNDERVOLTAGE CONTROL CABINET.



SM-4785.4

INSTALLATION AND TESTING OF NEW THROWOVER RELAY IN BUS 18  
UNDervOLTAGE CONTROL CABINET

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW THROWOVER RELAY IN THE BUS 18 UNDervOLTAGE CONTROL CABINET.

SM-4785.5

INSTALLATION AND TESTING OF NEW THROWOVER RELAY AND LOSS OF D.C.  
VOLTAGE ALARM FOR DIESEL GENERATOR 1A

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW THROWOVER RELAY AND LOSS OF D.C. VOLTAGE ALARM FOR DIESEL GENERATOR 1A.

SM-4785.6

INSTALLATION AND TESTING OF NEW THROWOVER RELAY AND LOSS OF D.C.  
VOLTAGE ALARM FOR DIESEL GENERATOR 1B

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF THE NEW THROWOVER RELAY AND LOSS OF D.C. VOLTAGE ALARM FOR DIESEL GENERATOR 1B.

SM-4809.1

DIESEL FIRE PUMP BATTERY CHARGER SUPPORT STRUCTURES INSTALLATION  
MODIFICATION

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE DIESEL FIRE PUMP BATTERY CHARGER SUPPORT STRUCTURES.

SM-4931.1

TDAFWP CHECK VALVE REPLACEMENT

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE REPLACEMENT, TESTING AND TURNOVER OF THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP DISCHARGE CHECK VALVES V-4003 AND V-4004.

SM-4933.1

PT-478, PT-479, AND PT-483 (S/G "B") TUBING REROUTE AND UPGRADE

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING, AND TURNOVER OF UPGRADED STEAM GENERATOR PT-478/479/483 INSTRUMENTATION TUBING, SUPPORTS, AND BARRIERS IN THE INTERMEDIATE BUILDING (STEAM HEADER LEVEL).

SM-4937.1

REPLACEMENT OF HEAT TRACE CIRCUITS 12 & 34

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION OF THE NEW CHEMELEX SELF REGULATING HEAT TRACE CABLE FOR CIRCUITS 12 AND 34.



SM-4937.2

REPLACEMENT OF HEAT TRACE CIRCUIT 29

THE PURPOSE OF THIS NEW PROCEDURE IS TO CONTROL THE INSTALLATION, TESTING AND TURNOVER OF THE NEW CHEMELEX SELF REGULATING HEAT TRACE CABLE FOR CIRCUITS 29 (BORIC ACID BLENDER PIPING), WHICH INCLUDES VALVES FCV-110C, V364, FCV-110B, AND V365A..





SECTION C - COMPLETED TECHNICAL STAFF ENGINEERING  
EVALUATIONS (TSEEs)

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 TSEE in this section is presentation to the PORC, closure of the associated TSR, and submittal to the Document Control Department. Within the time frame of this report there were none.



SECTION D - TEMPORARY BYPASS OF SAFETY FUNCTION,  
STRUCTURE FEATURES, SHIELDING, AND FLUID  
SYSTEM FEATURES

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



CATEGORY 3.3.5  
REVIEWED ✓

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

MA  
7  
-  
f  
+f

JOB FOREMAN: Jeff Jones DATE: 11/29/89 REQUEST #: 89-46

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION Lift wires for BAD T/C. (D7) to incorr T/C READ OUT  
(T.39) ckt sub. R3787 T.B. TRA 5+6

PURPOSE To Remove Bad T/C from SCAN

LOCATION: Control Room, Incorr T/C PANEL REAR

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 12-6-89

TECHNICAL MANAGER: [Signature] DATE: 11-30-89

SHIFT SUPERVISOR: [Signature] DATE: 12-11-89

INSTALLATION

DATE & TIME 12/11/89 1309

ENTERED IN OFFICIAL LOG: M

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: 4-30-90 @ 1829

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) Ensure 4 thermocouples per quadrant are maintained and that this thermocouple is not an input to RY615.

**RECEIVED**

MAY 3 1990

CENTRAL RECORDS  
QA  
DISPOSITION 5 YRS.

Attach additional page(s) as necessary




10CFR50.59 Safety Evaluation  
for lifting wire for Thermocouple D07

The indications for TC D07 are inconsistent with the response of other related core parameters (i.e. incore flux map & nearby thermocouple indications). Thermocouples are used to sense core outlet temperature, determine relative fuel assembly power and compensate RVLIS. Since TC D07 is not consistent with either incore or other thermocouples it has been declared inoperable. It has been deleted from processing in PPCS. To remove it from the averaging circuit at the thermocouple panel requires lifting its lead. The panel will then sense an open TC and remove it from averaging.

With TC D07 inoperable the minimum requirement per Tech. Specs. of 4 thermocouples per quadrant is met. TC D07 is not used to compensate RVLIS. The functions of the thermocouple system as described in the UFSAR are fulfilled. Therefore, neither the probability nor the consequences of an accident or malfunction evaluated in the UFSAR is increased. The possibility of a new accident or malfunction is not created. The margin of safety defined in Tech. Specs. is not reduced.

References: Tech. Specs. 3.5.3, UFSAR Section 7.7.4

  
Jeffrey P. Wayland  
11/30/89

PORC Approval: 12-6-89





CATEGORY 3.3.5

REVIEWED \_\_\_\_\_

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

jm

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: Alan Wilkerson Jr. DATE: 12/12/89 REQUEST #: 89-47  
PULL ANN. CARD OTHER

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK

FUNCTION MCB ANNUNCIATOR WINDOW L4 IS USED TO INDICATE THAT

THE 12A-12B BUS TRANSFER SCHEME IS IN MANUAL AS OPPOSED TO

PURPOSE TO TEMPORARILY DEFEAT L4, PRESENTLY LIT, UNTIL A  
AUTOMATIC MODE.

MODIFICATION TO SPAKE L4 CAN BE IMPLEMENTED DURING 1190 OUTAGE

LOCATION: MAIN CONTROL BOARD

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): N/A

TECHNICAL MANAGER: [Signature] DATE: 12-10-89

SHIFT SUPERVISOR: [Signature] DATE: 12-12-89

INSTALLATION

DATE & TIME 12/12/89

ENTERED IN OFFICIAL LOG; [Signature]

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: D. Palmer

VERIFIED BY: Alan Wilkerson Jr.

REMOVAL

DATE & TIME: \_\_\_\_\_

ENTERED IN OFFICIAL LOG; \_\_\_\_\_

NUMBER OF TAGS REMOVED: \_\_\_\_\_

REMOVED BY: \_\_\_\_\_

VERIFIED BY: \_\_\_\_\_

REVIEW (AS NECESSARY) MCB ANNUNCIATOR WINDOW L4 WAS INSTALLED TO  
ALERT THE OPERATOR THAT THE AUTO SWITCHOVER FOR 12A & 12B  
BUSES WAS NOT FUNCTIONING AND THE OPERATOR MUST SWITCH THE SUPPLY  
OF THE BUSES MANUALLY. DURING THE EVALUATION OF THE OFFSITE  
POWER MODIFICATION, IT WAS DETERMINED THAT THE 'AUTO SWITCH'  
FUNCTION WOULD NOT WORK AS ORIGINALLY DESIGNED. THEREFORE,  
THE CURRENT STATUS OF ALARM WINDOW L4 PROVIDES NO VALUABLE  
INFORMATION TO THE OPERATING SHIFT. THE ALARM WINDOW SHOULD  
BE 'TEMPORARILY' DISCONNECTED UNTIL THE MODIFICATION ELIMINATES  
THIS FUNCTION DURING THE 1190 RELO. V.J. Colan

Attach additional page(s) as necessary



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REFERENCE PROCEDURE A-1402

CATEGORY 3.3.5  
REVIEWED [Signature]

ROCHESTER GAS AND ELECTRIC JUN 4 1990  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

DISPOSITION - 5 YRS.

*7/26/90*

JOB FOREMAN: Jeff Jones/Kathleen Moya<sup>han</sup> DATE: 1/31/90 REQUEST #: 90-0.3

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION: C-10 Annunciator (CUT Recirc Lo Flow Alarm)

PURPOSE: Remove Annunciator with the power coming from MCC IC-16B pulling IA - Aux Bldg. sump pump to Annunciator card C-10. RM card C-10

LOCATION: MCB States Block, TES-#3 / C-10 Annun.

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 1-31-90

TECHNICAL MANAGER: [Signature] DATE: 1-31-90

SHIFT SUPERVISOR: [Signature] DATE: 1-31-90

**INSTALLATION**

DATE & TIME: 1/31/90 1836

ENTERED IN OFFICIAL LOG: m

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

**REMOVAL**

DATE & TIME: 4/29/90 1707

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) Annunciator C-10 is described in the UFSAR as a method of providing indications of low SW flow to the control room during an accident. A wiring anomaly is causing spurious alarms and annunciator card failure. Without this alarm the operator will not know if adequate SW flow exists during an accident. Leaving the alarm card installed could create a condition where the card could fail without the operator's knowledge. By pulling the alarm card, the card will be prevented from failing but indication of flow will be lost. To ensure sufficient SW flow, if an SI signal is received, operations will verify locally that >900 gpm to each fan cooler is available. This requirement will be posted on the MCB and oncoming operators will be informed during turnover. During normal ops, the flow is ~1000 gpm. When an SI signal is received flow would go up so sufficient flow should be available. By verifying >900 gpm the assumptions of the UFSAR remain valid and no unreviewed safety question exists.

Post maintenance testing will include sufficient testing to ensure the alarm will operate when actual low flow is sensed. Ref UFSAR 6.2.1.1.1 49-142 Rev. 2/88

Attach additional page(s) as necessary



CATEGORY 3.3.5  
REVIEWED \_\_\_\_\_

REFERENCE PROCEDURE  
A-1402  
*P. 87*

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: JEFF JONES DATE: 1-15-90 REQUEST #: 90-04

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION WIRES RUN FROM MAIN INCOMING POWER TO RETENTION TK  
TO <sup>SEPARATE</sup> SEPARATE CONTROL BOX ON TOP OF R-21 PANEL

PURPOSE TO PROVIDE 120 AC POWER TO R-21 RADIATION MONITOR  
(RETENTION TANK MONITOR)

LOCATION: SERVICE BUILDING BASEMENT (RETENTION TK PANEL)

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 2-7-90

TECHNICAL MANAGER: [Signature] DATE: 2-7-90

SHIFT SUPERVISOR: Terry White DATE: 2-8-90

INSTALLATION  
DATE & TIME 2/8/90 0920  
ENTERED IN OFFICIAL LOG; [Signature]  
NUMBER OF TAGS INSTALLED: 3  
INSTALLED BY: [Signature]  
VERIFIED BY: [Signature]

REMOVAL  
DATE & TIME: \_\_\_\_\_  
ENTERED IN OFFICIAL LOG; \_\_\_\_\_  
NUMBER OF TAGS REMOVED: \_\_\_\_\_  
REMOVED BY: \_\_\_\_\_  
VERIFIED BY: \_\_\_\_\_

REVIEW (AS NECESSARY) \_\_\_\_\_  
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## Safety Evaluation for Bypass of Safety Function and Jumper Control for power to R-21.

The power cable for the power supply to the retention tank panel was installed using very poor workmanship. The original installation used an extension cord which was terminated on both ends to terminal blocks and grounded at the power source. Because this installation 'looks like' a temporary hookup, it is desirable to install Jumper Control tags to identify this condition. An active EWR is scheduled to replace this power supply in late 1990 or early 1991. (EWR-4545)

Since the retention tank radiation monitor is not required for safe shutdown of the plant and is not classified as QA in accordance with 2.1 of Appendix A of the QA manual, the probability of occurrence of an accident evaluated previously in the UFSAR is not increased due to this installation.

The consequences of an accident previously evaluated in the UFSAR are not increased since this radiation monitor (R-21) is not needed to assure post accident levels are maintained below 10CFR100 limits. If this monitor were to fail, a grab sample will be taken to ensure 10CFR20 limits are maintained.

The probability of occurrence of a malfunction of equipment important to safety previously evaluated in the UFSAR is not increased due to this installation. As discussed above, this monitor is not important for plant safety and therefore its failure will not adversely affect plant safety.

Since this detector is ~~not~~ not assumed in the accident analysis in chapter 15 of the UFSAR, a failure will not increase the probability, nor increase the consequences of an accident previously evaluated. This condition will also not create an accident of a different type since the equipment has been installed since day one.





The margin of safety as defined in the basis for any Technical Specification will not be decreased due to this installation. Technical Specification 3.5 provides provisions of obtaining a grab sample if R-21 fails to continue releases through this path.

*J.S. O'Brien*  
2-7-90



CATEGORY 3.3.5  
REVIEWED [Signature]

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

*[Handwritten initials]*

JOB FOREMAN: MICHAEL J Meleca DATE: 3-21-90 REQUEST #: 90-07

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION TO INSTALL A 250Ω Precision Resistor IN SERIES  
WITH INPUT WIRES TO INDICATOR TI-409B-1

PURPOSE TO PROVIDE A VOLTAGE INPUT TO A Temporary  
Recorder FOR T-Cold MEASUREMENT.

LOCATION: MAIN CONTROL BOARD.

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 3-22-90

TECHNICAL MANAGER: [Signature] DATE: 3-22-90

SHIFT SUPERVISOR: [Signature] DATE: 3-22-90

**INSTALLATION**

DATE & TIME 3/22/90 @ 1440

ENTERED IN OFFICIAL LOG; [Signature]

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

**REMOVAL**

DATE & TIME: 5-9-90 0050

ENTERED IN OFFICIAL LOG; [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) \_\_\_\_\_

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**RECEIVED**

JUN 4 1990

CENTRAL RECORDS  
QA  
DISPOSITION - 5 YRS.

Attach additional page(s) as necessary



Bypass of Safety Function and Jumper Control

for Temporary T-Cold Recorder

Since the T-Cold wide range recorder for TI-450 & TI-451 has been unreliable, it is desirable to provide a T-Cold recorder for plant shutdown. This will be accomplished by installing a 250Ω precision resistor in series with the control board indicator for T-Cold (409B & 410B).

A failure of the newly installed temporary recorder or the temporary wiring will not effect the T-Cold signal from T-409B or T-410B because the temporary wiring is installed downstream of a V/I isolation amplifier (TY-409B-1 & TY-410B-1). Therefore, the installation of this recorder will not increase the probability or the consequence of an accident previously evaluated in Chapter 15 of the UFSAR. Since a failure of the new temporary recorder or its wiring will not effect existing plant instrumentation used for safety system controls, the probability of creating an accident not previously evaluated in Chapter 15 of the UFSAR will not be increased.

Since a failure of this recorder will not adversely effect RVLIS input from T-Cold 409B and 410B, the margin of safety as defined in the basis of any Technical Specification will not be reduced.

*Steven T. Adams*  
Steven T. Adams  
3/22/90



CATEGORY 3.3.5  
REVIEWED WJ

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

57

JOB FOREMAN: MIKE Meleca DATE: 3-21-90 REQUEST #: 90-08

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION To INSTALL A 250Ω Precision Resistor in Series  
with Input Wires to Indicator TI-410 B-1

PURPOSE To Provide a Voltage Input to a Temporary  
Recorder for the Purpose of Monitoring T-COLD.

LOCATION: MAIN CONTROL BOARD

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 3-22-90

TECHNICAL MANAGER: [Signature] DATE: 3-22-90

SHIFT SUPERVISOR: [Signature] DATE: 3-27-90

INSTALLATION

DATE & TIME 3/22/90 @ 1448

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: 5-9-90 0051

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) See attached

RECEIVED

JUN 4 1990

CENTRAL RECORDS  
QA  
DISPOSITION - 5 YRS.





Bypass of Safety Function and Jumper Control  
for Temporary T-Cold Recorder

Since the T-Cold wide range recorder for TI-450 & TI-451 has been unreliable, it is desirable to provide a T-Cold recorder for plant shutdown. This will be accomplished by installing a 250 $\Omega$  precision resistor in series with the control board indicator for T-Cold (409B & 410B).

A failure of the newly installed temporary recorder or the temporary wiring will not effect the T-Cold signal from T-409B or T-410B because the temporary wiring is installed downstream of a V/I isolation amplifier (TY-409B-1 & TY-410B-1). Therefore, the installation of this recorder will not increase the probability or the consequence of an accident previously evaluated in Chapter 15 of the UFSAR. Since a failure of the new temporary recorder or its wiring will not effect existing plant instrumentation used for safety system controls, the probability of creating an accident not previously evaluated in Chapter 15 of the UFSAR will not be increased.

Since a failure of this recorder will not adversely effect RVLIS input from T-Cold 409B and 410B, the margin of safety as defined in the basis of any Technical Specification will not be reduced.

*Steven T. Adams*  
Steven T. Adams  
3/22/90



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CATEGORY 3.3.5

REVIEWED

AUG 3 1990

REFERENCE PROCEDURE A-1402

ROCHESTER GAS AND ELECTRIC

CENTRAL RECORDS

GINNA STATION

BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL DISPOSITION - 5 YRS.

JOB FOREMAN: Kenneth E. Oelsenroth DATE: 3/31/90 REQUEST #: 90-16

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION: Provide power to ELCP digital displays

PURPOSE: To hook up temporary power to circuit #9 in Panel 14D

LOCATION: A D/G Room, panel 14D

SAFETY EVALUATION REQUIRED:  YES  NO

SKETCH ATTACHED:  YES  NO Drawing 33013-1772, SH.3-F3 also - review work instructions for W.O. 9021052

PORC DATE (IF REQUIRED): 3-26-90

TECHNICAL MANAGER: [Signature] DATE: 3-26-90

SHIFT SUPERVISOR: [Signature] DATE: 3-31-90

INSTALLATION

DATE & TIME 3/31/90 12:45

ENTERED IN OFFICIAL LOG: M/R MRS

NUMBER OF TAGS INSTALLED: 2

INSTALLED BY: Kenneth E. Oelsenroth

VERIFIED BY: Cliff Rank

REMOVAL

DATE & TIME: 7/27/90 13:15

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: R Browne

VERIFIED BY: M. Bouwman

REVIEW (AS NECESSARY) This jumper will supply AC power to the ELCP. The AC power is needed to the ELCP during the outage to perform calibration of instrumentation inside the ELCP. The AC power is fed from a lighting panel fed from Bus 13. The transformer will be replaced during the outage to supply AC power from the safeguards bus.

The installation of this jumper will not adversely affect the controls of the IA D/G, only supply AC power to the indicators inside the ELCP. Therefore, the probability or the consequences of an accident previously evaluated in Chapter 15 of the UFSAR will not be increased. The installation of this jumper will not create an accident of a different type previously evaluated in the UFSAR since the failure of the jumper will not adversely affect operability of the IA D/G.

Since the IA D/G will remain operable while the IA D/G ELCP is powered from the AC outlet, the margin of safety as defined in the basis of any technical specification will not be reduced.

Attach additional page(s) as necessary



CATEGORY 335  
REVIEWED [Signature]

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: M BAUMAN DATE: 4-18-90 REQUEST #: 90-21

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION States deck points on Bus 17 for MCB voltmeter indication,  
Term. Deck TB3, terminals 1 and 2

PURPOSE Connect wires to TB3, terminals 1 and 2 for voltage indication for  
recording bus voltage for SWP 10, W.O.# 9021560

LOCATION: UNIT 25, rear of Bus 17, Ref. dwg. 21946-56

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 4-17-90

TECHNICAL MANAGER: [Signature] DATE: 4-17-90

SHIFT SUPERVISOR: [Signature] DATE: 4-18-90

INSTALLATION

DATE & TIME 4-18-90 1325

ENTERED IN OFFICIAL LOG; Ray J. Gillon

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: BAUMAN

VERIFIED BY: J. Manley

REMOVAL

DATE & TIME: 4-18-90

ENTERED IN OFFICIAL LOG; Ray J. Gillon

NUMBER OF TAGS REMOVED: 1

REMOVED BY: BAUMAN

VERIFIED BY: J. Manley

REVIEW (AS NECESSARY) See attached safety analysis. This monitoring device shall be  
removed prior to exceeding 200°F RCS temperature. APR 4-17-90

**RECEIVED**

MAY 3 1990

CENTRAL RECORDS  
QA  
DISPOSITION - 5 YRS.



GINNA STATION:	DATE:	PAGE	OF
JOB:	MADE BY:		

Safety Evaluation for Bypass of Safety Function and Jumper Control for recorder on 1D SW Pump.

A current transformer will be installed on the leads of the 1D Service water pump and will be wired to a current ~~transformer~~<sup>transducer</sup> and a recorder. A voltage transducer will be installed to TB 3-1 and TB 3-2 (Unit 25, Bus 17). The voltage transducer will also be wired to the recorder. The recorder will be powered from a normal 120 VAC power supply. (See attached sketch for details).

The proposed bypass of Safety Function and Jumper Control will not increase the probability of occurrence of an accident previously evaluated in the UFSAR. This jumper will be removed prior to heatup past  $350^{\circ}\text{F}$ <sup>200°F</sup> and therefore will not adversely affect the probability of any accident evaluated in chapter 15 of the UFSAR.

This jumper will not increase the consequences of an accident previously evaluated in the UFSAR. The radiological consequences of an accident will not be increased with a failure of the recorder, nor will a failure of the 1D SW Pump cause the consequences of an accident to be increased provided at least one other S.W pump remains operable.

The proposed modification will not increase the probability of occurrence <sup>nor the consequences</sup> of a malfunction of equipment important to safety previously evaluated in the UFSAR since the current transformer is a passive device and will not adversely affect the SW pump operability. A failure of the voltage transducer may result in a failure of the volt meter for the service water pump. This is non-essential equipment for the running of the 1D SW pump.

The proposed jumper will not create the possibility of an accident of a different type since the worst outcome of this jumper would be a failure of the 1D SW pump, a single failure of an active component is evaluated in the UFSAR.

The proposed <sup>jumper</sup> modification will not create the possibility of a different type of malfunction of equipment important to safety than any previously evaluated in the UFSAR since the loss of one SW pump has been previously evaluated.

The proposed jumper will not reduce any margin of safety as defined in the basis of any technical specifications since the service water system as





GINNA STATION:	DATE:	PAGE OF
JOB:	MADE BY:	
<p>defined in section 3.3 of tech specs is defines only one SW pump needed for the injection phase of an accident. Failure of one SW pump will not create a complete loss of SW condition and therefore, cooling to the CCW heat exchangers will continue to provide a heat sink for the RHR system.</p>		



CATEGORY 3.3.5  
REVIEWED SS

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: Ren Browne DATE: 4/17/90 REQUEST #: 90-22

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION OPERATES LOW FLOW MONITOR ALARM FOR THE 1B BATTERY BANK.

PURPOSE PREVENT NUISANCE ALARMS (MAINT ID TAG 3794)

LOCATION: LOAD FLOW MONITOR FOR 1B BATTERY TB 4-1

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 4-20-90

TECHNICAL MANAGER: [Signature] DATE: 4-20-90

SHIFT SUPERVISOR: [Signature] DATE: 4/20/90

**INSTALLATION**  
DATE & TIME 4-20-90 1528  
ENTERED IN OFFICIAL LOG; [Signature]  
NUMBER OF TAGS INSTALLED 1 tag  
INSTALLED BY: [Signature]  
VERIFIED BY: RW Marshall

**REMOVAL**  
DATE & TIME: 5-11-90 0950M 0951  
ENTERED IN OFFICIAL LOG; [Signature]  
NUMBER OF TAGS REMOVED: 1  
REMOVED BY: Bauman  
VERIFIED BY: R. SPENCER

REVIEW (AS NECESSARY) See safety evaluation for 1A Battery Monitor Alarm

**RECEIVED**

JUN 4 1990

CENTRAL RECORDS  
QA  
DISPOSITION - 5 YRS.



RECEIVED

REFERENCE PROCEDURE  
A-1202

JUN 4 1990

CATEGORY 3.3.5  
REVIEWED JL

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

CENTRAL RECORDS  
POSITION - 5 YRS.

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: Ron Browne DATE: 4/17/90 REQUEST #: 90-23

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION Operator load flow alarm for A Battery

PURPOSE Prevent frequent <sup>RS</sup> nuisance alarms.  
maint I.D tag 3794

LOCATION: A Battery Room load flow monitor wire # TB4-1

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 4-20-90

TECHNICAL MANAGER: [Signature] DATE: 4-20-90

SHIFT SUPERVISOR: [Signature] DATE: 4/20/90

**INSTALLATION**

DATE & TIME 4-20-90 1621

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS INSTALLED: 1 tag

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

**REMOVAL**

DATE & TIME: 5-9-90 @ 1303 1324

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 1

REMOVED BY: [Signature]

VERIFIED BY: [Signature]

REVIEW (AS NECESSARY) Lifting the wire at TB4-1 will disable the TB<sup>1A</sup> vital battery monitor alarm. This wire lifting is necessary since the alarm is not functioning properly and needs to be repaired. The load flow monitor will still provide a readout for the operations personnel and the voltage <sup>meter</sup> of the 1A Battery will provide a backup to the load flow monitor. Since the load flow monitor alarm is not assumed to be functioning for the assumptions in the accident analysis of Chapter 15 of the VFSAR, the malfunction of this alarm will not increase the probability nor the consequences of an accident previously evaluated in the VFSAR. The lifting of this wire will only disable the alarm function of the battery monitor and will therefore not create an accident of a different type not evaluated in chapter 15 of the VFSAR. The vital battery monitor system is not addressed in the basis of any tech specs, therefore, the margin of safety as defined in the basis of tech specs will not be decreased from lifting the wire to the alarm function of the battery monitor.

Attach additional page(s) as necessary



RECEIVED

MAY 3 1990

REFERENCE PROCEDURE A-1403

CATEGORY 335  
REVIEWED [Signature]

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

DISCONTINUED POSITION .5 YRS.

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: BOB POPP DATE: 4/24/90 REQUEST #: 90-28

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION AMMETER SELECTOR SWITCH "B" DIESEL PHASE A,B,C

CURRENT DEVICE "GOC"

PURPOSE RESOLVE NCR 90-226 W/O # 90-21771

LIFT WIRES ON "GOC" TERMINALS G7, G6, G5 per 33013-1737 SH 3

LOCATION: MCB LEFT REAR

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO 33013-1737-3

PORC DATE (IF REQUIRED): 4-25-90

TECHNICAL MANAGER: X [Signature] DATE: 4-24-90

SHIFT SUPERVISOR: [Signature] DATE: 4-25-90

**INSTALLATION**

DATE & TIME X 4/25/90 1020

ENTERED IN OFFICIAL LOG: OP's [Signature]

NUMBER OF TAGS INSTALLED: 6

INSTALLED BY: X [Signature]

VERIFIED BY: [Signature] / B. Popp

**REMOVAL**

DATE & TIME: 4/25/90 1100

ENTERED IN OFFICIAL LOG: [Signature]

NUMBER OF TAGS REMOVED: 6

REMOVED BY: [Signature]

VERIFIED BY: [Signature] / B. Popp

REVIEW (AS NECESSARY) B D/G OUT OF SERVICE

The B D/G is held for maintenance. The wires which are to be lifted to resolve the phase current device anomaly will be replaced in the same terminal location. This wire lifting is a test to verify the proper wiring from the phase to the current device. This maintenance activity will be completed prior to testing of the B D/G. The testing being performed following the wire lifting and retermination will verify proper operation of the diesel. Therefore, the probability or the consequences of an accident previously evaluated in the USAR will not be increased by lifting and reinstalling the above listed wires. The probability of creating an accident not previously addressed in the USAR will not be increased. The margin of safety as addressed in the basis of any technical specifications will not be decreased by performing this maintenance.





CATEGORY 3.3.5  
REVIEWED 107

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

# BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL

*W 4  
14  
C*

JOB FOREMAN: MIKE BAUMAN DATE: 5-18-90 REQUEST #: 90-35

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION OPERATES LOW FLOW MONITOR ALARM FOR THE 1B BATTERY BANK

PURPOSE PREVENT NUISANCE ALARMS

LOCATION: LOAD FLOW MONITOR FOR 1B BATTERY TB 4-1 LIFTED

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): SEE ANALYSIS FOR 1A BATTERY ON 4-20-90 (ATTACHED)

TECHNICAL MANAGER: *[Signature]* DATE: 5-18-90

SHIFT SUPERVISOR: *[Signature]* DATE: 5/18/90

### INSTALLATION

DATE & TIME 5-18-90 1320

ENTERED IN OFFICIAL LOG: *[Signature]*

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: BAUMAN

VERIFIED BY: W. SPENCER

### REMOVAL

DATE & TIME: 10-12-90 0950

ENTERED IN OFFICIAL LOG: *[Signature]*

NUMBER OF TAGS REMOVED: 1

REMOVED BY: R. Browne

VERIFIED BY: R. Mastrella

REVIEW (AS NECESSARY) SEE ATTACHED

**RECEIVED**

NOV 12 1990

CENTRAL RECORDS

DISPOSITION - 5 YRS.



RECEIVED

CATEGORY 3.3.5  
REVIEWED [Signature]

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

JUN 4 1990

REFERENCE PROCEDURE  
A-1202

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

CENTRAL RECORDS  
POSITION - 5 YRS.

JOB FOREMAN: Ron Browne DATE: 4/17/90 REQUEST #: 90-23

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION Operator load flow alarm for A Battery

PURPOSE Prevent frequent <sup>RB</sup> nuisance alarms.  
maint I.D tag 3794

LOCATION: A Battery Room load flow monitor wire # TB4-1

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 4-20-90

TECHNICAL MANAGER: [Signature] DATE: 4-20-90

SHIFT SUPERVISOR: [Signature] DATE: 4/20/90

**INSTALLATION**

DATE & TIME 4-20-90 1621

ENTERED IN OFFICIAL LOG: Pam: Cy

NUMBER OF TAGS INSTALLED: 1 tag

INSTALLED BY: [Signature]

VERIFIED BY: RW Marriott

**REMOVAL**

DATE & TIME: 5-9-90 @ 430<sup>PM</sup> 1324

ENTERED IN OFFICIAL LOG: 1 Pam: Cy

NUMBER OF TAGS REMOVED: 1

REMOVED BY: Dm Bahr

VERIFIED BY: M Bauman

REVIEW (AS NECESSARY) Lifting the wire at TB4-1 will disable the TB "IA vital battery monitor alarm. This wire lifting is necessary since the alarm is not functioning properly and needs to be repaired. The load flow monitor will still provide a readout for the operations personnel and the voltage <sup>meter</sup> of the IA Battery will provide a backup to the load flow monitor. Since the load flow monitor alarm is not assumed to be functioning for the assumptions in the accident analysis of Chapter 15 of the VFSAR, the malfunction of this alarm will not increase the probability nor the consequences of an accident previously evaluated in the VFSAR. The lifting of this wire will only disable the alarm function of the battery monitor and will therefore not create an accident of a different type not evaluated in chapter 15 of the VFSAR. The vital battery monitor system is not addressed in the basis of any tech. specs, therefore, the margin of safety as defined in the basis of tech specs will not be decreased from lifting the wire to the alarm function of the battery monitor.

Attach additional page(s) as necessary



CATEGORY 3.3.5

REVIEWED ARM

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

*2.70*

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: Don Pulver DATE: 6/8/90 REQUEST #: 90-37

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER   
FUNCTION C-10 Annunciator Card (CNMT Recirc Fan SW low flow Alarm) Card Pulled

PURPOSE Defeat Spurious Alarms on window C-10 by removing card

LOCATION: M.C.B. <sup>left</sup> right sect. "C" window

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 6-8-90

TECHNICAL MANAGER: JWghl DATE: 6-8-90

SHIFT SUPERVISOR: [Signature] DATE: 6-8-90

INSTALLATION  
DATE & TIME 6-8-90 1530  
ENTERED IN OFFICIAL LOG; M  
NUMBER OF TAGS INSTALLED: 1  
INSTALLED BY: D. Pulver  
VERIFIED BY: A. Alvarado

REMOVAL  
DATE & TIME: 8-23-90 1433  
ENTERED IN OFFICIAL LOG; [Signature]  
NUMBER OF TAGS REMOVED: 1  
REMOVED BY: George [Signature]  
VERIFIED BY: D. Pulver

REVIEW (AS NECESSARY) see attached review

**RECEIVED**

SEP 18 1990

CENTRAL RECORDS  
QA  
DISPOSITION - 5 YRS.



BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL  
ANNUNCIATOR C-10

Annunciator C-10 is described in the UFSAR as a method of providing indication of low SW flow to the control room during an accident. A wiring anomaly is causing spurious alarms. Without this alarm, the operator will not know if adequate SW flow exists during an accident. By pulling the alarm card, the card will be prevented from alarming spuriously but indication of SW flow will be lost. To ensure sufficient SW flow, if an SI signal is received, operations personnel will verify locally that greater than 900 gpm is available to each fan cooler. This requirement will be posted on the MCB and oncoming operators will be informed during turnover. During normal operations, the flow is ~1000 gpm. When an SI signal is received, flow would go up so sufficient flow should be available. By verifying greater than 900 gpm, the assumptions of the UFSAR remain valid and no unreviewed safety question exists. Post maintenance testing will include sufficient testing to ensure the alarm will operate when actual low flow is sensed.

Ref. UFSAR 6.2.1.1.1

*JWZ*  
6/8/90





CATEGORY 3.3.5

REVIEWED [Signature]

REFERENCE PROCEDURE A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

J.E.P.

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

-40

JOB FOREMAN: MICHAEL J MELECA DATE: 6-9-90 REQUEST #: 90-583

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION LIFT WIRES AT TERMINAL BLOCK TB-1B TERMINALS

5 AND 6 AT INCORE PATEC THERMOCOUPLE PANEL

PURPOSE TO REMOVE T/C K-3 FROM INPUT OF

DISPLAY UNIT

LOCATION: CONTROL ROOM

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 6-19-90

TECHNICAL MANAGER: [Signature] DATE: 6-19-90

SHIFT SUPERVISOR: [Signature] DATE: 6-19-90

INSTALLATION

DATE & TIME 6/19/90 1328

ENTERED IN OFFICIAL LOG: 1

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: \_\_\_\_\_

ENTERED IN OFFICIAL LOG: \_\_\_\_\_

NUMBER OF TAGS REMOVED: \_\_\_\_\_

REMOVED BY: \_\_\_\_\_

VERIFIED BY: \_\_\_\_\_

REVIEW (AS NECESSARY) see attached evaluation.

Attach additional page(s) as necessary



10CFR 50.59 Safety Evaluation  
for  
Bypass of Safety Function and Jumper Control  
for Thermocouple K-3

The circuit to thermocouple K3 is open. To ensure ~~it~~<sup>no</sup> erroneous readings are not generated in the future, the leads from this thermocouple to the thermocouple panel will be lifted. This will prevent erroneous ~~field~~<sup>sw</sup> thermocouple readings from being included in the averaging calculations in the thermocouple panel. The four thermocouples per quadrant required by Tech Specs will be maintained and thermocouple K3 is not used by RVLIS.

Based on this evaluation, the probability and consequences of an accident or malfunction previously evaluated in the UFSAR will not be increased. The probability of an accident or malfunction not previously evaluated in the UFSAR will not be increased. The margin of safety as ~~calculated~~<sup>sw</sup> defined in the basis of Tech Specs will not be decreased.

UFSAR section 4.4.5.4 & table 7.7-3

Tech Specs section 3.5.3 & table 3.5-3

*W. J. ...* 6/18/90



CATEGORY 3.3.5

REVIEWED \_\_\_\_\_

REFERENCE PROCEDURE  
A-1402

ROCHESTER GAS AND ELECTRIC  
GINNA STATION

**BYPASS OF SAFETY FUNCTION AND JUMPER CONTROL**

JOB FOREMAN: G. RAWA DATE: 7-17-90 REQUEST #: 90-41

JUMPER WIRE  LIFTED WIRE  FUSES PULLED  STATES BLOCK  OTHER

FUNCTION INCORE TEMPERATURE INDICATION C3

PURPOSE LIFT INCORE T/C C3, TO KEEP 'A' TRAIN IN THE MEGASYSTEMS FROM ALARMING, THUS BE ABLE TO DECLARE OPERABILITY

LOCATION: CONTROL ROOM, INCORE RACK #4 TIA #31 + 32

SAFETY EVALUATION REQUIRED:  YES  NO SKETCH ATTACHED:  YES  NO

PORC DATE (IF REQUIRED): 7-17-90

TECHNICAL MANAGER: [Signature] DATE: 7-17-90

SHIFT SUPERVISOR: [Signature] DATE: 7-17-90

INSTALLATION

DATE & TIME 7-17-90 1615

ENTERED IN OFFICIAL LOG; [Signature]

NUMBER OF TAGS INSTALLED: 1

INSTALLED BY: [Signature]

VERIFIED BY: [Signature]

REMOVAL

DATE & TIME: \_\_\_\_\_

ENTERED IN OFFICIAL LOG; \_\_\_\_\_

NUMBER OF TAGS REMOVED: \_\_\_\_\_

REMOVED BY: \_\_\_\_\_

VERIFIED BY: \_\_\_\_\_

REVIEW (AS NECESSARY) see attached Safety evaluation



10CFR50.59 SAFETY EVALUATION  
for  
Bypass of Safety Function for Thermocouple C-3

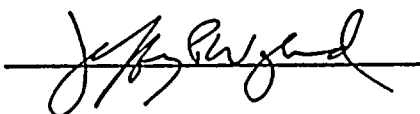
The circuit for thermocouple C-3 is inoperable. To ensure erroneous readings are not generated, the leads from this thermocouple to the thermocouple panel will be lifted. This will prevent erroneous thermocouple readings from being included in the averaging calculations in the thermocouple panel. The four thermocouples per quadrant required by Tech Specs will be maintained and thermocouple C-3 is not used by RVLIS.

Based on this evaluation, the probability and consequences of an accident or malfunction previously evaluated in the UFSAR will not be increased. The possibility of an accident or malfunction not previously evaluated in the UFSAR will not be created. And, the margin of safety as defined in the basis of Tech Specs will not be reduced. Therefore, this bypass of safety function does not create an unreviewed safety question.

References:

UFSAR Section 4.4.5.4 & Table 7.7-3  
Tech Specs Section 3.5.3 & Table 3.5-3

Prepared by:



Date: 7-17-90





August 1, 1989

SAFETY EVALUATION FOR TEMPORARY STRUCTURE FEATURE  
AUTHORIZATION FORM 89-180

This temporary structure will be placed under the reference leg piping to support the condensate pot and associated tubing. The reference leg piping will be lifted by hand while measuring and recording the maximum lift force. The lift will not create any substantial deflection of the root valve and will therefore not create an unexceptable stress on the welds in the reference leg. The reference leg will not be lifted past the condensates pot's original design elevation. Therefore, this temporary structure will not endanger the integrity of the reference leg piping. This temporary structure will be removed prior to leaving the hot shutdown condition.

This temporary structure will not increase the probability of an accident or the consequences of an accident previously evaluated in the UFSAR. This temporary structure will not effect the pressure transmitter PT-429 and therefore will not effect the response of safety injection to an accident. This structure will not effect the integrity of the reference leg and will only be used to support the static load of the piping will remain intact.

This temporary structure will not create an accident of a different type then those specified in the UFSAR. The Safety Injection System will react as designed to any accident addressed in the UFSAR.

This temporary structure will not reduce the margin of safety as defined in any technical specification basis. This structure does not render any plant system inoperable, nor will it degrade any operating system.



8/11/89

SCREENHOUSE NORTH OF MCC-1G PLANT  
BETTERMENT PAINT SCAFFOLD  
89-183

Scaffolding is needed for ceiling and wall painting in the area north of MCC-1G not covered by previously approved scaffolds 89-167 and 89-168. Because of the proximity of the service Water Pumps in both trains and MCC-1G the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.K. Fitzsimmons on Authorization Form 89-167).

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall accept the installation.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Seismic Events



There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



8/11/89

SCREENHOUSE SOUTH WALL OVER DIESEL FIRE PUMP  
PLANT BETTERMENT PAINT SCAFFOLD  
89-184

Scaffolding is needed for ceiling and wall painting in the area over the Diesel Fire Pump between the areas covered by previously approved scaffolds 89-170 and 89-171. Because of the proximity of the service Water Pumps and Fire Service Water Pumps in both trains the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.K. Fitzsimmons on Authorization Form 89-167).

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall accept the installation.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Seismic Events





There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



September 6, 1989

A MAIN STEAM ARV-3411 REPAIR  
WORK PLATFORM 89-190

Repair work on ARV-3411 will necessitate a work platform, constructed of pole scaffold and planks such as to surround the A Main Steam lead and the relief valve inlet piping, somewhat below the ARV inlet flange. The small tubing for the ARV air operator will be disconnected during the valve repair preparations. As such the platform will have no potential effect on the ARVs, and the structures will be restricted from movement in the direction of any other safety related equipment. The Main Steam leads and the relief piping are sufficiently sturdy to preclude any damage from the relatively light scaffold materials; however, piping of smaller diameter than the scaffold pole material is incorporated as the isolation valve 3507 bypass. The duration of scaffold existence is projected to be 2 weeks.

Because of the above factors, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, and fire fighting provisions in the area.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Generator tube rupture
- Rupture of a steam pipe
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



September 7, 1989

LAUNDRY EXHAUST FAN VIBRATION/EXPANSION  
RING REPLACEMENT WORK PLATFORM 89-191

Repair is required on ductwork at the Laundry Exhaust Fan, located in the vicinity of the A Feedwater Line. The entries from the Motor and Turbine Auxiliary Feedwater Pump discharges are nearby, and there is a high density of snubbers for this piping in area (5 mechanical and 1 hydraulic). A temperature sensor (TE-2096) is located at the top of the feedwater line downstream of check valve 3003.

Because of the existence of the above features within the vicinity of the proposed scaffold, scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Loss of Normal Feedwater
- Loss of all A.C. power to the station auxiliaries
- Steam Generator tube rupture
- Rupture of a steam pipe
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



September 12, 1989

SI RECIRC FLOW ORIFICE FE-916  
LEAK REPAIR WORK PLATFORM 89-192

A work platform is required to correct a leak condition at SI recirc flow orifice FE-916, located between the Refueling Water Tank and 480v Bus 16. Also within the vicinity are Temperature Indicator TI-917, and SI recirc MOVs 897 and 898. The MOVs are within the ASME Seismic Class 2 boundary as indicated on P&ID 33013-1261 Containment Spray (SI). The platform is to be about 4 ft. high, estimated to be in existence 2 days.

Because of factors given above the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



9/26/89

AUXILIARY BUILDING TOP SOUTH WALL WEST  
FROM COLUMN LINE 8a PLANT BETTERMENT  
PAINT SCAFFOLD 89-194

A scaffold is planned for painting the south wall at the Auxiliary Building top level, to extend from the Decon Pit to the Monitor Tanks. Because of the large area to be covered, including the area immediately adjacent to both Component Cooling Heat Exchangers, and the relatively lengthy projected duration of the scaffold existence, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167).

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. In addition, part of the orientation shall stress the importance of taking care not to bump any live smoke detectors. The erection process shall be monitored by an assigned Liaison Engineer. In addition, the Job Supervisor shall notify the Fire Protection group during installation to allow for consultation on any potential interferences with fire detection/sprinkler provisions encountered.

During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Liaison Engineer.

In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Liaison Engineer. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.





Clearance shall be maintained for operations, testing, and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

The scaffold shall be constructed so as not to interfere with Auxiliary Building Crane use during fuel transfer mechanism work planned.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Rupture of a Steam Pipe
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



1/16/90

SERVICE WATER PIPE SUPPORTS SWU-625,  
SWU-626, SWU-623, AND SWU-624  
SCREENHOUSE BASEMENT WORK PLATFORMS  
89-202

In order to perform the pipe support upgrade work near the ceiling for the Service Water Pump discharges, work platforms are needed, to be constructed of wood, about 3 ft. above the floor. The individual pump discharges are 14 in. pipe, and the headers are 20 in. pipe, sufficiently sturdy to preclude any damage by the relatively short wooden platforms. No safety related instrumentation will be affected by this platform installation.

Based on the factors described above 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. Material of construction will be light enough so that it will have no effect on any component in the event of a seismic event.

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

- Seismic Event

The installation does not involve a change in the Plant Technical Specifications because the lightness of the installation in relation to the sturdiness of the pipe will ensure that there will be no effect on assumptions provided in the Plant Technical Specifications bases.

The installation will 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 it will not affect safety related equipment in the event of a seismic event.

The installation does not increase the probability of an occurrence or the consequences of an accident or malfunction of a different type than previously evaluated in the Safety Analysis Report, because of the sturdiness of the adjacent piping.

The installation of this temporary modification will not reduce the margin of safety as defined in the basis for any Plant Technical Specification because it does not affect any Technical Specification.



1/16/90

SERVICE WATER PIPE SUPPORTS SWU-636  
AND SWU-638 WORK PLATFORMS  
89-203

In order to perform the pipe support upgrade work near the ceiling for the Service Water Pump discharge portion in the northeast corner of the room, a work platform constructed of wood will be needed, about 3 ft. above the floor. The individual pump discharges are 14 in. pipe, and the headers are 20 in. pipe, sufficiently sturdy to preclude any damage by the relatively short wooden platforms. No safety related instrumentation will be affected by this platform installation.

Based on the factors described above 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. Material of construction will be light enough so that it will have no effect on any component in the event of a seismic event.

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

- Seismic Event

The installation does not involve a change in the Plant Technical Specifications because the lightness of the installation in relation to the sturdiness of the pipe will ensure that there will be no effect on assumptions provided in the Plant Technical Specifications bases.

The installation will 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 it will not affect safety related equipment in the event of a seismic event.

The installation does not increase the probability of an occurrence or the consequences of an accident or malfunction of a different type than previously evaluated in the Safety Analysis Report, because of the sturdiness of the adjacent piping.

The installation of this temporary modification will not reduce the margin of safety as defined in the basis for any Plant Technical Specification because it does not affect any Technical Specification.



1/17/90

SCREENHOUSE PLANT BETTERMENT PAINTING  
SCAFFOLD ABOVE THE HOUSE HEATING BOILER  
90-01

Scaffolding is required in the Screenhouse for cleaning and painting under the Plant Betterment Project. This permit (90-01) is for a seismic scaffold above and around the house heating boiler. (Ref. sketch attached to permit). This location is within 1 1/2 times its height of safety related service water pumps 1A and 1B.

The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.K. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Station Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall accept the installation.

Clearance shall be maintained for operations, testing and maintenance access to the Screenhouse all valves, instrumentation, panels, rotating equipment, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Seismic Events





There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



February 7, 1990

CONDUIT AND CABLE INSTALLATION IN  
AUXILIARY BUILDING SUB-BASEMENT  
FOR MIDLOOP INSTRUMENTATION EWR-4892  
SCAFFOLD 90-14

A scaffold is needed with a work platform about 8 feet from the floor. The corner poles shall be extended to the ceiling and horizontal poles shall be extended to at least one wall and other anchorage points or bumper contact points on the opposite side to prevent movement.

Because both trains of Residual Heat Removal Pumps are within the immediate vicinity of the scaffold, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment), incorporating the features described above.

The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.



During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, fire protection systems, and rotating equipment in the area.

The above construction and operational 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 assumptions of the analyses given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



February 7, 1990

CONDUIT AND CABLE INSTALLATION IN  
AUXILIARY BUILDING BASEMENT AT WEST STAIR  
FOR MID-LOOP INSTRUMENTATION  
EWR-4892 SCAFFOLDS 90-15

In order to install conduit and cable for this project in the Auxiliary Building basement a scaffold is needed near the ceiling above the Spent Fuel Pool Pumps.

The SFP cooling system is non-seismic safety related (1) however, Seismic Category I items are within the immediate vicinity, given below.

- A and B Residual Heat Removal Pump Cooling Units (2)
- A Residual Heat Removal Pump Discharge Temperature TT-630 (3)

Other instruments in the area for which care should be taken to avoid disturbing are as follows:

- Component Cooling Return from Residual Heat Removal Pumps flow FI-651 and its associated tubing. (4)
- A Residual Heat removal Pump discharge pressure PIC-629 and PI-629A and their associated tubing. (3)

Because of the above factors the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.





The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to the Auxiliary Building sub-basement, all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.



The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.

NOTES:

- 1) Quality Assurance Manual Appendix A Quality and Safety Related Listing and Diagrams Section 2.2.4 Spent Fuel Pool Cooling outlined in RG&E Drawing 33013-1248 (portion attached).
- 2) UFSAR Section 9.4.9.1 Engineered Safety Features Equipment Ventilation and Cooling.
- 3) UFSAR Figure 5.4-7 Residual Heat Removal System (portion attached).
- 4) UFSAR Figure 9.2-4 Sheet 1 Component Cooling Water System (portion attached).



February 7, 1990

CONDUIT AND CABLE INSTALLATION IN  
AUXILIARY BUILDING INTERMEDIATE LEVEL  
AT WEST STAIR FOR MID-LOOP INSTRUMENTATION  
EWR-4892 SCAFFOLD 90-16

In order to install conduit and cable for this project in the Auxiliary Building Intermediate Level a scaffold is needed near the ceiling from the stairwell north to adjacent to the Containment wall, over the west end of the Spent Fuel Pool Heat Exchanger. Standby Auxiliary Feedwater System Containment isolation MOVs are located on the north side of the SFPHX.

The space between the heat exchanger and containment is very congested with piping, pipe support structures, regulators, valves, instruments, and lead shielding for a process monitor in the service water piping from the heat exchanger. A major portion of the equipment here is associated with the waste gas system supporting the Reactor Coolant Drain Tank and the Pressurizer Relief Tank, both of which are in Containment. Immersed within this space is one of the Containment Mini-purge discharge isolation valves.

Because of the location of the above discussed SAFW Containment isolation MOVs, the scaffold shall be constructed as seismic using the attached Seismic Scaffold Guidelines provided from Structural Engineering (M. B. Fitzsimmons October 31, 1988 memo attachment). The erection process shall be monitored by the Construction Engineer and the Liaison Engineer.

The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.



If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

Locked area access to the Spent Fuel Pool filter vault is controlled by a locked gate. Ensure that the scaffold does not allow any easier access to this area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Steam Generator Tube Rupture
- Rupture of a Steam Pipe
- Primary System Pipe Rupture
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.





The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



February 7, 1990

CONDUIT AND CABLE INSTALLATION IN CONTROL ROOM  
AIR HANDLING ROOM FOR MID-LOOP  
INSTRUMENTATION EWR-4892  
SCAFFOLD 90-17

In order to install conduit and cable for this project in the Control Room Air Handling Room a scaffold is needed. The equipment in the immediate area is, for the most part, dedicated to continuing habitability for the Main Control Room in the post-accident environment. Because of this, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



February 13, 1990

PENETRATION SEAL INSPECTION OVER  
CONTROL ROOM AIR HANDLING UNIT  
SCAFFOLD 90-23

In order to inspect penetration seals above the Control Room Air Handling Unit, a scaffold is needed. The equipment in the immediate area is, for the most part, dedicated to continuing habitability for the Main Control Room in the post-accident environment. Because of this, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



February 15, 1990

CONDUIT AND CABLE INSTALLATION UNDER  
INTERMEDIATE BUILDING NORTH CATWALK  
EWR-4530 SCAFFOLD 90-24

In order to install conduit and cable under the catwalk a work platform needed. It will be located in the immediate vicinity of containment penetrations for heating steam and the ILRT vent to roof. It will be directly above the Containment Cooler Unit flow indicators which are Seismic Category I instruments. To the immediate north are Control Rod Drive Power Cabinets.

Because of the close involvement with the Seismic Category I items the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.



During construction and teardown care should be taken to prevent bumping containment isolation valves, the instruments and cabinets described above and any other sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Line Rupture
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.



90-24

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





February 16, 1990

A BATTERY ROOM EAST WALL PENETRATION  
SEALING INSPECTION EWR-4941  
SCAFFOLD 90-26

In order to inspect penetration seals on the A Battery Room wall adjacent to the A Battery, a scaffold is needed, to provide a work platform approximately 9 ft. from the floor. It is to be of wooden construction to eliminate the potential for short circuiting the battery. It shall be constructed in accordance with the attached sketch so that it will be identical to the structure provided as Request 86-56, which was determined to be seismically acceptable (see attached 10/7/86 S.K. Ferguson memo).

The Job Supervisor shall verify that an orientation session has been conducted on the construction requirements given below.

Pre-planning and prefabrication for the scaffold shall be done such as to allow completion of the structure, apart from the decking, in one day of work within the Battery Room. As alternatives to this the following may be observed:

- The portion completed shall be adequately restrained to make it seismic with bracing and interlocking and contact with adjacent structural features.
- In lieu of the above, the B Main Battery System shall be maintained operable, with no non-seismic temporary structures in the B Battery Room.
- During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by a qualified individual.

Extreme care must be exercised in working adjacent to or above the batteries during construction, use, and teardown of the scaffold.

Sufficient clearances are to be provided for Electrician access to the battery.

Prior to use, the structure shall be inspected by the Job Supervisor to confirm that its construction was in accordance with the sketch. Upon successful confirmation the Job Supervisor shall document this confirmation for the original copy of the Authorization Form, and so notify the Shift Supervisor.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



2/26/90

A BATTERY ROOM NORTHWEST CORNER PENETRATION  
SEALING INSPECTION EWR 4941 SCAFFOLD 90-27

A work platform is needed to inspect penetration seals in the northwest corner of the A Battery Room adjacent to the A Battery Charger, to be about 6 1/2 ft. from the floor. The duration of existence of this scaffold is estimated to be a month. In consideration of any possibility for inoperability of DC electric system equipment in the B Battery Room within this fairly lengthy duration the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167).

It shall not be started until the wooden scaffold over the A Battery bank is completed; as such, that scaffold (90-26) shall serve as a barrier to prevent short circuiting the battery with metal scaffold materials. This subject scaffold shall be removed prior to removal of the wooden scaffold.

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Extreme care must be exercised in working adjacent to the batteries and other DC electric equipment during construction, use, and teardown of the scaffold.

Clearance shall be maintained for operations, testing and maintenance access to all instrumentation and panels in the area.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





2/26/90

A BATTERY ROOM NORTHEAST CORNER PENETRATION  
SEALING INSPECTION EWR 4941 SCAFFOLD 90-28

A work platform is needed to inspect penetration seals in the northeast corner of the A Battery Room adjacent to the A Battery Disconnect Switches to be about 8 ft. from the floor. The duration of existence of this scaffold is estimated to be a month. In consideration of any possibility for inoperability of DC electric system equipment in the B Battery Room within this fairly lengthy duration the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167).

It shall not be started until the wooden scaffold over the A Battery bank is completed; as such, that scaffold (90-26) shall serve as a barrier to prevent short circuiting the battery with metal scaffold materials. This subject scaffold shall be removed prior to removal of the wooden scaffold.

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Extreme care must be exercised in working adjacent to the batteries and other DC electric equipment during construction, use, and teardown of the scaffold.

Clearance shall be maintained for operations, testing and maintenance access to all instrumentation and panels in the area.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



03/08/90

STANDBY SFP COOLING COMPONENT  
MOUNTING  
90-40

It has been decided to provide mountings for, and to install the standby SFP Pump in the Auxiliary Building basement, immediately east of the RHR Pump Cooler Units, by the containment wall, and to do likewise with the standby SFP Heat Exchanger on the top floor immediately west of the A Component Cooling Pump. The mountings are to be of seismic design as provided for Temporary Fluid System Provision Form 88-27 for EWR 1594B and discussed in J.J Ferraro's April 5, 1989 memo on review of the pump mounting.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will



90-40

have no interface with any equipment or systems discussed in the bases of Technical Specifications.





March 8, 1990

TUBING INSTALLATION IN  
AUXILIARY BUILDING SUB-BASEMENT  
FOR MIDLOOP INSTRUMENTATION EWR-4892  
SCAFFOLD 90-41

A scaffold is needed with a work platform about 5 feet from the floor. The corner poles shall be extended to the ceiling and horizontal poles shall be extended to at least one wall and other anchorage points or bumper contact points on the opposite side to prevent movement. As such it may be integrated with scaffold 90-14.

Because both trains of Residual Heat Removal Pumps are within the immediate vicinity of the scaffold, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment), incorporating the features described above.

The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift. The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by the Construction Engineer and the Liaison Engineer. During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead. In the final stage of construction prior to use, the seismic capability of the scaffold in relation to the guidelines shall be confirmed and documented prior to scaffold use by the Construction Engineer, or the Liaison Engineer in his stead. This confirmation shall include review of attributes such as configuration of the scaffold frame and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or the Liaison Engineer shall notify the Shift Supervisor of confirmation of seismic capability.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

The scaffold shall not be built until immediately prior to the planned start of the conduit installation effort.



During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, fire protection systems, and rotating equipment in the area.

The above construction and operational 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 assumptions of the analyses given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



03/29/90

RHR PUMP SUCTION MOV'S 704A & B  
SCAFFOLDS  
90-80

In order to perform maintenance on MOV's 704A and B a scaffold is needed to provide a work platform about 10 ft. from the floor. The maintenance is to be performed with all fuel removed from Reactor. The scaffold installation is to take place prior to this to maximize the time available for valve maintenance. Because of the need for operability of the RHR System during this period the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, rotating equipment and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described



in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





03/29/90

RHR RETURN OUTSIDE MISSILE BARRIER  
MOV-720 SCAFFOLD  
90-81

In order to perform maintenance on MOV-720 a scaffold is needed to provide a work platform about 7 ft. from the floor. The maintenance is to be performed with all fuel removed from the Reactor. The scaffold installation is to take place prior to this to maximize the time available for valve maintenance. Because of the need for operability of the RHR System during this period the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves and instrumentation in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described



in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



April 24, 1990

B MAIN STEAM ARV-3410 REPAIR  
WORK PLATFORM 90-151

Repair work on ARV-3411 will necessitate a work platform, constructed of pole scaffold and planks such as to surround the A Main Steam lead and the relief valve inlet piping, somewhat below the ARV inlet flange. As such the platform will have no potential effect on the ARVs, and the structures will be restricted from movement in the direction of any other safety related equipment. The Main Steam leads and the relief piping are sufficiently sturdy to preclude any damage from the relatively light scaffold materials; however, piping of smaller diameter than the scaffold pole material is incorporated as the isolation valve 3506 bypass. The duration of scaffold existence is projected to be approximately 1 1/2 weeks.

Because of the above factors, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, and fire fighting provisions in the area.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Generator tube rupture
- Rupture of a steam pipe
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





5/10/90

NaOH TANK ROOM PENETRATION SEAL INSPECTION  
EWR-4941 SCAFFOLD 90-156

In order to inspect penetration seals in the southeast corner of the NaOH Tank Room, a scaffold is needed, to provide a work platform approximately 12 ft. from the floor. In this location it will be directly over the Charging Pump Leakoff Collection System and will be immediately southeast of the 2 trains of Spray Additive Tank outlet valves (HCV-836A and HCV-836B). The leakoff collection system is indicated as non-seismic on P&ID 33013-1265 sheet 2. Damage to the leakoff tank which could present potential for release from the vent header is bounded by analysis of rupture of a Gas Decay Tank.

Because of the potential effect on HCV-836A and HCV-836B the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



May 9, 1990

*J.F.S.*

B BATTERY ROOM WEST WALL PENETRATION  
SEALING INSPECTION EWR-4941  
SCAFFOLD 90-157

In order to inspect penetration seals on the B Battery Room wall adjacent to the B Battery, a scaffold is needed, to provide a work platform approximately 9 ft. from the floor. It is to be of wooden construction to eliminate the potential for short circuiting the battery. It shall be constructed in accordance with the attached sketch so that it will be identical to the structure provided as Request 86-56, which was determined to be seismically acceptable (see attached 10/7/86 S.K. Ferguson memo).

The Job Supervisor shall verify that an orientation session has been conducted on the construction requirements given below.

Pre-planning and prefabrication for the scaffold shall be done such as to allow completion of the structure, apart from the decking, in one day of work within the Battery Room. As alternatives to this the following may be observed:

- The portion completed shall be adequately restrained to make it seismic with bracing and interlocking and contact with adjacent structural features.
- In lieu of the above, the A Main Battery System shall be maintained operable, with no non-seismic temporary structures in the A Battery Room.
- During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by a qualified individual.

Extreme care must be exercised in working adjacent to or above the batteries during construction, use, and teardown of the scaffold.

Sufficient clearances are to be provided for Electrician access to the battery.

Prior to use, the structure shall be inspected by the Job Supervisor to confirm that its construction was in accordance with the sketch. Upon successful confirmation the Job Supervisor shall document this confirmation for the original copy of the Authorization Form, and so notify the Shift Supervisor.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





5/9/90

JFL

B BATTERY ROOM SOUTHWEST CORNER PENETRATION  
SEALING INSPECTION EWR 4941 SCAFFOLD 90-158

A work platform is needed to inspect penetration seals in the southwest corner of the B Battery Room adjacent to the B Battery to be about 8 ft. from the floor. The duration of existence of this scaffold is estimated to be a month. In consideration of any possibility for inoperability of DC electric system equipment in the A Battery Room within this fairly lengthy duration the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167).

It shall not be started until the wooden scaffold over the B Battery bank is completed; as such, that scaffold (90-157) shall serve as a barrier to prevent short circuiting the battery with metal scaffold materials. This subject scaffold shall be removed prior to removal of the wooden scaffold.

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Extreme care must be exercised in working adjacent to the batteries and other DC electric equipment during construction, use, and teardown of the scaffold.

Clearance shall be maintained for operations, testing and maintenance access to all instrumentation and panels in the area.



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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



2/26/90  
JFL

B BATTERY ROOM NORTH END PENETRATION  
SEALING INSPECTION EWR 4941 SCAFFOLD 90-159

Work platforms are needed to inspect penetration seals in the north end of the B Battery Room adjacent to the B Battery Charger and B Battery Disconnect Switches to be about 8 ft. from the floor. The duration of existence of this scaffolding is estimated to be a month. In consideration of any possibility for inoperability of DC electric system equipment in the A Battery Room within this fairly lengthy duration the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167).

It shall not be started until the wooden scaffold over the B Battery bank is completed; as such, that scaffold (90-157) shall serve as a barrier to prevent short circuiting the battery with metal scaffold materials. This subject scaffold shall be removed prior to removal of the wooden scaffold.

The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Extreme care must be exercised in working adjacent to the batteries and other DC electric equipment during construction, use, and teardown of the scaffold.



Clearance shall be maintained for operations, testing and maintenance access to all instrumentation and panels in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The affects and methods to cope with loss of D.C. power are given in the following:

- UFSAR Section 8.1.4.4 Potential Risk of Station Blackout
- UFSAR Section 8.3.2.1 Description
- UFSAR Section 8.3.2.2 Analysis
- Procedure ER-ELEC.2 Crosstie TSC Battery to A or B DC Bus

Also analyzed in the Safety Analysis Report associated with this proposed installation is the following:

- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





May 15, 1990

BUS 16 SOUTH PORTION AREA PENETRATION  
SEALING INSPECTION EWR-4941 SCAFFOLD 90-160

In order to inspect penetration seals above the south portion of Bus 16 a scaffold is needed, to provide a work platform approximately 15 ft. from the floor.

In order to prevent any interference with activities involving the alternate train Bus 14 and MCC-1C, it is planned to construct the scaffold as a seismic installation. The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing, and maintenance access to all electrical panels on the Bus 16 and MCC-1D, to include clearance to rack out breakers.

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 assumptions of the analyses given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change to the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



May 15, 1990

BUS 16 NORTH END AREA PENETRATION  
SEALING INSPECTION EWR-4941 SCAFFOLD 90-161

In order to inspect penetration seals above the north end of Bus 16 a scaffold is needed, to provide a work platform approximately 15 ft. from the floor.

In order to prevent any interference with activities involving the alternate train Bus 14 and MCC-1C, it is planned to construct the scaffold as a seismic installation. The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing, and maintenance access to all electrical panels on the Bus 16 and MCC-1D, to include clearance to rack out breakers.

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 assumptions of the analyses given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

The installation does not involve a change to the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





5/16/90

TURBINE DRIVEN AUXILIARY FEEDWATER PUMP  
AREA PENETRATION SEAL INSPECTION EWR-4941  
SCAFFOLD 90-162

In order to inspect penetration seals at the north wall by the Turbine Auxiliary Feedwater Pump area, a scaffold is needed to provide a work platform approximately 10 ft. high adjacent to the Turbine Driven Auxiliary Feedwater Pump. Concurrent with this are two other sites of scaffolds for inspections in the vicinities of the A and B Motor Driven Auxiliary Feedwater Pumps.

Because of the concurrent activity which could potentially affect both trains of Auxiliary Feedwater System components, construction, and teardown activities shall take place at only one site at a time. In addition, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Line Rupture
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



5/16/90

B MOTOR DRIVEN AUXILIARY FEEDWATER PUMP  
AREA PENETRATION SEAL INSPECTION EWR-4941  
SCAFFOLD 90-163

In order to inspect penetration seals at the southwest corner of the Auxiliary Feedwater Pump area, a scaffold is needed to provide a work platform approximately 17 ft. high adjacent to the B Motor Driven Auxiliary Feedwater Pump. Concurrent with this are two other sites of scaffolds for inspections in the vicinities of the A Motor Driven Auxiliary Feedwater Pump and the Turbine Driven Auxiliary Feedwater Pump.

Because of the concurrent activity which could potentially affect both trains of Auxiliary Feedwater System components, construction, and teardown activities shall take place at only one site at a time. In addition, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Line Rupture
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





5/16/90

A HOUSE HEATING BOILER FEED PUMP  
AREA PENETRATION SEAL INSPECTION EWR-4941  
SCAFFOLD 90-164

In order to inspect penetration seals at the west and north walls of the Auxiliary Feedwater Pump area, a scaffold is needed to provide a work platform approximately 20 ft. high adjacent to the A Motor Driven Auxiliary Feedwater Pump. Concurrent with this are two other sites of scaffolds for inspections in the vicinities of the B Motor Driven Auxiliary Feedwater Pump and the Turbine Driven Auxiliary Feedwater Pump.

Because of the concurrent activity which could potentially affect both trains of Auxiliary Feedwater System components, construction, and teardown activities shall take place at only one site at a time. In addition, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Line Rupture
- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



6/11/90

A AND B DIESEL GENERATOR ROOMS  
EWR-3990 OVERHEAD COVER REMOVAL  
SCAFFOLDS 90-168

Scaffolds are needed just inside the Diesel Generator Room overhead doors to rise approximately 10' from the floor. The work is planned to be done in each room simultaneously. Because of this the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guideline statement 6.0 shall be augmented with the requirement that the scaffolds shall be complete and seismic to the extent installed by the end of each shift.

An additional requirement shall be that the scaffolds are to be erected in one Diesel Generator Room at a time. Upon completion of the first installation, prior to beginning erection of the scaffold in the second Diesel Generator Room, the Construction Engineer, or the Liaison Engineer in his stead, shall confirm and document the seismic capability in relation to the guidelines. This confirmation shall include review of attributes such as configuration of the scaffold frames and securing of the planks. Such documentation shall be attached to the original copy of the Authorization Form. The Construction Engineer or Liaison Engineer shall notify the Shift Supervisor of this confirmation prior to proceeding with the installation in the second Diesel Generator Room. After such confirmation, erection of the second scaffold may begin, accompanied by monitoring, confirmation, notification and documentation as with the first scaffold.

The Construction Engineer or Liaison Engineer shall verify that an orientation session has been conducted on the guidelines provided.

During construction, the end-of-shift seismic status shall be documented on an attachment to the field copy of the authorization form by the Construction Engineer or the Liaison Engineer in his stead.

If it is foreseen in the scaffold planning stage, or observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and, upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.



During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

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. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Loss of all A.C. power to the station auxiliaries
- Decrease in heat removal by the secondary system with coincident loss of on-site and external (off-site) A.C. power to the station
- Steam Generator tube rupture
- Rupture of a steam pipe
- Primary system pipe rupture
- Anticipated transients without SCRAM with a loss of A.C. power
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.





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 as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



June 21, 1990

AUXILIARY BUILDING INTERMEDIATE LEVEL  
WEST STAIRWELL PENETRATION FIRE SEAL  
INSPECTION EWR-4941 SCAFFOLD 90-173

A work platform is needed to inspect fire barrier penetration seals near the ceiling from the stairwell north to adjacent to the Containment wall, over the west end of the Spent Fuel Pool Heat Exchanger. Standby Auxiliary Feedwater System Containment isolation MOVs are located on the north side of the SFPHX.

The space between the heat exchanger and containment is very congested with piping, pipe support structures, regulators, valves, instruments, and lead shielding for a process monitor in the service water piping from the heat exchanger. A major portion of the equipment here is associated with the waste gas system supporting the Reactor Coolant Drain Tank and the Pressurizer Relief Tank, both of which are in Containment. Immersed within this space is one of the Containment Mini-purge discharge isolation valves.

Because of the location of the above discussed SAFW Containment isolation MOVs, the scaffold shall be constructed as seismic using the attached Seismic Scaffold Guidelines provided from Structural Engineering (M. B. Fitzsimmons October 31, 1988 memo attachment).

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.



During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

Locked area access to the Spent Fuel Pool filter vault is controlled by a locked gate. Ensure that the scaffold does not allow any easier access to this area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Accidental Release - Waste Gas
- Steam Generator Tube Rupture
- Rupture of a Steam Pipe
- Primary System Pipe Rupture
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.



The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





July 2, 1990

CONTROL ROOM AIR HANDLING ROOM NORTH WALL  
PENETRATION FIRE SEAL INSPECTION  
EWR-4941 SCAFFOLD 90-177

In order to perform fire seals inspection in the Control Room Air Handling Room a scaffold is needed. The equipment in the immediate area is, for the most part, dedicated to continuing habitability for the Main Control Room in the post-accident environment. Because of this, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 6.0 shall be augmented with the requirement that the scaffold shall be complete and seismic to the extent installed by the end of each shift.

The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, and fire fighting provisions.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory
- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



7/11/90

PRESSURIZER LIQUID SAMPLE CONTAINMENT ISOLATION  
AOV-966B LEAK REPAIR SCAFFOLD  
90-183

A work platform is needed for repair of the valve inside the Nuclear Sample System isolation valve hood enclosure, to be about 6 ft. above the floor. This is to accommodate working with the valve body at about waist level. Within the vicinity are, like the valve to be repaired, other Seismic Category I Containment isolation valves which are directly connected with the Reactor Coolant System and the Steam Generator Blowdowns. Because of this, the scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, and instrumentation in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Steam Generator tube rupture
- Rupture of a steam pipe
- Primary system pipe rupture
- Seismic Events

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





7/23/90

SERVICE BUILDING BASEMENT, PRIMARY WATER  
TREATMENT ROOM EAST WALL FIRE SEAL INSPECTION  
EWR-4941 SCAFFOLD 90-186

A work platform is needed to inspect fire barrier penetration seals on the east wall behind the Condensate Storage Tanks. Due to the proximity of the scaffold to the CST's, the scaffold shall be constructed as seismic.

The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M. B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Job Supervisor, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.

During construction and teardown, care should be taken to prevent bumping any sensitive equipment and tubing in the vicinity.

Clearance shall be maintained for operations, testing and maintenance access to all valves, instrumentation, panels, rotating equipment, fire fighting provisions, and adjoining rooms in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Loss of Normal Feedwater
- Seismic Events
- Rupture of Steam Pipe

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.



RELAY ROOM NORTH WALL  
WEST OF DOOR TO TURBINE BUILDING  
PENETRATION FIRE SEAL INSPECTION

EWR-4941 SCAFFOLD 90-188

A work platform is needed to inspect fire barrier penetration seals in the Relay Room on the North Wall. The scaffold will be located near the AMSAC and EH Panels. As a result, it shall be constructed as seismic. AMSAC itself is not a Safety Related System. The importance of the AMSAC System and other modifications that have been installed in this cabinet make it desirable for this scaffold to be seismic.

During construction and tear-down, extra care should be taken to prevent bumping any panels or conduit in the area.

The scaffold shall be constructed in accordance with the attached Seismic Scaffold Guidelines provided from Structural Engineering (M.B. Fitzsimmons October 31, 1988 memo attachment). The guidelines statement 4.0 requirement to wire all plank decking in place may be replaced with the alternative requirement to use scaffold poles as hold down bars in conjunction with wooden cleats. (Acceptable as noted per M.B. Fitzsimmons on Authorization Form 89-167). The Job Supervisor shall verify that an orientation session has been conducted on the guidelines provided. The erection process shall be monitored by an assigned Liaison Engineer, and its seismic capability in relation to the guidelines shall be confirmed and documented prior to scaffold use by a qualified individual. Such documentation shall be attached to the original copy of the Authorization Form. The person performing such confirmation of seismic capability shall so notify the Shift Supervisor.

If it is foreseen in the scaffold planning stage, or is observed during erection, that a deviation from the guidelines will be necessary, verbal guidance from a member of Structural Engineering shall be obtained. In this instance, the Structural Engineer shall review the installation, and upon being satisfied with its seismic capability, the Structural Engineer shall document acceptance of the installation in the same manner as described above.



Clearance shall be maintained for operations, testing and maintenance access to all instrumentation, panels, and adjoining rooms in the area.

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 assumptions of the analysis given in the Safety Analysis Report. As a seismically constructed feature with no interferences with accesses described above it will not have any adverse effect on any existing plant provisions in the immediate vicinity in their functions in normal operation or in their functions as described in the analyses given in the Safety Analysis Report. The design basis events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Seismic Events

There will be no adverse effect on fire fighting capability because there will be no interference with access provided to fire fighting provisions.

The installation does not involve a change in the Plant Technical Specifications because as a seismic feature there will be no effect on assumptions provided in the Plant Technical Specification bases.

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 of the seismic capability and access provisions incorporated.

The installation does not create the possibility for an accident or malfunction of a different type other than previously evaluated in the Safety Analysis Report, because as a seismic feature, it will remain independent of, and will have no interface with any existing equipment or systems in the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification, because as a seismic feature, it will be independent of, and will have no interface with any equipment or systems discussed in the bases of Technical Specifications.





July 26, 1989

TEMPORARY OXYGEN MONITOR  
TEMPORARY FLUID PROVISION  
REQUEST #89-28

AFFECTED DRAWING: 33013-1274, Waste Disposal - Gas H<sub>2</sub>  
and N<sub>2</sub> and Gas Analyzer (WD) P&ID

AFFECTED PROCEDURES: O-9.1, S-4.2.12, HP-11.13, HP-11.6

INSTRUCTIONS TO OPERATIONS: The HP procedures referenced shall  
be conducted by lab personnel.

TECH. SPEC. REF: Sect. 3.9.2.5, Table 3.5-5, Table  
4.1-5

The MSA Gas Analyzer is out of service for oxygen monitoring. In order to continue to monitor O<sub>2</sub> per Tech. Spec. requirements of Table 3.5-5 at temporary connection will be utilized. The temporary monitor will tie into the Gas Decay Tank sample 3/8 in. tubing with poly tubing connected with tubing nuts. The temporary tubing will be operated by lab personnel at pressures suitable for the sampler; however, the tubing to be used is more than capable of withstanding full Gas Decay Tank Pressure. The outlet of the monitor is to be tied to the vent header as does the present Gas Analyzer. Pressure reduction from Gas Decay Tank pressure is accomplished at an installed reducer upstream of the Gas Analyzer and the temporary connection. Tubing associated with this modification is designated as non-code class (ANSI B31.1) per RG&E Drawing 33013-1273. It shall be installed so that safety related equipment is not potentially affected by a design basis accident (seismic event). The events analyzed in the Safety Analysis Report which are associated with the proposed installation are the following:

- Radioactive Gas Waste System Failure
- Seismic Event

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 function of the system will be maintained, pressure retaining capability is within design limits and there is no potential impact to safety related equipment during a seismic event.

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 it can be readily isolated in the event of a failure and because the overall function of the system is being maintained.



The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification because the capability to monitor O<sub>2</sub> will be retained.



## SAFETY ANALYSIS FOR TEMPORARY RADWASTE

### DEMINERALIZER SYSTEM

#### 1.0 SCOPE OF ANALYSIS

- 1.1 The purpose of this analysis is to evaluate the safety aspects of installing a temporary demineralizing system for processing the excessive liquid radwaste from the 1989 outage. The evaporator and recycle systems have not been able to effectively process the added waste due to reduced capacity of the evaporator package. As a result, the on-site storage capability is near capacity severely limiting operation flexibility.
- 1.2 The temporary liquid waste processing system is a fluidized transfer demineralization system consisting of 5 to 6 resin vessels, booster pump, mechanical filter, dewatering pump and process control unit. The entire system is interconnected with flexible reinforced non-collapsible butyl rubber hoses designed for temperatures between  $-20^{\circ}\text{F}$  and  $180^{\circ}\text{F}$  and pressure from 0 to 300 psig. The supplied system is designed and operated in accordance with the following standards and operating parameters.
- a) Reg. Guide 1.143
  - b) ANSI 55.2
  - c) ANSI/ASME B31.1
  - d) ASME B&PV Code Section VIII & IX
  - e) Pressure 0-150 psig
  - f) Temperature  $50-135^{\circ}\text{F}$  (Resin limited)
  - g) Flow 15-200 gpm
  - h) Hydro tested to 225 psig

The shut-off head of the booster pump and the monitor tank transfer pump is 100 and 115 psig respectively. This is well below the design of all the temporary system components.

- 1.3 The temporary system will process waste from the Waste Holdup Tank using one of monitoring tanks as a batch tank. The process cycle will consist of cycling the waste from the monitoring tank thru the resin beds 5 to 6 times until the activity level is acceptable for discharge to the lake. The spent resin will then be sluiced to a shipping cask. The piping arrangement will consist of a temporary hose connected from the discharge of the waste evaporator feed pump at valve 1762A to the discharge of the monitoring tank pump at valve 1279. This hose will be used to transfer radwaste from the waste holdup tank via the evaporator feed pump to the A or B monitor tank. A second hose will then be connected from the discharge of the monitoring tank pump with a tee at valve 1279 to the inlet of the temporary waste processing system. This hose will be used to cycle the radwaste from



the monitor tank to the waste processing system via the monitor tank pump. A third hose will be connected from the outlet of the waste processing system to the A and B monitor tank return line at valve 1291A and/or 1234 depending on flow requirements. This hose will be used to cycle the waste back to the monitor tanks.

- 1.4 The entire temporary system will be located in the drumming area of the Auxiliary Building operating floor elv. 271 ft. The allowable floor loading for this area is 300 lb/ft<sup>2</sup>. Each of the demineralizer tanks has a minimum base diameter of 24 inches and weighs 2,200 lbs. full. Consequently, in order to adhere to the maximum floor loading, a minimum clearance of 6 inches must be maintained around each vessel.
- 1.5 The temporary system will also required 440V power, service air, and DI water connections. Electrical power will be supplied with a temporary cable from the 440V welding outlet located outside the drumming station on the truck bay wall. The DI water and service air will be connected with flexible rubber hoses from connections already existing within the drumming area.
- 1.6 The DI water and service air are required for sluicing and vessel flushing. The DI water connection also serves as a backup water source for cooling resins if a leak in the system develops during process down time.

## 2.0 REFERENCES

- 2.1 RG&E R.E. Ginna Nuclear Power Plant Updated Final Safety Analysis Report Section 15.7.2
- 2.2 RG&E Ginna P&ID 33013-1268
- 2.3 RG&E Ginna P&ID 33013-1270

## 3.0 SAFETY ANALYSIS

- 3.1 A review has been performed of all the events analyzed in the Ginna Station FSAR and the events requiring analysis by NRC Regulatory Guide 1.70. The only events related to this temporary modification are a radioactive liquid waste system failure and a seismic event.
- 3.2 The drumming area and monitoring tank areas are designed such that any piping or tank leakage will be collected through the drainage system in the Auxiliary Building sump to be pumped back into the liquid waste system. The building sump and basement volume is sufficient to hold the full volume of a CVCS liquid holdup tank (33,000 gallons) without overflowing to areas outside the building. The volume of a





monitoring tank and demineralizer tank is 7,500 gallons and 115 gallons respectively. Since either tank is less than the volume of a holdup tank, the sump still has sufficient capacity to handle the monitor tank or demineralizer tank. 4 inch drains are located with sloping floors in front of the drumming area doorway and in the monitoring tank area.

- 3.3 In the event the process water is lost from the spent resins in the demineralizer tanks, the resins can be cooled by the backup DI water connection. Based on the analysis presented in section 15.7.2 for the primary water CVCS spent resin storage tank, it will take 4 days for decay heat to generate enough heat to reach the resin 140°F temperature limit. This is based on a 1% fuel failure. Waste from the waste holdup tank is collected from floor drains and is not expected to contain high activity levels. However Administrative controls will be established to ensure resin tanks are maintained with proper water level when concentrated resins are to be stored for more than 24 hours.
- 3.4 The drumming area is enclosed by seismically designed walls. No safety related equipment exists within the walls of drumming area. Consequently, the demineralizer system will not affect safety related systems during a seismic event should it fail. The flexible hoses running outside the drumming area will be restrained and located to prevent interference with any safety related equipment operation.
- 3.5 Based upon the evaluations in sections 3.1 thru 3.4 above, the margins of safety during normal operations and transient conditions anticipated during the life of the station will remain unchanged by the installation of this temporary modification; and, the adequacy of structures, systems, and components provided for the prevention of accidents and for the mitigation of the consequences of accidents will be unchanged by the installation of this temporary modification.

#### 4.0 PRELIMINARY SAFETY EVALUATION

- 4.1 The proposed temporary modification does not involve an unreviewed safety question since:
  - a) the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report will not be increased since the waste tank volumes are less than previously considered, or;
  - b) the possibility of an accident or malfunction of a different type than any evaluated previously in the safety analysis report will not be created since accepted codes and standards are followed, or;



- c) the margin of safety as defined in the basis for any Technical Specification is not reduced since waste tank volumes are less than previously assumed.



March 9, 1990

LOSS OF DECAY HEAT REMOVAL EXPEDITIOUS ACTION -  
INTERIM "A" HOT LEG LEVEL TRANSMITTER 90-03

Generic letter 88-17 recommended expeditious actions including installing two independent RCS water level indications with the capability to provide water level information to Control Room operators. One such provision, a pressure transmitter (PT-432A) with indication at the Main Control Board has been in permanent existence; however, a similar provision is to be installed prior to entering the next reduced reactor coolant inventory operation. This will be installed at a test connection downstream of the Loop A Hot Leg Sample tap manual root valve 504, using tubing of material identical to the permanent installation for PT-432A in the B Loop Sample tap except that 3/8" tubing may be used in place of 1/4". The tubing is rated for pressure greater than 5,000 psig. A transmitter, similar to PT-432A, is to be installed, designated LIT-432A at the test point discussed above, to be mounted securely to the adjacent wall or on a stand which will be fabricated and installed such as to insure against toppling by use of struts, bumpers or tie-downs. In case of a break in the 3/8" tubing the leakage will be slow, and the level change will be monitored on the other channel.

The signal cable will be installed under the controls of procedure A-1405 installation and removal of temporary cables.

The existing procedure O-2.3.1, Draining the Reactor Coolant System, is to be revised to address the indications to be monitored, including the subject provision. Regarding level indication difference between measurement points, the difference calculated from Westinghouse ESBU/WOG-88-173 dated October 14, 1988 will be provided to operators for guidance.

The above construction and operational 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 assumptions of the analyses given in the Safety Analysis Report because of the substantial tubing installation and the adequate support system to provided as discussed above, it will not have any adverse effect on the safety-related equipment in the vicinity, or result in a decrease in reactor coolant inventory. The design bases events analyzed in the Safety Analysis Report which are associated with this proposed installation are the following:

- Decrease in Reactor Coolant Inventory

The installation does not involve a change in the Plant Technical Specifications because the substantial tubing installation and the adequacy of the support system is such as to ensure there will be no effect on assumptions provided in the Plant Technical Specification bases.



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 substantial tubing installation and the adequacy of the support system to be utilized ensure there will be no adverse effect on safety-related equipment.

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 substantial tubing installation and the support system adequacy, as described above, ensure there will be no adverse effect on safety related equipment within the vicinity.

The installation does not reduce the margin of safety as defined in the basis for any Plant Technical Specification because of the substantial tubing installation and the adequacy of the support system which ensure against any adverse effect on equipment or systems discussed in the bases of Technical Specifications.





3/20/90

SAFETY ANALYSIS FOR TEMPORARY RADWASTE

DEMINERALIZER SYSTEM

INSTALLATION 90-04

1.0 SCOPE OF ANALYSIS

1.1 The purpose of this analysis is to evaluate the safety aspects of installing a temporary demineralizing system for processing the excessive liquid radwaste from the 1989 outage. The evaporator and recycle systems have not been able to effectively process the added waste due to reduced capacity of the evaporator package. As a result, the on-site storage capability is near capacity severely limiting operation flexibility.

1.2 The temporary liquid waste processing system is a fluidized transfer demineralization system consisting of 5 to 6 resin vessels, booster pump, mechanical filter, dewatering pump and process control unit. The entire system is interconnected with flexible reinforced non-collapsible butyl rubber hoses designed for temperatures between  $-20^{\circ}\text{F}$  and  $180^{\circ}\text{F}$  and pressure from 0 to 300 psig. The supplied system is designed and operated in accordance with the following standards and operating parameters.

- a) Reg. Guide 1.143
- b) ANSI 55.2
- c) ANSI/ASME B31.1
- d) ASME B&PV Code Section VIII & IX
- e) Pressure 0-150 psig
- f) Temperature  $50-135^{\circ}\text{F}$  (Resin limited)
- g) Flow 15-200 gpm
- h) Hydro tested to 225 psig

The shut-off head of the booster pump and the monitor tank transfer pump is 100 and 115 psig respectively. This is well below the design of all the temporary system components.



1.3 The temporary system will process waste from the Waste Holdup Tank using one of monitoring tanks as a batch tank. The process cycle will consist of cycling the waste from the monitoring tank thru the resin beds 5 to 6 times until the activity level is acceptable for discharge to the lake. The spent resin will then be sluiced to a shipping cask. The piping arrangement will consist of a temporary hose connected from the discharge of the waste evaporator feed pump at valve 1762A to the discharge of the monitoring tank pump at valve 1279. This hose will be used to transfer radwaste from the waste holdup tank via the evaporator feed pump to the A or B monitor tank or the temporary demineralizer skid. A second hose will then be connected from the discharge of the monitoring tank pump with a tee at valve 1279 to the inlet of the temporary waste processing system. This hose will be used to cycle the radwaste from the monitor tank to the waste processing system via the monitor tank pump. A third hose will be connected from the outlet of the waste processing system to the A and B monitor tank return line at valve 1291A and/or 1234 depending on flow requirements. This hose will be used to cycle the waste back to the monitor tanks.

1.4 The entire temporary system will be located in the drumming area of the Aux. Bldg. operating floor elv. 271 ft. The allowable live floor loading for this area is 300 lbs/ft<sup>2</sup>. Each of the six demin. tanks has a minimum base dia. of 24 in. and weighs 2200 lbs. full. The tanks will be located on top of the 4 ft. wide by 19 ft. long by 2.5 ft. thick concrete slab in the drumming station. The reinforced slab will distribute the tank loads over the entire slab area. Using the weight of six tanks and 200 lbs. of lead shielding per tank, the floor loading will be approx. 190 lbs/ft<sup>2</sup>. for the raised slab area. The remaining equipment has the following weights:

Process Control Unit	2000
System booster pumps (2) @300/pump	600
Filter vessels (3) @180/filter	540
Dewatering pump	100
Sluice pump	100
Shielding 120/filter	<u>360</u>
	total 3700 lbs.

Because of the equipments physical dimensions, their weights may be considered distributed over the lower 6 ft. x 19 ft. floor area. This will produce a floor loading of 32 lbs/ft<sup>2</sup>. All loads are within the 300 lbs/ft<sup>2</sup> loading limit.



- 1.5 The temporary system will also required 440V power, service air, and DI water connections. Electrical power will be supplied with a temporary cable from the 440V welding outlet located outside the drumming station on the truck bay wall. The DI water and service air will be connected with flexible rubber hoses from connections already existing within the drumming area.
- 1.6 The DI water and service air are required for sluicing and vessel flushing. The DI water connection also serves as a backup water source for cooling resins if a leak in the system develops during process down time.

## 2.0 REFERENCES

- 2.1 RG&E R.E. Ginna Nuclear Power Plant Updated Final Safety Analysis Report Section 15.7.2
- 2.2 RG&E Ginna P&ID 33013-1268
- 2.3 RG&E Ginna P&ID 33013-1270
- 2.4 CHEM-NUCLEAR SYSTEMS, INC., A proposal to Rochester Gas and Electric for Liquid Waste Processing at the Robert E. Ginna Nuclear Power Plant, Section 2.0, Technical Approach. N-89-0020-P02, July 19, 1989
- 2.5 GAI Dwg. D-422-022

## 3.0 SAFETY ANALYSIS

- 3.1 A review has been performed of all the events analyzed in the Ginna Station FSAR and the events requiring analysis by NRC Regulatory Guide 1.70. The only events related to this temporary modification are a radioactive liquid waste system failure and a seismic event.
- 3.2 The drumming area and monitoring tank areas are designed such that any piping or tank leakage will be collected through the drainage system in the Auxiliary Building sump to be pumped back into the liquid waste system. The building sump and basement volume is sufficient to hold the full volume of a CVCS liquid holdup tank (33,000 gallons) without overflowing to areas outside the building. The volume of a monitoring tank and demineralizer tank is 7,500 gallons and 115 gallons respectively. Since either tank is less than the volume of a holdup tank, the sump still has sufficient capacity to handle the monitor tank or demineralizer tank. 4 inch drains are located with sloping floors in front of the drumming area doorway and in the monitoring tank area.



- 3.3 In the event the process water is lost from the spent resins in the demineralizer tanks, the resins can be cooled by the backup DI water connection. Based on the analysis presented in section 15.7.2 for the primary water CVCS spent resin storage tank, it will take 4 days for decay heat to generate enough heat to reach the resin 140°F temperature limit. This is based on a 1% fuel failure. Waste from the waste holdup tank is collected from floor drains and is not expected to contain high activity levels. However Administrative controls will be established to ensure resin tanks are maintained with proper water level when concentrated resins are to be stored for more than 24 hours.
- 3.4 The drumming area is enclosed by seismically designed walls. No safety related equipment exists within the walls of drumming area. Consequently, the demineralizer system will not affect safety related systems during a seismic event should it fail. The flexible hoses running outside the drumming area will be restrained and located to prevent interference with any safety related equipment operation.
- 3.5 Based upon the evaluations in sections 3.1 thru 3.4 above, the margins of safety during normal operations and transient conditions anticipated during the life of the station will remain unchanged by the installation of this temporary modification; and, the adequacy of structures, systems, and components provided for the prevention of accidents and for the mitigation of the consequences of accidents will be unchanged by the installation of this temporary modification.

#### 4.0 PRELIMINARY SAFETY EVALUATION

- 4.1 The proposed temporary modification does not involve an unreviewed safety question since:
- a) the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report will not be increased since the waste tank volumes are less than previously considered, or;
  - b) the possibility of an accident or malfunction of a different type than any evaluated previously in the safety analysis report will not be created since accepted codes and standards are followed, or;
  - c) the margin of safety as defined in the basis for any Technical Specification is not reduced since waste tank volumes are less than previously assumed.





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).

There were none within this time period.



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 two conducted.



SAFETY ANALYSIS

GINNA STATION

TEMPERATURE STRATIFICATION MONITORING

TEMPORARY MODIFICATION

REVISION 1

MAY 12, 1989

PREPARED BY: *A. Senatius* 5-12-89  
Electrical Engineer Date

REVIEWED BY: *John P. Cook* 5-12-89  
Reactor Engineer Date

APPROVED BY: *Steven T. Adams* 5-15-89  
Manager, Technical Engineering Date



Revision Status Sheet

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## SAFETY ANALYSIS

### 1.0 SCOPE OF ANALYSIS:

- 1.1 NRC Bulletin No. 88-11, "Pressurizer Surge Line Thermal Stratification", requests all addressees to establish and implement a program to confirm pressurizer surge line integrity in view of the occurrence of thermal stratification, and requires them to inform the staff of the actions taken to resolve this issue. Pursuant to satisfying the requirement and schedule of Bulletin 88-11, Rochester Gas and Electric Corporation is participating in a program for partial resolution of this issue through the Westinghouse Owner's Group (WOG).

The WOG program is designed to benefit from the experience gained in the performance of several plant-specific analyses on Westinghouse PWR surge lines. These detailed analyses included definition of revised thermal transients (including stratification). The overall analytical approach used in all of these analyses has been reviewed by the NRC staff. A significant amount of pressurizer surge line thermal monitoring data has been obtained in support of these plant-specific analyses. Additional pressurizer surge line thermal monitoring and plant system data continues to be made available within the WOG, resulting in a steadily increasing database.

Pressurizer surge line temperature stratification data will be collected at Ginna for inclusion in the WOG database.

- 1.2 Thermal stratification and cycling phenomena were also discovered in auxiliary piping connected to the Reactor Coolant System (RCS). These phenomena may cause pipe cracks in the unisolable sections of auxiliary piping systems. USNRC issued Bulletin 88-08 and subsequent supplements to address this phenomena. As a result, electric utilities are required to provide response to the NRC regarding the review and identification of auxiliary pipe sections connected to the RCS that may be subjected to thermal stratification not considered in the design of the plant.

Westinghouse has identified three piping sections that may be subjected to thermal stratification. These are:



- a) charging line to Loop B hot leg between check valve 393 and the RCS nozzle
- b) alternate charging line to Loop A cold leg between check valve 383A and the RCS nozzle
- c) auxiliary spray line between check valve 297 and the main pressurizer spray line

1.3 This analysis addresses the consequences of installing temporary thermocouples on the pressurizer surge line, Loop B charging line, Loop A alternate charging line, and auxiliary spray line. Thermocouple extension wire shall be temporarily routed to a data acquisition controller. The controller shall provide a digital output to a remote personal computer. The data output line shall utilize temporary cable and existing spare circuits to exit containment.

1.4 In addition to the thermocouples, four temporary displacement transducers are to be installed on the pressurizer surge line. The transducers will monitor line movement during heat-up, cool-down, and during temperature stratification conditions.

2.0 REFERENCE DOCUMENTS:

- 2.1 Ginna Station Procedure, A-303, "Preparation, Review, and Approval of Safety Analysis for Minor Modifications or Special Tests".
- 2.2 Ginna Station Procedure, A-1405, "Installation and Removal of Temporary Cables".
- 2.3 Ginna Station Procedure, "A-1406, "Control of Temporary Modifications".
- 2.4 R.E. Ginna Nuclear Power Plant Updated Safety Analysis Report.
- 2.5 USNRC Regulatory Guide 1.70, Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants, LWR Edition, Revision 3, November 1978.
- 2.6 Appendix R Alternative Shutdown System, "Ginna Nuclear Power Plant, Revision 4, January 1987.



2.7 GAI, "Fire Protection Evaluation" Report No. 1936, March 1977.

2.8 Letter, Eliaz to Wrobel, "852-A&B Limitorque - Aluminum Covers", dated 3/7/86.

3.0 SAFETY ANALYSIS:

3.1 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) major and minor fires

3.1.1 All temporary instrument cable installed shall be routed to follow the respective line to be monitored and then drop vertically to containment floor elevation 235'. The temporary cable will then be routed along the floor, following the shield wall to the free standing data acquisition controller. No seismic impact is anticipated since instrument cable weight is negligible compared to pipe/insulation weight. Instrument cable routed on the floor and the free standing controller (approx. 10"Hx 12"W x 24"D) will not affect seismic structures in the immediate vicinity. The data acquisition controller will be placed outside of the shield wall near the lower end of the pressurizer.

3.1.2 Temporary cable used for the data link shall follow the shield wall at elevation 235', rise to elevation 253' via south-east stairs, and follow the shield wall to Incore Reference Junction Box 1B. No seismic impact is anticipated since this cable will follow a floor/stair routing.

3.1.3 Cable separation in Incore Reference Junction Box 1B shall be maintained. The temporary data link cable shall be spliced to spare circuit A780. Cable and conductor insulation shall be restored using Raychem WCSF sleeves. The spliced cables shall be dressed in Incore Box 1B so that distance between A780 and Incore Thermocouple cables is maximized.



- 3.1.4 This temporary modification will not propagate a major or minor fire. Cables used for thermocouples and thermocouple extensions are individually sheathed in Inconel Overbraid (thermocouples) or Tinned Copper Overbraid (extensions). No additional fire loading is anticipated by the overbraided cable. Temporary cable used for the data link is rated and qualified to IEEE-383 flame requirements as a minimum. Total estimated containment fire loading for this temporary data link cable is 200000 BTUs.
- 3.1.5 Temporary cable used for the data link will be spliced to existing spare cable A779 in the Air Handling Room. Routing is through a floor penetration to the Mux. Room. Total fire loading for the temporary cable in the Air Handling Room is negligible. Total fire loading for the temporary cable in the Mux. Room is estimated at 2000 BTUs.
- 3.1.6 Fire barrier penetrations will be repaired and replaced in accordance with existing plant procedures. Therefore existing seals will not be degraded.
- 3.1.7 This modification does not affect the safe shutdown analysis in the Appendix R submittal since there is no effect on separation of existing circuits, associated circuits, or fire area boundaries as analyzed in the Appendix R submittal.
- 3.1.8 This modification will not effect the capabilities of the Alternative Shutdown System. Furthermore, none of the existing procedures for obtaining an Alternative Safe Shutdown will be effected. This modification, therefore, complies with 10CFR50, Appendix R.
- 3.1.9 Table 6.1-3 of the Ginna UFSAR gives the Aluminum inventory in Containment. The total exposed area is 2197 Ft<sup>2</sup>. This temporary modification will add a total of 10 Ft<sup>2</sup> of exposed Aluminum. The total weight of Aluminum in equipment is estimated to be 40 lbs. This includes Aluminum in data acquisition equipment, displacement transducers, and power supply. The 40 additional pounds of aluminum added to containment will add approximately 800 scf of hydrogen during an accident. This amount of hydrogen generation is negligible compared with 30,000 scf of total hydrogen production during an accident. (See Reference 2.8)





3.2 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.

3.2.1 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.

4.0 PRELIMINARY SAFETY EVALUATION:

4.1 The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety will not be increased by the proposed modification.

4.2 The possibility of an accident or a malfunction of a different type other than any evaluated previously will not be created by the proposed modification.

4.3 The margin of safety as defined in the basis for any Technical Specification will not be reduced by the proposed modification.

4.4 The proposed modification does not involve an unreviewed safety question or require a Technical Specification change.



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Safety Analysis For Special Test.

ISR # N/A

Special Test ST-89.02  
Control Building Heat Generation Rate

	Original.		Rev.1		Rev. 2	
Prepared By:	<u>Mark D. Calvey</u> Nuclear Engineer	<u>10/24/89</u> Date	_____	_____	_____	_____
Reviewed By:	<u>J. P. W. [Signature]</u> Reactor Engineer	<u>11/2/89</u> Date	_____	_____	_____	_____
Approved By:	<u>[Signature]</u> Technical Manager	<u>11/13/89</u> Date	_____	_____	_____	_____

1.0 Scope of Analysis

1.1 The purpose of Special Test ST-89.02 is to obtain the information necessary to determine the heat generated in various areas of the Control Building during normal operation. This information will then be used to analyze the thermal environment of the Control Building during Design Basis Accident (DBA), station blackout (SBO), and normal operating conditions.

1.2 The heat generation rate in the Control Building is to be determined by measuring and recording area wall and air temperatures over a minimum twenty-four (24) hour period to adequately account for room heat fluctuations.

1.3 The following areas of the Control Building are to be tested:

- a. Control Room
- b. Relay Room
- c. Computer Room
- d. Battery Room 1A
- e. Battery Room 1B

2.0 References

2.1 EWR 4529, "Ventilation System Requirements".



- 2.2.1 Section 3.8.4.1.2, "Design of Seismic Category I Structures - Control Building".
- 2.2.2 Section 3.10.2, "Seismic Qualification of Electrical Equipment and Instrumentation".
- 2.2.3 Section 3.11.3.5, "Identification of Limiting Environmental Conditions - Control Building".
- 2.2.4 Section 6.4, "Habitability Systems".
- 2.2.5 Section 9.4.3, "Control Room Area Ventilation System".
- 2.2.6 Section 9.4.9.2, "Engineered Safety Features Ventilation Systems - Relay Room".
- 2.2.7 Section 9.4.9.3, "Engineered Safety Features Ventilation Systems - Battery Rooms".
- 2.3 Ginna Station Technical Specifications, dated May 30, 1989.
- 2.4 Special Test Procedure ST-89.02, "Control Building Heat Generation Rate Testing".

3.0 Safety Analysis

- 3.1 A review has been performed of all events analyzed in the Ginna Station UFSAR. The topics related to this special test are fires, circuit separation, and seismic events.
- 3.2 This special test involves placing electrical wire (used as thermocouples), temperature recorders, and digital temperature readouts in various locations throughout the Control Building and Turbine Building (Section 6 of Reference 2.4). This equipment is in place on a temporary basis only (approximately 24 hours per each of the five areas) and will be removed at the conclusion of the special test.
- 3.3 At no time will any equipment used during normal operation or potentially required during abnormal or emergency conditions be removed from service. All ventilation systems being tested or being used by the special test are non-safety-related (emergency ventilation systems are not affected by the test). No Control Building penetrations are affected by the special test.



3.4 The equipment is in the Turbine Building and Control Building on a temporary basis only, is of minimal additional fire loading, and will be removed at the conclusion of the test; therefore, there are no significant fire loading concerns. Also, the areas subject to the test are either permanently staffed or frequently walked down on a normal basis by operations and security personnel. In addition, Section 6 of Reference 2.4 requires a walkdown of the test equipment at least once per shift to ensure that it is functioning properly. These precautions assist in the early detection of any fire hazards whether induced by the special test equipment or not.

3.5 At no time will any wiring be routed through or over cable trays, etc. allowing potential circuit cross-connection (Section 5.4 of Reference 2.4). Therefore, circuit separation will be maintained throughout the duration of the special test.

3.6 This special test includes the use of non-seismic equipment (i.e., thermocouples and their associated lead wires) on seismic structures (e.g., Control Room walls and floors). However, the thermocouples and lead wires are not of sufficient weight to cause concern with respect to loading on seismic structures. Also, the thermocouples and lead wires are being used on a temporary basis and will be removed at the conclusion of the test. Section 5.0 of Reference 2.4 also requires that the wiring be placed away from normal/emergency pathways and work locations. No wiring will be placed on the Seismic Category I Control Room ceiling.

4.0 Preliminary Safety Evaluation

4.1 The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety, previously evaluated in the Safety Analysis Report will not be increased by the proposed special test.

4.2 The possibility of an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report will not be created by the proposed special test.

4.3 The margin of safety as defined in the basis for any Technical Specification will not be reduced by the proposed special test.

4.4 The proposed special test does not involve an unreviewed safety question or require a Technical Specification change.





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 made 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 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:

These 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. These changes do not reduce the margin of safety because:

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

