
Licensee Event Report (LER) Compilation

For month of May 1984

Oak Ridge National Laboratory

Prepared for
U.S. Nuclear Regulatory
Commission

Available from

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Government Printing Office
Washington, D. C. 20402

A year's subscription consists of 12 issues for
this publication.

Single copies of this publication
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Information Service, Springfield, VA 22161

Microfiche of single copies are
available from NRC/GPO Sales Program
Washington, D. C. 20555

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Manuscript Completed: June 1984
Date Published: June 1984

Oak Ridge National Laboratory
Nuclear Safety Information Center
Oak Ridge, TN 37830

Prepared for
Office for Analysis and Evaluation of Operational Data
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
NRC FIN A9135

Special Insert for LER Monthly Report

SPECIAL NOTICE

This issue of the *Licensee Event Report (LER) Compilation* includes the first group of 1984 LERs submitted under the revised LER rule that became effective January 1, 1984 (see abstract for more information on the revised LER rule).

The principal difference between this issue of the monthly report and earlier issues relates to the system and component indexes. These indexes formerly contained the system and component identifiers as listed in NUREG-0161, *Instructions for Preparation of Data Entry Sheets for Licensee Event Reports*. Since these identifiers are no longer used under the revised LER rule, the two indexes are now comprised of appropriate system and component keywords, respectively. The keywords appearing in the system and component indexes are also included in the general keyword index as in past issues.

Abstract

This monthly report contains Licensee Event Report (LER) operational information that was processed into the LER data file of the Nuclear Safety Information Center (NSIC) during the one month period identified on the cover of the document. The LERs, from which this information is derived, are submitted to the Nuclear Regulatory Commission (NRC) by nuclear power plant licensees in accordance with federal regulations. Procedures for LER reporting for those events occurring prior to 1984 are described in NRC Regulatory Guide 1.16 and NUREG-0161, *Instructions for Preparation of Data Entry Sheets for Licensee Event Reports*. For those events occurring on and after January 1, 1984, LERs are being submitted in accordance with the revised rule contained in Title 10 Part 50.73 of the Code of Federal Regulations (10 CFR 50.73 - Licensee Event Report System) which was published in the Federal Register (Vol. 48, No. 144) on July 26, 1983. NUREG-1022, *Licensee Event Report System - Description of Systems and Guidelines for Reporting*, provides supporting guidance and information on the revised LER rule.

The LER summaries in this report are arranged alphabetically by facility name and then chronologically by event date for each facility. Component, system, keyword, and component vendor indexes follow the summaries. Vendors are those identified by the utility when the LER form is initiated; the keywords for the component, system, and general keyword indexes are assigned by the computer using correlation tables from the Sequence Coding and Search System. Questions concerning this report or its contents should be directed to

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CONTENTS

	<u>Page</u>
Licensee Event Reports.....	1
Component Index.....	106
System Index.....	109
Keyword Index.....	112
Vendor Code Index.....	121

[1] ARKANSAS NUCLEAR 1 DOCKET 50-313 LER 83-015
 HPI CONTROL VALVE FAILS TO OPEN.
 EVENT DATE: 061683 REPORT DATE: 070583 NSSS: BW TYPE: PWR
 VENDOR: LIMITORQUE CORP.

(NSIC 184102) ON 6/16/83, WHILE IN HOT SHUTDOWN AFTER A REACTOR TRIP, HIGH PRESSURE INJECTION (HPI) CONTROL VALVE CV-1219 FAILED TO OPEN ON DEMAND FROM THE CONTROL ROOM. THE VALVE WAS BEING OPENED TO ALLOW ADDITIONAL MAKEUP FLOW FOR INVENTORY CONTROL FOLLOWING THE REACTOR TRIP. CV-1219 IS THE BLOCK VALVE FOR THE HPI TO THE COLD LEG CONTAINING REACTOR COOLANT PUMP P-32C. REDUNDANT HPI VALVES CV-1220, CV-1227, AND CV-1228 WERE AVAILABLE AND OPERABLE. THIS OCCURRENCE IS REPORTABLE PER TECH SPEC 6.12.3.2.B. MAKEUP SYSTEM LIMITORQUE VALVE OPERATOR PROBLEMS WERE REPORTED IN LER'S (50-313) 79-021, 80-013, 80-033, 81-011 AND 82-002. TORQUE SWITCH PROBLEMS OF LIMITORQUE OPERATORS WERE REPORTED IN LER'S (50-313) 79-010, 79-021, 80-001, 80-002, 80-003, 80-033, 81-009, 81-011 AND 82-002. IMMEDIATE ACTIONS WERE TO USE A REDUNDANT VALVE FOR HPI AND TO MANUALLY OPEN CV-1219. THE ROOT CAUSE COULD NOT BE DETERMINED SINCE THE TRUE AS-FAILED CONDITIONS WERE ALTERED BY IMMEDIATE ACTIONS. SUBSEQUENT VALVE TESTING COULD NOT DUPLICATE THE FAILURE. TROUBLESHOOTING FOUND THE CONTACTS ON THE TORQUE SWITCH TO BE SOMEWHAT CORRODED, BUT INVESTIGATION OF THE CIRCUIT INDICATED THAT THIS SHOULD NOT HAVE PREVENTED CV-1219 FROM OPENING. THE OPERATOR AND THE SWITCHES WERE VISUALLY INSPECTED. SWITCH SETTINGS WERE CHECKED. NO PROBLEMS WERE FOUND. CV-1219 WAS TESTED SATISFACTORILY AND RETURNED TO SERVICE. THE OPERATOR FOR CV-1219 IS A TYPE SMB-00 MANUFACTURED BY LIMITORQUE.

[2] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 82-036 REV 1
 UPDATE ON EPW PUMP ISOLATION VALVE FAILS TO CLOSE.
 EVENT DATE: 110882 REPORT DATE: 120782 NSSS: CE TYPE: PWR
 VENDOR: LIMITORQUE CORP.

(NSIC 188384) ON 11/8/82 WHILE IN MODE-3, EPW PUMP 2P-7A ISOLATION VALVE 2CV-1026-2 FAILED TO CLOSE FOLLOWING SURVEILLANCE TESTING. THIS VALVE WOULD BE REQUIRED TO CLOSE UNDER MSIS CONDITIONS. THE FEEDWATER TRAIN WOULD HAVE PROVIDED EPW FLOW DELIVERY IF REQUIRED. THE REDUNDANT EPW TRAIN WAS OPERABLE. THIS OCCURRENCE IS REPORTABLE PER TECH SPEC 6.9.1.9.B. NO SIMILAR OCCURRENCES REGARDING THIS VALVE HAVE BEEN REPORTED. THE VALVE FAILED TO CLOSE DUE TO CHANGES IN OPERATING CHARACTERISTICS. THESE CHANGES WERE COMPENSATED FOR BY VALVE STEM LUBRICATION AND BY INCREASING THE TORQUE SWITCH SETTING. A COMPLETE CHECK OF THE VALVE OPERATOR REVEALED THAT A CONTACT, WHICH BYPASSES THE TORQUE SWITCH UNTIL THE VALVE IS APPROXIMATELY 99% CLOSED, WAS NOT WIRED IN. THE VALVE STEM WAS LUBRICATED, THE TORQUE SWITCH SETTING WAS INCREASED AND THE TORQUE SWITCH BYPASS CONTACT WAS WIRED IN. THE WIRING PROBLEM IS APPARENTLY NOT MAINTENANCE RELATED AND COULD HAVE EXISTED SINCE INITIAL INSTALLATION. THE MISWIRING HAD NO EFFECT ON VALVE OPERATION UNTIL THE VALVE OPERATING CHARACTERISTICS CHANGED DUE TO FACTORS SUCH AS WEAR, AGE, TEMPERATURE CYCLING, ETC. THE VALVE WAS SUBSEQUENTLY TESTED TO ASSURE PROPER OPERATION.

[3] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 83-045 REV 1
 UPDATE ON INADEQUATE FIRE BARRIERS.
 EVENT DATE: 091683 REPORT DATE: 033084 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: ARKANSAS NUCLEAR 1 (PWR)

(NSIC 189307) OBSERVATIONS OF FIRE PROTECTION DEFICIENCIES HAVE BEEN LISTED. THIS LIST INCLUDES THE DISCOVERY DATE, FACILITY STATUS CODE, METHOD OF DISCOVERY CODE, DISCOVERY DESCRIPTION, CAUSE CODE, CAUSE AND CORRECTIVE ACTIONS. THESE OCCURRENCES ARE REPORTABLE PER TECH SPEC 6.9.1.9.B. OTHER OCCURRENCES REGARDING FIRE PROTECTION DEFICIENCIES WERE REPORTED IN LER'S (50-368) 79-025, 79-026, 80-081, 81-029, 81-036, 81-042, 82-029, 82-039, 83-004, 83-00883-020, 83-021, 83-026, 83-032, 83-033, 83-034, 83-037, AND 83-042. ALSO REFERENCE LER 83-035.

THE CAUSES AND CORRECTIVE ACTIONS FOR THE INDIVIDUAL OCCURRENCES ARE LISTED. A COMPLETE FIRE PROTECTION SYSTEM WALKDOWN INSPECTION IS IN PROGRESS AS VALIDATION OF THE 'ANO FIRE PROTECTION PROGRAM MANUAL.' INTERIM CONTROLS HAVE BEEN PLACED ON CONSTRUCTION ACTIVITIES TO ASSURE RESTORATION OF FIRE SYSTEMS AFTER WORK IS PERFORMED. IN THE INTERIM, AP&L HAS ESTABLISHED A ROVING FIRE INSPECTOR PROGRAM FOR THE PURPOSE OF MONITORING ACTIVITIES AFFECTING FIRE SYSTEMS. FUTURE ACTION TO PREVENT RECURRENCE IS THE DEVELOPMENT OF AN INTEGRATED PROGRAM TO PROVIDE ASSURANCE THAT FIRE SYSTEMS ARE MAINTAINED AS REQUIRED.

[4] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 84-001
 REACTOR TRIP DURING LOW POWER PHYSICS TESTING.
 EVENT DATE: 012884 REPORT DATE: 022984 NSSS: CE TYPE: PWR

(NSIC 189123) ON 1/28/84 AT 0831, UNIT 2 TRIPPED FROM APPROXIMATELY 3X10(-3)% FP DURING LOW POWER PHYSICS TESTING. THE CORE PROTECTION CALCULATORS (CPCS) GENERATED AN AUXILIARY TRIP WHEN THE INTEGRATED ONE PIN PEAKING FACTOR LIMIT AS CALCULATED BY THE CPCS WAS EXCEEDED DUE TO CEA POSITION DURING TESTING WITHOUT THE CPCS IN BYPASS. INITIAL CRITICALITY AFTER REFUELING WAS ACHIEVED USING A PHYSICS TESTING PROCEDURE WHICH REQUIRED BYPASSING THE CPC TRIPS TO ALLOW A CERTAIN PHYSICS TEST TO BE PERFORMED. THE REACTOR WAS MANUALLY TRIPPED AS PART OF A PHYSICS TEST PROCEDURE. WHEN THE REACTOR WAS RETURNED TO CRITICALITY, THE NORMAL OPERATIONS PROCEDURE WAS USED. THIS PROCEDURE DID NOT CONTAIN THE PROVISIONS FOR SPECIAL TEST EXCEPTIONS (CPC BYPASSES) REQUIRED FOR PHYSICS TESTING. LOW POWER PHYSICS TESTING CONTINUED WITHOUT THE CPCS BYPASSED. DURING THE MEASUREMENT OF CEA GROUP WORTH, GROUP 4 RODS WERE BEING INSERTED WITH ALL REMAINING RODS OUT. AT THIS TIME THE CALCULATED INTEGRATED ONE PIN PEAKING FACTOR LIMIT WAS EXCEEDED CAUSING AN AUXILIARY TRIP TO BE GENERATED BY THE CPCS. THIS IS AN EXPECTED CONDITION DURING LOW POWER PHYSICS TESTING AND SPECIAL TEST EXCEPTIONS ALLOW TRIP BYPASSING. DUE TO PROCEDURAL DEFICIENCIES, THE CPCS HAD NOT BEEN BYPASSED. A TEMPORARY PROCEDURE CHANGE WAS MADE TO DELETE THE STEP WHICH REMOVES THE CPCS FROM BYPASS. NO ANOMALIES WERE NOTED FOLLOWING THE TRIP.

[5] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 84-002
 LOADING OF INCORRECT CORE PROTECTION CALCULATOR (CPC) ADDRESSABLE CONSTANTS.
 EVENT DATE: 012984 REPORT DATE: 030284 NSSS: CE TYPE: PWR

(NSIC 189124) ROUTINE DAILY SURVEILLANCE OF CORE PROTECTION CALCULATOR (CPC) ADDRESSABLE CONSTANTS IDENTIFIED THAT ADDRESSABLE CONSTANTS FOR CYCLE 3 RATHER THAN CYCLE 4 WERE IN USE ON JANUARY 29, 1984. ON THE PREVIOUS DAY, DURING LOW POWER PHYSICS TESTING, AN UNPLANNED REACTOR TRIP OCCURRED. ROUTINE INFORMATION COLLECTION FOLLOWING A TRIP REQUIRES GENERATION OF CPC TRIP BUFFER REPORTS. DUE TO DIFFICULTIES ENCOUNTERED IN COLLECTING THIS INFORMATION, THE SYSTEM SOFTWARE WAS RELOADED IN THE CPC CHANNELS. FOLLOWING THIS UNPLANNED SOFTWARE RELOAD, THE TECHNICIAN LOADED TYPE II ADDRESSABLE CONSTANTS FROM OBSOLETE DISK CARTRIDGES. FAILING TO FOLLOW WRITTEN PROCEDURES, THE TECHNICIAN DID NOT NOTIFY OPERATIONS PERSONNEL OF THE DECISION TO RELOAD SOFTWARE. HAD OPERATIONS BEEN NOTIFIED, CHECKING OF ADDRESSABLE CONSTANT VALUES WOULD HAVE OCCURRED IMMEDIATELY AS REQUIRED BY PROCEDURE. ACTUAL CONSEQUENCES OF THIS OCCURRENCE ARE MINIMAL SINCE THE CPCS WERE BYPASSED FOR OPERATION BELOW 10(-4)% FP AND THE AUTOMATIC BYPASS REMOVAL FEATURE WAS RESET TO 1% FP FOR PHYSICS TESTING. THE HIGH LOG POWER TRIP CHANNELS SETPOINT OF 0.75% FP PROVIDED REACTOR PROTECTION IN LIEU OF THE CPCS. THE EVENT IS REPORTED BECAUSE POTENTIAL EXISTED FOR A SIMILAR OCCURRENCE LATER WHEN PROTECTION BY THE CPCS IS RELIED UPON.

[6] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 84-003
 MSIS ACTUATION AND REACTOR TRIP.
 EVENT DATE: 013084 REPORT DATE: 030584 NSSS: CE TYPE: PWR
 VENDOR: FISHER CONTROLS CO.

(NSIC 189331) ON 1/30/84 AT 0928 UNIT 2 TRIPPED ON LOW STEAM GENERATOR PRESSURE WITH A CONCURRENT MAIN STEAM ISOLATION SYSTEM (MSIS) ACTUATION FROM AN INITIAL POWER LEVEL OF APPROXIMATELY 4% FULL POWER. PRIOR TO THE TRANSIENT, BOTH EMERGENCY FEED (EPW) PUMPS WERE OPERATING AND THE TURBINE WAS ROLLING AT 1800 RPM FOR SHAFT POLISHING. IN ORDER TO CONSERVE CONDENSATE, THE STEAM-DRIVEN EMERGENCY FEED PUMP WAS TAKEN OFF LINE AND STEAM GENERATOR BLOWDOWN REDUCED. STEAM GENERATOR LEVELS COULD NOT BE MAINTAINED AND THE RCS TEMPERATURE DECREASED. THE STEAM-DRIVEN EPW PUMP WAS RESTARTED FOR ADDITIONAL FEED BUT ONLY ADDED TO THE COOLDOWN. FEED WAS REDUCED AND GROUP 6 RODS WERE FULLY WITHDRAWN. A DILUTION WAS BEGUN TO FURTHER INCREASE POWER AND RCS TEMPERATURE. HOWEVER, A LEAKING BORIC ACID FLOW CONTROL VALVE ALLOWED BORIC ACID TO ENTER THE CHEMICAL ADDITION HEADER AND WHEN THE DILUTION WAS BEGUN, CONCENTRATED BORIC ACID WAS INJECTED INTO THE RCS BY THE DILUTION FLOW. THE UNANTICIPATED BORIC ACID INJECTION ALONG WITH A POSITIVE MODERATOR TEMPERATURE COEFFICIENT, POWER REDUCTION, AND STEAM DEMAND TO THE EMERGENCY FEED PUMP AND MAIN TURBINE RESULTED IN THE COOLDOWN OF THE RCS WITH THE ACCOMPANYING COOLDOWN AND PRESSURE REDUCTION OF THE SECONDARY. MSIS ACTUATED CONCURRENTLY WITH THE LOW PRESSURE TRIP AS DESIGNED.

[7] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 84-004
 REACTOR TRIP CAUSED BY LOW STEAM GENERATOR LEVEL.
 EVENT DATE: 013184 REPORT DATE: 030584 NSSS: CE TYPE: PWR

(NSIC 189263) ON 1/31/84 AT 2047 HOURS, THE REACTOR TRIPPED FROM APPROXIMATELY 10% FP BECAUSE OF LOW STEAM GENERATOR LEVEL IN 'B' STEAM GENERATOR. THE MAIN GENERATOR WAS NOT YET ON LINE AND FEEDWATER CONTROLS WERE IN MANUAL DURING POWER ESCALATION FOR THE BEGINNING OF CYCLE 4. SWITCHOVER FROM THE AUXILIARY FEEDWATER SYSTEM TO THE MAIN FEEDWATER SYSTEM HAD OCCURRED SHORTLY BEFORE THE TRIP. THE LOW STEAM GENERATOR LEVEL CONDITION WAS CAUSED BY MANUAL LEVEL CONTROL DIFFICULTIES THAT EXIST AT LOW POWER LEVELS AND WAS COMPOUNDED BY A POSITIVE MODERATOR TEMPERATURE COEFFICIENT (MTC).

[8] ARNOLD DOCKET 50-331 LER 84-003
 CONTROL ROOM INTAKE AIR STANDBY FILTER UNITS INITIATION.
 EVENT DATE: 010284 REPORT DATE: 020184 NSSS: GE TYPE: BWR

(NSIC 189177) ON JANUARY 2, 4, 6, & 16, 1984, AUTO-INITIATIONS OF CONTROL BUILDING VENTILATION SYSTEM, ISOLATION MODE, OCCURRED FROM MAIN INLET AIR LOW TEMPERATURE (SETPOINT 40F). THESE OCCURRENCES RESULTED FROM FREEZING IN THE NON-SAFETY RELATED HOT WATER PREHEATING COILS AND THE RESULTING CORRECTIVE MAINTENANCE ACTIVITIES. IN THE ISOLATION MODE THE CONTROL BUILDING VENTILATION RECIRCULATES CONTROL ROOM AIR TO THE CONTROL ROOM, SWITCHGEAR ROOMS AND BATTERY ROOMS, WHILE THE 1000 CFM MAKEUP AIR (TO BALANCE THE BATTERY ROOM EXHAUST) IS TREATED THROUGH THE STANDBY FILTER UNITS (SFU). THE PLANT WAS OPERATING NORMALLY AT FULL POWER. THE ISOLATION OF THE CONTROL BUILDING VENTILATION SYSTEM DUE TO LOW TEMPERATURE IS FOR OPERATOR COMFORT AND TO PROTECT CONTROL BUILDING EQUIPMENT. PREVIOUS PROBLEMS WITH PREHEATING MAIN INLET AIR WERE NOT REPORTABLE UNDER THE PRE-1984 CRITERIA, SEE ALSO LER 84-004. BY DESIGN, THREE SETS OF PREHEATING COILS ARE STACKED VERTICALLY THROUGH WHICH INLET AIR PASSES. THE DAMAGED COILS WERE REMOVED FOR REPAIR AND THE RESPECTIVE OPENINGS BLOCKED UNTIL THEIR RETURN. INADEQUATE CIRCULATION FROM THE NON-SAFETY RELATED MAIN HOT WATER LOOP SEEMS TO BE THE ROOT CAUSE OF FREEZING; INVESTIGATION IS CONTINUING.

[9] ARNOLD DOCKET 50-331 LER 84-005
 RHR/CORE SPRAY FILL PUMP FAILS.
 EVENT DATE: 010284 REPORT DATE: 020184 NSSS: GE TYPE: BWR
 VENDOR: GOULDS PUMPS INC.

(NSIC 189178) ON 010284, WITH THE PLANT IN RUN MODE AND THE REACTOR AT 100%

POWER, THE RHR/CORE SPRAY FILL PUMP MOTOR WAS TRIPPED BY THE CIRCUIT BREAKER THERMAL OVERLOAD RELAY. THE SYSTEM PRESSURE DECREASED TO 25 PSIG BEFORE BEING RE-PRESSURIZED AND VENTED. THE FILL PUMP'S FUNCTION IS TO MAINTAIN THE RHR/CORE SPRAY PUMP DISCHARGE PIPING IN A FILLED CONDITION. THE VERTICAL HEAD OF THE PIPING IS APPROX. 90 FEET WHICH CORRESPONDS TO THE LOW PRESSURE ALARM SETPOINT AT 40 PSIG. PAR. 3.5.H OF THE PLANT TECH SPEC STATES THAT "...THE DISCHARGE PIPING FROM THE PUMP DISCHARGE OF THESE SYSTEMS...SHALL BE FILLED" AS AN LCO WITH NO ACTION STATEMENT. ALTHOUGH THE SYSTEM PRESSURE WAS PROMPTLY RESTORED AND VENTING SHOWED NO INDICATION OF AIR IN THE PIPING, PRESSURE BELOW 40 PSIG HAD THE POTENTIAL FOR AIR INGRESS. BECAUSE OF THE TECH. SPEC. LCO REQUIREMENT WITHOUT A CORRESPONDING ACTION STATEMENT, THIS PLACED THE PLANT IN VIOLATION OF THE TECH SPEC. FOR THIS REASON, THIS EVENT IS BEING REPORTED PURSUANT TO 10CFR50.73 (A)(2)(I)(B). THE FILL PUMP WAS REBUILT AND IS NOW MAINTAINING DESIGN PRESSURE. AN AMENDMENT TO TECH SPEC PAR. 35.B WILL BE REQUESTED TO INCLUDE SPECIFIC ACTIONS UPON RECEIVING DISCHARGE PIPING LOW PRESSURE ALARM. ENGINEERING EFFORTS TO UPGRADE THE ADEQUACY OF THE FILL SYSTEM ARE CONTINUING.

[10] ARNOLD DOCKET 50-331 LER 84-002
 HPCI INOPERABLE.
 EVENT DATE: 010384 REPORT DATE: 020284 NSSS: GE TYPE: BWR
 VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 189051) WHILE PERFORMING A ROUTINE HPCI MONTHLY SURVEILLANCE TEST PROCEDURE (IN ACCORDANCE WITH TECH SPEC 3.5.D), AN INSTRUMENT TECHNICIAN INADVERTENTLY INSTALLED A JUMPER IN LIEU OF A CONTACT BLOCK AS CALLED FOR IN THE PROCEDURE. AS A RESULT, THE INBOARD HPCI STEAM SUPPLY ISOLATION VALVE CLOSED. THE ERROR WAS REALIZED WITHIN 1 MINUTE AND THE JUMPER WAS REMOVED; ALLOWING THE VALVE TO BE OPENED AND RESTORING SYSTEM OPERABILITY. AFTER THE INSTRUMENT TECHNICIAN WAS INSTRUCTED TO EXERCISE MORE CAUTION IN THE FUTURE, THE TEST PROCEDURE WAS RESUMED AND COMPLETED WITHOUT FURTHER INCIDENT.

[11] ARNOLD DOCKET 50-331 LER 84-001
 SCRAM DUE TO FEEDWATER REDUCTION AND SRV ACTUATION.
 EVENT DATE: 010784 REPORT DATE: 020684 NSSS: GE TYPE: BWR
 VENDOR: DRESSER INDUSTRIAL VALVE & INST DIV

(NSIC 189176) WHILE IN RUN MODE AT APPROXIMATELY 100% POWER, THE "B" FEEDWATER RECIRCULATION VALVE FAILED OPEN, THEREBY DECREASING FEEDWATER FLOW TO THE VESSEL. DUE TO AN UNRELATED ERROR IN THE PERFORMANCE OF AN ONGOING SURVEILLANCE TEST PROCEDURE, A MAIN STEAM RELIEF VALVE WAS INADVERTENTLY OPENED 43 SECONDS LATER. VESSEL LEVEL DECREASED TO THE LOW LEVEL SETPOINT (170" ABOVE TOP OF ACTIVE FUEL) AND INITIATED A SCRAM AS DESIGNED. THE RELIEF VALVE WAS RESEATED APPROXIMATELY 75 SECONDS LATER. BOTH RFP'S TRIPPED ON LOW SUCTION PRESSURE. THE VESSEL LEVEL CONTINUED TO FALL UNTIL THE HPCI/RCIC INITIATION SETPOINT WAS REACHED (119.5" ABOVE TOP OF ACTIVE FUEL). LEVEL WAS RESTORED TO 194" AND HPCI/RCIC WERE SECURED WITHIN 4 MINUTES. PRIOR TO STARTUP, BOTH FEEDWATER RECIRC VALVES WERE REPAIRED OR INSPECTED AND THE SURVEILLANCE TEST PROCEDURE WAS REVISED TO REDUCE THE MARGIN FOR PERSONNEL ERROR IN THE FUTURE.

[12] ARNOLD DOCKET 50-331 LER 84-004
 CONTROL ROOM AIR TREATMENT SYSTEM - SFU INITIATION FAILURES.
 EVENT DATE: 011084 REPORT DATE: 020984 NSSS: GE TYPE: BWR

(NSIC 189052) ON 01/10/84 AT 2228 HRS DURING REACTOR STARTUP, THE NORMAL CONTROL BUILDING VENTILATION SYSTEM ISOLATED DUE TO LOW INLET AIR TEMPERATURE (SETPOINT 40 F), BUT BOTH TRAINS OF MAKE-UP AIR STANDBY FILTER UNITS (SFU) FAILED TO INITIATE PROPERLY. SFU INLET DAMPERS AV-7301A&B DID NOT OPEN ON DEMAND BECAUSE THE PILOT SOLENOIDS SV-7301A&B MISOPERATED BY FAILING TO VENT THE DAMPER AIR

OPERATORS WHEN DE-ENERGIZED. OPERATIONS PERSONNEL PROMPTLY OPENED THE DAMPERS BY LOCALLY ISOLATING INSTRUMENT AIR. AV-7301B WAS DEMONSTRATED OPERABLE AFTER BEING CYCLED, BUT AV-7301A KEPT STICKING. SFU-B WAS KEPT RUNNING, BUT SFU-A WAS DECLARED INOPERABLE ENTERING A 7 DAY LCO. THE FAILED SAFETY-RELATED SOLENOIDS ARE ASCO #8316 INTERNALLY PILOTED DIAPHRAGM VALVES THAT REQUIRE A MINIMUM PRESSURE DIFFERENTIAL BETWEEN THE EXHAUST AND PRESSURE PORTS IN ORDER TO GO THROUGH THEIR OPERATING CYCLE. WHEN MAINTENANCE REMOVED A RESTRICTING ADAPTOR ELBOW (3/8 NPT TO 1/4 IN. TUBING) FROM THE EXHAUST PORT OF SV-7301A, IT OPERATED SATISFACTORILY, AND A SIMILAR FITTING WAS REMOVED FROM SV-7301B. WITHIN 24 HRS OF THE ORIGINAL FAILURE, SFU-A WAS TESTED AND DECLARED OPERABLE, THUS ENDING THE LCO. FOREIGN MATERIAL IN THE INSTRUMENT AIRWAY MAY HAVE CONTRIBUTED TO THE FAILURES. THE PLANT IS BEING INSPECTED TO VERIFY THAT NO OTHER RESTRICTIONS ARE ON SIMILAR SAFETY-RELATED SOLENOID VALVES.

[13] ARNOLD DOCKET 50-331 LER 84-008
 REACTOR SCRAM DUE TO TOO FEW LPRM'S FOR APRM'S.
 EVENT DATE: 012384 REPORT DATE: 022284 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CORP. (NUCLEAR ENG DIV)
 YARWAY CORP.

(NSIC 189241) ON 01/23/84 AT 2247 HOURS DURING NORMAL OPERATION DAEC EXPERIENCED A SCRAM FROM APPROXIMATELY 100% POWER. THIS SCRAM WAS CAUSED BY A POWER SUPPLY FAILURE THAT NORMALLY SUPPLIED POWER TO LPRM'S THAT IN TURN ARE USED BY THE A AND B APRM'S. THE POWER SUPPLY FAILURE CAUSED BOTH APRM A (A-RPS) AND APRM B (B-RPS) TO HAVE TOO FEW LPRM INPUTS WHICH RESULTED IN A FULL SCRAM. MINIMUM VESSEL WATER LEVEL DURING THE TRANSIENT WAS APPROXIMATELY 120" ABOVE TOP OF ACTIVE FUEL (APPROXIMATELY 190" ABOVE TOP OF ACTIVE FUEL IS THE NORMAL OPERATING WATER LEVEL). WATER LEVEL RESPONSE AND OTHER PARAMETERS IN GENERAL RESPONDED NORMALLY DURING AND FOLLOWING THE TRANSIENT. ONE OF TWO INDEPENDENT LOGIC CHANNELS OF THE LPCI LOOP SELECT LOGIC WAS DISCOVERED TO HAVE A BLOWN FUSE AFTER IT HAD PERFORMED THE FUNCTION TO TRIP THE RECIRCULATION PUMPS. AN UNUSUAL EVENT WAS CONSERVATIVELY DECLARED BY OPERATORS DUE TO THIS CONDITION. REACTOR WAS MAINTAINED IN HOT SHUTDOWN UNTIL REACTOR STARTUP FOUR DAYS LATER.

[14] ARNOLD DOCKET 50-331 LER 84-006
 H & V DAMPER ACTUATORS DOCUMENTATION DEFICIENCIES.
 EVENT DATE: 012684 REPORT DATE: 022484 NSSS: GE TYPE: BWR
 VENDOR: HILLS-MCCANNA COMPANY

(NSIC 188988) BY LETTERS DATED JAN. 27, 1984 (NG-84-0436) AND JAN. 30, 1984 (NG-84-0451), IOWA ELECTRIC PROVIDED WRITTEN NOTIFICATION TO THE NRC THAT CERTAIN VENTILATION DAMPER ACTUATORS WERE POTENTIALLY DEFICIENT IN MEETING OUR PURCHASE SPECIFICATIONS. SPECIFICALLY, ACTUATORS MANUFACTURED BY HILLS MCCANNA PROCURED THRU OUR ORIGINAL DAMPER VENDOR, AND REPLACEMENT ACTUATORS PROCURED DIRECTLY FROM HILLS MCCANNA APPEAR TO HAVE BEEN MANUFACTURED WITHOUT THE MANUFACTURER HAVING AN ACCEPTABLE QUALITY ASSURANCE PROGRAM. THESE ACTUATORS ARE USED IN VARIOUS SECONDARY CONTAINMENT AND CONTROL ROOM HABITABILITY VENTILATION SYSTEMS AT DAEC. PAST ACTUATOR PERFORMANCE AND REDUNDANT DAMPER ACTUATORS IN ALL APPLICATIONS PROVIDE REASONABLE ASSURANCE OF ACCEPTABLE ACTUATOR PERFORMANCE PENDING RESOLUTION OF DOCUMENTATION DISCREPANCIES. ENGINEERING ACTIVITIES ARE CONTINUING.

[15] ARNOLD DOCKET 50-331 LER 84-007
 REACTOR BUILDING ISOLATION AND SBGTS STARTUP OCCURS.
 EVENT DATE: 012784 REPORT DATE: 022684 NSSS: GE TYPE: BWR

(NSIC 188989) AT 0909 HRS, WHILE THE PLANT WAS IN HOT SHUTDOWN WITH THE MODE SWITCH IN THE REFUEL MODE, A GROUP III WAS AUTOMATICALLY INITIATED ON A HI-HI RADIATION ALARM FROM THE 'A' SIDE OF THE REFUELING POOL EXHAUST RADIATION

MONITORS. AS PART OF THE GROUP III, THE 'A' SIDE OF THE REACTOR BUILDING ISOLATED AND THE 'A' STANDBY GAS TREATMENT SYSTEM INITIATED PER DESIGN. AN IMMEDIATE INSPECTION OF THE ASSOCIATED RADIATION RECORDER REVEALED THAT THE HI-HI RADIATION ALARM WAS A MOMENTARY SPIKE AND THE RAD LEVEL HAD SINCE RETURNED TO NORMAL. AFTER THE RADIATION LEVELS IN THE VICINITY OF THE 'A' FUEL POOL EXHAUST MONITOR WERE CHECKED BY HEALTH PHYSICS PERSONNEL AND FOUND TO BE BETWEEN 0.8 AND 1.0 MR (NORMAL) IT WAS APPARENT THAT THE HI-HI ALARM WAS THE RESULT OF A SPURIOUS ELECTRICAL SIGNAL. THE REACTOR BUILDING WAS UNISOLATED AND THE 'A' STANDBY GAS TREATMENT SYSTEM WAS SECURED WITHOUT FURTHER INCIDENT. LATER INVESTIGATION REVEALED THAT THE SPURIOUS SIGNAL WAS MOST LIKELY DUE TO ONGOING MAINTENANCE IN THE RACEWAY CONTAINING THE HIGH RADIATION SIGNAL CABLE. INSPECTION OF THE CABLE FOR POSSIBLE DAMAGE IS UNDERWAY. ALL SYSTEMS PERFORMED PER DESIGN THROUGHOUT THE BRIEF EVENT.

[16] ARNOLD DOCKET 50-331 LER 84-010
HPCI STEAM SUPPLY ISOLATION VALVE CLOSURES.
EVENT DATE: 020484 REPORT DATE: 030584 NSSS: GE TYPE: BWR
VENDOR: PANALARM COMPANY

(NSIC 189114) DURING NORMAL FULL POWER OPERATIONS, THE "STEAM LEAK DETECTION HIGH DIFFERENTIAL TEMPERATURE" AND "HPCI ISOLATION TRIP SIGNAL" ANNUNCIATORS ALARMED, AND THE INBOARD HPCI STEAM SUPPLY ISOLATION VALVE CYCLED CLOSED AS DESIGNED. IN ORDER TO CONFIRM THE SIGNALS VALIDITY, OPERATORS ATTEMPTED TO RESET THE HPCI "AUTO ISOLATION SIGNAL" LOGIC AND A TEAM WAS DISPATCHED TO INVESTIGATE THE CAUSE OF THE SIGNAL. OPERATORS SUCCESSFULLY RESET THE HPCI LOGIC CIRCUIT AND REOPENED THE VALVE. THE ENTIRE EVENT LASTED ABOUT ONE MINUTE. THE HPCI SYSTEM WAS NOT INITIATED BUT WAS UNAVAILABLE FOR USE DURING THIS TIME. IT WAS ASSUMED THAT AN ELECTRICAL SPIKE IN THE HPCI STEAM LEAK DETECTION LOGIC CAUSED THE FALSE INDICATION OF HIGH TEMPERATURE DIFFERENTIAL IN THE HPCI ROOM. DURING THE EVENT ALL OTHER NECESSARY EMERGENCY CORE COOLING SYSTEMS WERE OPERABLE.

[17] ARNOLD DOCKET 50-331 LER 84-011
CONTROL ROOM INTAKE STANDBY FILTER UNIT INITIATION.
EVENT DATE: 020584 REPORT DATE: 030684 NSSS: GE TYPE: BWR

(NSIC 189179) AT 1043 HOURS, WHILE AT APPROXIMATELY 100% POWER WITH NO SIGNIFICANT PLANT EVOLUTIONS IN PROGRESS, AN AUTO-ISOLATION OF CONTROL BUILDING VENTILATION AND INITIATION OF THE INTAKE 'B' STANDBY FILTER UNIT (SFU) OCCURRED DUE TO LOW INLET AIR TEMPERATURE (SETPOINT 40 F). AFTER VERIFYING PROPER OPERATION, THE OPERATORS LET SFU-B RUN UNTIL 1428 HOURS WHEN THE SYSTEM WAS RESET. THE INITIATION OF THIS ENGINEERED SAFETY FEATURE RESULTED FROM INADEQUATE CIRCULATION THROUGH THE NON-SAFETY RELATED HOT WATER PREHEATING COILS. THE ISOLATION OF THE CONTROL BUILDING VENTILATION SYSTEM DUE TO LOW TEMPERATURE IS FOR OPERATOR COMFORT AND TO PROTECT CONTROL BUILDING EQUIPMENT. SEE LER 84-003 AND 84-004 FOR PREVIOUS SIMILAR EVENTS. BY DESIGN, THREE SETS OF PREHEATING COILS ARE STACKED VERTICALLY THROUGH WHICH INLET AIR PASSES. THE PREVIOUSLY DAMAGED BOTTOM TWO COILS HAD BEEN REPAIRED AND RETURNED, BUT REMAINED ISOLATED AND DRAINED WITH THE RESPECTIVE OPENINGS BLOCKED. APART FROM THE NON-SAFETY PREHEAT COILS, ALL NECESSARY SYSTEMS OPERATED PER DESIGN. TO PREVENT RECURRENCE, AN ENGINEERING STUDY HAS BEEN INITIATED TO IMPROVE THE HOT WATER SYSTEM.

[18] ARNOLD DOCKET 50-331 LER 84-012
HPCI STOP VALVE AND ADS TIMER FAILURES.
EVENT DATE: 022984 REPORT DATE: 032984 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CORP. (NUCLEAR ENG DIV)
SCHUTTE AND KOERING COMPANY

(NSIC 189115) DURING NORMAL FULL POWER OPERATION WHILE CONDUCTING HPCI

SURVEILLANCE TESTING, THE HPCI TURBINE STOP VALVE FAILED TO OPEN AFTER THE AUXILIARY OIL PUMP WAS STARTED. IN ACCORDANCE WITH TECH SPEC 3.5.D.2, THE PLANT ENTERED A 7 DAY LCO AND REQUIRED SURVEILLANCE TESTING WAS PERFORMED ON ADS, RCIC, LPCI AND CORE SPRAY SUBSYSTEMS. HPCI WAS RETURNED TO PRETEST CONFIGURATION AND DECLARED INOPERABLE. ON THE FOLLOWING DAY WHILE CONDUCTING THE REQUIRED DAILY SURVEILLANCE TESTING OF THE AUTOMATIC DEPRESSURIZATION SYSTEM, THE "B" SIDE ADS LOGIC TIMER FAILED TO START DUE TO A RESET SWITCH FAILING TO RESET THE TIMER AND LOGIC. ADS WAS DECLARED INOPERABLE WHICH PLACED THE PLANT IN A 24 HOUR LCO DUE TO HPCI BEING ALREADY INOPERABLE. THE PLANT COMMENCED REDUCING POWER. THE FAULTY RESET SWITCH WAS REPLACED WITHIN 5 HOURS AND ADS WAS TESTED AND DECLARED OPERABLE. SIX DAYS AFTER THE HPCI FAILURE, REBUILDING OF THE TURBINE STOP VALVE WAS COMPLETED ALONG WITH OTHER HPCI MAINTENANCE; AND HPCI WAS TESTED AND DECLARED OPERABLE. RCIC, BOTH LPCI AND CORE SPRAY LOW PRESSURE COOLING SYSTEMS, ONE AUTOMATIC DEPRESSURIZATION SYSTEM LOGIC CHANNEL AND MANUAL MEANS TO INITIATE DEPRESSURIZATION VIA THE ADS VALVES WERE OPERABLE THROUGHOUT THE PERIOD THE ABOVE EQUIPMENT WAS INOPERABLE.

[19] BEAVER VALLEY 1 DOCKET 50-334 LER 84-001
 TURBINE TRIP/REACTOR TRIP WHILE PERFORMING TURBINE PEDESTAL CHECKS.
 EVENT DATE: 011484 REPORT DATE: 021484 NSSS: WE TYPE: PWR
 VENDOR: MERCOID CORP.

(NSIC 189053) ON 1/14/84, OPERATIONS PERSONNEL WERE PERFORMING PEDESTAL CHECKS ON THE MAIN TURBINE. DURING THE PERFORMANCE OF THE LOW BEARING OIL PRESSURE TRIP, THE MAIN TURBINE TRIPPED. THIS CAUSED AN AUTOMATIC REACTOR TRIP SINCE REACTOR POWER WAS ABOVE THE P-9 SETPOINT OF 10%. OPERATIONS PERSONNEL FOLLOWED THE APPLICABLE EMERGENCY PROCEDURE AND STABILIZED THE PLANT IN HOT STANDBY. AN INVESTIGATION INTO THE CAUSE OF THE TURBINE TRIP (INCLUDING REPEATED PERFORMANCES OF THE PEDESTAL CHECKS) HAS DETERMINED THAT A PRESSURE SWITCH (63-AST-3) ON THE AUTO STOP OIL HEADER ACTUATED AND CAUSED THE ACTUATION OF A SOLENOID VALVE (SOV-20-ET) ON THE AUTO STOP OIL HEADER. THIS CAUSED A LOSS OF AUTO STOP OIL PRESSURE AND A RESULTING TURBINE TRIP. A CHECK OF THE SETPOINT FOR THE PRESSURE SWITCH (63-AST-1, 2, 4, 5, 6) WERE CHECKED FOR PROPER CALIBRATION. THESE SWITCHES WERE ALL FOUND TO BE WITHIN THEIR CALIBRATION LIMITS. A CHECK OF 63-AST-3 SHOWED THAT THE SETPOINT WAS SLIGHTLY LOW, BUT STILL WITHIN ITS OPERATIONAL LIMITS. THE FREQUENCY OF PERFORMANCE OF THE PEDESTAL CHECKS HAS BEEN CHANGED FROM WEEKLY TO MONTHLY AFTER CONSULTATION WITH THE TURBINE VENDOR.

[20] BEAVER VALLEY 1 DOCKET 50-334 LER 84-002
 MANUAL SAFETY INJECTION CAUSED BY PERSONNEL ERROR.
 EVENT DATE: 012584 REPORT DATE: 022384 NSSS: WE TYPE: PWR

(NSIC 188990) AT 0305 HRS, DURING THE PERFORMANCE OF MAINTENANCE SURVEILLANCE PROCEDURE 1.04 (REACTOR PROTECTION LOGIC SYSTEM TRAIN 'A' BIMONTHLY TEST), THE REACTOR OPERATOR MISTAKENLY DEPRESSED THE TRAIN 'B' MANUAL SAFETY INJECTION PUSHBUTTON INSTEAD OF THE TRAIN 'B' SAFETY INJECTION RESET PUSHBUTTON. THESE PUSHBUTTONS ARE LOCATED ADJACENT TO ONE ANOTHER ON THE BENCHBOARD. THIS ERROR RESULTED IN TRAIN 'B' SAFETY INJECTION AND A REACTOR TRIP. ALL SAFETY EQUIPMENT FUNCTIONED PROPERLY AND AT THE PROPER SETPOINTS. OPERATIONS PERSONNEL FOLLOWED THE APPLICABLE EMERGENCY PROCEDURES AND STABILIZED THE PLANT IN HOT STANDBY. PLASTIC COVERS WILL BE INSTALLED OVER THE MANUAL SAFETY INJECTION PUSHBUTTONS DURING THE NEXT EXTENDED OUTAGE. DISCIPLINARY ACTION HAS BEEN TAKEN AGAINST THE OPERATOR. SAFETY INJECTIONS TO DATE: 17 OPERATIONAL, 2 PRE-OPERATIONAL.

[21] BEAVER VALLEY 1 DOCKET 50-334 LER 84-003
 REACTOR TRIP ON SOURCE RANGE HIGH FLUX DURING MANUAL REACTOR SHUTDOWN.
 EVENT DATE: 031284 REPORT DATE: 040684 NSSS: WE TYPE: PWR

(NSIC 189253) ON 3/12/84, AT 2100 HOURS, DURING THE COURSE OF A PLANNED MANUAL REACTOR SHUTDOWN, A REACTOR TRIP ON SOURCE RANGE HIGH NEUTRON FLUX OCCURRED. THE SOURCE RANGE INSTRUMENT FUSES WERE REMOVED AT POWER BECAUSE OF PREVIOUS PROBLEMS INVOLVING INADVERTENT RE-ENERGIZATION OF THE SOURCE RANGE DETECTORS WHILE AT POWER. THE REMOVAL OF THE INSTRUMENT FUSES CAUSES AN AUTOMATIC TRIP OF THE SOURCE RANGE REACTOR BISTABLES; HOWEVER, THESE BISTABLES ARE BLOCKED WHILE AT POWER BY A POWER ESCALATION PERMISSIVE (P-6, SETPOINT 10E-10 AMPERES). DURING THE POWER DESCENSION, SHIFT SUPERVISION INSTRUCTED THE OPERATORS TO INSTALL THE INSTRUMENT FUSES JUST PRIOR TO REACHING THE P-6 SETPOINT. BEFORE THE OPERATORS HAD INSTALLED THE INSTRUMENT FUSES, AN AUTOMATIC REMOVAL OF THE P-6 BLOCK OCCURRED AND THE SOURCE RANGE TRIP BISTABLES INITIATED A REACTOR TRIP ON HIGH NEUTRON FLUX BECAUSE THE BISTABLES HAD ALREADY BEEN IN A DE-ENERGIZED STATE DUE TO THE REMOVAL OF THE INSTRUMENT FUSES. THE CAUSE FOR THIS EVENT HAS BEEN ATTRIBUTED TO PERSONNEL ERROR. THIS INCIDENT WILL BE REVIEWED BY ALL SHIFT SUPERVISION TO PREVENT A FUTURE OCCURRENCE OF THIS TYPE. ALL SYSTEMS FUNCTIONED AS DESIGNED TO PLACE THE PLANT IN A SHUTDOWN CONDITION.

[22] BIG ROCK POINT DOCKET 50-155 LER 84-001
 REACTOR DEPRESSURIZATION SYSTEM ISOLATION VALVE FAILURE.
 EVENT DATE: 022284 REPORT DATE: 032284 NSSS: GE TYPE: BWR
 VENDOR: ANCHOR/DARLING INDUSTRIES

(NSIC 189140) DURING REACTOR DEPRESSURIZATION SYSTEM (RDS) SURVEILLANCE TESTING WITH PRIMARY SYSTEM PRESSURE AT 50 PSIG AND ALL CONTROL RODS INSERTED, 3 OF 4 RDS ISOLATION VALVES FAILED TO OPERATE TO THE OPEN POSITION. THE FAILURE WAS REPORTED UNDER 10 CFR 50.72(B)(1)(ii)B AND SUBSEQUENTLY REPORTED AS AN UNUSUAL EVENT SINCE THE PRIMARY SYSTEM TEMPERATURE WAS GREATER THAN 212 F. THE PLANT WAS COOLED TO SHUTDOWN CONDITIONS WITHOUT INCIDENT.

[23] BROWNS FERRY 1 DOCKET 50-259 LER 83-066 REV 1
 UPDATE ON REFUELING PLATFORM POSITION INTERLOCK FAILS.
 EVENT DATE: 111283 REPORT DATE: 030984 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 188935) DURING REFUEL OUTAGE, WHILE PERFORMING SI 4.10.A.1, THE INTERLOCK THAT PREVENTS BRIDGE TRAVEL OVER THE CORE WITH ONE ROD WITHDRAWN AND FUEL GRAPPLE EXTENDED FAILED TO OPERATE. THIS RESULTED IN A LOSS OF ROD BLOCK FUNCTION WITH THE PLATFORM OVER THE CORE (TECH SPEC 3.10.A.1). THERE ARE NO REDUNDANT SYSTEMS. THE LEVER ARM ON LIMIT SWITCH NO. 1 (GE PART NO. CR 115GW307) WAS FOUND TO BE IMPROPERLY ADJUSTED. THE CAUSE IS UNKNOWN. THE LEVER ARM WAS ADJUSTED AND SI 4.10.A.1 WAS SUCCESSFULLY COMPLETED. SI 4.10.A.1, STEP 18, WAS REVISED TO VERIFY THAT LIMIT SWITCHES 1 AND 2 ACTUATE FOR BOTH CW AND CCW ROTATION AND TO VERIFY THE LIMIT SWITCH'S LEVER ARMS ARE INSTALLED AND ADJUSTED PROPERLY.

[24] BROWNS FERRY 1 DOCKET 50-259 LER 84-001
 INADVERTENT START OF RESIDUAL HEAT REMOVAL PUMP.
 EVENT DATE: 010384 REPORT DATE: 012184 NSSS: GE TYPE: BWR

(NSIC 188951) ON JAN. 3, 1984, RESIDUAL HEAT REMOVAL (RHR) PUMP 1D STARTED WITHOUT RECEIVING EITHER AN AUTOMATIC SIGNAL OR A MANUAL START SIGNAL FROM THE CONTROL ROOM. AN INVESTIGATION OF THE EVENT REVEALED THAT APPARENTLY LABORERS PERFORMING DECONTAMINATION WORK IN THE VICINITY OF THE LOCAL CONTROL STATION INADVERTENTLY STARTED THE RHR PUMP 1D. THE LABORERS HAVE BEEN CAUTIONED REGARDING EXTRA CARE WHICH MUST BE TAKEN WHEN WORKING IN THE VICINITY OF LOCAL CONTROL STATIONS.

[25] BROWNS FERRY 1 DOCKET 50-259 LER 84-002
 INOPERABLE PRESSURE SWITCHES.
 EVENT DATE: 010384 REPORT DATE: 012484 NSSS: GE TYPE: BWR
 VENDOR: STATIC-O-RING

(NSIC 188952) DURING UNIT STARTUP, ROUTINE SURVEILLANCE TESTING SHOWED THAT THE SETPOINTS FOR PRESSURE SWITCHES PS-64-57A THROUGH D WERE NOT WITHIN LIMITS OF TECH SPEC 3.2.B (LESS THAN OR EQUAL TO 2.50 PSI). THE AS-FOUND VALUES WERE 2.54 PSI FOR PS-64-51A THROUGH C, AND 2.52 PSI FOR PS-64-51D. THESE SWITCHES, IN CONJUNCTION WITH LOW REACTOR WATER LEVEL, HIGH DRYWELL PRESSURE, A 120-SECOND DELAY TIME, AND AN RHR OR CORE SPRAY PUMP RUNNING, INITIATE THE AUTOMATIC DEPRESSURIZATION SYSTEM (ADS). THE ADS ACTIVATES IN THE EVENT OF A LOSS-OF-COOLANT ACCIDENT TO DEPRESSURIZE THE REACTOR VESSEL AND ALLOW LPCI AND CORE SPRAY TO INJECT WATER INTO THE VESSEL TO PROTECT THE CORE. THE SETPOINTS FOR THE STATIC-O-RING MODEL 12N-AA4 PRESSURE SWITCHES HAD DRIFTED. THESE SWITCHES ARE APPARENTLY VULNERABLE TO SETPOINT DRIFT DUE TO A SETPOINT REPEATABILITY PROBLEM THAT OCCURS UNDER CERTAIN CONDITIONS FOLLOWING EXTENDED UNIT OUTAGES. AS RECURRENCE CONTROL, THE SURVEILLANCE TEST WILL BE REVISED TO HAVE THESE SWITCHES CYCLED THROUGH THEIR NORMAL OPERATING RANGE PRIOR TO SETPOINT ADJUSTMENT.

[26] BROWNS FERRY 1 DOCKET 50-259 LER 84-004
 REACTOR SCRAMS AFTER CONTROL RODS MOVED OUT OF SEQUENCE.
 EVENT DATE: 010684 REPORT DATE: 012784 NSSS: GE TYPE: BWR

(NSIC 188932) WHILE PERFORMING MANUAL SHUTDOWN OF THE MAIN TURBINE, CONTROL RODS WERE BEING INSERTED TO REDUCE POWER. AT THIS POINT, POWER WAS 13.5%. WHEN VACUUM WAS REDUCED IN THE MAIN CONDENSER, THE REACTOR MODE SWITCH WAS MOVED FROM 'RUN' TO 'STARTUP.' THIS RESULTED IN A HALF SCRAM. THE UNIT OPERATOR AND NUCLEAR ENGINEER ATTEMPTED TO REDUCE POWER TO CLEAR THE HALF SCRAM. THE NUCLEAR ENGINEER CHANGED THE ROD PULL SHEET TO INSERT SELECTED RODS FROM POSITION '24' TO '00.' ROD WORTH MINIMIZER (RWM) WAS BYPASSED AND A SECOND LICENSED OPERATOR WAS PRESENT TO VERIFY ROD MOVES. TO FURTHER REDUCE POWER RAPIDLY, THE ROD NOTCH OVERRIDE (RONOR) SWITCH WAS USED TO INSERT RODS TO '00.' TECH SPEC 3.3.B.3.A WAS VIOLATED BY USAGE OF THE RONOR SWITCH TO POSITION RODS IN OTHER THAN POSITIONS REQUIRED BY GROUP NOTCH LOGIC OF ROD SEQUENCE CONTROL SYSTEM (RSCS). AT THIS POINT, THE NUCLEAR ENGINEER RECONSIDERED THESE ACTIONS AND REQUESTED A MANUAL SCRAM, WHICH WAS ACCOMPLISHED. EVENT TIME WAS LESS THAN TWO MINUTES. BOTH INDIVIDUALS WERE COUNSELED AS TO ALL PERTINENT REQUIREMENTS. IMMEDIATE RECURRENCE CONTROL WAS ADMINISTRATIVELY PROHIBITING USE OF RONOR SWITCH WHILE THE ROD SEQUENCE CONTROL SYSTEM IS ENFORCING.

[27] BROWNS FERRY 1 DOCKET 50-259 LER 84-003
 STANDBY GAS TREATMENT SYSTEM TRAINS IN DEGRADED MODE.
 EVENT DATE: 011784 REPORT DATE: 020684 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)

(NSIC 189027) DURING PERFORMANCE OF TESTING OF THE STANDBY GAS TREATMENT (SBGT) TRAINS IT WAS OBSERVED THAT ONE OF THE THREE TRAINS HAD FLOW BELOW DESIGN. UPON INVESTIGATION, THE DISCHARGE DAMPERS ON 'A' AND 'C' TRAINS WERE MISADJUSTED IN AN NONCONSERVATIVE DIRECTION. READJUSTMENT OF THE DAMPERS AND A PITOT TUBE TRAVERSE OF BOTH TRAINS WERE IMMEDIATELY ACCOMPLISHED WITH SATISFACTORY DESIGN FLOW RATES. THE FINAL SAFETY ANALYSIS REPORT VALUES OF 14,000 CFM FOR THE COMBINED FLOWS OF THE STANDBY GAS TREATMENT SYSTEM COULD HAVE BEEN MET AT ALL TIMES. ('B' TRAIN HAD 9,100 CFM; 'A' AND 'C' COMBINED HAD APPROXIMATELY 10,000 CFM WITH MISALIGNED DAMPERS.) CAUSE OF MISALIGNED DISCHARGE DAMPERS IS UNKNOWN. RECURRENCE CONTROL IS TO CHECK DISCHARGE DAMPER POSITIONS ON A WEEKLY BASIS.

[28] BROWNS FERRY 1 DOCKET 50-259 LER 84-005
 PRESSURE SWITCHES' SETPOINTS DRIFT.
 EVENT DATE: 012284 REPORT DATE: 021384 NSSS: GE TYPE: BWR
 VENDOR: STATIC-O-RING

(NSIC 188953) DURING NORMAL OPERATION, ROUTINE SURVEILLANCE TESTING SHOWED THAT THE SETPOINTS FOR PRESSURE SWITCHES PS-64-56B AND C WERE NOT WITHIN THE LIMITS OF TECH SPEC 3.2.A (LESS THAN OR EQUAL TO 2.50 PSI). THE AS-FOUND VALUES WERE 2.54 PSI FOR PS-64-56B AND 2.52 FOR PS-64-56C. PRESSURES ABOVE THE TRIP SETTING INITIATE THE RPS (HIGH DRYWELL PRESSURE HALF SCRAM), REACTOR BUILDING AND PRIMARY CONTAINMENT ISOLATION, AND THE STANLEY GAS TREATMENT SYSTEM. THE SETPOINTS FOR THE STATIC-O-RING MODEL 11N-AA4 PRESSURE SWITCHES HAD DRIFTED. THESE SWITCHES ARE APPARENTLY VULNERABLE TO SETPOINT DRIFT DUE TO A SETPOINT REPEATABILITY PROBLEM THAT OCCURS UNDER CERTAIN CONDITIONS FOLLOWING EXTENDED UNIT OUTAGES. AS RECURRENCE CONTROL, PROCEDURES WILL BE REVISED TO HAVE THESE SWITCHES CYCLED THROUGH THEIR NORMAL OPERATING RANGE PRIOR TO SETPOINT ADJUSTMENT.

[29] BROWNS FERRY 1 DOCKET 50-259 LER 84-007
 CAD STORAGE TANK PRESSURE MAINTAINING SYSTEM FOUND CLOSED.
 EVENT DATE: 012784 REPORT DATE: 021784 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)

(NSIC 188954) DURING ROUTINE CHECKS, THE UNIT OPERATOR OBSERVED DECREASING PRESSURE ON THE CONTROL ATMOSPHERIC DILUTION TANKS. UPON INVESTIGATION IT WAS DETERMINED THAT THE 2 ISOLATION VALVES FOR MAINTAINING TANK PRESSURES WERE IN THE CLOSED POSITION. THIS APPARENTLY OCCURRED DURING A SPECIAL TEST OR DURING TANK REFILLING AFTER THE TEST. THE TANKS' CAPACITY WAS ABOVE 2500 GALLONS AND THE SUPPLY LINE PRESSURE WAS NEVER BELOW 100 PSIG AS SPECIFIED IN THE FINAL SAFETY ANALYSIS REPORT DURING THE EVENT. AN ASSISTANT UNIT OPERATOR WAS DISPATCHED TO THE TANKS IMMEDIATELY AFTER THE UNIT OPERATOR NOTICED A DECREASE IN PRESSURE. THE VALVES WERE OPENED, AND A CAUTION ORDER TAG PLACED ON EACH VALVE. AN INFORMATION LETTER WAS SENT TO ALL OPERATIONS PERSONNEL ON FEB. 2, 1984 GIVING THE DETAILS OF THE EVENT AND EXPRESSING THE IMPORTANCE OF LOGGING ABNORMAL VALVE LINEUPS. THE APPLICABLE OPERATING INSTRUCTION IS BEING REVISED TO INCLUDE A VALVE CHECKLIST TO VERIFY PROPER VALVE ALIGNMENT AFTER THE TANKS HAVE BEEN FILLED, AND TO REQUIRE THE VALVES TO BE LOCKED OPEN.

[30] BROWNS FERRY 1 DOCKET 50-259 LER 84-008
 PRESSURE TRANSMITTERS FAIL ON NUMEROUS OCCASIONS.
 EVENT DATE: 012984 REPORT DATE: 022384 NSSS: GE TYPE: BWR
 VENDOR: ROSEMOUNT, INC.

(NSIC 188955) DURING NORMAL UNIT OPERATION, ONE OR MORE PRESSURE DIFFERENTIAL TRANSMITTER (PDT) INSTRUMENTATION 1-25A THROUGH D FAILED IN THE DOWNSCALE (NONCONSERVATIVE) DIRECTION ON FIVE SEPARATE OCCASIONS, CAUSING "TROUBLE" ALARMS TO ANNUNCIATE IN THE REACTOR PROTECTION SYSTEM (RS) ANALOG TRIP UNITS. PDT-1-25B FAILED ON JAN. 29 AND AGAIN ON FEB. 10 AND 11, 1984. PDT-1-25A FAILED ON JAN. 31, 1984 WHILE PDT-1-25C AND D BOTH FAILED ON FEB. 3, 1984. THIS INSTRUMENTATION SENSES HIGH FLOW ON EACH MAIN STEAMLINE. HIGH FLOW COULD INDICATE A BREAK IN THE MAIN STEAMLINE AND FLOWS ABOVE THE INSTRUMENT TRIP SETTING INITIATE A MAIN STEAMLINE ISOLATION. CAUSE OF THE ROSEMOUNT INSTRUMENT FAILURES IS UNKNOWN AT THIS TIME, BUT IS BEING INVESTIGATED BY PLANT PERSONNEL, NUCLEAR CENTRAL OFFICE, AND THE MANUFACTURER. A FOLLOWUP REPORT WILL BE ISSUED WHEN THE EVALUATION IS COMPLETE. THE FREQUENCY OF DOWNSCALE FAILURE OF THESE INSTRUMENTS IS INDICATIVE OF A GENERIC PROBLEM. THE INSTRUMENTS WERE RECALIBRATED AND/OR RESET AND RETURNED TO SERVICE.

[31] BROWNS FERRY 1 DOCKET 50-259 LER 84-010
CONTAINMENT ISOLATION OF COMBUSTIBLE CONTROL ANALYZERS.
EVENT DATE: 020384 REPORT DATE: 022884 NSSS: GE TYPE: BWR
VENDOR: POTTER & BRUMFIELD

(NSIC 189210) DURING NORMAL OPERATION, THE UNIT OPERATOR OBSERVED THAT "B" HYDROGEN-OXYGEN (H2O2) ANALYZER HAD ISOLATED DUE TO A GROUP 6 ISOLATION SIGNAL. "A" ANALYZER WAS OUT-OF-SERVICE FOR MAINTENANCE. THE ISOLATION SIGNAL WAS CAUSED BY A FAULTY RELAY. GROUP 6 VALVES ARE ISOLATED ON A LOW REACTOR WATER LEVEL, HIGH DRYWELL PRESSURE, OR REACTOR BUILDING VENTILATION HIGH RADIATION SIGNAL. BOTH "A" AND "B" H2O2 ANALYZERS ISOLATE ON A GROUP 6 SIGNAL, BUT "B" REMAINED OPERABLE IN THAT A SAMPLE COULD BE TAKEN USING A KEYLOCK SWITCH BYPASS. THE RELAY CONTACTS FOR THE REFUELING ZONE VENTILATION EXHAUST RADIATION MONITOR "HI" TRIP OPENED DUE TO RELAY FAILURE. BOTH THE "HI" AND "LO" RELAYS WERE REPLACED, THE ISOLATION SIGNAL WAS RESET, AND SURVEILLANCE TESTING WAS PERFORMED TO RETURN THE RADIATION MONITOR TO SERVICE.

[32] BROWNS FERRY 1 DOCKET 50-259 LER 84-011
AUTOMATIC SCRAM AND CONTAINMENT INDICATION DUE TO FAILURE OF MAIN STEAM ISOLATION VALVE DC SOLENOID.
EVENT DATE: 020984 REPORT DATE: 022984 NSSS: GE TYPE: BWR
VENDOR: AUTOMATIC VALVE COMPANY

(NSIC 189340) DURING ROUTINE SURVEILLANCE TESTING, AC POWER TO THE "C" OUTBOARD MAIN STEAM ISOLATION VALVE CONTROL SOLENOID WAS PROPERLY REMOVED AND "B" CHANNEL OF THE REACTOR PROTECTION SYSTEM WAS PROPERLY TRIPPED, BRINGING IN A HALF SCRAM. PREVIOUSLY THE DC CONTROL SOLENOID COIL HAD UNKNOWINGLY FAILED AND REMOVAL OF THE AC POWER CAUSED THE "C" OUTBOARD MAIN STEAM ISOLATION VALVE TO CLOSE. WHEN THE "C" MAIN STEAM LINE ISOLATED, A REACTOR HIGH PRESSURE SIGNAL WAS RECEIVED IN "C" LINE CAUSING THE "A" REACTOR PROTECTION SYSTEM CHANNEL TO TRIP. THIS CONDITION CAUSED A FULL SCRAM SIGNAL AND THE REACTOR SCRAMMED. NO UNUSUAL TRANSIENTS WERE OBSERVED. THE DC COIL WAS REPLACED. THE DC COIL FAILURE IS CONSIDERED TO BE A RANDOM FAILURE AND NO FURTHER RECURRENCE CONTROL IS REQUIRED.

[33] BROWNS FERRY 1 DOCKET 50-259 LER 84-015
EMERGENCY EQUIPMENT COOLING WATER VACUUM PRIMING VALVE UNDERDESIGNED.
EVENT DATE: 022184 REPORT DATE: 030984 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)
VENDOR: NASH ENGINEERING COMPANY, THE

(NSIC 188933) DURING ENGINEERING DESIGN'S EVALUATION FOR RESIDUAL HEAT REMOVAL SERVICE WATER AND EMERGENCY EQUIPMENT COOLING WATER PERFORMANCE ON FEB. 20, 1984, IT WAS DISCOVERED THAT THE EMERGENCY EQUIPMENT COOLING WATER VACUUM PRIMING VALVE WAS NOT QUALIFIED FOR ITS APPLICATION. THE NORTH HEADER ONLY WAS AFFECTED. (THE SOUTH HEADER HAS NO VACUUM PRIMING VALVE.) THE VACUUM PRIMING VALVE HAS BEEN IN OPERATION FOR OVER TEN YEARS WITHOUT ITS VALVE BODY FAILING DUE TO SYSTEM PRESSURE. THE VACUUM PRIMING VALVE HAS NOW BEEN ISOLATED ALONG WITH ADMINISTRATIVE CONTROLS REQUIRING AT LEAST ONE EMERGENCY EQUIPMENT COOLING WATER PUMP TO OPERATE AT ALL TIMES; THUS MINIMIZING THE NEED FOR THE VACUUM PRIMING VALVE ON THE NORTH HEADER (SINCE THE HEADER IS CHARGED WITH WATER). THE LONG TERM SOLUTION WILL BE TO REPLACE THE VALVE WITH A QUALIFIED ONE.

[34] BROWNS FERRY 1 DOCKET 50-259 LER 84-014
HIGH TURBINE PRESSURE CAUSES SCRAM.
EVENT DATE: 022284 REPORT DATE: 031384 NSSS: GE TYPE: BWR

(NSIC 189092) DURING STARTUP OF UNIT 1, WHILE WARMING THE TURBINE, THE REACTOR

SCRAMMED WHEN THE TURBINE HIGH-PRESSURE FIRST STAGE PRESSURE EXCEEDED 142 PSIG WITH THE TURBINE STOP VALVES CLOSED. ALL REDUNDANT SYSTEMS WERE OPERABLE. THE CAUSE OF THE SCRAM IS CONSIDERED TO BE PROCEDURAL ERROR. THE OPERATING INSTRUCTION WILL BE TO KEEP THE ACTUAL TURBINE FIRST STAGE PRESSURE FROM EXCEEDING 135 PSIG DURING TURBINE STOP VALVE.

[35] BROWNS FERRY 1 DOCKET 50-259 LER 84-016
 REACTOR SCRAMMED FROM WORKER VIBRATING PANEL.
 EVENT DATE: 022984 REPORT DATE: 032384 NSSS: GE TYPE: BWR

(NSIC 189093) UNIT 1 SCRAMMED WHILE AT 95% POWER BECAUSE OF VIBRATION INDUCED BY ELECTRICIANS WHO WERE INSTALLING A GROUND CONNECTOR ON REACTOR PROTECTION PANEL 25-6B WHICH HAS A COMMON LEG TO PANEL 25-183. THIS WORK WAS PERFORMED ON AN APPROVED MAINTENANCE REQUEST. THE SHIFT ENGINEER WAS MADE AWARE OF THE WORK BEFORE WORK WAS STARTED. THE ELECTRICAL PLANNERS WILL BE REMINDED TO USE MEANS OF REMOVING PAINT FROM PANELS IN SERVICE OTHER THAN WITH ELECTRIC SIDEGRINDERS IN THE FUTURE. THE UNIT WAS RETURNED TO SERVICE AFTER REQUIRED SURVEILLANCE INSTRUCTIONS WERE PERFORMED. THERE WERE NO REAL PROBLEMS DURING THE SCRAM OR ON UNIT STARTUP.

[36] BROWNS FERRY 1 DOCKET 50-259 LER 84-017
 SURVEILLANCE INSTRUCTION NOT PERFORMED WITHIN SCHEDULE.
 EVENT DATE: 031384 REPORT DATE: 040684 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)

(NSIC 189323) THE ROUTINE FUNCTIONAL CHECK FOR RADIATION MONITOR RM-90-259, WHICH MONITORS THE CONTROL ROOM AIR SUPPLY DUCT, WAS NOT PERFORMED WITHIN THE SCHEDULE REQUIRED BY TECH SPEC 4.2.G. THE FUNCTIONAL CHECK WAS SCHEDULED TO BE PERFORMED BY FEB 21, 1984, BUT WAS NOT ACTUALLY PERFORMED UNTIL MAR 8, 1984 DUE TO PERSONNEL ERROR. THE FAILURE TO PERFORM THE SURVEILLANCE CHECK WAS DISCOVERED 15 DAYS AFTER THE SCHEDULE DATE DURING ROUTINE REVIEW OF COMPLETED SURVEILLANCE TESTS. THE INCIDENT WAS DISCUSSED WITH APPROPRIATE MAINTENANCE PERSONNEL AND THE IMPORTANCE OF DOCUMENTING JOB COMPLETION ONLY AFTER A JOB HAS ACTUALLY BEEN PERFORMED WAS STRESSED. NO FURTHER CORRECTIVE ACTION IS REQUIRED. RADIATION MONITOR RM 90-259 IS USED TO CONTINUOUSLY MONITOR THE ACTIVITY IN THE FRESH AIR DUCT BEFORE IT ENTERS THE CONTROL ROOM. IF ACTIVITY LEVELS ABOVE PRESET LIMITS ARE DETECTED, THE MONITOR FUNCTIONS TO ISOLATE THE CONTROL BAY VENTILATION AND TO START THE EMERGENCY PRESSURIZATION FANS. REDUNDANT RADIATION MONITORS WERE OPERABLE.

[37] BROWNS FERRY 1 DOCKET 50-259 LER 84-018
 RCIC SYSTEM REMOVED FROM SERVICE TO REPAIR STEAM LEAK.
 EVENT DATE: 032084 REPORT DATE: 040384 NSSS: GE TYPE: BWR
 VENDOR: WALWORTH COMPANY

(NSIC 189146) THE REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM WAS REMOVED FROM SERVICE TO REPAIR A STEAM LINE LEAK DOWSTREAM OF THE RCIC MAIN STEAM MOISTURE TRAP. THE OUTBOARD MAIN STEAM SUPPLY ISOLATION VALVE WAS USED TO ISOLATE THE STEAM LEAK. AFTER THE STEAM LEAK (RCIC) WAS REPAIRED, THE STEAM LINE WAS ATTEMPTED TO BE PLACED BACK IN SERVICE BY CLOSING THE INBOARD MAIN STEAM ISOLATION VALVE, OPENING THE OUTBOARD ISOLATION, AND USING THE INBOARD ISOLATION FOR A THROTTLING VALVE (THE OUTBOARD VALVE IS NOT USED TO THROTTLE). THE INBOARD VALVE WOULD NOT OPEN DUE TO THE HIGH PRESSURE DIFFERENTIAL ACROSS THE VALVE DISC. WITH BOTH INBOARD AND OUTBOARD VALVES CLOSED, THE LINE BETWEEN THE VALVES WAS PRESSURIZED TO EQUAL REACTOR PRESSURE ON THE UPSTREAM SIDE OF THE INBOARD VALVE. WHEN THE PRESSURE WAS EQUALIZED ON BOTH SIDES OF THE INBOARD (STUCK) VALVE DISC, THE VALVE OPENED AND THE RCIC SYSTEM WAS RETURNED TO NORMAL.

[38] BROWNS FERRY 2 DOCKET 50-260 LER 83-074 REV 2
UPDATE ON HPCI RUPTURE DISC FAILURES.
EVENT DATE: 111083 REPORT DATE: 012784 NSSS: GE TYPE: BWR
VENDOR: FIKE METAL PRODUCTS CORP.

(NSIC 189339) DURING STARTUP OF HPCI, WHILE PERFORMING SPECIAL TEST 8211 ON 11/5/83, THE TURBINE EXHAUST INNER RUPTURE DIAPHRAGM RUPTURED. ON 11/10/83, DURING HPCI INITIATION RESULTING FROM A UNIT SCRAM, THE INNER DIAPHRAGM RUPTURED. TECH SPEC 3.5.E.2 PERMITS OPERATION FOR SEVEN DAYS WITH HPCI INOPERABLE. REDUNDANT SYSTEMS WERE AVAILABLE AND OPERABLE. EXACT CAUSE OF INNER RUPTURE DIAPHRAGM (FIKE, MODEL 16-CPV-CBT) FAILURES HAS NOT BEEN DETERMINED. FURTHER INVESTIGATION WILL BE CONDUCTED TO DETERMINE RUPTURE CAUSES AND A FINAL REPORT WILL BE SUBMITTED. ADDITIONAL TESTING WILL VERIFY CORRECT STOP VALVE BALANCING CHAMBER PRESSURE AND CORRECT OPERATION OF VALVES AND SWITCHES.

[39] BROWNS FERRY 2 DOCKET 50-260 LER 84-001
RCIC FAILED TO DEVELOP RATED FLOW WITHIN SPECIFIED TIME.
EVENT DATE: 010884 REPORT DATE: 012784 NSSS: GE TYPE: BWR
VENDOR: WOODWARD GOVERNOR COMPANY

(NSIC 189028) DURING PERFORMANCE OF FLOW TESTING OF THE REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM, THE OPERATOR OBSERVED THAT THE RCIC FAILED TO REACH RATED FLOW IN THE REQUIRED 30 SECONDS. INVESTIGATION REVEALED THAT THE OFFSET VOLTAGE SIGNAL SUPPLIED BY THE ELECTRONIC GOVERNOR SERIES M (EG-M) CONTROL BOX TO THE ELECTRONIC GOVERNOR SERIES R (EG-R) ACTUATOR WAS NOT WITHIN SPECIFIED CALIBRATION LIMITS DURING AUTOMATIC INITIATION OF RCIC. DURING CALIBRATION THE ELECTRONIC GOVERNOR CONTROL SYSTEM (CONSISTING OF THE RAMP GENERATOR, SIGNAL CONVERTER, AND EG-M), WAS FOUND TO BE OUTSIDE CALIBRATION LIMITS. DURING THE LAST CALIBRATION OF THE ELECTRONIC GOVERNOR CONTROLS (APPROXIMATELY ONE YEAR AGO), THE OFFSET VOLTAGE WAS SET AT THE EXTREME UPPER LIMIT OF CALIBRATION AND THE VOLTAGE DRIFTED UP. THE MOST PROBABLE CAUSE FOR THE FAILURE OF RCIC TO ATTAIN RATED FLOW WITHIN THE SPECIFIED 30-SECOND TIME PERIOD IS SETPOINT DRIFT. THE RCIC ELECTRONIC GOVERNOR CONTROL SYSTEM (CONSISTING OF THE RAMP GENERATOR, SIGNAL CONVERTER, AND EG-M CONTROL BOX), WAS RECALIBRATED AND RCIC RETURNED TO SERVICE. THIS EVENT IS CONSIDERED TO BE A RANDOM FAILURE AND NO FURTHER RECURRENCE CONTROL IS PLANNED.

[40] BROWNS FERRY 2 DOCKET 50-260 LER 84-002
REACTOR SCRAM DUE TO OPERATOR ERROR DURING SURVEILLANCE TESTING.
EVENT DATE: 012184 REPORT DATE: 020884 NSSS: GE TYPE: BWR

(NSIC 189029) DURING PERFORMANCE OF ROUTINE SURVEILLANCE TESTING, THE UNIT OPERATOR DID NOT INSURE 'B' CHANNEL PRIMARY CONTAINMENT ISOLATION SYSTEM WAS RESET BEFORE TESTING 'C' CHANNEL. (CHANNELS 'A' AND 'C' ARE IN TRIP SYSTEM 'A', CHANNELS 'B' AND 'D' ARE IN TRIP SYSTEM 'B.'). THE SURVEILLANCE INSTRUCTION STATES TO CHECK PANEL LIGHTS IN THE CONTROL ROOM AND AUXILIARY INSTRUMENT ROOM. ONLY THE CONTROL ROOM LIGHTS WERE VERIFIED. THE OPERATOR WAS PREOCCUPIED WITH SEVERAL ALARMS WHICH OCCURRED AT THE TIME HE BEGAN RESETTING THE 'B' CHANNEL. AS A RESULT OF 'B' CHANNEL NOT BEING RESET AND TESTING OF 'C' CHANNEL, THE MAIN STEAM ISOLATION VALVES SHUT, SCRAMMING THE REACTOR. ALL REQUIRED SAFETY SYSTEMS OPERATED AS REQUIRED. MAIN STEAM RELIEF VALVES WERE MANUALLY OPERATED AND MAIN TURBINE WAS MANUALLY TRIPPED. THE OPERATOR INVOLVED IN THIS INCIDENT WAS STRONGLY COUNSELED TO ALWAYS FOLLOW WRITTEN PROCEDURES TO PERFORM ANY TYPE TESTING.

[41] BROWNS FERRY 3 DOCKET 50-296 LER 84-002
SECONDARY CONTAINMENT VENTILATION ISOLATES.
EVENT DATE: 012584 REPORT DATE: 021684 NSSS: GE TYPE: BWR
VENDOR: AMERACE CORP.
GENERAL ELECTRIC CO.

(NSIC 189218) DURING THE UNIT 3 REFUELING OUTAGE, THE REACTOR OPERATOR RECEIVED SECONDARY CONTAINMENT ISOLATION ALARMS FOR REACTOR ZONE VENTILATION AND REFUELING FLOOR VENTILATION AND GROUP 6 ISOLATION VALVE CLOSURE. AFTER VERIFICATION CHECKS TO ASSURE ALL ASSOCIATED PARAMETERS WERE BELOW SETPOINTS, THE OPERATOR ATTEMPTED TO RESET THE ALARMS. THIS DID NOT CLEAR THE ALARMS. MAINTENANCE WAS DISPATCHED FOR TROUBLESHOOTING. THE ENSUING INVESTIGATION REVEALED THE DIVISION I LOGIC OF SECONDARY CONTAINMENT ISOLATION HAD INITIATED AND ALL COMPONENTS RESPONDED PROPERLY. THE INITIATION WAS CAUSED BY A PRIMARY LOGIC RELAY FAILING IN THE CONSERVATIVE DIRECTION. THE DIVISION II LOGIC ALSO STARTED TO INITIATE OFF A PRESSURE DIFFERENTIAL SEEN BECAUSE OF THE DIVISION I'S ISOLATING THE REFUELING ZONE VENTILATION. HOWEVER, A PRIMARY LOGIC RELAY FAILED IN THE NONCONSERVATIVE DIRECTION TERMINATING DIVISION II INITIATION. DIVISION I FULFILLED THE REQUIREMENT OF SECONDARY CONTAINMENT ISOLATION AND THE RELAY FAILURE WAS A RANDOM FAILURE. RELAYS WERE REPLACED, SATISFACTORILY TESTED AND BOTH DIVISION LOGICS RETURNED TO STANDBY READINESS CONDITION. NO RECURRENCE CONTROL IS REQUIRED.

[42] BROWNS FERRY 3 DOCKET 50-296 LER 84-003
TWO 4 KV SHUTDOWN BOARDS MOMENTARILY LOSE VOLTAGE.
EVENT DATE: 012984 REPORT DATE: 022284 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 188968) AT 1633, AN ATTEMPT WAS MADE TO TRANSFER 4 KV START BUS 1B FROM ITS ALTERNATE FEED (ATHENS LINE) TO ITS NORMAL FEED (TRINITY LINE). THE NORMAL FEEDER BREAKER FAILED TO CLOSE. THE 4 KV START BUS 1B WAS IMMEDIATELY RETURNED TO ITS ALTERNATE FEED. HOWEVER, THE MOMENTARY LOSS OF VOLTAGE WAS SENSED BY THE 4 KV SHUTDOWN BOARDS 3C AND 3D. THIS CAUSED THE DIESEL GENERATORS 3C AND 3D TO AUTOMATICALLY START. POWER WAS IMMEDIATELY RESTORED TO THE 4 KV START BUS 1B, AND THE DIESEL GENERATORS WERE STOPPED. NO OTHER EVENTS OCCURRED RELATED TO THIS EVENT. THE NORMAL FEED BREAKER WAS TESTED AND IT CLOSED SATISFACTORILY. IT WAS THEN RETURNED TO SERVICE. A THOROUGH CHECKOUT OF THE BREAKER WAS PERFORMED ON FEB. 21, AND 22, 1984. NO PROBLEMS WERE FOUND WHICH WOULD PREVENT IT FROM OPERATING PROPERLY.

[43] BRUNSWICK 1 DOCKET 50-325 LER 80-057 REV 1
UPDATE ON DRIFT OF SLC RELIEF VALVE.
EVENT DATE: 070380 REPORT DATE: 073081 NSSS: GE TYPE: BWR

(NSIC 188724) DURING THE PERFORMANCE OF PT 6.2.1 STANDBY LIQUID CONTROL (SLC) RELIEF VALVE OPERABILITY TEST, SLC RELIEF VALVE, 1-C01-F029B, DID NOT LIFT. THE REQUIRED LIFTING SETPOINT FOR THIS VALVE IS 1400 PLUS OR MINUS 50 PSIG. A SIMILAR EVENT INVOLVING THIS VALVE WAS REPORTED IN LER 1-79-02 ON 2-21-79. MECHANICAL DRIFT OF THE VALVE LIFTING SETPOINT WAS DETERMINED AS THE CAUSE OF THIS EVENT. THE SETPOINT WAS ADJUSTED AND THE PT WAS PERFORMED SATISFACTORILY. DURING THE 1981 MAINTENANCE OUTAGE, THE VALVE WAS DISASSEMBLED AND EXAMINED TO DETERMINE IF ANY MECHANICAL IRREGULARITIES EXISTED AND NONE WERE FOUND. BASED ON THE EXAMINATION IT IS FELT NO FURTHER CORRECTIVE ACTIONS TO THE EVENT ARE REQUIRED.

[44] BRUNSWICK 1 DOCKET 50-325 LER 84-001
LOSS OF RESIDUAL HEAT REMOVAL SERVICE WATER COOLING SYSTEM.
EVENT DATE: 011984 REPORT DATE: 030984 NSSS: GE TYPE: BWR
VENDOR: BARKSDALE COMPANY

(NSIC 189172) DURING UNIT NO. 1 POWER OPERATION AT 100 PERCENT, AN ATTEMPT TO INITIATE SUPPRESSION POOL COOLING USING THE A LOOP OF THE RESIDUAL HEAT REMOVAL SERVICE WATER (RHRSW) SYSTEM REVEALED THAT BOTH LOOP PUMPS, A AND C, WHEN STARTED, RAN FOR APPROXIMATELY FIVE SECONDS AND TRIPPED ON LOW SUCTION PRESSURE LOCKOUT. AT THE TIME, THE REDUNDANT RHRSW LOOP (B) WAS OUT OF SERVICE FOR MAINTENANCE AND UNAVAILABLE. THE INOPERABILITY OF BOTH RHRSW LOOPS RENDERS REACTOR SHUTDOWN COOLING AND SUPPRESSION POOL COOLING INOPERABLE. IT IS BELIEVED THAT AIR IN THE LOOP SUCTION HEADER PREVENTED THE HEADER SUCTION PRESSURE SWITCH FROM SENSING ACTUAL, NORMAL PRESSURE. ALSO, IT IS BELIEVED THAT THE AIR RESULTED FROM THE LOOP SUCTION PIPING DRAINING THROUGH THE LOOP RESIDUAL HEAT REMOVAL (RHR) HEAT EXCHANGER OUTLET VALVE, E11-F002A, WHICH LEAKS BY WHILE THE LOOP IS IN WET LAY-UP. THE AIR WAS VENTED BY ESTABLISHING CONVENTIONAL SERVICE WATER SYSTEM HEADER FLOW THROUGH THE A LOOP PIPING FOR APPROXIMATELY FIVE MINUTES. THE LOOP PUMPS WERE STARTED AND RETURNED TO SERVICE WITHIN 15 MINUTES OF THE EVENT. AN EVALUATION IS IN PROGRESS TO DETERMINE A METHOD OF KEEPING THE LOOP SUCTION PIPING FULL OF WATER AT ALL TIMES. A SUPPLEMENT TO THIS REPORT REFLECTING CORRECTIVE ACTIONS WILL BE SUBMITTED BY APRIL 13, 1984.

[45] BRUNSWICK 1 DOCKET 50-325 LER 84-002
 REACTOR SCRAMS DUE TO HIGH PRESSURE.
 EVENT DATE: 020384 REPORT DATE: 030284 NSSS: GE TYPE: BWR
 VENDOR: BROWN & ROOT INC.

(NSIC 189106) ON FEB. 3, 1984, AT 0044, A UNIT NO. 1 REACTOR SCRAM OCCURRED DUE TO HIGH REACTOR VESSEL PRESSURE (1049 PSIG RECORDED). AT THE TIME, THE UNIT WAS OPERATING AT 26% POWER AND PREPARATIONS WERE IN PROGRESS TO ROLL AND PLACE THE UNIT MAIN TURBINE INTO SERVICE. A UNIT SCRAM RECOVERY WAS CARRIED OUT WITH THE LOWEST RECORDED REACTOR LEVEL OF 163". THE MAIN STEAM FLOW PATH TO THE MAIN CONDENSER WAS RENDERED INOPERABLE BY THIS EVENT; HOWEVER, THE EMERGENCY CORE COOLING SYSTEMS WERE OPERABLE ALONG WITH THE CONDENSATE FEEDWATER SYSTEM. THE EVENT COULD HAVE BEEN MORE SEVERE HAD IT OCCURRED AT 100% POWER. REACTOR SCRAM RESULTED FROM CLOSURE OF THE MAIN TURBINE BYPASS VALVES CAUSED BY A LOSS OF ELECTROHYDRAULIC CONTROL (EHC) SYSTEM FLUID ACTUATION SUPPLY (FAS) PRESSURE TO THE VALVES. THE FAS HEADER TUBE TO THE VALVES HAD FAILED DUE TO 2 THROUGH-WALL CIRCUMFERENTIAL CRACKS IN THE TOE WELD OF THE SOCKET SIDE OF THE TUBE WHERE IT MEETS THE TUBE COUPLING UNION, ATTRIBUTED TO CYCLIC LOADING FATIGUE FAILURE OF THE TUBING MATERIAL. THE SUBJECT TUBING SECTION WAS REPLACED. INSPECTIONS OF UNIT 1 EHC TUBING DID NOT REVEAL ADDITIONAL PROBLEMS. SHORT-AND LONG-TERM CORRECTIVE ACTIONS IN RESPONSE TO THIS EVENT WILL BE IMPLEMENTED DURING RESPECTIVE FUTURE OUTAGES ON EACH UNIT.

[46] BRUNSWICK 2 DOCKET 50-324 LER 83-052 REV 1
 UPDATE ON RHR FLOW INDICATOR SHORT.
 EVENT DATE: 052683 REPORT DATE: 021084 NSSS: GE TYPE: BWR
 VENDOR: MOORE INDUSTRIES

(NSIC 189015) WHILE PERFORMING REMOTE SHUTDOWN PANEL RHR SYSTEM FLOW INDICATION CALIBRATION, PT-55.8PC, ALLIGATOR CLIP TEST LEADS CONNECTED ACROSS THE INSTRUMENT TEST TERMINALS OF RHR SYSTEM FLOW TRANSMITTER 2-E11-PT-3338 WERE ACCIDENTLY BUMPED AND DETACHED BY THE INVOLVED TECHNICIAN. THE LEADS SHORTED TO GROUND AND RENDERED THE TRANSMITTER'S RESPECTIVE SIGNAL CONVERTER, FY-3338, INOPERABLE DUE TO RESULTING COMPONENT DAMAGE. TECH SPECS 3.3.5.2, 6.9.1.9B. THIS EVENT RESULTED FROM THE INVOLVED TECHNICIAN BEING SOMEWHAT ENCUMBERED DUE TO DRESS IN FULL ANTICONTAMINATE CLOTHING AND RUBBER GLOVES. FY-3338, PART NO. SRT/4-20 MA/1-5V/24 DC STD WAS REPAIRED AND RETURNED TO SERVICE. THIS EVENT WAS REVIEWED BY APPROPRIATE I&C PERSONNEL TO ENSURE THEIR AWARENESS OF THE IMPORTANCE TO EXERCISE CAUTION WHEN PERFORMING FUNCTIONS REQUIRING DEXTERITY WHILE IN ANTICONTAMINATE DRESS.

[47] BRUNSWICK 2 DOCKET 50-324 LER 83-084
 ROD WORTH MINIMIZER FAILS.
 EVENT DATE: 090283 REPORT DATE: 093083 NSSS: GE TYPE: BWR

(NSIC 185947) DURING A UNIT REACTOR STARTUP WHILE MANIPULATING CONTROL RODS, IT WAS DISCOVERED THAT THE ROD WORTH MINIMIZER (RWM) WENT TO CONTROL ROD GROUP 4 WHILE THE LAST TWO CONTROL RODS OF GROUP 3 WERE STILL FULLY INSERTED. THESE GROUP 3 RODS WERE BEING WITHDRAWN TO POSITION "04". IN ACCORDANCE WITH TECH SPECS, THE RWM WAS BYPASSED AND DECLARED INOPERABLE. TECH SPECS 3.1.4.1, 6.9.1.9B. THE CAUSE OF THIS EVENT WILL BE DETERMINED DURING A FUTURE REACTOR STARTUP WHEN CONDITIONS WILL ALLOW TROUBLESHOOTING AND APPROPRIATE CORRECTIVE ACTION. A SUPPLEMENT TO THIS REPORT OUTLINING THE CAUSE OF THIS EVENT AND CORRECTIVE ACTIONS WILL FOLLOW.

[48] BRUNSWICK 2 DOCKET 50-324 LER 84-002
 LOSS OF PLANT EMERGENCY AC BUS.
 EVENT DATE: 012984 REPORT DATE: 030284 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BRUNSWICK 1 (BWR)

(NSIC 189231) WHILE PLACING AN EQUIPMENT CLEARANCE ON EMERGENCY DIESEL GENERATOR (DG) NO. 4, THE DG OUTPUT BREAKER 125 VDC NORMAL CONTROL POWER BREAKER WAS INADVERTENTLY DE-ENERGIZED. UPON RE-ENERGIZING THE BREAKER, THE DG EMERGENCY BUS E-4 UNDERVOLTAGE RELAY TRIPPED, THEREBY, CAUSING E-4 TO DE-ENERGIZE AND GROUP 3 AND GROUP 6 ISOLATIONS TO OCCUR. BUS E-4 WAS ENERGIZED WITHIN FOUR MINUTES BY CLOSING BUS 2-C FEEDER BREAKER TO E-4, AND THE GROUP 3 AND GROUP 6 ISOLATIONS WERE RESET. THE INVOLVED AUXILIARY OPERATOR HAD MISTAKENLY ASSUMED HE WAS DE-ENERGIZING THE 125 VDC NORMAL CONTROL POWER BREAKER FOR DG NO. 4, WHICH IS LOCATED IN THE DG LOCAL CONTROL PANEL. THIS BREAKER WAS NOT PROPERLY LABELED; HOWEVER, THE DG OUTPUT BREAKER 125 VDC NORMAL CONTROL POWER BREAKER WAS PROPERLY IDENTIFIED AND LABELED. A WORK REQUEST HAS BEEN INITIATED TO PERMANENTLY IDENTIFY AND LABEL 125 VDC CONTROL POWER BREAKERS TO THE PLANT EMERGENCY E-BUSES AND DG'S. THE INVOLVED AUXILIARY OPERATOR WAS APPROPRIATELY DISCIPLINED CONCERNING THESE ACTIONS.

[49] BRUNSWICK 2 DOCKET 50-324 LER 84-003
 DIESEL GENERATOR NO. 4 AUTO START DUE TO LOSS OF PLANT EMERGENCY AC BUS E-4.
 EVENT DATE: 021484 REPORT DATE: 031584 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BRUNSWICK 1 (BWR)

(NSIC 189238) WHILE PERFORMING A FUNCTIONAL TEST OF DEGRADED VOLTAGE INSTRUMENTATION FOR THE 4160V EMERGENCY BUSES CONCURRENT WITH AN OPERABILITY TEST OF ALARM AND LOGIC INSTRUMENTATION FOR PLANT EMERGENCY DIESEL GENERATORS (DG), THE NORMAL POWER SUPPLY FEEDER TO EMERGENCY BUS E-4 AUTOMATICALLY OPENED DUE TO A BUS UNDERVOLTAGE CONDITION AS SENSED BY THE BUS DEGRADED VOLTAGE RELAY, 27 DV. GROUP 3 AND GROUP 6 ISOLATIONS OCCURRED. WITHIN 10 SECONDS DG NO. 4 AUTOMATICALLY STARTED AND REENERGIZED E-4. AT THE TIME OF THIS EVENT, UNITS 1 AND 2 WERE AT POWER OPERATION OF 99 PERCENT AND 95 PERCENT, RESPECTIVELY. WITHIN 22 MINUTES OF THE EVENT, THE NORMAL SUPPLY FEEDER BREAKER TO E-4 WAS RECLOSED. THE CAUSE OF THIS EVENT COULD NOT BE DETERMINED. AN OPERABILITY CHECK OF 27 DV SHOWED THE DEVICE IS ABLE TO PERFORM ITS DESIGNED FUNCTION. NO FURTHER ACTION IS PLANNED REGARDING THIS EVENT. THE FUNCTIONAL TEST BEING PERFORMED, PT-12.7.3P, IS A MONTHLY TEST PERFORMED IN THE DEGRADED VOLTAGE RELAYS FOR EACH EMERGENCY BUS. THIS PROCEDURE DOES NOT HAVE A HISTORY OF PROBLEMS AND HAS BEEN REVIEWED FOR TECHNICAL ADEQUACY; THEREFORE, IT HAS BEEN DETERMINED THAT THE PROCEDURE IS ADEQUATE. ADDITIONALLY, NO IDENTIFIED DEFICIENCIES EXISTED IN TEST PERFORMANCE TO CONTRIBUTE TO THE EVENT. THIS PORTION OF THE TEST WAS SUBSEQUENTLY REPERFORMED SATISFACTORILY.

[50] BRUNSWICK 2 DOCKET 50-324 LER 84-004
 REACTOR SCRAMS ON HIGH POWER.
 EVENT DATE: 022284 REPORT DATE: 032384 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189105) ON FEB. 22, 1984, AT APPROXIMATELY 0158, WHILE TESTING THE PRIMARY CONTAINMENT ISOLATION SYSTEM (PCIS) FUNCTION OF UNIT 2 REACTOR LOW WATER LEVEL NO. 2 DC LOGIC CHANNEL N025A-1, MAIN STEAM LINE ISOLATION VALVE (MSIV) B21-F028D CLOSED. AT THE TIME THE UNIT WAS AT POWER OPERATION OF 97%. REACTOR PRESSURE SPIKED (1,014 PSIG RECORDED), AND THE REACTOR SCRAMMED ON HIGH POWER (117% RECORDED). A GROUP 1 ISOLATION OCCURRED. THE HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEM AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM AUTOMATICALLY STARTED TO CONTROL REACTOR LEVEL AND PRESSURE. THE GROUP 1 WAS RESET, REACTOR PRESSURE AND LEVEL CONTROL WAS REESTABLISHED, AND A SCRAM RECOVERY WAS PERFORMED. THE EVENT OCCURRED IN THE MOST LIMITING CONDITION (HIGH POWER). F028D CLOSED AS A RESULT OF THE AC- AND DC-POWERED SOLENOID VALVES TO THE F028D OPERATOR BEING DE-ENERGIZED SIMULTANEOUSLY. ELECTRICAL CONTACTS 9 AND 10 OF AC LOGIC CHANNEL N024B-1, RELAY A71-K16, WERE NOT MAKING WHEN DC LOGIC CHANNEL N025A-1 WAS TESTED. RELAY A71-K16, GE PART NO. 12HFA51A49H, WAS REPLACED AND RETURNED TO SERVICE. THE PROBLEM RELAY WAS DISASSEMBLED WITH NO PROBLEMS. THE PROCEDURE FOR REPLACING THESE TYPE RELAY COILS IS BEING REVISED TO INCLUDE ELECTRICAL VERIFICATION OF THE RELAY CONTACTS CLOSURE AS PERMITTED BY THE INVOLVED CIRCUITRY DESIGN. THESE TYPE RELAYS ARE INSPECTED MONTHLY TO DETECT POTENTIAL RELAY COIL FAILURES.

[51] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-017 REV 1
 UPDATE ON ESPAS ISOLATOR OPERATING ERRATICALLY.
 EVENT DATE: 041883 REPORT DATE: 110783 NSSS: CE TYPE: PWR
 VENDOR: MONSANTO RESEARCH CORP.

(NSIC 188340) AT 1520 DURING NORMAL OPERATION ESPAS CABINET ED WAS DEENERGIZED FOR CORRECTIVE MAINTENANCE (TECH SPEC 3.3.2.1). THE ISOLATOR FOR BL STEAM GENERATOR ISOLATION SIGNAL LOGIC MODULE WAS REPLACED AND THE CABINET REENERGIZED AT 1535. THE THREE REDUNDANT CHANNELS REMAINED OPERABLE DURING THIS EVENT. SIMILAR EVENTS: 50-318/82-02. INVESTIGATION BY VITRO LABS OF THE ISOLATION MODULE FAILURE REVEALED THE CAUSE TO BE A FAILURE OF TWO MONSANTO MCT2 OPTOISOLATORS. ALL 15 OPTOISOLATORS IN THAT MODULE WERE REPLACED WITH AN IMPROVED DESIGN. ALL ISOLATION MODULES ON BOTH UNITS, INCLUDING SPARES, WILL BE FITTED WITH THE IMPROVED OPTOISOLATORS DURING THE NEXT REFUELING PERIODS.

[52] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-032 REV 2
 UPDATE ON DEFECTIVE ESPAS MODULE.
 EVENT DATE: 052383 REPORT DATE: 011184 NSSS: CE TYPE: PWR
 VENDOR: VITRO ENGINEERING DIVISION

(NSIC 189011) AT 0250 DURING PERFORMANCE OF SURVEILLANCE TESTS, THE CIS 'B' LOGIC MODULE WOULD NOT ACTUATE. IT WAS DETERMINED THAT THE LOGIC MODULE WAS DEFECTIVE (TECH SPEC 3.3.2.1). THE MODULE WAS REPLACED, TESTED AND ESPAS WAS RETURNED TO SERVICE AT 1345. THE REDUNDANT ESPAS REMAINED OPERABLE THROUGHOUT THE EVENT. SIMILAR EVENTS: NONE. VITRO LABS DETERMINED THE CAUSE OF THE LOGIC MODULE FAILURE (#1628-1061) TO BE TWO DEFECTIVE ELECTRONIC LOGIC COMPONENTS. ONE COMPONENT (U3) INDIRECTLY SIGNALS OPERATION OF THE TEST LAMP AND SENDS A SIGNAL TO THE OTHER LOGIC COMPONENT (U5), WHOSE OUTPUT IS FOR TRIP LOGIC. IN ACCORDANCE WITH THE VENDOR REPORT, NO FURTHER ACTION IS DEEMED NECESSARY.

[53] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-034 REV 1
 UPDATE ON ECCS PUMP ROOM COOLER INOPERABLE.
 EVENT DATE: 052583 REPORT DATE: 030684 NSSS: CE TYPE: PWR
 VENDOR: DOW CHEMICAL COMPANY, THE

(NSIC 189012) AT 1925 DURING NORMAL OPERATION, 12 ECCS PUMP ROOM COOLER WAS TAKEN OUT OF SERVICE FOR MAINTENANCE. THE COOLER WAS DECLARED INOPERABLE RENDERING ONE ECCS SUBSYSTEM INOPERABLE (TECH SPEC 3.5.2). THE COOLER SALT WATER SUPPLY PIPING AND STRAINER WERE CLEANED AND THE COOLER RETURNED TO SERVICE AT 1655 ON 5/26/83. THE REDUNDANT ECCS SUBSYSTEM REMAINED OPERABLE THROUGHOUT THE EVENT. SIMILAR EVENTS: NONE. THE SUPPLY PIPING AND STRAINERS ON BOTH UNITS HAVE BEEN DISASSEMBLED, INSPECTED AND CLEANED. EXISTING OPERATIONS PM PROCEDURES (FLOW TEST) HAVE BEEN REVIEWED AND FOUND TO BE SATISFACTORY. NEW MECHANICAL MAINTENANCE PM PROCEDURES HAVE BEEN IMPLEMENTED TO INSPECT AND CLEAN THE STRAINERS UPON COMPLETION OF THE OPERATIONS PM PROCEDURES.

[54] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-037 REV 1
 UPDATE ON REACTOR TRIP BREAKERS LONG RESPONSE TIME.
 EVENT DATE: 071883 REPORT DATE: 030584 NSSS: CE TYPE: PWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189013) AT 1115 DURING SURVEILLANCE TEST OF REACTOR TRIP CIRCUIT BREAKERS (TCB'S) UNDERVOLTAGE (U/V) DEVICE, THE RESPONSE TIMES OF TCB'S 3 AND 4 U/V TRIP DEVICES WAS SLOWER THAN ALLOWED BY TECH SPEC 3.3.1.1. THE BREAKERS AND U/V DEVICES WERE ADJUSTED AND TESTED SATISFACTORILY AT 1820. TCB 3 AND 4 WERE OPERABLE AS THE REDUNDANT SHUNT TRIP DEVICE WAS OPERATIONAL WITH SATISFACTORY RESPONSE TIME. SIMILAR EVENTS: NONE. CAUSE OF THE EVENT WAS SETPOINT DRIFT AND WORN OR BINDING FRONT FRAME ASSEMBLY MECHANISMS (PFAM) ON THE TCB'S. SETPOINTS WERE ADJUSTED AND TRIP SHAFT AND LATCH ROLLER BEARINGS WERE LUBRICATED. MONTHLY TIME RESPONSE TESTING TO DATE HAS PROVEN ADEQUATE TO IDENTIFY THE NEED FOR SHORTENED PREVENTIVE MAINTENANCE INTERVAL. NO FURTHER ACTION IS REQUIRED.

[55] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-037 REV 1
 UPDATE ON DIESEL GENERATOR TRIPS ON LOW FUEL LEVEL.
 EVENT DATE: 081683 REPORT DATE: 033084 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: CALVERT CLIFFS 2 (PWR)

(NSIC 189139) AT 1142 DURING NORMAL OPERATIONS, SWING DG #12 SHUT DOWN ON LOSS OF FUEL OIL DURING THE PERFORMANCE OF SURVEILLANCE TESTING RENDERING IT INOPERABLE (TECH SPEC 3.8.1.1). INVESTIGATION REVEALED THE LEVEL SWITCHES FOR THE DAY TANK WERE ISOLATED PREVENTING OPERATION OF THE FUEL OIL TRANSFER PUMP AND ACTUATION OF THE LOW LEVEL ALARM. IT WAS DETERMINED THAT THIS CONDITION EXISTED FROM 10 TO 16 AUGUST DURING WHICH TIME 11 AND 21 DG'S REMAINED OPERABLE. SIMILAR EVENTS: NONE. THE CAUSE OF THIS EVENT WAS PERSONNEL ERROR; PROCEDURES WERE NOT FOLLOWED. THE OPEN COMMITMENTS OF THIS LER ARE ADDRESSED IN MRC INSPECTION REPORT 50-317/83-22 AND 50-318/83-22, DETAIL ITEM NO. 5, SUB-ITEMS F AND G. SINCE THE INSPECTION REPORT COMMITMENTS PARALLEL THIS LER'S COMMITMENTS, NO FURTHER LER RELATED ACTIONS ARE DEEMED NECESSARY.

[56] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-049 REV 1
 UPDATE ON AUXILIARY FEEDWATER PUMP DECLARED INOPERABLE.
 EVENT DATE: 081883 REPORT DATE: 030584 NSSS: CE TYPE: PWR
 VENDOR: BYRON JACKSON PUMPS, INC.

(NSIC 189014) AT 1830, DURING NORMAL OPERATION, WHILE PERFORMING POST MAINTENANCE TESTING ON THE FLOW PATH FROM 12 CONDENSATE STORAGE TANK, 11 AUX FEEDWATER PUMP WAS FOUND TO BE INOPERABLE (TECH SPEC 3.7.1.2). ON 8-20-83 AT 1610 REPAIRS TO 11 AUX FEED PUMP WERE COMPLETED AND IT WAS RETURNED TO SERVICE. DURING THIS EVENT 12 AUX FEED PUMP REMAINED OPERABLE. SIMILAR EVENTS: NONE. INSPECTION OF THE PUMP INTERNALS REVEALED THAT THE "STAGE PIECE-BALANCE" AND THE "SHAFT PIECE-BALANCE" HAD BOUND UP. BOTH PARTS WERE REPLACED AND THE PUMP RETURNED TO SERVICE. THIS IS AN ISOLATED EVENT. NO FURTHER CORRECTIVE ACTION IS DEEMED NECESSARY.

[57] CALVERT CLIFFS 1 DOCKET 50-317 LER 84-001
 FAILURE TO IMPLEMENT ADMINISTRATIVE CONTROLS.
 EVENT DATE: 011384 REPORT DATE: 021084 NSSS: CE TYPE: PWR

(NSIC 188982) AT 1315 IT WAS DISCOVERED THAT THE POST ACCIDENT SAMPLING SYSTEM RETURN TO THE REACTOR COOLANT DRAIN TANK ISOLATION VALVE WAS OPEN. THIS VALVE IS A KEY OPERATED SOLENOID VALVE WHICH IS PERMITTED, BY TECH SPEC 3.6.4.1 CONTAINMENT ISOLATION VALVES, TO BE OPEN DURING POWER OPERATION IF ADMINISTRATIVELY CONTROLLED. SINCE THIS VALVE WAS OPEN WITHOUT ADMINISTRATIVE CONTROLS, IN EFFECT THIS VIOLATES TECH SPEC 3.6.4.1. IT COULD NOT BE DETERMINED WHY THIS KEY OPERATED VALVE WAS IN THE OPEN POSITION. TO PREVENT A RECURRENCE OF THIS INCIDENT, THE KEY SWITCHES FOR THIS AND SIMILAR VALVES WILL BE MODIFIED. ADDITIONALLY, KEY CONTROL WILL BE IMPROVED AND PERSONNEL WILL BE REINSTRUCTED ON THE ADMINISTRATIVE REQUIREMENTS FOR OPERATION OF SUCH VALVES.

[58] CALVERT CLIFFS 1 DOCKET 50-317 LER 84-003
 IMPROPER OPERATION OF PASS CONTAINMENT ISOLATION VALVES.
 EVENT DATE: 012384 REPORT DATE: 022284 NSSS: CE TYPE: PWR

(NSIC 189338) WHILE ATTEMPTING TO PERFORM AN OPERATIONAL MAINTENANCE CHECK ON THE POST ACCIDENT SAMPLING SYSTEM (PASS) ON 1-23-84, CHEMISTRY TECHNICIANS OPERATED CONTAINMENT ISOLATION VALVES BY OPENING VALVES 1-SV-6540-G AND 1-SV-6507-G, THE RADIOGAS RETURN TO CONTAINMENT ATMOSPHERE. THIS VIOLATED TECH SPEC 3.6.4.1 WHICH DOES NOT ALLOW THESE VALVES TO BE OPEN IN MODES 1, 2, 3, AND 4. OPERATION OF THE POST ACCIDENT SAMPLING SYSTEM (PASS) WAS ORIGINALLY INTENDED FOR MODE 5 (COLD SHUTDOWN) EMERGENCY CONDITIONS. THE PROCEDURE DID NOT INCORPORATE TECH SPEC REQUIREMENTS DURING POWER MODES. TO PREVENT RECURRENCE OF THIS EVENT, A NEW PROCEDURE WILL BE WRITTEN FOR OPERATIONAL MAINTENANCE CHECK OF THE PASS, ADMINISTRATIVE CONTROLS OF THESE VALVE KEYS WILL BE INITIATED, AND A TECH SPEC AMENDMENT HAS BEEN SUBMITTED.

[59] CALVERT CLIFFS 1 DOCKET 50-317 LER 84-002
 REACTOR TRIP BREAKERS OPENED SIMULTANEOUSLY WITHOUT KNOWN CAUSE.
 EVENT DATE: 012784 REPORT DATE: 021584 NSSS: CE TYPE: PWR

(NSIC 189224) AT 1347 ON JANUARY 27, 1984, CALVERT CLIFFS UNIT 1 REACTOR TRIPPED. THE ROOT CAUSE OF THE EVENT IS UNKNOWN. IT APPEARS THAT ALL 8 REACTOR TRIP BREAKERS OPENED SIMULTANEOUSLY. ALL SAFETY SYSTEMS FUNCTIONED AS EXPECTED FOLLOWING THE EVENT. NO INPUT PARAMETERS TO THE REACTOR PROTECTIVE SYSTEM HAD EXCEEDED THEIR TRIP SETPOINTS JUST PRIOR TO THE TRIP. THE FOLLOWING CORRECTIVE ACTIONS WERE TAKEN FOLLOWING THE TRIP: 1) A VIDEO MONITORING SYSTEM WAS UTILIZED TO MONITOR THE REACTOR PROTECTIVE SYSTEM PANEL FOR INDICATIONS OF INADVERTENT ACTUATIONS OR GROUNDS, 2) THE POWER SUPPLIES TO THE MATRIX RELAYS WERE VERIFIED TO FUNCTION PROPERLY, AND 3) A DETAILED SYSTEM FAILURE EVALUATION WAS PERFORMED TO ATTEMPT TO IDENTIFY THE CAUSE. THE FOLLOWING CORRECTIVE ACTIONS ARE PLANNED TO ATTEMPT TO ESTABLISH THE CAUSE AND PREVENT RECURRENCE: 1) A MODIFICATION WILL BE EVALUATED WHICH WILL ALLOW MONITORING THE MATRIX RELAYS OF THE REACTOR PROTECTIVE SYSTEM FOR GROUNDS OR OTHER FAULTS, AND 2) AN INDEPENDENT SYSTEM FAILURE EVALUATION WILL BE PERFORMED TO VERIFY THE RESULTS OF THE ORIGINAL EVALUATION.

[60] CALVERT CLIFFS 1 DOCKET 50-317 LER 84-004
 EXCESSIVE CHARGING PUMP PACKING FAILURES CAUSES REACTOR SHUTDOWN.
 EVENT DATE: 022884 REPORT DATE: 032884 NSSS: CE TYPE: PWR
 VENDOR: ARMCO STEEL CORP.

(NSIC 189168) DURING MODE 1 OPERATION AT 1025 ON FEBRUARY 28, 1984, NO. 12 CHARGING PUMP (CB-P) WAS TAKEN OUT OF SERVICE DUE TO EXCESSIVE PACKING LEAKAGE.

AT 1840, NO. 13 CHARGING PUMP (CB-P) WAS TAKEN OUT OF SERVICE FOR THE SAME REASON AND UNIT 1 ENTERED THE ACTION STATEMENT OF TECH SPEC 3.1.2.4. POWER WAS REDUCED TO 88% AND THE UNIT WAS MANUALLY TRIPPED AT 2027 DUE TO THE UNAVAILABILITY OF SPARE CHARGING PUMP PACKING. NO. 11 CHARGING PUMP REMAINED OPERABLE THROUGHOUT THE EVENT. NO SIMILAR EVENTS HAVE OCCURRED. THIS EVENT WAS CAUSED BY THE FAILURE OF NO. 12 AND NO. 13 CHARGING PUMP (CB-P) PLUNGER PACKING AND EXACERBATED BY PREVIOUS PACKING FAILURES WHICH DEPLETED THE STOCK OF PACKING. ADDITIONAL PACKING HAD BEEN PREVIOUSLY ORDERED AND WAS IN SHIPMENT AT THE TIME OF THIS EVENT. AN EVALUATION OF ALTERNATIVE CHARGING PUMP PACKING MATERIALS AND PLUNGER MATERIALS IS IN PROGRESS. THE MINIMUM ORDER POINT FOR PACKING MATERIAL IS BEING INCREASED. A PERFORMANCE SPECIFICATION HAS BEEN WRITTEN AND WILL BE USED FOR FUTURE PACKING PURCHASES.

[61] CALVERT CLIFFS 2 DOCKET 50-318 LER 81-025 REV 1
 UPDATE ON RPS T-HOT TEMPERATURE TRANSMITTER FAILURES.
 EVENT DATE: 043081 REPORT DATE: 030584 NSSS: CE TYPE: PWR
 VENDOR: ROCHESTER INSTRUMENT SYSTEMS, INC.

(NSIC 189227) DURING NORMAL POWER OPERATION AT 0825, REACTOR PROTECTIVE SYSTEM (RPS) CHANNEL "B" TRIP UNITS (TU) 1, 3, 7, 8 AND 10 WERE BYPASSED TO INVESTIGATE A PROBLEM WITH T-HOT CHANNEL "B" (TECH SPEC 3.3.1.1). THE TRIP UNITS WERE RETURNED TO NORMAL AT 0925. ON MAY 14 AT 0635, TRIP UNITS 1, 7, AND 10 WERE BYPASSED DUE TO A SUDDEN DECREASE IN CHANNEL "B" T-HOT INDICATION. THE TRIP UNITS WERE RETURNED TO NORMAL AT 1425. ALL OTHER CHANNELS REMAINED OPERABLE DURING THIS EVENT. SIMILAR EVENT: 317/81-32. THE CAUSE OF THE FAILURE IS DUE TO TWO OSCILLATORS IN THE CIRCUITRY OF THE TRANSMITTER THAT PRODUCE NOISE ON THE OUTPUT OF THE TRANSMITTER. BOTH TRANSMITTERS WERE REPLACED WITH SPARES. A FACILITY CHANGE REQUEST HAS BEEN INITIATED FOR ADDITION OF A FILTER CIRCUIT FOR ALL APPLICABLE TRANSMITTERS.

[62] CALVERT CLIFFS 2 DOCKET 50-318 LER 81-030 REV 1
 UPDATE ON RPS TEMPERATURE TRANSMITTER FAILURE.
 EVENT DATE: 060481 REPORT DATE: 030584 NSSS: CE TYPE: PWR
 VENDOR: ROCHESTER INSTRUMENT SYSTEMS, INC.

(NSIC 189228) AT 1430 DURING NORMAL OPERATION WHILE PERFORMING A SURVEILLANCE TEST, IT WAS DISCOVERED THAT TEMPERATURE TRANSMITTER 122HB, WHICH INPUTS TO REACTOR PROTECTION SYSTEM (RPS) CHANNEL "B" DELTA T POWER CALCULATOR WAS OUT OF TOLERANCE IN A NONCONSERVATIVE DIRECTION (TECH SPEC 3.3.1.1). ALL TRIP UNITS THAT RECEIVE INPUT FROM DELTA T POWER WERE BYPASSED TO REPLACE THE TRANSMITTER. RPS CHANNEL "B" WAS RETURNED TO NORMAL AT 1500. THE THREE REDUNDANT RPS CHANNELS REMAINED OPERABLE. SIMILAR EVENTS: 318/81-25 AND 317/81-32. THE CAUSE OF FAILURE IS DUE TO TWO OSCILLATORS IN THE CIRCUITRY OF THE TRANSMITTER THAT PRODUCE NOISE ON THE OUTPUT OF THE TRANSMITTER. THE TRANSMITTER WAS REPLACED WITH A SPARE. A FACILITY CHANGE REQUEST HAS BEEN INITIATED FOR ADDITION OF A FILTER CIRCUIT FOR ALL APPLICABLE TRANSMITTERS.

[63] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-036 REV 1
 UPDATE ON LONG RESPONSE TIMES OF TWO REACTOR TRIP BREAKERS.
 EVENT DATE: 071983 REPORT DATE: 030584 NSSS: CE TYPE: PWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189087) AT 0900 DURING SURVEILLANCE TEST OF REACTOR TRIP CIRCUIT BREAKERS (TCB) UNDERVOLTAGE (U/V) DEVICE, THE RESPONSE TIME OF TCB 4 AND 7 U/V TRIP DEVICES WAS SLOWER THAN ALLOWED BY TECH SPEC 3.3.1.1. THE BREAKERS AND U/V DEVICES WERE ADJUSTED AND TESTED SATISFACTORILY AT 1700. TCB 4 AND 7 WERE OPERABLE AS THE REDUNDANT SHUNT TRIP DEVICE WAS OPERATIONAL WITH SATISFACTORY RESPONSE TIME. SIMILAR EVENTS: NONE. CAUSE OF THE EVENT WAS SETPOINT DRIFT AND

WORN OR BINDING FRONT FRAME ASSEMBLY MECHANISMS (FFAM) ON THE TCB. SETPOINTS WERE ADJUSTED AND TRIP SHAFT AND LATCH ROLLER BEARINGS WERE LUBRICATED. MONTHLY TIME RESPONSE TESTING TO DATE HAS PROVEN ADEQUATE TO IDENTIFY THE NEED FOR SHORTENED PREVENTIVE MAINTENANCE INTERVAL. NO FURTHER ACTION IS REQUIRED.

[64] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-043 REV 1
 UPDATE ON STEAM GENERATOR SAFETY VALVE FAILS TO RESEAT.
 EVENT DATE: 080983 REPORT DATE: 033084 NSSS: CE TYPE: PWR
 VENDOR: DRESSER INDUSTRIAL VALVE & INST DIV

(NSIC 189229) AT 1810 FOLLOWING A REACTOR TRIP A STEAM GENERATOR SAFETY VALVE FAILED TO RESEAT. AT 2230 THE VALVE WAS GAGGED SHUT. THE POWER LEVEL-HIGH TRIP WAS REDUCED AS PER TECH SPEC 3.7.1.1.A. THE REMAINING SAFETY VALVES REMAINED OPERABLE DURING THIS EVENT. ON 12 AUGUST THE VALVE HAD BEEN REPAIRED, TESTED, AND RETURNED TO SERVICE. THE VALVE OPENED ON HIGH PRESSURE AND FAILED TO RESEAT DUE TO A WORN LOCKING PIN ALLOWING ROTATION OF THE BLOWDOWN RING. THE VENDOR REPORTS THIS HAS BEEN A RARE OCCURRENCE. TO PREVENT FUTURE RECURRENCE, PREVENTIVE MAINTENANCE ITEMS HAVE BEEN APPROVED TO INSPECT THE VALVES TO ENSURE THE BLOWDOWN RING AND PIN ARE NOT WORN. NO FURTHER CORRECTIVE ACTION REQUIRED.

[65] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-046 REV 1
 UPDATE ON PENETRATION ROOM EXHAUST FAN FAILS TO START.
 EVENT DATE: 090683 REPORT DATE: 033084 NSSS: CE TYPE: PWR
 VENDOR: GENERAL ELECTRIC CO.
 VITRO ENGINEERING DIVISION

(NSIC 189230) AT 0420 IT WAS DISCOVERED THAT PENETRATION ROOM EXHAUST FAN 21 WOULD NOT START ON A CONTAINMENT ISOLATION SIGNAL WHILE PERFORMING SURVEILLANCE TEST STP-0-22 (TECH SPEC 3.6.6.1). PENETRATION ROOM EXHAUST FAN 22 WAS OPERABLE DURING THE TIME FAN 21 WAS INOPERABLE EXCEPT FOR THE PERIOD FROM 0605 TO 0650 WHEN BOTH FANS WERE INOPERABLE AS REPORTED BY LER 83-45. PENETRATION ROOM EXHAUST FAN 21 WAS RETURNED TO SERVICE AT 1425, 9-6-83 AFTER COMPLETING APPLICABLE PORTION OF STP-0-7-2. THE CAUSE OF CIS LOGIC MODULE FAILURE (VITRO 1628-1061), AS REPORTED BY THE VENDOR, DOES NOT ACCOUNT FOR THE ORIGINAL FAILURE MODE. AN INTERMITTENTLY FAILING MODULE IS SUSPECTED. THE MODULE HAS BEEN REMOVED FROM STOCK AND DISCARDED. THERE HAVE BEEN NO SIMILAR EVENTS. NO FURTHER ACTION IS DEEMED NECESSARY.

[66] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-052 REV 2
 UPDATE ON APW PUMP INOPERABLE.
 EVENT DATE: 092383 REPORT DATE: 120683 NSSS: CE TYPE: PWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189088) AT 1715 DURING NORMAL OPERATIONS, 23 AUXILIARY FEEDWATER (APW) PUMP WAS FOUND TO BE INOPERABLE (TECH SPEC 3.7.1.2.A). AT 2120 THE PUMP WAS RETURNED TO SERVICE. DURING THIS PERIOD THE REMAINING APW PUMPS REMAINED OPERABLE. SIMILAR EVENTS: NONE. INVESTIGATION FOUND ALL #23 APW PUMP MOTOR BREAKER (G.E. AMH 4.76-250-1D) PROTECTIVE RELAYS TRIPPED. THE RELAYS WERE RESET. NO OPERATIONAL PROBLEMS WERE FOUND. SUSPECTED CAUSE IS WORKERS SHORTING INTERNAL BREAKER CIRCUITS WHEN WORKING SCAFFOLDING WHILE GROUTING AT CUBICLE BASE WITH DOOR OPEN. A FACILITY CHANGE TO ADD ALARMS IS BEING INVESTIGATED.

[67] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-057 REV 2
 UPDATE ON LEAKING CONTAINMENT AIR LOCK DOOR.
 EVENT DATE: 101783 REPORT DATE: 010384 NSSS: CE TYPE: PWR
 VENDOR: CHICAGO BRIDGE AND IRON COMPANY

(NSIC 189089) AT 0715 DURING PERFORMANCE OF SURVEILLANCE TEST PROCEDURES, AN EXCESSIVE LEAK RATE PAST THE CONTAINMENT PERSONNEL AIR LOCK OUTER DOOR WAS DISCOVERED (TECH SPEC 3.6.1.3). THE SOURCE OF THE LEAK WAS LOCATED AND REPAIRED AT 1800. THE INNER DOOR REMAINED CLOSED THROUGHOUT THE EVENT. SIMILAR EVENTS: 50-318/82-01 AND 50-317/82-01. DEGRADATION OF THE GASKET CAUSED THE GASKET TO LEAK. THE GASKET AND GROOVE WERE CLEANED AND LUBRICATED. THE GASKET WAS REVERSED TO PRESENT A NEW SEATING SURFACE AND SUBSEQUENTLY PASSED ITS LEAKAGE TEST. TO PREVENT RECURRENCE PREVENTIVE MAINTENANCE ITEMS HAVE BEEN APPROVED TO LUBRICATE AND INSTALL NEW DOOR GASKETS PERIODICALLY.

[68] CALVERT CLIFFS 2 DOCKET 50-318 LER 84-001
ISOLATION OF INSTRUMENT AIR TO FAN DISCHARGE DAMPER.
EVENT DATE: 020384 REPORT DATE: 030184 NSSS: CE TYPE: PWR

(NSIC 189226) ON 12-20-83 INSTRUMENT AIR WAS ISOLATED TO THE ECCS PUMP ROOM VENTILATION CHARCOAL FILTER BYPASS DAMPERS IN ORDER TO FAIL THEM SHUT WHILE THE BYPASS DAMPERS WERE AWAITING MAINTENANCE. ON 2-3-84 DURING PERFORMANCE OF SURVEILLANCE TESTS, IT WAS DISCOVERED THAT 21 ECCS PUMP ROOM VENTILATION SYSTEM EXHAUST FAN DISCHARGE DAMPER WOULD NOT OPEN. INVESTIGATION REVEALED THAT THE AIR SUPPLY TO 21 EXHAUST FAN DISCHARGE DAMPER HAD BEEN ISOLATED. FURTHER INVESTIGATION REVEALED THAT THE INSTRUMENT AIR VALVE WHICH ISOLATED AIR TO THE BYPASS DAMPERS ALSO ISOLATED AIR TO THE EXHAUST FAN DISCHARGE DAMPER. THE ORIGINAL TAG OUT WAS COMPLETED USING A PIPING AND INSTRUMENT DIAGRAM WHICH WAS IN ERROR. THE AIR WAS IMMEDIATELY RESTORED TO THE EXHAUST FAN DISCHARGE DAMPER AND THE AIR TO THE BYPASS DAMPERS WAS DISCONNECTED AND CAPPED. THIS RETURNED THE ECCS PUMP ROOM VENTILATION SYSTEM TO SERVICE AT 0820. THE REDUNDANT ECCS PUMP ROOM VENTILATION SYSTEM EXHAUST FAN REMAINED OPERABLE THROUGHOUT THE EVENT. A PIPING AND INSTRUMENT DIAGRAM UPDATE AND VERIFICATION PROGRAM IS CURRENTLY IN PROGRESS AND WILL BE COMPLETED BY 12-31-84. THE ERROR IN THE PIPING AND INSTRUMENT DIAGRAM HAD BEEN IDENTIFIED PRIOR TO THE EVENT AND FORWARDED TO THE RESPONSIBLE DESIGN ORGANIZATION FOR REVIEW AND DRAWING UPDATE, HOWEVER, THE REVISED PIPING AND INSTRUMENT DIAGRAM HAD NOT BEEN ISSUED FOR USE AT THE TIME OF THE EVENT.

[69] CONNECTICUT YANKEE DOCKET 50-213 LER 84-001
FIRE DOORS FOUND INOPERABLE.
EVENT DATE: 032184 REPORT DATE: 041984 NSSS: WE TYPE: PWR

(NSIC 189204) WITH THE PLANT OPERATING AT 100 PERCENT POWER, A NUMBER OF FIRE DOORS REQUIRED BY TECH SPEC (SECTION 3.22.F) WERE FOUND TO BE INOPERABLE, REQUIRING MINOR REPAIRS. THE APPROPRIATE ADMINISTRATIVE ACTIONS WERE INVOKED PER TECH SPEC 3.22.F.2, AND REPAIRS ARE IN PROGRESS. SINCE IT IS BELIEVED THAT THE CONDITION OF THE NONCONFORMING DOORS EXISTED FOR A PERIOD OF TIME GREATER THAN THAT ALLOWED BY TECH SPEC 3.22.F, THIS INCIDENT IS REPORTABLE UNDER 10 CFR 50.73 (A) (2) I.

[70] COOK 1 DOCKET 50-315 LER 83-056
COMPONENT COOLING WATER (CCW) SEAL WATER CHECK VALVE TO H2 SAMPLING PUMPS FOUND LEAKING.
EVENT DATE: 060183 REPORT DATE: 062983 NSSS: WE TYPE: PWR
VENDOR: ROCKWELL-INTERNATIONAL

(NSIC 184373) DURING SURVEILLANCE TEST 12 THP 4030.STP.236, CHECK VALVE NS-262 (CCW SEAL WATER TO THE H2 SAMPLING PUMPS) WAS FOUND TO BE LEAKING BY. THE H2 SAMPLING PUMPS WERE TAGGED OUT UNDER A MAINTENANCE CLEARANCE TO REPAIR NS-262 AT 1245 HRS ON 6/1/83. THIS IS LESS CONSERVATIVE THAN TECH SPEC 3.6.4.1 REQUIRES. THE ACTION STATEMENTS WERE MET. A PREVIOUS OCCURRENCE WAS 315/83-042. CHECK VALVE NS-262 WAS DISASSEMBLED. THE CAUSE OF LEAKAGE WAS DUE TO DIRT BUILDUP ON

THE VALVE SEATING SURFACES. THE SEATING SURFACES WERE CLEANED AND THE VALVE WAS REASSEMBLED. THE H2 SAMPLING PUMPS WERE RETURNED TO SERVICE AT 1456 HRS ON 6/1/83.

[71] COOK 1 DOCKET 50-315 LER 84-001
 EQUALIZING VALVE LEAK CAUSES REACTOR TRIP.
 EVENT DATE: 012384 REPORT DATE: 022284 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 188980) DURING NORMAL OPERATION AT 99% REACTOR THERMAL POWER THE REACTOR COOLANT LOOP FLOW TRANSMITTERS WERE BEING CALIBRATED DUE TO A 3% DEVIATION BETWEEN CHANNELS. THE CHANNEL 2 TRANSMITTER (NFP-221) WAS CALIBRATED AND RETURNED TO SERVICE. CHANNEL 3 TRANSMITTER (NFP-222) WAS CALIBRATED AND WHILE IT WAS BEING RETURNED TO SERVICE. THE CONTROL ROOM FLOW INDICATION ON CHANNEL 1 (NFP-220) WAS OBSERVED TO HAVE DROPPED TO APPROXIMATELY 90% FOLLOWED BY AN AUTOMATIC REACTOR TRIP. THIS OCCURRED AT 1351 HRS ON 1-23-84. THE EQUALIZING VALVE FOR FLOW TRANSMITTER NFP-222 WAS FOUND TO BE LEAKING THROUGH. ALL THREE FLOW TRANSMITTERS ON EACH REACTOR COOLANT LOOP ARE CONNECTED TO A COMMON HIGH PRESSURE SENSING LINE. WHEN THE LOW SIDE CONNECTION FOR NFP-222 WAS VALVED IN, THE HIGH SIDE PRESSURE DROPPED DUE TO THE LEAKING EQUALIZING VALVE. THIS CAUSED A 2/3 LOW FLOW INDICATION RESULTING IN THE AUTOMATIC ACTUATION OF THE REACTOR PROTECTION SYSTEM AND THE REACTOR TRIP.

[72] COOK 2 DOCKET 50-316 LER 84-001
 BORON INJECTION TANK HAS LOW CONCENTRATION.
 EVENT DATE: 011784 REPORT DATE: 021684 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 188981) BORON INJECTION TANK (BIT) WAS DILUTED BY PRIMARY WATER AFTER AN EQUIPMENT CLEARANCE PERMIT WAS RELEASED AND THE SYSTEM REALIGNED. THE VALVE THAT WAS WORKED ON WAS NOT TAGGED AND THEREFORE WAS NOT PART OF THE RESTORATION LINEUP. THE VALVE WAS OPEN AND DILUTED THE BIT TO BELOW THE LIMITS SET IN TECH SPEC 3.5.4.1. A HEAVY CONCENTRATION BATCH WAS MIXED AND THE BIT WAS BROUGHT INTO SPEC WITHIN THE ONE HOUR ACTION STATEMENT LIMIT. CORRECTIVE ACTION INCLUDED SENDING A LETTER TO EACH PERSON RESPONSIBLE FOR ISSUING CLEARANCE PERMITS EXPLAINING THE REQUIREMENT TO ALSO INCLUDE ON THE RESTORATION FORM COMPONENTS INSIDE CLEARANCE BOUNDARIES BUT WHICH ARE NOT TAGGED.

[73] COCK 2 DOCKET 50-316 LER 84-002
 OVERPRESSURIZATION OF MSR RESULTS IN TURBINE/REACTOR TRIP.
 EVENT DATE: 021884 REPORT DATE: 031684 NSSS: WE TYPE: PWR

(NSIC 189048) A TURBINE TRIP/REACTOR TRIP OCCURRED FROM FULL POWER WHEN PLACING THE MOISTURE SEPARATOR REHEATER (MSR) STEAM COILS IN SERVICE. THE TURBINE TRIP OCCURRED WHEN THE OPERATOR (AN SRO) ATTEMPTED TO RESTORE THE MSR TUBE BUNDLES TO SERVICE FOLLOWING THEIR ISOLATION OF AN EXTREME HIGH COIL DRAIN TANK LEVEL. THE OPERATOR HAD INTENDED TO ISOLATE ALL THE STEAM TO THE TUBE BUNDLES BY ISOLATING THE BYPASS VALVES AROUND THE MAIN STEAM SUPPLY VALVES AND THE INDIVIDUAL BUNDLE STEAM SUPPLY VALVES, BUT HE NEGLECTED TO CLOSE THE MAIN STEAM SUPPLY VALVES THEMSELVES. WHEN THE INDIVIDUAL BUNDLE STEAM SUPPLY VALVES WERE REOPENED, THE TUBE BUNDLES WERE ALMOST IMMEDIATELY PRESSURIZED TO 800 PSI. THE UNIT TRIPPED FROM AN APPARENT HIGH LEVEL IN THE MSR SHELL WHICH HAPPENED BEFORE THE STEAM SUPPLY VALVES TO THE BUNDLES WERE FULLY OPENED. THE APPARENT HIGH LEVEL MAY HAVE BEEN AN ACTUAL LEVEL OR VIBRATION FROM THERMAL SHOCK DUE TO THE RAPID REPRESSURIZATION OF THE STEAM TUBE BUNDLES. PROCEDURE CHANGES ARE BEING MADE TO PREVENT RECURRENCE.

[74] COOPER DOCKET 50-298 LER 84-001
 MICROSWITCH FAILS IN REACTOR VESSEL WATER LEVEL INDICATING SWITCH.
 EVENT DATE: 012084 REPORT DATE: 022484 NSSS: GE TYPE: BWR
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 188969) WHILE PERFORMING A MONTHLY FUNCTIONAL TEST ON NBI-LIS-101B (REACTOR VESSEL WATER LEVEL INDICATING SWITCH), THIS HIGH LEVEL MICROSWITCH TRIPPED AT THE PROPER LEVEL, BUT FAILED TO RESET WHEN THE SIMULATED HIGH LEVEL SIGNAL WAS REMOVED. THE HIGH LEVEL MICROSWITCH CLOSES THE HIGH PRESSURE COOLANT INJECTION (HPCI) INBOARD STEAM ISOLATION VALVE (HPCI-MO-15) AND TRIPS THE HPCI TURBINE. AFTER THE MICROSWITCH RESETS ON DECREASING LEVEL, AND A SUBSEQUENT LOW REACTOR VESSEL WATER LEVEL IS REACHED, VALVE HPCI-MO-15 WILL REOPEN AND THE SYSTEM WILL RESTART. THEREFORE HAD THE MICROSWITCH FAILED TO RESET FOLLOWING AN ACTUAL REQUIRED LOW LEVEL INJECTION SIGNAL, SUBSEQUENT AUTOMATIC SYSTEM OPERATION WOULD HAVE BEEN PREVENTED. THE MICROSWITCH WAS REPLACED AND PROPER OPERATION VERIFIED.

[75] COOPER DOCKET 50-298 LER 84-002
 REACTOR TRIP FOLLOWING LOSS OF OFFSITE POWER.
 EVENT DATE: 012984 REPORT DATE: 022484 NSSS: GE TYPE: BWR

(NSIC 188970) HIGH WINDS DETACHED A PIECE OF REACTOR BUILDING ALUMINUM SIDING WHICH WAS SUBSEQUENTLY BLOWN ONTO THE 161 KV LINE CREATING A PHASE-TO-PHASE AND/OR PHASE-TO-GROUND ELECTRICAL SHORT WHICH DE-ENERGIZED THE STARTUP TRANSFORMER. SINCE THE NORMAL STATION SERVICE TRANSFORMER WAS OUT OF SERVICE WHEN THE STARTUP TRANSFORMER WAS DEENERGIZED, NORMAL OFFSITE POWER AND ONSITE POWER WAS LOST WHICH RESULTED IN A LOSS OF ALL NONCRITICAL BUSES. LOSS OF REACTOR RECIRCULATION MOTOR-GENERATOR SETS CAUSED REACTOR POWER TO DECREASE. AS PRESSURE DECREASED TO 825 PSIG WITH THE MAIN STEAM ISOLATION VALVES (MSIVS) OPEN (MODE SWITCH IN RUN), A GROUP I ISOLATION WAS INITIATED AND SUBSEQUENTLY THE REACTOR SCRAMMED AS A RESULT OF THE MSIV CLOSURE. REACTOR BUILDING SIDING WILL BE REPLACED AND SECURELY FASTENED TO PREVENT RECURRENCE.

[76] COOPER DOCKET 50-298 LER 84-003
 REACTOR TRIPS ON HIGH FLUX.
 EVENT DATE: 013084 REPORT DATE: 022484 NSSS: GE TYPE: BWR

(NSIC 188971) THE REACTOR PROTECTION SYSTEM GENERATED A HIGH AVERAGE POWER RANGE MONITOR (APRM) HIGH FLUX REACTOR TRIP AS A RESULT OF A REACTOR FEEDWATER FLOW TRANSIENT DURING REACTOR STARTUP. THE TRANSIENT WAS CAUSED BY A TRIP OF THE REACTOR FEEDWATER PUMP WHILE AN INSTRUMENT & CONTROL TECHNICIAN WAS TROUBLESHOOTING A LOSS OF FEED PUMP SPEED INDICATION. THE REACTOR FEED PUMP WAS IMMEDIATELY RESTARTED, HOWEVER, THE FEEDWATER ADDITION RATE WAS THEN EXCESSIVE. THE POSITIVE REACTIVITY ADDED DUE TO THE RAPID FEEDWATER INJECTION CAUSED REACTOR POWER TO INCREASE TO THE TRIP SETTING. THIS EVENT WILL BE DISCUSSED WITH OPERATORS AND INSTRUMENT TECHNICIANS IN ORDER TO IMPROVE COMMUNICATIONS SUCH THAT ALTERNATE METHODS OF OPERATING AND TESTING ARE EMPLOYED TO PREVENT RECURRENCE OF SIMILAR EVENTS. THIS LER WILL BE FOUTED TO THE APPROPRIATE SUPERVISORS AND ALL THE LICENSED OPERATORS. ADDITIONALLY, DURING SEMINARS WITH ALL LICENSED OPERATORS, THE OPERATIONS SUPERVISOR WILL DISCUSS ALTERNATE METHODS OF PLANT OPERATION THAT COULD HAVE PREVENTED THIS EVENT. PERSONNEL ERRORS IDENTIFIED WERE LACK OF SPECIFIC CONTROLS ON TROUBLESHOOTING, FAILURE TO PROVIDE DIRECTION AND EFFECTIVE COMMUNICATION, AND NOT UTILIZING THE AVAILABLE REDUNDANT EQUIPMENT.

[77] CRYSTAL RIVER 3 DOCKET 50-302 LER 84-001
 REACTOR BUILDING CONTAINMENT PENETRATION NOT DESIGNED IN ACCORDANCE WITH FSAR.
 EVENT DATE: 011384 REPORT DATE: 021084 NSSS: BW TYPE: PWR
 VENDOR: CHICAGO BRIDGE AND IRON COMPANY

(NSIC 188972) DURING A REFUELING OUTAGE (MAY, 1983) THE END CAP OF A PENETRATION IN THE REACTOR CONTAINMENT BUILDING WAS INCORRECTLY CUT OFF. SUBSEQUENTLY, A PLANT MODIFICATION PACKAGE WAS ISSUED TO REPLACE THE END CAP. A ROUTINE REVIEW OF THE MODIFICATION PACKAGE ON JAN. 13, 1984 DISCOVERED SEVERAL DESIGN SPECIFICATIONS THAT WERE INCONSISTENT WITH FSAR COMMITMENTS. COGNITIVE PERSONNEL ERROR IS THE CAUSE OF THIS EVENT IN THAT BOTH THE DESIGN ENGINEER (ON CONTRACT TO FLORIDA POWER CORPORATION) AND THE VERIFICATION ENGINEER (A FLORIDA POWER CORPORATION EMPLOYEE) FAILED TO FOLLOW APPLICABLE ENGINEERING PROCEDURES. THE VERIFICATION ENGINEER HAS BEEN RETRAINED ON FOLLOWING APPLICABLE ENGINEERING PROCEDURES. THE DESIGN ENGINEER NO LONGER WORKS FOR FLORIDA POWER CORPORATION. THE RESULTS OF THE LOCAL LEAK RATE TEST THAT WAS PERFORMED ON THE PENETRATION (JULY 2, 1983) AND SUBSEQUENT ENGINEERING EVALUATION (JAN. 1984) INDICATE THAT THE END CAP WILL PERFORM ITS INTENDED SAFETY FUNCTION UNDER THE WORST CASE LOCA CONDITIONS AND THUS JUSTIFIES CONTINUED OPERATION WITH THE AS-BUILT PENETRATION UNTIL THE NEXT REFUELING OUTAGE (MAR. 1985). AN ENGINEERING EVALUATION WILL BE PERFORMED TO DETERMINE IF THE AS-BUILT REACTOR CONTAINMENT BUILDING PENETRATION IS ADEQUATE FOR THE REMAINDER OF PLANT LIFE OR IF ANOTHER MODIFICATION IS REQUIRED TO MAKE THE PENETRATION CONSISTENT WITH FSAR COMMITMENTS.

[78] CRYSTAL RIVER 3 DOCKET 50-302 LER 84-002
 NON-RECORDED LIQUID RADWASTE RELEASE.
 EVENT DATE: 020284 REPORT DATE: 021784 NSSS: LW TYPE: PWR
 VENDOR: BAILEY METER COMPANY

(NSIC 188973) ON FEB. 1, 1984 AT 2220 HRS, CONTRARY TO APPROVED PROCEDURES, A UTILITY NON-LICENSED OPERATOR INITIATED AN OFF-SITE LIQUID RELEASE OF THE SECONDARY PLANT WITHOUT VERIFYING THAT THE WASTE DISPOSAL FLOW RECORDER WAS OPERABLE. THUS, CONTRARY TO ENV. TECH SPECS 2.4.1.L AND 2.4.1.M, A LIQUID RELEASE TOOK PLACE WITHOUT CONTINUOUS RECORDING OF THE RELEASE FLOW RATE AND RADIOACTIVITY. ON FEB. 2, 1984 AT 0045 HRS, A RELIEVING UTILITY NON-LICENSED OPERATOR DISCOVERED THAT THE CHART RECORDER WAS INOPERABLE DUE TO A FAILURE IN THE PAPER ADVANCE MECHANISM. THE OPERATOR SUBSEQUENTLY TERMINATED THE RELEASE. NO RADIOACTIVE ISOTOPES WERE RELEASED TO THE ENVIRONMENT. THE CHART RECORDER WAS REPAIRED AND OPERATED PROPERLY. A PREVENTATIVE MAINTENANCE PROGRAM WILL BE IMPLEMENTED TO REGULARLY INSPECT AND ADJUST ALL CHART RECORDERS. PLANT OPERATORS WILL BE RETRAINED IN THE PROPER USE OF THE CHART RECORDERS. OPERATING PROCEDURE OP-407-N WILL BE REVISED AS NOTED IN THE TEXT. THIS REPORT IS SUBMITTED IN ACCORDANCE WITH ENV. TECH SPEC 5.6.2.A.

[79] CRYSTAL RIVER 3 DOCKET 50-302 LER 84-004
 POST-ACCIDENT SAMPLING SYSTEM MANUAL ISOLATION VALVES FOUND CLOSED.
 EVENT DATE: 022884 REPORT DATE: 033084 NSSS: BW TYPE: PWR

(NSIC 189099) ON FEBRUARY 28, 1984 WHILE CONDUCTING A POST-INSTALLATION ENGINEERING REVIEW OF THE POST-ACCIDENT SAMPLING SYSTEM (PASS), UTILITY PERSONNEL DISCOVERED THAT SIX MANUAL ISOLATION VALVES WERE CLOSED, THEREBY REDUCING THE SYSTEM'S CAPABILITY TO PERFORM AS DESIGNED. FLORIDA POWER CORPORATION HAD DECLARED THE PASS OPERABLE ON JANUARY 1, 1984. THE SAMPLING CAPACITY OF THE REACTOR COOLANT SYSTEM WAS AVAILABLE THROUGH THE NORMAL LETDOWN AND PRESSURIZER PRIMARY SAMPLING FLOWPACERS. THE RADIOLOGICAL CONSEQUENCES OF SUCH SAMPLING ARE CURRENTLY BEING EVALUATED AND WILL BE SUBMITTED IN A SUPPLEMENT TO THIS REPORT. PERSONNEL ERROR AND INADEQUACIES IN THE MODIFICATION APPROVAL RECORD (MAR) PROCESS ARE THE CAUSES OF THE EVENT. ALL SIX VALVES WERE OPENED. PROCEDURES AND THE MAR PROCESS WILL ALSO BE REVISED TO PREVENT RECURRENCE. THIS IS A VOLUNTARY REPORT.

[80] DAVIS-BESSE 1 DOCKET 50-346 LER 83-023
 VITAL BUS LOSES POWER.
 EVENT DATE: 051083 REPORT DATE: 060883 NSSS: BW TYPE: PWR

(NSIC 183481) (NP-33-83-32) ON 5/10/83 AT 1026 HOURS, 120 VAC ESSENTIAL BUS Y4 WAS LOST DUE TO A BLOWN FUSE IN INVERTER YV4. THIS PLACED THE UNIT IN THE ACTION STATEMENT OF TECH SPEC 3.8.2.1. AS A RESULT OF THE LOSS OF Y4, THE FOLLOWING TECH SPEC INSTRUMENTATION WAS DE-ENERGIZED: REACTOR PROTECTION SYSTEM CHANNEL 4 AND SAFETY FEATURES ACTUATION SYSTEM CHANNEL 4. ALL SAFETY SYSTEMS PERFORMED AS DESIGNED. WHILE PERFORMING MODIFICATION WORK IN THE LOW VOLTAGE SWITCHGEAR ROOM 2, A SPRAY CAN BEING USED TIPPED OVER, SPRAYING WATER ONTO THE PROTECTIVE PLASTIC ON THE SCAFFOLDING. AS A RESULT, WATER WORKED ITS WAY THROUGH THE PLASTIC INTO THE REGULATED RECTIFIER YRF4 AND CAUSED THE INVERTER YV4 INPUT FUSE TO BLOW. Y4 WAS RESTORED AT 1336 HOURS ON 5/10/83. A MEMO WAS ISSUED OUTLINING PRECAUTIONS TO BE TAKEN WHILE ERECTING SCAFFOLDING OVER ELECTRICAL EQUIPMENT.

[81] DAVIS-BESSE 1 DOCKET 50-346 LER 84-001
 REACTOR TRIP CAUSED BY AUTOMATIC INSERTION OF AXIAL POWER SHAPING RODS.
 EVENT DATE: 010884 REPORT DATE: 020784 NSSS: BW TYPE: PWR
 VENDOR: MOTOROLA

(NSIC 188992) DUE TO A CONDENSER TUBE LEAK, REACTOR POWER WAS REDUCED TO 46%. OPERATORS BORATED THE REACTOR COOLANT SYSTEM, RCS, TO MINIMIZE THE NORMAL NEGATIVE IMBALANCE CAUSED BY THE ROD INSERTION DURING THE POWER REDUCTION. WHEN CORE IMBALANCE TURNED AROUND AND BECAME POSITIVE, OPERATORS ADDED DEMINERALIZED WATER TO THE RCS TO ALLOW RODS TO INSERT. DUE TO A FAILURE IN THE CONTROL ROD DRIVE CONTROL SYSTEM, CRDCS, THE OPERATORS COULD NOT OPERATE THE AXIAL POWER SHAPING RODS, APSRS, AND THEY INSERTED WITHOUT COMMAND TO HELP REDUCE THE POSITIVE CORE IMBALANCE. THE POSITIVE CORE IMBALANCE INCREASED TO THE REACTOR PROTECTION SYSTEM, RPS, FLUX/DELTA FLUX/FLOW SETPOINT, AND THE REACTOR TRIPPED ABOUT 3.5 HRS AFTER REDUCING POWER TO 46%. THE CRDCS PROBLEM WAS DUE TO A FAULTY LOGIC CARD WHICH WAS LATER REPAIRED.

[82] DAVIS-BESSE 1 DOCKET 50-346 LER 84-002
 FUEL TRANSFER TUBE CONTAINMENT ISOLATION DRAIN VALVES LEFT OPEN.
 EVENT DATE: 011984 REPORT DATE: 021784 NSSS: BW TYPE: PWR
 VENDOR: VELAN VALVE CORP.

(NSIC 189294) THE PLANT WAS IN MODE 5, COLD SHUTDOWN, FOR CONTAINMENT WORK AND SECONDARY SIDE WORK WHEN IT WAS OBSERVED THAT FUEL TRANSFER TUBE 1-1 DRAIN SF69 WAS OPEN AND UNCAPPED, AND FUEL TRANSFER TUBE 1-2 DRAIN SF68 WAS PARTIALLY OPEN AND UNCAPPED. FUEL TRANSFER TUBE 1-2 ISOLATION VALVE SF1 AND FUEL TRANSFER TUBE 1-1 ISOLATION VALVE SF2 LEAKED BY ALLOWING BORATED WATER TO LEAK FROM THE FUEL TRANSFER PIT IN THE AUXILIARY BUILDING TO THE DEEP END OF THE REFUELING CANAL IN CONTAINMENT. SF1 AND SF2 AND THE BLIND FLANGES WERE IN THEIR CORRECT POSITION BUT THE BOUNDARY BETWEEN THEM WAS BREACHED BY SF68 AND SF69 BEING OPEN AND UNCAPPED, THEREBY, POTENTIALLY VIOLATING CONTAINMENT INTEGRITY. CONTAINMENT LEAKAGE WAS NOT VIOLATED BASED ON A CONTAINMENT VESSEL LOCAL LEAK RATE TEST OF SF1 AND SF2. SF68 AND SF69 WERE UNCAPPED AND OPEN IN THE 1983 REFUELING OUTAGE. TWO DEFECTIVE PROCEDURES WERE THE APPARENT CAUSE OF THIS LER. MP 1503.04, FUEL TRANSFER TUBE COVER PLATE REMOVAL AND REPLACEMENT, AND AD 1839.03, OPERATION AND CONTROL OF CAPPED VALVES. CORRECTIVE ACTION WAS TO REEVALUATE ALL CAPPED VALVES AND REQUIRE A FACILITY CHANGE REQUEST TO DELETE ANY CAPPED VALVES FROM AD 1839.03. A MODIFICATION TO MP 1503.04 THAT ADDS STEPS TO CLOSE AND CAP SF68, SF69, SF70, AND SF71 WAS WRITTEN.

[83] DIABLO CANYON 1 DOCKET 50-275 LER 84-001
 INADVERTENT SAFETY INJECTION ACTUATION.
 EVENT DATE: 010684 REPORT DATE: 020684 NSSS: WE TYPE: PWR

(NSIC 189156) DURING INSTALLATION OF TEST EQUIPMENT, THE AC SUPPLY TO A SOLID STATE PROTECTION SYSTEM (SSPS) SLAVE RELAY CIRCUIT WAS MOMENTARILY GROUNDED. THIS CAUSED A MOMENTARY DROP IN INVERTER OUTPUT VOLTAGE, WHICH SUBSEQUENTLY CAUSED A SAFETY INJECTION SIGNAL ON ONE TRAIN OF THE ENGINEERED SAFETY FEATURES ACTUATION SYSTEM. THE SIGNAL CAUSED ONE CENTRIFUGAL CHARGING PUMP AND ONE DIESEL GENERATOR TO START. ALSO, ONE TRAIN OF CONTAINMENT PHASE 'A' ISOLATION VALVES ACTUATED. THE CENTRIFUGAL CHARGING PUMP WAS IN THE RECIRCULATION MODE, SO THERE WAS NO INJECTION OF WATER INTO THE REACTOR COOLANT SYSTEM. CORRECTIVE ACTION WAS A MEMO TO OPERATORS, INSTRUCTING THEM TO PUT THE SSPS IN THE 'TEST' MODE (BLOCKING THE ESF ACTUATION SIGNAL) EXCEPT WHEN REQUIRED FOR ESF TESTING OR OPERATION.

[84] DIABLO CANYON 1 DOCKET 50-275 LER 84-002
 INOPERABLE CONTROL ROOM VENTILATION SYSTEM.
 EVENT DATE: 010784 REPORT DATE: 020884 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: DIABLO CANYON 2 (PWR)

(NSIC 189039) WHILE IN MODE 5 (COLD SHUTDOWN), BOTH TRAINS OF THE CONTROL ROOM VENTILATION SYSTEM WERE IDENTIFIED AS BEING POWERED BY THE SAME 480V VITAL BUS. IT WAS NOTED THAT THIS CONDITION HAD EXISTED SINCE DEC. 31, 1983 WHEN COMPONENTS IN BOTH TRAINS WERE REMOVED FROM SERVICE FOR MAINTENANCE. AS A RESULT, THE ACTION REQUIREMENTS OF TECH SPEC 3.7.5.1 WERE NOT MET WITHIN THE SPECIFIED SEVEN DAY TIME INTERVAL (EXCEEDED BY 2 DAYS). THE CAUSE OF THIS EVENT WAS THE FAILURE BY THE OPERATORS TO IDENTIFY THE RESULTING ELECTRICAL LINEUP AFTER REMOVING COMPONENTS IN BOTH TRAINS FROM SERVICE. THE CONTROL ROOM VENTILATION SYSTEM WAS DECLARED ADMINISTRATIVELY INOPERABLE UPON DISCOVERY OF THIS CONDITION, AND BOTH TRAINS WERE PLACED IN THE RECIRCULATION MODE. CORRECTIVE ACTION TO PREVENT A SIMILAR OCCURRENCE HAS INCLUDED OPERATOR TRAINING AND REVISION OF THE RELEVANT OPERATING PROCEDURE.

[85] DIABLO CANYON 1 DOCKET 50-275 LER 84-003
 SPURIOUS SAFETY INJECTION ACTUATION.
 EVENT DATE: 011684 REPORT DATE: 021584 NSSS: WE TYPE: PWR

(NSIC 189157) WHILE IN MODE 5 (COLD SHUTDOWN), THE PLANT EXPERIENCED A SPURIOUS SAFETY INJECTION ACTUATION. THE EVENT WAS INITIATED BY A MOMENTARY VOLTAGE DROP ON INSTRUMENT AC BUS 1-1 WHILE CHANNEL III BISTABLES FOR HI STEAM LINE DELTA P WERE IN THE TRIPPED POSITION. ALL REQUIRED EQUIPMENT STARTED AUTOMATICALLY. WATER WAS NOT INJECTED INTO THE REACTOR COOLANT SYSTEM. THE CAUSE OF THE MOMENTARY VOLTAGE DROP COULD NOT BE DETERMINED, AND THERE ARE NO PLANNED CORRECTIVE ACTIONS AS A RESULT OF THIS EVENT.

[86] DIABLO CANYON 1 DOCKET 50-275 LER 84-005
 DIESEL GENERATOR INADVERTENTLY STARTED.
 EVENT DATE: 011684 REPORT DATE: 021584 NSSS: WE TYPE: PWR

(NSIC 188959) WHILE IN MODE 5 (COLD SHUTDOWN), DIESEL GENERATOR NO. 1-2 AUTOMATICALLY STARTED BECAUSE OF 4 KV STARTUP POWER BUS UNDERVOLTAGE. THE CAUSE OF THIS EVENT WAS OPERATOR ERROR IN THAT A LICENSED OPERATOR INADVERTENTLY ISOLATED STARTUP TRANSFORMER NO. 12 FROM THE 4 KV VITAL BUS FEEDER. THIS HAPPENED DURING THE RECOVERY FROM A SPURIOUS SAFETY INJECTION (REF. LER 84-003), AND WHILE THE OPERATOR WAS COMPLETING A MANUAL BUS TRANSFER OF THE 4 KV VITAL BUS POWER SUPPLY BACK TO THE AUXILIARY TRANSFORMER NO. 12 BUS. CONTRIBUTING TO THE CAUSE WAS THE ADJACENT LOCATION AND IDENTICAL CONFIGURATION OF ALL THE 4 KV BREAKER POSITION CONTROL SWITCHES ON THE STATION ELECTRIC PANEL. THIS LER IS SUBMITTED

TO PROVIDE ADDITIONAL INFORMATION CONCERNING THE EVENT NOTIFICATION OF FEB. 2, 1984. CORRECTIVE ACTION WAS THE INSTALLATION OF A SWITCH GUARD OVER THE CONTROL SWITCH FOR THE 4 KV STARTUP POWER MAIN BUS BREAKER.

[87] DIABLO CANYON 1 DOCKET 50-275 LER 84-007
ACTUATION OF ESF VENTILATION SYSTEMS.
EVENT DATE: 030984 REPORT DATE: 040984 NSSS: WE TYPE: PWR

(NSIC 189159) ON MARCH 9, 1984, WHILE IN MODE 5 (COLD SHUTDOWN), THE 120V VITAL INSTRUMENT A.C. BUS 1-3 WAS DE-ENERGIZED WHEN AN OPERATOR INADVERTENTLY RESET THE "INVERTER INPUT" BREAKER WHICH APPEARED TO BE TRIPPED. THIS ACTION DE-ENERGIZED THE BUS WHICH RESULTED IN THE AUTOMATIC OPERATION OF TWO ENGINEERED SAFETY FEATURE (ESF) SYSTEMS. THE ESF SYSTEMS ACTUATED WERE THE AUXILIARY BUILDING VENTILATION SYSTEM AND THE CONTROL ROOM VENTILATION SYSTEM. TO PREVENT RECURRENCE OF THIS EVENT, ADDITIONAL LABELING HAS BEEN ADDED TO THE INVERTER PANELS TO CLARIFY EACH BREAKER'S FUNCTION.

[88] DIABLO CANYON 1 DOCKET 50-275 LER 84-008
INADVERTENT SAFETY INJECTION ACTUATION.
EVENT DATE: 031584 REPORT DATE: 041684 NSSS: WE TYPE: PWR

(NSIC 189213) ON MARCH 15, 1984 AT 0828 PST, WHILE IN MODE 5 (COLD SHUTDOWN), THE PLANT EXPERIENCED AN INADVERTENT SAFETY INJECTION ACTUATION. THE EVENT WAS INITIATED WHEN AN INSTRUMENTATION AND CONTROLS TECHNICIAN FAILED TO FOLLOW THE PROCEDURE WHILE PERFORMING A SURVEILLANCE TEST ON TRAIN A OF THE SOLID STATE PROTECTION SYSTEM. THE SIGNAL CAUSED A DIESEL GENERATOR AND A RESIDUAL HEAT REMOVAL PUMP TO START; HOWEVER, DUE TO PLANT CONDITIONS, NO WATER WAS INJECTED INTO THE REACTOR COOLANT SYSTEM. CORRECTIVE ACTION INCLUDED COUNSELING OF THE RESPONSIBLE I&C TECHNICIAN AND THE BRIEFING OF OTHER I&C PERSONNEL ON THE NEED TO FOLLOW PROCEDURES AND TO IMMEDIATELY INFORM SUPERVISION OF ANY PROBLEMS ENCOUNTERED DURING MAINTENANCE.

[89] DIABLO CANYON 1 DOCKET 50-275 LER 84-009
INADVERTENT START OF DIESEL GENERATOR.
EVENT DATE: 031584 REPORT DATE: 041684 NSSS: WE TYPE: PWR

(NSIC 189304) WHILE IN MODE 5 (COLD SHUTDOWN), DIESEL GENERATOR NO. 1-3 AUTOMATICALLY STARTED BECAUSE OF 4 KV STARTUP POWER BUS UNDERVOLTAGE FOR UNIT 1. THE CAUSE OF THIS EVENT WAS OPERATOR ERROR IN THAT A LICENSED OPERATOR NEGLECTED TO PLACE THE UNIT 2 DIESEL GENERATOR NO. 1-3 SELECTOR SWITCH IN MANUAL PRIOR TO OPENING THE STARTUP FEEDER BREAKER.

[90] DRESDEN 2 DOCKET 50-237 LER 83-012 REV 1
UPDATE ON MAIN STEAM LINE SNUBBER FAILURES.
EVENT DATE: 021083 REPORT DATE: 030284 NSSS: GE TYPE: BWR
VENDOR: PACIFIC SCIENTIFIC COMPANY

(NSIC 189082) DURING UNIT 2 REFUELING OUTAGE, WHILE CONDUCTING ROUTINE MECHANICAL SNUBBER FUNCTIONAL TEST (TECH SPEC 4.6.I.2), MAIN STEAM (MSL) MECHANICAL SNUBBERS 44,46,50,51,53 WERE FOUND TO BE INOPERABLE. SAFETY SIGNIFICANCE IS MINIMAL BECAUSE ANALYSIS SHOWED THAT EVEN WITHOUT THE SNUBBERS, OR WITH ONE SNUBBER FAILED RIGIDLY PER LINE, THE PIPING STRESSES WERE LESS THAN YIELD STRESS. A SIMILAR EVENT WAS REPORTED BY R.O. 82-16/03L ON DOCKET 50-249. THE CAUSE OF SNUBBER FAILURE IS NOT KNOWN EVEN THOUGH A THOROUGH INVESTIGATION WAS CONDUCTED. HOWEVER, IT WAS CONCLUDED THAT CONTINUED OPERATION IS JUSTIFIED. THE DEFECTIVE SNUBBERS HAVE BEEN REPLACED. SURVEILLANCES WILL CONTINUE PER DTS 020-1 AND TECH SPEC 4.6.I.

[91] DRESDEN 2 DOCKET 50-237 LER 83-043 REV 2
 UPDATE ON FAILURE OF TWO REACTOR WATER LEVEL INDICATORS.
 EVENT DATE: 042683 REPORT DATE: 071983 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189291) DURING NORMAL OPERATION, OPERATOR OBSERVED NARROW RANGE GEMAC (2-640-29A) AND WIDE RANGE YAKWAY (2-263-106A) REACTOR WATER LEVEL INDICATORS PEGGED HIGH. (TECH SPEC TABLE 3.2.2). SAFETY SIGNIFICANCE WAS MINIMAL SINCE REDUNDANT LEVEL INDICATORS WERE FUNCTIONING PROPERLY. FIRST OCCURRENCE OF THIS TYPE. CAUSE OF THE EVENT WAS DUE TO A LOOSE PACKING NUT ON PRESSURE SWITCH 2-263-111A (MODEL 82T-M12SS-GE), WHICH ALLOWED WATER TO DRAIN FROM THE REFERENCE LEGS OF BOTH LEVEL INSTRUMENTS. THE PACKING NUT WAS TIGHTENED AND BOTH LEVEL INDICATORS FUNCTIONED PROPERLY. NO FURTHER ACTION DEEMED NECESSARY. THIS EVENT WAS PREVIOUSLY REPORTED AS 237/83-071 R1.

[92] DRESDEN 2 DOCKET 50-237 LER 83-062 REV 1
 UPDATE ON HPCI ERRATIC FLOW CONTROL.
 EVENT DATE: 081983 REPORT DATE: 021684 NSSS: GE TYPE: BWR
 VENDOR: TELEDYNE PHILBRUCK NEXUS

(NSIC 189010) DURING NORMAL OPERATIONS, THE HPCI MOTOR GEAR UNIT WAS OBSERVED TO BE MOVING BETWEEN THE HIGH AND LOW SPEED STOPS WITHOUT OPERATION ACTION. THIS EVENT IS OF MINIMAL SAFETY SIGNIFICANCE BECAUSE HPCI COULD STILL AUTOMATICALLY INITIATE, AND THE FLOW WAS SET TO THE HIGH SPEED STOP (MANUALLY ADJUSTABLE). PREVIOUS OCCURRENCE OF THIS TYPE REPORTED ON R.O. 82-27 ON DOCKET 50-237. EVENT WAS CAUSED BY THE FAILURE OF A HPCI SYSTEM CONTROLLER OPERATIONAL AMPLIFIER. THIS FAILURE WAS ATTRIBUTED TO HPCI ROOM HIGH TEMPERATURES (ABOUT 120 F), CAUSED BY BROKEN HPCI ROOM COOLER FAN BELTS. THE AMPLIFIER WAS REPLACED, AND DOS 2300-1 WAS PERFORMED TO ASSURE OPERABILITY. THE JUMPER INSTALLED ON RELAY 2330-148 DURING INVESTIGATION HAS BEEN REMOVED.

[93] DRESDEN 2 DOCKET 50-237 LER 83-080 REV 1
 UPDATE ON OFF-GAS RADIATION MONITOR POWER SUPPLY FAILURE.
 EVENT DATE: 112483 REPORT DATE: 122083 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189083) DURING NORMAL OPERATION OFF- GAS LOG RADIATION MONITOR 2-1705-A DELIVERED OFF-GAS HI-HI ALARM AND HJ ALARM, SPIKED AND DRIFTED DOWNSCALE. THE SAFETY SIGNIFICANCE WAS MINIMAL BECAUSE THE REDUNDANT MONITOR 2-1705-B CONTINUED TO OPERATE NORMALLY. THIS OCCURRENCE IS THE FIRST FAILURE OF THE OFF-GAS RADIATION MONITOR'S POWER SUPPLY. CAUSE OF POWER SUPPLY FAILURE WAS A BURNED OUT RESISTOR. RESISTOR (R142) WAS A BRIDGE NETWORK COMPONENT. SINCE THE UNIT 2 MONITOR HAD BEEN RESTORED BY USE OF THE UNIT 3 POWER SUPPLY, THE REPAIRED POWER SUPPLY WAS INSTALLED IN THE UNIT 3 MONITOR. AFTER INSTALLATION, THE UNIT 3 MONITOR WAS CALIBRATED, FUNCTIONALLY TESTED AND RETURNED TO SERVICE.

[94] DRESDEN 2 DOCKET 50-237 LER 84-001
 SETPOINT DRIFT OF MAIN STEAM PRESSURE SWITCHES.
 EVENT DATE: 010284 REPORT DATE: 012584 NSSS: GE TYPE: BWR
 VENDOR: BARKSDALE COMPANY

(NSIC 189021) DURING ROUTINE INSTRUMENT CALIBRATION PROCEDURES, TWO OF FOUR REDUNDANT MAIN STEAM LINE LOW PRESSURE SWITCHES WERE FOUND TO TRIP BELOW THE TECH SPEC MINIMUM TRIP POINT. THIS EVENT DID NOT AFFECT THE SWITCHES' CAPABILITY TO COMPLETE THE REQUIRED TRIP FUNCTION ONCE THE SET PRESSURE WAS ACHIEVED. THE INCORRECT TRIP SETTING WAS CAUSED BY INSTRUMENT SETPOINT DRIFT. THE SWITCHES WERE IMMEDIATELY RECALIBRATED TO ACTUATE AT OR ABOVE THE REQUIRED TECH SPEC LIMIT.

[95] DRESDEN 2 DOCKET 50-237 LER 84-002
 STANDBY GAS TREATMENT FAN DISCHARGE DAMPER FOUND TRIPPED.
 EVENT DATE: 011784 REPORT DATE: 020784 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189022) DURING NORMAL OPERATIONS, SGT 'B' TRAIN FAN DISCHARGE DAMPER 2/3-7507B CONTROL ROOM INDICATION WAS FOUND TO BE INOPERATIVE. BREAKER WAS INSPECTED AND FOUND TRIPPED. BREAKER WAS RESET AND CONTROL ROOM INDICATION WAS RESTORED. SURVEILLANCE ON THE 'A' TRAIN WAS IMMEDIATELY INITIATED TO ENSURE REDUNDANT SYSTEM OPERABILITY. THE EVENT IS OF MINIMAL SAFETY SIGNIFICANCE SINCE THE REDUNDANT TRAIN, AND ALL OTHER EMERGENCY SYSTEMS WERE OPERABLE. FIRST OCCURRENCE OF THIS TYPE. THE EVENT WAS PROBABLY CAUSED BY A SPURIOUS OVERCURRENT TO A SINGLE PHASE OF THE BREAKER. THE BREAKER WAS REMOVED AND THE 3 PHASES WERE BENCH TESTED AT 30 AMPS FOR 90 SECONDS AND A TRIP DID NOT OCCUR. BREAKER WAS TESTED AND PHASES A, B, AND C TRIPPED AT 54 AMPS, 58 AMPS AND 60 AMPS RESPECTIVELY. ALTHOUGH BREAKER WAS OPERATING CORRECTLY, THE MAGNETIC TRIP SETTING ON THE 2/3-7507-B BREAKER WILL BE CHANGED FROM 4 (52 AMPS) TO 6 (68 AMPS). TO REDUCE THE POSSIBILITY OF SPURIOUS TRIPS, ALL MAGNETIC TRIP SETTINGS ON THE 7500 SYSTEM MOTOR OPERATED BUTTERFLY VALVES WILL BE VERIFIED AND RESET AS REQUIRED (WR33287).

[96] DRESDEN 2 DOCKET 50-237 LER 84-003
 CORE SPRAY VALVE FAILS TO OPERATE.
 EVENT DATE: 022184 REPORT DATE: 031984 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 3 (BWR)
 VENDOR: LIMITORQUE CORP.

(NSIC 189090) DURING NORMAL OPERATION, CORE SPRAY VALVE MO2-1402-25A FAILED TO OPERATE FROM THE CONTROL ROOM. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE REDUNDANT CORE SPRAY 'B' LOOP WAS OPERABLE TO PROVIDE CORE COOLING. THE EXACT CAUSE OF THE EVENT IS UNDER INVESTIGATION. THE GEAR HOUSING OF THE VALVE WAS FOUND CRACKED. A POSSIBLE CONTRIBUTING FACTOR TO THIS EVENT IS THE VALVE CONTROL CIRCUITRY WHICH CAN ALLOW THE VALVE DISC TO REPEATEDLY ATTEMPT TO CLOSE AFTER ALREADY BEING CLOSED. THIS CREATES A HAMMERING EFFECT ON THE VALVE AND OPERATOR. WORK REQUESTS HAVE BEEN WRITTEN TO MODIFY THE CIRCUITRY TO PREVENT THIS HAMMERING EFFECT. A REVIEW OF OTHER SAFETY RELATED MOTOR OPERATED VALVES HAS BEEN MADE TO ENSURE THAT A SIMILAR VALVE CONTROL CIRCUITRY PROBLEM DOES NOT EXIST ELSEWHERE. ALSO A SECTION OF THE GEAR HOUSING AND THE OUTER BEARING RACE ARE BEING SENT TO THE OPERATIONAL ANALYSIS DEPARTMENT FOR METALLURGICAL ANALYSIS. A SUPPLEMENTAL REPORT WILL BE SUBMITTED TO PROVIDE RESULTS OF THE ANALYSIS AND OUR ADDITIONAL INVESTIGATION. THE HOUSING AND BEARING RACE WERE REPLACED. FINALLY AS INTERIM CORRECTIVE ACTION UNTIL THE VALVE CONTROL CIRCUITRY IS MODIFIED, CAUTION CARDS WERE PUT ON THE 1402-25A AND B VALVES FOR BOTH UNITS 2 AND 3. THESE CAUTION CARDS WILL WARN THE OPERATOR NOT TO HOLD ONTO THE CONTROL SWITCH WHEN CLOSING THESE VALVES IN ORDER TO LIMIT ANY HAMMERING EFFECT.

[97] DRESDEN 2 DOCKET 50-237 LER 84-004
 CORE SPRAY VALVE FAILS TO CLOSE.
 EVENT DATE: 022284 REPORT DATE: 032084 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189205) WHILE PERFORMING DOS 1400-2, CORE SPRAY VALVE OPERABILITY TEST, CORE SPRAY SUCTION VALVE MO-2-1402-3A FAILED TO CLOSE FROM THE CONTROL ROOM. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE 'D' CORE SPRAY LOOP AND ALL OTHER ECCS SYSTEMS WERE OPERABLE. PREVIOUS OCCURRENCE REPORTED BY R.O. 83-69/03L-0 ON DOCKET #050-237. THE CAUSE WAS A FAULTY AUXILIARY BREAKER CONTACT (G.E. CR105X) IN THE VALVE CONTROL CIRCUITRY. BOTH AUXILIARY CONTACTS ON THE BREAKER WERE REPLACED AND DOS 1400-2 WAS PERFORMED TO VERIFY VALVE OPERABILITY. PREVIOUS TO THIS EVENT, SIMILAR AUXILIARY CONTACTS HAD BEEN SENT TO THE OPERATIONAL ANALYSIS

DEPARTMENT FOR ANALYSIS. ALSO GENERAL ELECTRIC HAS BEEN REQUESTED TO REVIEW CAUSES OF CONTACT PROBLEMS. A SUPPLEMENTAL REPORT WILL BE SUBMITTED WHEN BOTH ANALYSES ARE COMPLETED.

[98] DRESDEN 3 DOCKET 50-249 LER 81-036 REV 1
 UPDATE ON AUTO BLOWDOWN PRESSURE SWITCH INOPERABLE.
 EVENT DATE: 110781 REPORT DATE: 011282 NSSS: GE TYPE: BWR
 VENDOR: MERCOID CORP.

(NSIC 189008) WHILE PERFORMING AUTO BLOWDOWN PERMISSIVE SURVEILLANCE DIS 287-1, PRESSURE SWITCH PS3-155AE WOULD NOT OPERATE AT REQUIRED PRESSURE (TECH SPEC TABLE 3.2.2.) REDUNDANT PRESSURE SWITCHES WERE OPERABLE. THE CAUSE OF THE FAILURE WAS A PLUGGED INSTRUMENT SNUBBER. THE SNUBBER WAS CLEANED AND THE PRESSURE SWITCH OPERATED PROPERLY. DIS 287-1 WILL CONTINUE TO BE PERFORMED MONTHLY. NO FURTHER ACTION CONSIDERED NECESSARY.

[99] FARLEY 1 DOCKET 50-348 LER 83-034
 PRESSURIZER PRESSURE DROPS BELOW TECH SPEC LIMIT.
 EVENT DATE: 061683 REPORT DATE: 071583 NSSS: WE TYPE: PWR

(NSIC 184554) AT 1035 ON 6/16/83 DURING UNIT STARTUP OPERATIONS, PRESSURIZER PRESSURE DROPPED TO 2205 PSIA. TECH SPEC 3.2.5, IN PART, REQUIRES PRESSURIZER PRESSURE TO BE GREATER THAN OR EQUAL TO 2220 PSIA. TECH SPEC 3.2.5 ACTION STATEMENT REQUIREMENTS WERE MET. THIS EVENT WAS DUE TO PERSONNEL ERROR. A RCS BORATION COMBINED WITH A LOAD INCREASE RESULTED IN THE DROP IN PRESSURIZER PRESSURE. THE PRESSURIZER PRESSURE WAS RESTORED TO GREATER THAN 2220 PSIA AT 1040 ON 6/16/83. THE INDIVIDUALS INVOLVED WERE COUNSELED CONCERNING THIS INCIDENT.

[100] FARLEY 1 DOCKET 50-348 LER 84-001
 REACTOR TRIPS ON LOW SG LEVEL.
 EVENT DATE: 010984 REPORT DATE: 020384 NSSS: WE TYPE: PWR
 VENDOR: INGERSOL-RAND CO.
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 189182) AT 2328 ON 1/9/84, THE REACTOR TRIPPED DUE TO LC-LO LEVEL IN 1B STEAM GENERATOR. THIS WAS A RESULT OF 1A STEAM GENERATOR FEEDWATER PUMP TRIPPING DUE TO LOW BEARING OIL PRESSURE WHILE THE REACTOR WAS AT 100% POWER. THE LOW BEARING OIL PRESSURE RESULTED FROM A TRIP OF THE OPERATING AC LUBE OIL PUMP MOTOR DUE TO AN OVERLOAD CONDITION. THE FAILURE OF THE SOURCE RANGE CHANNELS TO INDICATE ANY SOURCE RANGE COUNTS WAS CAUSED BY FAILURE OF BOTH SOURCE RANGE DETECTORS (1G,1BT). THE DETECTORS WERE REPLACED.

[101] FARLEY 2 DOCKET 50-364 LER 84-001
 REACTOR TRIPS DUE TO LOW SG LEVEL.
 EVENT DATE: 011884 REPORT DATE: 021084 NSSS: WE TYPE: PWR

(NSIC 188994) AT 0403 ON 1/18/84, THE REACTOR TRIPPED FROM 19% POWER DUE TO LO-LO LEVEL IN 2C STEAM GENERATOR DURING A NORMAL UNIT SHUTDOWN. THIS EVENT WAS CAUSED BY PERSONNEL ERROR IN THAT THE PLANT OPERATOR ALLOWED THE LEVEL IN 2B STEAM GENERATOR TO REACH THE HI-HI SETPOINT WHILE OPERATING THE FEEDWATER SYSTEM IN MANUAL CONTROL. THIS CAUSES THE FEED PUMPS TO TRIP AND RESULTED IN THE 2C STEAM GENERATOR LEVEL DECREASING TO THE LO-LO LEVEL REACTOR TRIP SETPOINT.

[102] FARLEY 2 DOCKET 50-364 LER 84-003
 REACTOR TRIP DUE TO LO-LO SG LEVEL.
 EVENT DATE: 013084 REPORT DATE: 022784 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 189062) AT 1627 ON 1-30-84, THE REACTOR TRIPPED DUE TO LO-LO LEVEL IN 2C STEAM GENERATOR. THIS WAS CAUSED BY THE 2C MAIN FEEDWATER REGULATING VALVE GOING CLOSED AS A RESULT OF THE INSTRUMENTATION CHANNEL ASSOCIATED WITH PRESSURE TRANSMITTER PT-495 (LOOP 3 STEAM PRESSURE) SPIKING LOW.

[103] FARLEY 2 DOCKET 50-364 LER 84-004
 REACTOR TRIP CAUSED BY LIGHTNING.
 EVENT DATE: 032784 REPORT DATE: 041984 NSSS: WE TYPE: PWR

(NSIC 189262) AT 1247 ON 3-27-84, THE REACTOR TRIPPED FROM 100% POWER DUE TO A POWER RANGE NEUTRON HIGH FLUX NEGATIVE RATE. THIS WAS CAUSED BY ALL CONTROL RODS DROPPING INTO THE CORE DUE TO A VOLTAGE SURGE, CAUSED BY SEVERE LIGHTNING, WHICH TRIPPED THE PRIMARY AND BACKUP 25 VDC POWER SUPPLIES TO ALL FOUR ROD CONTROL POWER CABINETS. THE REACTOR TRIP BREAKERS OPENED DUE TO THE HIGH NEGATIVE RATE.

[104] FITZPATRICK DOCKET 50-333 LER 83-060 REV 1
 UPDATE ON WRONG GEAR IN RHR VALVE OPERATOR.
 EVENT DATE: 113083 REPORT DATE: 020384 NSSS: GE TYPE: BWR

(NSIC 189016) AS A RESULT OF A TECHNICAL REVIEW OF VALVE MOTOR ACTUATORS INCLUDING A COMPARISON OF ISI STROKE TIMES ON A REDUNDANT MOTOR OPERATOR, IT WAS DETERMINED THAT AN INCORRECT MOTOR ACTUATOR WAS INSTALLED ON THE RHR SUPPRESSION POOL OUTBOARD ISOLATION VALVE (10MOV-39B) DURING MAINTENANCE ACTIVITIES. A DESIGN REVIEW INDICATED THAT DESIGN LIMITS FOR THE SUBSTITUTE ACTUATOR MAY BE EXCEEDED DURING ONE POST-ACCIDENT OPERATING MODE FOR RHR SUPPRESSION POOL COOLING. A GEAR CHANGE WAS MADE TO UPGRADE THE ACTUATOR TO ITS ORIGINAL DESIGN REQUIREMENTS. A REVIEW OF THE QUALITY ASSURANCE LEVEL OF THE REPLACEMENT ACTUATOR ALSO HAS REVEALED THAT INADEQUATE Q.A. DOCUMENTATION IS AVAILABLE. AS REPORTED IN REV. 0 IT WAS BELIEVED THAT ACTUATOR DESIGN LIMITS MAY BE EXCEEDED DURING ONE POST-ACCIDENT OPERATING MODE FOR THE RHR SUPPRESSION POOL COOLING MODE. ASSUMING ACTUAL VALVE DESIGN INFORMATION AND CALCULATED ACCIDENT TRANSIENT DATA, ACTUATOR SIZING CALCULATIONS HAVE CONFIRMED THAT VALVE 10MOV-39B WAS CAPABLE OF PERFORMING ITS INTENDED DESIGN FUNCTION FOR ALL MODES OF OPERATION WITH THE INCORRECT OPERATOR WHICH WAS INSTALLED BETWEEN 1977 AND NOV. 1983.

[105] FITZPATRICK DOCKET 50-333 LER 84-001
 SERVICE WATER PUMP FAILURE MAKES CONTAINMENT COOLING INOPERABLE.
 EVENT DATE: 011884 REPORT DATE: 021684 NSSS: GE TYPE: BWR
 VENDOR: ALLIS CHALMERS
 LIMITOPQUE CORP.

(NSIC 189242) WHILE CONDUCTING SURVEILLANCE TESTING FOR INOPERATIVE VALVE 10-MOV-39B, THE B SIDE SUPPRESSION POOL COOLING AND SPRAY ISOLATION VALVE, THE C RHR SERVICE WATER PUMP FAILED. THIS PLACED THE PLANT IN A CONDITION REQUIRING THE PLANT TO BE IN COLD SHUTDOWN WITHIN 24 HOURS PER TECH SPEC 3.5.B. THE VALVE WAS REPAIRED WITHIN 10 HOURS THEREBY RESTORING THE B SIDE CONTAINMENT COOLING SYSTEM TO FULL OPERABILITY. REPAIRS TO C RHR SERVICE WATER PUMP WERE COMPLETED ON JANUARY 23, 1984. THE PUMP FAILED AS THE RESULT OF THE IMPELLER BECOMING DISCONNECTED FROM THE SHAFT DUE TO A WORN IMPELLER COLLET. ON JANUARY 30, 1984 THE RECENTLY REPAIRED C RHR SERVICE WATER PUMP WAS FOUND TO BE VIBRATING EXCESSIVELY DURING SURVEILLANCE TESTING AND AGAIN DECLARED INOPERABLE (REFER TO LER 84-002 FOR DETAILS OF THE B ESW PUMP PROBLEM). REPAIRS TO THE C RHR SERVICE WATER PUMP WERE COMPLETED ON FEBRUARY 4, 1984. THE PUMP VIBRATION WAS THE RESULT

OF THE SECOND STAGE IMPELLER SLIPPING ON THE SHAFT DUE TO AN OUT OF DIMENSION IMPELLER COLLET.

[106] FITZPATRICK DOCKET 50-333 LER 84-002
RHR SERVICE WATER PUMP FAILS TO START THREE TIMES.
EVENT DATE: 013084 REPORT DATE: 022384 NSSS: GE TYPE: BWR
VENDOR: ALLIS CHALMERS
GENERAL ELECTRIC CO.

(NSIC 189252) ON JANUARY 30, 1984 AT 1051 HRS., WHILE PERFORMING SURVEILLANCE TESTING FOR AN INOPERATIVE RHR SERVICE WATER PUMP, THE B EMERGENCY SERVICE WATER PUMP BREAKER TRIPPED AS IT WAS STARTING. THIS PLACED THE PLANT IN A LCO REQUIRING THAT THE REACTOR BE IN COLD SHUTDOWN WITHIN 24 HOURS. AFTER INVESTIGATION AND ADJUSTMENT OF THE OVERCURRENT TRIP DEVICES FOR THE B ESW PUMP BREAKER, IT WAS RESTORED TO SERVICE AT 1855 HRS. ON FEBRUARY 3, 1984, IT WAS DETERMINED THAT THE PUMP BREAKER'S SETTINGS WERE NOT CORRECTLY SET DUE TO TEST EQUIPMENT BEING OUT OF CALIBRATION. THE PUMP WAS TAKEN OUT OF SERVICE FOR 35 MINUTES WHILE THE BREAKER WAS REPLACED WITH ONE CORRECTLY SET. ON FEBRUARY 8, 1984 AT 0420 HRS., WHILE PERFORMING ROUTINE SURVEILLANCE TESTING ON THE EMERGENCY DIESEL GENERATORS, THE B ESW PUMP BREAKER AGAIN TRIPPED AS IT WAS STARTING. THIS PLACED THE PLANT IN A LCO REQUIRING THAT THE REACTOR BE IN COLD SHUTDOWN WITHIN 24 HOURS. AFTER ADJUSTMENT OF THE PUMP AND BREAKER TRIP DEVICES, THE PUMP WAS RESTORED TO SERVICE AT 1745.

[107] FITZPATRICK DOCKET 50-333 LER 84-003
RCIC INOPERABLE WHILE HPCI OUT OF SERVICE.
EVENT DATE: 020784 REPORT DATE: 030584 NSSS: GE TYPE: BWR
VENDOR: TERRY STEAM TURBINE COMPANY

(NSIC 189180) DURING NORMAL FULL POWER OPERATION THE HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEM WAS INTENTIONALLY REMOVED FROM SERVICE TO PERMIT MAINTENANCE AND MODIFICATION. PRIOR TO REMOVING HPCI FROM SERVICE, COMPLETION OF SURVEILLANCE REQUIRED TECH SPEC HAD DEMONSTRATED THE AUTOMATIC DEPRESSURIZATION SYSTEM (ADS), REACTOR CORE ISOLATION (RCIC), LOW PRESSURE COOLANT INJECTION (LPCI) AND BOTH CORE SPRAY SYSTEMS OPERABLE. WHILE THE HPCI SYSTEM WAS OUT OF SERVICE, THE REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM WAS MADE INOPERABLE DUE TO A PERSONNEL ERROR. THIS ACTION RESULTED IN THE PLANT BEING PLACED IN A 24 HOUR LIMITING CONDITION FOR OPERATION (LCO) IN ACCORDANCE WITH TECH SPEC 3.5.C.1.B. THE RCIC SYSTEM WAS DEMONSTRATED OPERABLE AND PLACED IN THE STANDBY MODE APPROXIMATELY 10 HOURS LATER. THE HPCI SYSTEM MAINTENANCE AND MODIFICATION WAS COMPLETED IN APPROXIMATELY 4 DAYS AND WAS DEMONSTRATED OPERABLE AND PLACED IN STANDBY. CORRECTIVE ACTION TO REDUCE THE PROBABILITY OF RECURRENCE INCLUDES DISCIPLINARY ACTION FOR THE INDIVIDUALS INVOLVED, IMPLEMENTATION OF A PROGRAM TO VERIFY THAT INDIVIDUALS ARE KNOWLEDGEABLE OF THE EQUIPMENT THEY WORK ON, CONTINUATION OF PLANT SPECIFIC BWR TECHNOLOGY/TRAINING AND LABELING OF CERTAIN PLANT EQUIPMENT.

[108] FITZPATRICK DOCKET 50-333 LER 84-006
DEFECTIVE REACTOR WATER LEVEL SWITCH.
EVENT DATE: 021384 REPORT DATE: 031484 NSSS: GE TYPE: BWR
VENDOR: ITT-BARTON

(NSIC 189117) DURING NORMAL FULL POWER OPERATION ON FEBRUARY 13 AND MARCH 2, 1984, REACTOR WATER LEVEL INDICATING SWITCH 02-3-LIS-101D WAS FOUND OUT OF TECH SPEC LIMIT. THE INSTRUMENT IS REQUIRED TO BE SET AT OR LESS THAN 222.5 INCHES ABOVE TOP OF ACTIVE FUEL (TAF). ON FEBRUARY 13, 1984 IT WAS FOUND SET AT 222.8 INCHES ABOVE TAF AND ON MARCH 2, 1984 IT WAS FOUND SET AT 228.0 INCHES ABOVE TAF. A REVIEW OF PAST PERFORMANCE REVEALED ERRATIC BEHAVIOR SINCE INSTALLATION IN

DECEMBER, 1982. EVALUATION OF THE INSTALLED INSTRUMENT AND AN IDENTICAL INSTRUMENT DRAWN FROM SPARE PARTS INDICATES THAT TIGHTENING OF THE "SWITCH LOCK" CAUSES BENDING OF SWITCH BACKING PLATES RESULTING IN POSSIBLE EXCESSIVE FRICTION BETWEEN THE SWITCH ACTUATOR CAM AND ACTUATOR ARM ON BOTH INSTRUMENTS. IMMEDIATE CORRECTIVE ACTION IS TO PERFORM SURVEILLANCE OF THE INSTRUMENT AT AN INCREASED FREQUENCY UNTIL REPLACEMENT CAN BE COMPLETED. THE INSTRUMENT DRAWN FROM SPARE PARTS HAS BEEN SENT TO THE MANUFACTURER WITH A REQUEST TO EVALUATE THE PROBLEM AND REPAIR OR REPLACE THE INSTRUMENT. EVALUATION OF SURVEILLANCE/CALIBRATION DATA FOR OTHER INSTRUMENTS PERFORMING THE SAME SAFETY FUNCTION DID NOT INDICATE A SIMILAR PROBLEM. LONG TERM CORRECTIVE ACTION INCLUDES REPLACEMENT OF THE INSTRUMENT WITH AN ANALOG TRIP TRANSMITTER UNIT.

[109] FITZPATRICK DOCKET 50-333 LER 84-005
 HYDROGEN AND OXYGEN CONTAINMENT MONITORING LOST.
 EVENT DATE: 022584 REPORT DATE: 032684 NSSS: GE TYPE: BWR
 VENDOR: BECKMAN INSTRUMENTS, INC.

(NSIC 189116) DURING NORMAL PLANT OPERATIONS ON 2/25/84, BOTH THE "A" AND "B" SIDE PRIMARY CONTAINMENT ATMOSPHERE MONITORING INSTRUMENTATION (HYDROGEN AND OXYGEN ANALYZERS) WERE OUT OF SERVICE FOR A PERIOD OF APPROXIMATELY FIVE (5) HOURS DUE TO ZERO POINT CALIBRATION PROBLEMS WITH "A" SIDE HYDROGEN ANALYZERS AND A FAILURE OF THE "B" SIDE HYDROGEN AND OXYGEN SAMPLE FLOW VACUUM PUMP. THE PLANT OPERATING TECH SPEC SECTION 3.7.A.9 REQUIRES THAT THE PRIMARY CONTAINMENT BE CONTINUOUSLY MONITORED FOR HYDROGEN AND OXYGEN WHEN CONTAINMENT INTEGRITY IS REQUIRED. NO LIMITING CONDITION FOR OPERATION ACTION WITHIN THE TEXT OF THE TECH SPEC IS LISTED FOR THIS EVENT. THE SHORT TERM ACTION INITIATED WAS THE IMMEDIATE REPAIRS OF "B" SIDE PUMP AND ENSURE (AFTER REPAIR) HYDROGEN AND OXYGEN LEVELS INSIDE THE CONTAINMENT WERE LESS THE TECH SPEC REQUIREMENTS. LONG TERM CORRECTIVE ACTION: INVESTIGATION OF SYSTEM MODIFICATIONS INTENDED TO IMPROVE THE RELIABILITY OF THE ANALYZERS AND/OR ASSOCIATED SAMPLE SYSTEM WILL BE CONDUCTED.

[110] FITZPATRICK DOCKET 50-333 LER 84-008
 HEAT-UP RATE EXCEEDS TECH SPEC LIMIT.
 EVENT DATE: 031384 REPORT DATE: 033084 NSSS: GE TYPE: BWR

(NSIC 189181) DURING ROUTINE START-UP OPERATIONS, THE 100 F PER HOUR HEAT-UP RATE LIMIT OF TECH SPEC 3.6.A.1 WAS EXCEEDED BY APPROXIMATELY 4 F DURING A ONE (1) HOUR PERIOD. THE HEAT-UP RATE, PRIOR TO AND AFTER THE PERIOD IN QUESTION, WAS WELL BELOW THE TECH SPEC LIMIT. PERSONNEL ERROR WAS THE CAUSE OF THE EVENT. AN ENGINEERING EVALUATION WAS PERFORMED AND HAS DEMONSTRATED THAT THE EVENT DID NOT HAVE ANY EFFECT ON REACTOR VESSEL LIFE. PERSONNEL INVOLVED WERE COUNSELLED AND ALARM POINTS HAVE BEEN INCORPORATED IN THE PLANT PROCESS COMPUTER TO ALARM AT FIFTEEN (15) MINUTE INTERVALS WHEN THE HEAT-UP RATE LIMIT IS BEING APPROACHED. THE EVENT HAS BEEN INCORPORATED INTO THE LICENSED OPERATOR REQUALIFICATION PROGRAM.

[111] FT. CALHOUN 1 DOCKET 50-285 LER 84-001
 AUXILIARY BUILDING CRANE INTERLOCKS BYPASSED.
 EVENT DATE: 012284 REPORT DATE: 022284 NSSS: CE TYPE: DWR

(NSIC 189215) TECH SPEC 2.11(2) STATES THE FOLLOWING: THE AUXILIARY BUILDING CRANE SHALL NOT BE USED TO MOVE MATERIAL OVER IRRADIATED FUEL IN THE FUEL STORAGE POOL. IF THE CRANE INTERLOCKS ARE INOPERABLE OR BYPASSED, THE CRANE OPERATION WILL BE UNDER THE DIRECT CONTROL OF A SUPERVISOR. THE HOOKS ON THE AUXILIARY BUILDING CRANE CANNOT TRAVEL OVER THE SPENT FUEL POOL UNLESS THE TRAVEL INTERLOCKS ARE BYPASSED BY MEANS OF A KEY SWITCH ON THE CRANE. CONTRARY TO TECH SPEC 2.11(2), THE CRANE SUPERVISOR LEFT THE SPENT FUEL POOL AREA WHILE THE KEY WAS STILL IN THE INTERLOCK BYPASS SWITCH IN THE BYPASSED POSITION. WHEN THE

QUALITY CONTROL INSPECTOR AT THE JOB SITE DISCOVERED THAT THE CRANE SUPERVISOR HAD LEFT, HE IMMEDIATELY CALLED FOR ANOTHER CRANE SUPERVISOR. APPROXIMATELY TWENTY MINUTES ELAPSED BETWEEN THE DEPARTURE OF THE FIRST CRANE SUPERVISOR AND THE ARRIVAL OF THE SECOND. AT NO TIME DURING THIS PERIOD WAS THE CRANE OPERATED INSIDE THE INTERLOCKED ZONE OVER THE SPENT FUEL POOL. THE CERTIFICATION OF THE CRANE SUPERVISOR WHO FAILED TO MAINTAIN PROPER ADMINISTRATIVE CONTROL OF THE KEY WAS WITHDRAWN. THE INCIDENT AND ITS SIGNIFICANCE WERE DISCUSSED WITH THE INDIVIDUAL BY PLANT SUPERVISION. THE TRAINING AND CERTIFICATION OF CRANE SUPERVISORS WAS REVIEWED AND WAS FOUND TO BE ADEQUATE WITH REGARD TO THIS INCIDENT.

[112] FT. CALHOUN 1 DOCKET 50-285 LER 84-004
 REACTOR COOLANT DOSE EQUIVALENT IODINE LIMIT EXCEEDED.
 EVENT DATE: 030384 REPORT DATE: 040584 NSSS: CE TYPE: PWR

(NSIC 189165) TECH SPEC 2.1.3(5) REQUIRES THE FOLLOWING: WITH THE RADIOACTIVITY OF THE REACTOR COOLANT >1.0 MICROCI/GM DOSE EQUIVALENT I-131, PERFORM THE SAMPLING AND ANALYSIS REQUIREMENTS OF ITEMS 1.(A)(2)(II) AND 1.(B)(2)(I) OF TABLE 3-4 UNTIL THE RADIOACTIVITY OF THE REACTOR COOLANT IS RESTORED TO WITHIN ITS LIMITS. A REPORTABLE OCCURRENCE, PURSUANT TO SPECIFICATION 5.9.2, SHALL BE SUBMITTED TO THE COMMISSION. DURING A NORMAL PLANT SHUTDOWN FOR REFUELING, IT WAS DISCOVERED DURING A ROUTINE REACTOR COOLANT SAMPLE ANALYSIS THAT THE REACTOR COOLANT RADIOACTIVITY WAS IN EXCESS OF 1.0 MICROCI/GM DOSE EQUIVALENT I-131. THE SAMPLING SCHEDULE, ONCE EVERY EIGHT HOURS WHENEVER THE RADIOACTIVITY EXCEEDS 1.0 MICROCI/GM DOSE EQUIVALENT I-131, OF TABLE 3-4 WAS INITIATED. THE DOSE EQUIVALENT I-131 RETURNED TO BELOW THE LIMIT AT 0830 ON 3/4/84 AT WHICH TIME THE EVERY EIGHT HOUR SAMPLING WAS TERMINATED.

[113] GINNA DOCKET 50-244 LER 84-001
 INOPERABLE S.I. ACCUMULATORS.
 EVENT DATE: 021984 REPORT DATE: 031984 NSSS: WE TYPE: PWR
 VENDOR: COPES-VULCAN, INC.
 CROSBY VALVE
 DELTA SOUTHERN CO.
 FISHER CONTROLS CO.

(NSIC 189142) DUE TO EXISTING NITROGEN SYSTEM LEAKAGE, THE SI ACCUMULATORS WERE BEING FILLED AT INTERVALS OF TWICE PER SHIFT. IT WAS DURING A ROUTINE NITROGEN FILL THAT ON FEB. 18, 1984, AT 2205 HRS WHILE OPERATING AT APPROXIMATELY 98% POWER, THE CONTROL ROOM OPERATOR NOTICED ACCUMULATOR PRESSURE, INSTEAD OF INCREASING AND CLEARING THE LOW PRESSURE ALARM, HAD IN FACT DECREASED TO BELOW THE TECH SPEC LIMIT. THE 'B' SI ACCUMULATOR WAS DECLARED INOPERABLE AND WITHIN THE NEXT HR A UNIT SHUTDOWN WAS COMMENCED AS REQUIRED BY PLANT TECH SPEC. AT 0015 HRS ON FEB 19, 1984, THE 'A' SI ACCUMULATOR WAS ALSO DECLARED INOPERABLE. AN UNUSUAL EVENT WAS DECLARED AT 0020 HRS. THE CONTROL ROOM PERSONNEL ATTEMPTED TO MAKEUP NITROGEN TO BOTH ACCUMULATORS BUT INSTEAD OF PRESSURE INCREASING, THE PRESSURE KEPT DECREASING. VERIFICATION OF VALVE LINEUPS WERE PERFORMED IN THE AUX. BLDG. AND FOUND NO INDICATION OF A PROBLEM. SUBSEQUENT CONTAINMENT ENTRY REVEALED HCV-945 (IN THE CLOSED POSITION) TO BE LEAKING NITROGEN BY THE SEAT.

[114] GINNA DOCKET 50-244 LER 84-002
 INOPERABLE RESIDUAL HEAT REMOVAL SYSTEM.
 EVENT DATE: 030384 REPORT DATE: 033084 NSSS: WE TYPE: PWR
 VENDOR: LIMITORQUE CORP.
 VELAN VALVE CORP.

(NSIC 189207) ON MARCH 3, 1984, WHILE COOLING DOWN THE REACTOR COOLANT SYSTEM (RCS) TO COLD SHUTDOWN CONDITION FOR THE ANNUAL REFUELING AND MAINTENANCE OUTAGE,

PERIODIC TEST PT-2.4.1 "COLD/REFUELING MOTOR OPERATED VALVE SURVEILLANCE (RHR SYSTEM - 700 VALVES)" WAS IN PROGRESS. MOV-700 (RCS LOOP A RESIDUAL HEAT REMOVAL SUCTION STOP VALVE) FAILED TO STROKE TO THE OPEN POSITION WHEN ACTUATED FROM THE CONTROL ROOM. FOLLOWING MANUAL UNSEATING OF THE VALVE, THE VALVE WAS RETESTED AND STROKING TIMES WERE VERIFIED ACCEPTABLE (TIMED TWICE, FULL CYCLE). TWO MOST PROBABLE CAUSES OF FAILURE COULD BE EITHER A DRY VALVE STEM, OR A LIGHT TORQUE SWITCH SETTING. FIELD TECHNICIANS INVOLVED IN PT-2.4.1, REPORTED THAT MOV-700 HAD AN EXTREMELY DRY OPERATING SHAFT. THIS LACK OF LUBRICATION PROBABLY CONTRIBUTED TO MOV-700 FAILURE TO STROKE TO THE OPEN POSITION. THE TORQUE SWITCH SETTING WILL BE VERIFIED AND INCREASED IF NECESSARY. THE VALVE STEM AND PACKING WILL BE INSPECTED. THE TORQUE SWITCH BYPASS SETPOINT WILL ALSO BE VERIFIED AND CORRECTED IF NECESSARY.

[115] GINNA DOCKET 50-244 LER 84-003
 POTENTIAL LOSS OF RESIDUAL HEAT REMOVAL (RHR) CAPABILITY.
 EVENT DATE: 030784 REPORT DATE: 040684 NSSS: WE TYPE: PWR
 VENDOR: DARLING-ANCHOR

(NSIC 189208) ON MARCH 7, 1984, WHILE THE REACTOR WAS IN THE COLD SHUTDOWN CONDITION, THE DRAINDOWN OF THE REACTOR COOLANT SYSTEM (RCS) WAS IN PROGRESS IN PREPARATION FOR THE STEAM GENERATORS' (S/G) ANNUAL INSPECTION. IN THE PROCESS OF DRAINING THE RCS TO THE CVCS HOLDUP TANKS, WHILE PREPARING TO SHIFT FROM DRAINING VIA THE REACTOR COOLANT DRAIN TANK (RCDT) PUMP TO THE LOW PRESSURE PURIFICATION PUMP, VALVES MOV-851A AND B (CONTAINMENT SUMP B SUCTION TO RHR) WERE MISTAKENLY OPENED PRIOR TO SHUTTING VALVE MOV-850A (DOWNSTREAM OF MOV-851A AND UPSTREAM OF RCDT PUMP SUCTION). THIS RESULTED IN WATER BEING DRAINED FROM THE RCS LOOP TO THE SUMP B, WITH POTENTIAL LOSS OF RHR CAPABILITY. A REVIEW WAS MADE OF OPERATING PROCEDURE O-2.3.1 "DRAINING THE REACTOR COOLANT SYSTEM" AND OF O-2.2 "PLANT SHUTDOWN FROM HOT SHUTDOWN TO COLD SHUTDOWN CONDITION" TO SEE IF CLARIFICATIONS WERE REQUIRED. A MINOR CHANGE WAS MADE TO PROCEDURE O-2.2 TO CLARIFY ONE STEP ASSOCIATED WITH MOV-851A AND B. OPERATIONS PERSONNEL HAVE BEEN CAUTIONED ON STRICT ADHERENCE TO OPERATING PROCEDURES.

[116] GRAND GULF 1 DOCKET 50-416 LER 83-031 REV 3
 UPDATE ON OPEN TURBINE BUILDING FIRE DOOR.
 EVENT DATE: 011383 REPORT DATE: 021384 NSSS: GE TYPE: BWR

(NSIC 189937) ON JAN. 13, 1983, FIRE RATED DOOR OC104 (HOT MACHINE SHOP TO TURBINE BLDG.) WAS BLOCKED OPEN TO ROUTE A TEMPORARY DISCHARGE HOSE FROM THE HOT MACHINE SHOP SUMP TO THE TURBINE BUILDING FLOOR DRAIN SYSTEM. AN HOURLY FIRE WATCH WAS ESTABLISHED IN ACCORDANCE WITH TECH SPEC 3.7.7. THIS IS SUBMITTED AS A SPECIAL REPORT PURSUANT TO TECH SPEC 6.9.2. THE TEMPORARY DISCHARGE HOSE WAS ROUTED THROUGH THE DOORWAY TO DISCHARGE WATER FROM THE HOT MACHINE SHOP SUMP. THE PRESENT SYS. PUMP IS INADEQUATE (WILL NOT GENERATE REQUIRED HEAD). DCP 83-843 HAS BEEN INITIATED FOR PUMP REPLACEMENT. THE DOOR WILL BE INTERMITTENTLY OPENED & FIRE WATCHES WILL BE ESTABLISHED UNTIL THE DCP IS COMPLETED. ESTIMATED RESTORATION IS 4/15/84.

[117] GRAND GULF 1 DOCKET 50-416 LER 83-109 REV 2
 UPDATE ON ISOLATION OF SHUTDOWN COOLING CHANNEL.
 EVENT DATE: 072783 REPORT DATE: 021484 NSSS: GE TYPE: BWR

(NSIC 188938) ON JULY 27, 1983, A SPURIOUS RHR ROOM HIGH AREA TEMPERATURE OR DELTA TEMPERATURE SIGNAL CAUSED THE CLOSURE OF THE INBOARD SHUTDOWN COOLING VALVE (F009). SHUTDOWN COOLING LOOP A WAS RESTORED WITHIN TWO MINUTES. THIS IS REPORTED PURSUANT TO TECH SPEC 8.5.1.13.5. THIS IS A FINAL REPORT. THE CAUSE WAS DETERMINED TO BE A LOOSE PLUG CONNECTION ON THE RILEY TEMPERATURE SWITCH. ALL RILEY INSTRUMENTS WERE INSPECTED AND LOOSE CONNECTIONS WERE TIGHTENED. THERE

HAVE BEEN NO RECURRENCES OF SHUTDOWN COOLING ISOLATIONS DUE TO SPORADIC HIGH AREA TEMPERATURE SIGNALS SINCE THIS EVENT.

[118] GRAND GULF 1 DOCKET 50-416 LER 83-126 REV 3
 UPDATE ON DELUGE VALVE FAILURE DURING DIESEL GENERATOR FIRE.
 EVENT DATE: 090483 REPORT DATE: 030884 NSSS: GE TYPE: BWC
 VENDOR: AUTOMATIC SPRINKLER CORPORATION
 DE LAVAL TURBINE, INC.

(NSIC 188939) ON 9-4-83 AFTER APPROXIMATELY 8.3 HRS OF MAINTENANCE OPERATION, A DIV. I D/G FUEL LINE RUPTURED RESULTING IN A FIRE NEAR THE LEFT BANK TURBOCHARGER. THE ENGINE WAS SECURED AND AN UNUSUAL EVENT WAS DECLARED FROM 1447 HRS TO 1559 HRS. PERSON(S) RESPONDING TO THE FIRE NOTED THAT THE FIRE PROTECTION DELUGE VALVE FAILED TO OPEN. THE VALVE WAS FORCED OPEN BY A MECHANIC. THE FIRE WAS REPORTED OUT APPROXIMATELY 25 MINUTES AFTER STARTING. THIS IS REPORTED PURSUANT TO TECH SPEC 6.9.1.12.I. THE FUEL LINE FAILURE WAS DUE TO FATIGUE CRACK PROPAGATION. THE CAUSE OF THE DELUGE VALVE FAILURE WAS DUE TO ROUGH MATING SURFACES OF THE VALVE'S LATCH AND CLAPPER. CORRECTIVE ACTIONS INCLUDE THE ADDITION OF A FUEL LINE SUPPORT TO DIV. 1 AND 2 DIESEL GENERATORS, A MORE THOROUGH VALVE TEST PROCEDURE, AND SMOOTHING THE VALVE MATING SURFACES.

[119] GRAND GULF 1 DOCKET 50-416 LER 83-143 REV 1
 UPDATE ON RADIATION MONITOR SAMPLE PUMP FOUND SWITCHED OFF.
 EVENT DATE: 092883 REPORT DATE: 021484 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 188940) ON SEPT. 28, 1983, THE CHEMISTRY SUPERVISOR REPORTED FINDING THE COMPONENT COOLING WATER PROCESS RADIATION MONITOR SAMPLE PUMP NOT OPERATING AS REQUIRED BY TECH SPEC 3.3.7.1. THE PUMP HAD BEEN SWITCHED OFF. THE PUMP WAS IMMEDIATELY RESTARTED. THE EVENT IS REPORTED PURSUANT TO TECH SPEC 6.9.1.12.B. THIS IS A FINAL REPORT. IT CANNOT BE DETERMINED WHY THE PUMP WAS SECURED. IT WAS NOT DETECTED BECAUSE ITS HI/LO FLOW ALARM IS COMMON WITH 3 OTHER MONITORS AND WAS ALREADY IN THE ALARM STATE. RADIATION MONITOR SYSTEM FLOW CHECKS WERE ADDED TO THE AUXILIARY BUILDING SHIFT ROUNDS LOG UNTIL SEPARATE HI/LO ALARMS ARE PROVIDED FOR ALL 4 MONITORS.

[120] GRAND GULF 1 DOCKET 50-416 LER 93-156 REV 1
 UPDATE ON DIESEL GENERATOR INOPERABLE.
 EVENT DATE: 100383 REPORT DATE: 030284 NSSS: GE TYPE: BWR
 VENDOR: DE LAVAL TURBINE, INC.

(NSIC 189296) DURING A ROUTINE INSPECTION OF THE DIV. I D/G, A CAPSCREW SECURING THE STARTING AIR MANIFOLD TO ITS SUPPORT PLATE ON THE NO. 6 LEFT BANK (LB) CYLINDER WAS FOUND BROKEN INSIDE THE PLATE. A SIMILAR CAPSCREW ON THE NO. 7 LB CYLINDER WAS FOUND NOT SECURELY TIGHTENED. AN LCO WAS ENTERED (DIV. I D/G DECLARED INOPERABLE) PURSUANT TO TECH SPEC 3.8.1.1.A SINCE IT WAS QUESTIONABLE WHETHER THE SEISMIC COMPONENT (SUPPORT PLATE) WAS CAPABLE OF PERFORMING ITS DESIGNED FUNCTION. DIV. 2 & 3 D/GS WERE OPERABLE. THE ROOT CAUSE OF THE FAILED CAPSCREW COULD NOT BE DETERMINED DUE TO THE CAPSCREW BEING REMOVED AND ELIMINATED BEFORE AN ACCURATE ANALYSIS COULD BE PERFORMED. THE FAILED CAPSCREW WAS REPLACED WITH ONE OF THE SAME TYPE AND GRADE. THE OTHER CAPSCREW WAS TIGHTENED TO ITS REQUIRED TORQUE. THE D/G WAS OUT OF SERVICE FOR 6.5 HOURS.

[121] GRAND GULF 1 DOCKET 50-416 LER 83-164 REV 1
 UPDATE ON CONTAINMENT HYDROGEN MONITOR FAILS.
 EVENT DATE: 101683 REPORT DATE: 020784 NSSS: GE TYPE: BWR
 VENDOR: COMSIP DELPHI INC.

(NSIC 188941) ON OCT. 16, 1983, THE CHANNEL 'B' CONTAINMENT HYDROGEN MONITOR WAS DECLARED INOPERABLE AND AN LCO WAS ENTERED PURSUANT TO TECH SPEC 3.3.7.5 ACTION 80(A) WHEN THE HYDROGEN ANALYZER FAILED THE MONTHLY CALIBRATION. THE ANALYZER WAS INOPERABLE FOR 52.5 HRS. THIS IS REPORTED PURSUANT TO TECH SPEC 6.9.1.13.B. THE 'B' CONTAINMENT HYDROGEN MONITOR FAILED TO PASS THE MONTHLY CALIBRATION BECAUSE IT HAD A FAULTY HYDROGEN ANALYZER CELL. THE CELL WAS REPLACED AND THE HYDROGEN MONITOR WAS RETURNED TO SERVICE. THE ANALYZER IS A COMSIP DELPHI, MODEL K-III. THE ROOT CAUSE OF THE FAILURE CANNOT BE DETERMINED. THIS IS A FINAL REPORT.

[122] GRAND GULF 1 DOCKET 50-416 LER 83-167 REV 1
 UPDATE ON DIESEL FUEL OIL INSTRUMENT LINE LEAK.
 EVENT DATE: 102283 REPORT DATE: 020784 NSSS: GE TYPE: BWR

(NSIC 189018) ON OCT. 22, 1983, DIESEL GENERATOR (DG) 12 WAS INTENTIONALLY SECURED WHEN A LEAK WHICH WAS CONSIDERED A POTENTIAL FIRE HAZARD DEVELOPED IN THE FUEL OIL FILTER DIFFERENTIAL PRESSURE INSTRUMENT LINE. THE ENGINE HAD OPERATED APPROX. 27 HRS OF A 7 DAY SURVEILLANCE RUN. THE DIESEL WAS DECLARED INOPERABLE AND AN LCO WAS ENTERED PURSUANT TO TECH SPEC 3.8.1.1. DG 11 AND 13 WERE OPERABLE. DG 12 REMAINED INOPERABLE FOR 4.5 HRS. THIS IS CONSIDERED A NONVALID FAILURE PURSUANT TO REGULATORY POSITION C.2.E(2) OF R.G. 1.108. THE TUBING RUBBED AGAINST A DG AIR BOX WHICH EVENTUALLY CAUSED A RUPTURE IN THE TUBING DUE TO VIBRATION. THE TUBING WAS REPLACED AND ROUTED TO PREVENT RUBBING. DIVISION 1 AND 2 DG'S WILL BE INSPECTED FOR OTHER SIMILAR DEFICIENCIES. FUEL OIL TUBING FOUND DAMAGED OR RUBBING IS BEING REPLACED. THIS IS SUBMITTED AS A FINAL REPORT.

[123] GRAND GULF 1 DOCKET 50-416 LER 83-170 REV 1
 UPDATE ON RCIC TURBINE TRIP VALVE STICKS.
 EVENT DATE: 102603 REPORT DATE: 021384 NSSS: GE TYPE: BWR
 VENDOR: INGERSOLL-RAND CO.

(NSIC 188942) ON 10/26/83, THE RCIC SYSTEM WAS DECLARED INOPERABLE AND AN LCO WAS ENTERED PURSUANT TO TECH SPEC 3.7.3 WHEN ATTEMPTS TO SECURE THE RCIC TURBINE VIA THE TRIP PUSHBUTTON FAILED. THE TURBINE TRIP THROTTLE VALVE LATCH DISENGAGED BUT THE VALVE FAILED TO FULLY CLOSE. ALSO ON 11/1/83, AFTER CORRECTION OF THIS PROBLEM THE RCIC TURBINE BEGAN TO TRIP ON OVERSPEED DURING START ATTEMPTS. THE LCO WAS LIFTED ON 11/9/83, WHEN THE PLANT ENTERED THE SHUTDOWN MODE WITH REACTOR PRESSURE LESS THAN 135 PSIG. INFREQUENT OPERATION RESULTED IN OXIDATION ON CLOSE TOLERANCE PARTS WHICH CAUSED THE STOCKING TRIP VALVE. THE OVERSPEED TRIPS WERE DUE TO THE GOVERNOR VALVE NOT CLOSING FAST ENOUGH ON TURBINE STARTS. A STARTUP BYPASS VALVE IS BEING INSTALLED TO PREVENT THIS. THIS IS A FINAL REPORT.

[124] GRAND GULF 1 DOCKET 50-416 LER 83-177 REV 1
 UPDATE ON OFF GAS RADIATION MONITOR LOW FLOW.
 EVENT DATE: 102983 REPORT DATE: 021384 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 188943) ON OCT. 23, NOV. 2, AND NOV. 6, 1983, WHILE PLACING THE STEAM JET AIR EJECTORS IN OPERATION, WATER COLLECTED IN THE OFFGAS PRETREATMENT MONITOR RESULTING IN IMPROPER FLOW THROUGH THE MONITOR. THE INSTRUMENT WAS DECLARED INOPERABLE AND AN LCO WAS ENTERED PURSUANT TO TECH SPEC 3.3.7.1. THE MONITOR WAS INOPERABLE FOR 8 HRS, 2 HRS, AND 3 DAYS AND 19 HRS RESPECTIVELY FOR THE ABOVE DATES. THE WATER RESULTED FROM AN ACCUMULATION OF CONDENSATION. HEAT TRACING HAS BEEN INSTALLED ON THE PIPING TO REDUCE CONDENSATION. SYSTEM OPERATION WILL BE EVALUATED DURING POWER ASCENSION TO DETERMINE IF FURTHER MODIFICATION IS NECESSARY. THIS IS A FINAL REPORT.

[125] GRAND GULF 1 DOCKET 50-416 LER 83-179 REV 1
 UPDATE ON DIESEL GENERATORS INOPERABLE DUE TO PERSONNEL ERRORS.
 EVENT DATE: 110583 REPORT DATE: 030884 NSSS: GE TYPE: BWR
 VENDOR: DE LAVAL TURBINE, INC.

(NSIC 188944) DURING A 7 DAY MAINTENANCE RUN, THE DIV. II DIESEL GENERATOR WAS SHUTDOWN UPON DISCOVERY OF A FUEL OIL RETURN LINE LEAK. UPON RESTART, AFTER REPAIR OF THE FUEL LEAK, THE DIESEL GENERATORS TRIPPED DUE TO ISOLATION OF FUEL SUPPLY VALVE F016B. PER R.G.1.108, THESE WERE NOT VALID FAILURES BECAUSE THE DIESEL RAN FOR LONGER THAN 1 HR AT GREATER THAN 50% LOAD AND DUE TO OPERATOR ERROR. THE REQUIREMENTS OF TECH SPEC 3.8.1.1 WERE MET. THIS IS REPORTED PURSUANT TO TECH SPEC 4.8.1.1.3. THIS IS A FINAL REPORT. THE FUEL LINE LEAK WAS A RESULT OF ACCIDENTAL DAMAGE TO THE TUBING BY PERSONNEL. THE FUEL LINE WAS REPLACED. THE CAUSE OF THE FAILURE TO RESTORE THE ISOLATED VALVE WAS PERSONNEL ERROR & PROCEDURAL INADEQUACY. AN OPS. SECTION DIRECTIVE IS BEING REVISED TO ENSURE THAT DEVIATIONS IN VALVE POSITIONS DUE TO EMERGENCY SITUATIONS ARE DOCUMENTED AND CONTROLLED.

[126] GRAND GULF 1 DOCKET 50-416 LER 83-180 REV 1
 UPDATE ON DRYWELL SUMP DRAINED BELOW LEVEL INSTRUMENT RANGE.
 EVENT DATE: 110783 REPORT DATE: 021784 NSSS: GE TYPE: BWR

(NSIC 188945) ON NOV. 7, 1983, THE DRYWELL FLOOR DRAIN SUMP LEVEL AND FLOW MONITORING LEAK DETECTION SYSTEM WAS DECLARED INOPERABLE WHEN THE SUMP WAS INADVERTENTLY PUMPED BELOW INSTRUMENT ZERO. THE PUMP NORMALLY STOPS AT A LEVEL OF 4 INCHES ABOVE INSTRUMENT ZERO. AN LCO WAS ENTERED PURSUANT TO TECH SPEC 3.4.3.1. THE EVENT IS REPORTED PURSUANT TO TECH SPEC 6.9.1.13.B. MAINTENANCE INVESTIGATED THE INSTRUMENT LOOP INCLUDING LEVEL SWITCHES AND FOUND NO DISCREPANCIES. THE INCIDENT CAN NOT BE DUPLICATED. THE SYSTEM WAS CLOSELY MONITORED FOR 2 WEEKS WITHOUT REPEATING THE PROBLEM. ALSO, THE PROBLEM HAS NOT ARISEN IN THE THREE MONTHS SINCE THE EVENT. THE PROBLEM WAS A SPURIOUS AND ISOLATED EVENT. THIS IS A FINAL REPORT.

[127] GRAND GULF 1 DOCKET 50-416 LER 83-181 REV 1
 UPDATE ON RPS UNDERVOLTAGE TRIP SETPOINT OUT OF CALIBRATION.
 EVENT DATE: 111083 REPORT DATE: 022184 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 188946) WHILE PERFORMING CALIBRATION OF RPS ELECTRICAL PROTECTION ASSEMBLY CHANNEL 'C', THE 'AS FOUND' SETPOINTS FOR UNDERVOLTAGE TRIP WERE 116.2V AC. THIS IS CONTRARY TO TECH SPEC 4.8.4.3 WHICH REQUIRES THE UNDERVOLTAGE SETPOINTS TO BE 117V AC. THIS IS REPORTED PURSUANT TO TECH SPEC 6.9.1.13.A. IMMEDIATE ACTION WAS TAKEN TO ADJUST THE VOLTAGE TO WITHIN THE DESIRED RANGE (117 + 2.9, -0V AC). MAINTENANCE INVESTIGATED THE UNDERVOLTAGE DEVICE AND FOUND NO DISCREPANCIES. THE SETPOINT WAS RECHECKED ON FEB. 13, 1984, AND NO SIGNIFICANT DRIFT WAS FOUND. THIS IS A FINAL REPORT.

[128] GRAND GULF 1 DOCKET 50-416 LER 83-185 REV 1
 UPDATE ON SERVICE TRANSFORMER TRIP.
 EVENT DATE: 120183 REPORT DATE: 030284 NSSS: GE TYPE: BWR

(NSIC 189330) ON DEC 1, 1983 AT 1420 HRS WHILE IN COLD SHUTDOWN, BREAKER 552-2105 FROM SERVICE TRANSFORMER 21 TRIPPED CAUSING A LOSS OF POWER TO THE DIV I ENGINEERED SAFETY FEATURE (ESF) BUS AND ALL BALANCE OF PLANT (BOP) LOADS. THIS RESULTED IN A REACTOR SCRAM SIGNAL, A LOSS OF REACTOR PROTECTOR SYSTEM (RPS) BUSES, LOSS OF SHUTDOWN COOLING, REACTOR WATER CLEANUP (RWCU) ISOLATION, CONTAINMENT/AUX. BLDG. ISOLATIONS, CONTROL ROD DRIVE (CRD) 'A' PUMP TRIP, STANDBY GAS TREATMENT SYSTEM (SGTS) INITIATION, CONTROL ROOM SFAU INITIATION, AND AN AUTO

START OF DG 11. THE DG WAS PARALLELED TO TRANSFORMER 11 TO RESTORE NORMAL POWER. TWO WIRES SHORTED IN THE BREAKER HANDSWITCH CAUSING THE TRIP. THE WIRES WERE PINCHED BETWEEN A PLATE AND A COVER BOX MOUNTED INSIDE PANEL 1H13-P807. THE WIRES AND BOX HAVE BEEN TEMPORARILY ALTERED TO PREVENT PINCHING. FINAL RESOLUTION TO REMOVE THE PLATE IS PENDING THE PROCESSING OF DESIGN CHANGE 84/3001. ESTIMATED COMPLETION DATE IS MAY 31, 1984.

[129] GRAND GULF 1 DOCKET 50-416 LER 83-189 REV 1
 UPDATE ON HIGH PRESSURE CORE SPRAY DIESEL TRIPS.
 EVENT DATE: 120783 REPORT DATE: 031284 NSSS: GE TYPE: BWR
 VENDOR: AGASTAT RELAY CO.
 GENERAL MOTORS

(NSIC 189342) ON 12/7/83, BREAKER 152-1704 TO THE DIVISION 3 ESF BUS TRIPPED. THE HIGH PRESSURE CORE SPRAY (HPCS) DIESEL GENERATOR (DG) ATTEMPTED TO START BUT IMMEDIATELY TRIPPED. THE CAUSE COULD NOT BE DETERMINED AT THE TIME. THE FAILURE WAS CONSIDERED VALID AND THE TESTING FREQUENCY WAS INCREASED. ON 2-1-84, THE DIESEL GENERATOR TRIP RECURRED (SPECIAL REPORT 84-005) AND WAS ATTRIBUTED TO A LOW LUBE OIL PRESSURE SIGNAL WHICH IS BYPASSED IN THE EMERGENCY MODE. THE FAILURE IS NOW CONSIDERED INVALID PURSUANT TO POSITION C.2.E.(2) OF REG. GUIDE 1.108. THE BREAKER TRIPPED DUE TO A BROKEN CURRENT LIMITER RESISTOR SOCKET FOR THE BREAKER POSITION INDICATING LIGHT. THE RESISTOR SOCKET SHORTED CAUSING THE TRIP COIL TO ENERGIZE. THE SOCKET WAS ACCIDENTALLY BROKEN DURING A CHANGING OF THE BULB. THE DG TRIP WAS CAUSED BY THE FAILURE OF A TIME DELAY RELAY WHICH ALLOWED A PREMATURE LOW LUBE OIL PRESSURE SIGNAL.

[130] GRAND GULF 1 DOCKET 50-416 LER 84-001
 ESF ACTUATIONS WHILE PLACING BATTERY CHARGER ON EQUALIZER.
 EVENT DATE: 010384 REPORT DATE: 020284 NSSS: GE TYPE: BWR

(NSIC 189289) ON JANUARY 3, 1984, WHILE IN COLD SHUTDOWN AT 0920 HOURS AND WHILE PLACING A DIVISION 2 BATTERY CHARGER ON EQUALIZE, THE DIVISION 2 POWER SUPPLY TRIPPED ON HIGH VOLTAGE RESULTING IN THE FOLLOWING AUTOMATIC ACTIONS: INITIATION OF CONTROL ROOM FRESH AIR UNIT (CRFAU) B, SGTS B, DRYWELL PURGE COMPRESSOR B, STANDBY SERVICE WATER B, DIVISION 2 HYDROGEN ANALYZERS, LOW PRESSURE COOLANT INJECTION B AND C, AND ISOLATION OF SHUTDOWN COOLING, RWCU, THE AUXILIARY BUILDING AND CONTAINMENT BUILDING. THE DIVISION 2 DIESEL GENERATOR WAS OUT OF SERVICE AT THE TIME. THE LPCI INJECTION RAISED THE WATER LEVEL TO GREATER THAN 400 INCHES. WHILE TROUBLESHOOTING THE PROBLEM ON JANUARY 6, 1984, CRFAU B ACTUATED WHEN THE CHLORINE DETECTOR WAS DEENERGIZED FROM A REPEAT OF THE TRIP. OTHER SYSTEMS HAD BEEN REMOVED FROM SERVICE FOR THE TEST. THE EQUALIZING POTENTIOMETER ON THE BATTERY CHARGER WAS SET HIGHER THAN ITS NORMAL EQUALIZING VOLTAGE OF 140 VDC. THE INVERTER TRIPPED AT 147 VDC. THE CHARGER THEN TRIPPED AT 152 VDC ALLOWING THE INVERTER TO RESET AND INITIATE THE ECCS ACTUATION. THE PROCEDURE WAS REVISED TO INSTRUCT THE TECHNICIANS TO ADJUST THE CHARGER OUTPUT TO 140 PLUS OR MINUS 1 VDC WHEN PLACING THE CHARGERS ON EQUALIZE. A DESIGN CHANGE WILL LOWER THE CHARGER HIGH VOLTAGE TRIP TO 145 VDC, ALLOWING THE CHARGER TO TRIP PRIOR TO THE INVERTER TRIP.

[131] GRAND GULF 1 DOCKET 50-416 LER 84-002
 RPS BUS BREAKER TRIPS RESULTING IN LOSS OF SHUTDOWN COOLING.
 EVENT DATE: 010784 REPORT DATE: 020684 NSSS: GE TYPE: BWR

(NSIC 189079) SINCE JAN. 7, 1984, SEVERAL INSTANCES OF RPS BUS BREAKER TRIPS HAVE RESULTED IN A LOSS OF SHUTDOWN COOLING. DATES OF OCCURRENCES WERE JAN. 7, 9, 11, 14, 19, AND 20. REDUNDANT TRAINS OF THE SHUTDOWN COOLING MODE OF RHR ARE SUPPLIED THROUGH A COMMON INLET CONTAINING TWO MOTOR OPERATED VALVES IN SERIES. THE ISOLATION LOGIC FOR THESE VALVES RECEIVE POWER FROM THE RPS BUS. LOSS OF EITHER

RPS BUS CAUSES ONE OR THE OTHER ISOLATION VALVE TO FAIL SHUT, CAUSING A TOTAL LOSS OF SHUTDOWN COOLING. THE CAUSE OF THE TRIPS IS UNDETERMINED, HOWEVER, WE ARE CONTINUING TO INVESTIGATE. THE RESULTS OF THE INVESTIGATION WILL BE INCLUDED IN A FOLLOW-UP REPORT.

[132] GRAND GULF 1 DOCKET 50-416 LER 84-004
ISOLATION OF SHUTDOWN COOLING.
EVENT DATE: 011484 REPORT DATE: 021484 NSSS: GE TYPE: BWR

(NSIC 189080) A FUSE FAILED WHILE A TECHNICIAN WAS WORKING IN A PANEL CAUSING ISOLATION OF A SHUTDOWN COOLING SUCTION VALVE. THE VALVE IS COMMON TO BOTH SHUTDOWN COOLING LOOPS AND THEREFORE RESULTED IN THE INOPERABILITY OF BOTH LOOPS. THE REACTOR WATER CLEANUP SYSTEM WAS OPERATED AS AN ALTERNATE METHOD OF COOLANT CIRCULATION UNTIL THE CAUSE WAS DETERMINED. THE FUSE WAS REPLACED, AND SHUTDOWN COOLING WAS RESTORED.

[133] GRAND GULF 1 DOCKET 50-416 LER 84-005
DRYWELL PURGE COMPRESSOR STARTS FOR UNKNOWN REASON.
EVENT DATE: 011984 REPORT DATE: 022084 NSSS: GE TYPE: BWR

(NSIC 189081) DURING THE PERFORMANCE OF A SPECIAL TEST OF THE DRYWELL PURGE COMPRESSOR 'A' LOGIC RELAYS, THE COMPRESSOR WAS INADVERTENTLY STARTED. ORIGINALLY IT WAS THOUGHT THAT THE COMPRESSOR START WAS CAUSED BY LIFTING LEADS TO ONE OF THE TIMING RELAYS IN THE COMPRESSOR'S CONTROL CIRCUIT LOGIC AS INSTRUCTED BY THE PROCEDURE. HOWEVER, FURTHER INVESTIGATION OF APPLICABLE WIRING DIAGRAMS INDICATED THAT THIS COULD NOT BE THE CAUSE. A MAINTENANCE WORK ORDER HAS BEEN WRITTEN TO REPERFORM THE TEST AND TROUBLESHOOT THE CIRCUIT AS NECESSARY. THE WORK IS EXPECTED TO BE COMPLETE BY FEB. 23, 1984.

[134] GRAND GULF 1 DOCKET 50-416 LER 84-008
HPCS PUMP CONTROL POWER LOST.
EVENT DATE: 020284 REPORT DATE: 030584 NSSS: GE TYPE: BWR

(NSIC 189138) CONTROL POWER TO THE HPCS PUMP WAS LOST. THE HPCS PUMP POWER SUPPLY BREAKER WAS INCORRECTLY OPENED WHILE PERFORMING AN ELECTRICAL LINEUP FOR THE HPCS DIESEL GENERATOR (THE DIESEL WAS BEING TAGGED OUT FOR MAINTENANCE). THE WRONG BREAKER WAS OPENED DUE TO INCORRECT INFORMATION ON THE ELECTRICAL LINEUP SHEET OF THE SYSTEM OPERATING INSTRUCTION FOR THE HPCS DIESEL GENERATOR.

[135] GRAND GULF 1 DOCKET 50-416 LER 84-003
CONTROL ROOM FRESH AIR UNIT AUTO START.
EVENT DATE: 021084 REPORT DATE: 030884 NSSS: GE TYPE: BWR

(NSIC 189324) AS PART OF A MAINTENANCE WORK ORDER, POWER WAS REMOVED FROM THE 'B' CONTROL ROOM FRESH AIR UNIT CHLORINE DETECTOR. DUE TO INCOMPLETE WORK INSTRUCTIONS, THIS CAUSED THE 'B' CONTROL ROOM FRESH AIR UNIT TO START UP AUTOMATICALLY IN THE ISOLATION MODE.

[136] GRAND GULF 1 DOCKET 50-416 LER 84-011
LOSS OF BOP POWER DUE TO BREAKER FAULT.
EVENT DATE: 030984 REPORT DATE: 040384 NSSS: GE TYPE: BWR

(NSIC 189295) ARCING OCCURRED IN A 500KV SWITCHYARD BREAKER AS IT WAS RETURNED TO SERVICE AFTER MAINTENANCE WAS PERFORMED ON THE BREAKER. THIS CAUSED A DIFFERENTIAL CURRENT IN THE UNIT'S SERVICE TRANSFORMER WHICH TRIPPED THE SWITCHYARD BREAKER SUPPLYING POWER TO THE UNIT'S BOP LOADS AND ONE ESP

TRANSFORMER. AS A RESULT, SHUTDOWN COOLING ISOLATED, RWCU ISOLATED, THE AUXILIARY BUILDING ISOLATED, SBTG INITIATED, CONTROL ROOM FRESH AIR INITIATED, REACTOR SCRAM INITIATED AND THE HPCS DIESEL GENERATOR STARTED.

[137] HATCH 1 DOCKET 50-311 LER 83-105
EIGHT SRV'S DID NOT LIFT WITHIN SPECIFIED SETPOINT.
EVENT DATE: 111583 REPORT DATE: 120983 NSSS: GE TYPE: BWR
VENDOR: TARGET ROCK CORP.

(NSIC 188075) ON 11/15/83, PLANT PERSONNEL WERE NOTIFIED THAT DURING A SAFETY RELIEF VALVE (SRV) BENCH TEST AT WYLE LABORATORY, 8 OF 11 SRV'S (1B21-F013 A,B,D,F,H,J,K & L) DID NOT LIFT WITHIN THE SPECIFIED SETPOINT PLUS OR MINUS 1% AS REQUIRED BY TECH SPECS SECTION 2...A.1.B. PLANT OPERATION WAS NOT AFFECTED. WHEN THE CAUSE OF THIS EVENT IS DETERMINED, A DETERMINATION OF THE REPETITIVENESS OF THIS EVENT WILL BE PROVIDED IN AN UPDATE REPORT. THE CAUSE AND CORRECTIVE ACTION TAKEN FOR THIS EVENT ARE UNKNOWN AT THIS TIME. HOWEVER, UPON RECEIVING THE FINAL TEST RESULTS FROM THE VENDOR AN UPDATE REPORT FOR THIS LER WILL BE SUBMITTED.

[138] HATCH 1 DOCKET 50-321 LER 84-002
VALVE FAILS LOCAL LEAK RATE TEST.
EVENT DATE: 022484 REPORT DATE: 032384 NSSS: GE TYPE: BWR
VENDOR: WALWORTH COMPANY

(NSIC 189104) ON 2-24-84, WHILE PREPARING TO CLOSE OUT A DESIGN CHANGE REQUEST, A PLANT ENGINEER DETERMINED THAT RECORDS FOR THE PREVIOUS LOCAL LEAK RATE TEST (LLRT) ON THE 'A' LOOP CORE SPRAY MINIMUM FLOW VALVE (1E21-F031A) WERE NOT AVAILABLE. CONSEQUENTLY THE 'PRIMARY CONTAINMENT PERIODIC TYPE B AND TYPE C LEAKAGE TESTS' PROCEDURE (HNP-1-3952) WAS PERFORMED ON 022484, FOR 1E21-F031A. THIS TEST FAILED DUE TO EXCESS LEAKAGE. INVESTIGATION DETERMINED THAT THE VALVE'S WEDGE WAS CRACKED ACROSS THE SEATING SURFACE TO THE EXTENT THAT THE WEDGE COULD NOT BE REPAIRED. MINIMUM FLOW VALVE 1E21-F031A WAS REMOVED FROM ITS LINE, AND IT WAS REPLACED WITH A SIMILAR VALVE FROM UNIT 2.

[139] HATCH 2 DOCKET 50-366 LER 83-034
SELECTED ISOTOPES OMITTED FROM COMPUTER LIBRARY.
EVENT DATE: 052583 REPORT DATE: 060683 NSSS: GE TYPE: BWR

(NSIC 183513) DURING A NORMAL REVIEW OF E BAR DETERMINATION, IT WAS DISCOVERED THAT SOME ISOTOPES (I.E., CU 64) HAD BEEN IDENTIFIED, BUT WERE OMITTED FROM THE PROCESS COMPUTER E BAR LIBRARY WHEN THE PROGRAM WAS ORIGINALLY INITIATED. THIS EVENT IS CONTRARY TO THE REQUIREMENTS OF TECH SPECS SECTION 3.4.5.B. PLANT OPERATION WAS NOT AFFECTED BY THIS EVENT AS UNIT 2 WAS SHUTDOWN FOR REFUELING WHEN THE EVENT WAS DISCOVERED. THE CAUSE OF THIS EVENT HAS BEEN DETERMINED TO BE AN INCORRECT COMPUTER PROGRAM SUPPLIED BY THE VENDOR. THE PROGRAM LIBRARY WILL BE CORRECTED PRIOR TO UNIT STARTUP. A REVIEW WAS COMPLETED ON 6/2/83 AND NO TECH SPEC LIMITS HAVE BEEN VIOLATED DUE TO THIS EVENT.

[140] HATCH 2 DOCKET 50-366 LER 83-040 REV 1
UPDATE ON TWO CONTROL ROD DRIVES FAILED AND WERE IMPROPERLY RETURNED TO SERVICE.
EVENT DATE: 070983 REPORT DATE: 031284 NSSS: GE TYPE: BWR
VENDOR: COMBINATION PUMP VALVE CO.

(NSIC 188936) ON 07/09/83 AND 07/14/83, THE CRD LOW PRESSURE OR HIGH LEVEL ALARM WAS RECEIVED FOR HCU'S 2C11-26-31 AND 02-19 RESPECTIVELY. THE HCU'S WERE DECLARED INOPERABLE PER TECH SPECS SECTION 3.1.3.5, ACTION A. THEN, ON 07/20/83 AND 07/22/83, IT WAS DISCOVERED THAT THE HCU'S HAD BEEN INCORRECTLY RETURNED TO

SERVICE FOLLOWING CORRECTIVE ACTIONS. THESE EVENTS ARE REPETITIVE AS LAST REPORTED IN LER 50-366/1982-090. THE CAUSE OF BOTH OF THE FIRST TWO EVENTS HAS BEEN ATTRIBUTED TO LEAKING EP-111 NITROGEN CHARGING VALVES. THE EP-111 NITROGEN CHARGING VALVES WERE REPLACED AND THE HCU'S WERE RETURNED TO SERVICE. THE ROOT CAUSE OF THE INCORRECT RETURN HAS BEEN DETERMINED TO BE PROCEDURAL INADEQUACY.

[141] HATCH 2 DOCKET 50-366 LER 83-134 REV 1
 UPDATE ON HYDROGEN AND OXYGEN ANALYZERS FOUND INOPERABLE.
 EVENT DATE: 112983 REPORT DATE: 020284 NSSS: GE TYPE: BWR
 VENDOR: LEEDS & NORTHRUP CO.

(NSIC 189017) ON 11/29/83, DURING A CONTROL PANEL WALKDOWN, THE 'B' H2O2 ANALYZER WAS NOTED INOPERABLE. ON 12/04/83, DURING PERFORMANCE OF THE 'CONSIDER DELPHI MODEL K-IV HYDROGEN AND OXYGEN ANALYZER FT&C' PROCEDURE (HNP-2-3882), THE 'A' H2O2 ANALYZER WAS NOTED INOPERABLE. BOTH EVENTS ARE CONTRARY TO THE REQUIREMENTS OF TECH SPEC TABLE 3.3.6.4-1, ITEM 9. PLANT OPERATION WAS NOT AFFECTED. THESE EVENTS WERE LAST REPORTED ON LERS 50-366/1983-089 AND -099. THE FIRST EVENT WAS THE RESULT OF COMPONENT FAILURE DUE TO MISCELLANEOUS FAILED PARTS. THE SECOND EVENT WAS DUE TO THE SYSTEM'S PUMP FAILING AND LEAKING PIPE FITTINGS. ANALYZERS 2P33-R601B (FIRST EVENT) AND 2P33-R601A (SECOND EVENT) WERE REPAIRED, FUNCTIONALLY TESTED SATISFACTORILY PER HNP-2-3882, AND RETURNED TO SERVICE ON 12/28/83 & 12/15/83 RESPECTIVELY.

[142] HATCH 2 DOCKET 50-366 LER 83-137
 RELIEF VALVE TEMPERATURE RECORDER DECLARED INOPERABLE.
 EVENT DATE: 122183 REPORT DATE: 011384 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 188586) ON 12/21/83 (FIRST EVENT) AND 12/22/83 (SECOND EVENT), PERSONNEL DETERMINED THAT SAFETY RELIEF VALVE TAILPIPE TEMPERATURE RECORDER 2B21-R614 WAS INOPERABLE. THE RECORDER RECEIVES ITS INPUTS FROM TEMPERATURE ELEMENTS 2B21-N004 A-H AND K-M; THEREFORE, THE RECORDER WAS DECLARED INOPERABLE. BOTH EVENTS ARE CONTRARY TO THE REQUIREMENTS OF TECH SPECS TABLE 3.3.6.4-1, ITEM 10.B. THE FIRST EVENT WAS DUE TO THE RECORDER'S HAVING A FAILED CHART DRIVE MOTOR AND CHART DRIVE IDLER GEAR. THE SECOND EVENT WAS DUE TO THE RECORDER'S HAVING A FAILED CHART DRIVE IDLER GEAR. REPLACEMENT PARTS WERE INSTALLED FOR EACH EVENT. THE RECORDER WAS FUNCTIONALLY TESTED SATISFACTORILY AND RETURNED TO SERVICE ON 12/21/83 AND 12/22/83, RESPECTIVELY.

[143] HATCH 2 DOCKET 50-366 LER 84-003
 REACTOR WATER CLEANUP SYSTEM ISOLATES.
 EVENT DATE: 011584 REPORT DATE: 021484 NSSS: GE TYPE: BWR
 VENDOR: POWELL, WILLIAM COMPANY
 ROSEMOUNT, INC.

(NSIC 188996) ON 01/15/83, WITH THE REACTOR IN COLD SHUTDOWN, OPERATING PERSONNEL WERE IN THE PROCESS OF LOWERING REACTOR WATER LEVEL WITH THE REACTOR WATER CLEANUP (RWCU) PUMP BY DUMPING THE WATER INTO THE MAIN CONDENSER. AT THE BEGINNING OF THIS PROCESS, A PRIMARY CONTAINMENT ISOLATION SYSTEM (PCIS) VALVE GROUP 5 ISOLATION SIGNAL WAS RECEIVED WHICH SHOULD HAVE CLOSED RWCU SYSTEM ISOLATION VALVES 2G31-F001 AND 2G31-F004. THE RWCU INBOARD ISOLATION VALVE 2G31-F001 CLOSED; HOWEVER, THE RWCU SYSTEM OUTBOARD ISOLATION VALVE 2G31-F004 DID NOT CLOSE. AN INVESTIGATION HAS DETERMINED THAT THE ISOLATION SIGNAL OCCURRED DURING THIS EVENT BECAUSE THE REACTOR WATER CLEANUP DUMP FLOW TRANSMITTER (2G31-N012) HAD BEEN INSTALLED INCORRECTLY DURING COMPLETION OF A DESIGN CHANGE REQUEST.

[144] HATCH 2 DOCKET 50-366 LER 84-004
 FAILURE OF VALVES TO PASS LOCAL LEAK RATE TEST.
 EVENT DATE: 011784 REPORT DATE: 021484 NSSS: GE TYPE: BWR
 VENDOR: BLACKSTONE CORPORATION
 LONERGAN, J.E., CO.

(NSIC 188997) DURING PERFORMANCE OF THE 'PRIMARY CONTAINMENT PERIODIC TYPE B AND C LEAKAGE TESTS' PROCEDURE (HNP-2-3952) AS REQUIRED BY TECH SPECS 4.6.1.2.D, PLANT PERSONNEL DETERMINED THAT THE FOLLOWING VALVES WERE LEAKING IN EXCESS OF THE LIMITS SPECIFIED IN TECH SPECS 3.6.1.2.B AND C, AND THE ASME SEC. XI CRITERIA SPECIFIED IN HNP-2-3952: 1) MAIN STEAM ISOLATION VALVES 2B21-F022C, AND 2B21-F028C, 2) MAIN STEAM ISOLATION VALVE LEAKAGE CONTROL SYSTEM'S INBOARD ISOLATION VALVE 2E32-F001K, 3) CORE SPRAY TESTABLE CHECK VALVE 2E21-F006A, 4) RHR 'A' PUMP SUCTION VALVE 2E11-F004A, 5) RHR 'A' PUMP SUCTION RELIEF VALVE 2E11-F030A, 6) DRYWELL FLOOR DRAIN ISOLATION VALVE 2G11-F004, 7) TORUS WATER CLEANUP DRAIN ISOLATION VALVE 2G51-F002. THESE VALVES WILL BE REPAIRED TO CONFORM TO TECH SPECS REQUIREMENTS, AND THE REQUIREMENTS OF ASME SECTION XI.

[145] HATCH 2 DOCKET 50-366 LER 84-002
 SAFETY RELIEF VALVE FAILED TO LIFT WHEN TESTED.
 EVENT DATE: 022084 REPORT DATE: 032084 NSSS: GE TYPE: BWR
 VENDOR: TARGET ROCK CORP.

(NSIC 189122) DURING PERFORMANCE OF WYLE LABORATORIES TESTING OF MAIN STEAM SAFETY RELIEF VALVES (SRVS), FIVE SRVS FAILED TO LIFT IN THE 1% TOLERANCE RANGE REQUIRED BY TECH SPECS SECTION 3.4.2.1.

[146] HUMBOLDT BAY DOCKET 50-133 LER 84-001
 GAS TREATMENT FLOW CONTROL VALVE LINKAGE FAILURE.
 EVENT DATE: 010384 REPORT DATE: 020284 NSSS: GE TYPE: BWR
 VENDOR: PRATT, HENRY COMPANY

(NSIC 189020) DURING A ROUTINE MONTHLY TEST OF THE STANDBY GAS TREATMENT SYSTEM, AIR FLOW THROUGH THE SYSTEM WAS OBSERVED TO BE ABOVE THE ALLOWABLE LIMIT OF 134 SCFM. INSPECTION OF THE FLOW CONTROL VALVE REVEALED THAT THE VALVE ACTUATOR AND THE VALVE SHAFT HAD DISENGAGED, ALLOWING THE BUTTERFLY VALVE TO TURN FREELY. THE LINKAGE WAS RECONNECTED AND THE GAS TREATMENT SYSTEM TESTED SATISFACTORILY. TO PREVENT RECURRENCE OF THIS PROBLEM, AN ADDITIONAL PAIR OF SET SCREWS WILL BE ADDED ABOVE THE EXISTING PAIR OF SET SCREWS ON THE LINKAGE WHICH COUPLES THE VALVE ACTUATOR TO THE VALVE SHAFT.

[147] INDIAN POINT 2 DOCKET 50-247 LER 84-001
 INOPERABLE CONTAINMENT ISOLATION VALVES.
 EVENT DATE: 010484 REPORT DATE: 020384 NSSS: WE TYPE: PWR
 VENDOR: ASCO VALVES
 FISHER FLOW CONTROL DIV (ROCKWELL INT)

(NSIC 189332) DURING NORMAL POWER OPERATION, A LOW PRESSURE ALARM ON THE WELD CHANNEL AND CONTAINMENT PENETRATION PRESSURIZATION SYSTEM FOR THE VC VENTILATION ANNUNCIATED IN THE CENTRAL CONTROL ROOM. THE WELD CHANNEL FLOW FLUCTUATED AND FINALLY DECREASED BELOW NORMAL FLOW. SOV-1278 (THE AIR SUPPLY TO THE CONTAINMENT PENETRATION BETWEEN THE CONTAINMENT PURGE EXHAUST VALVES) HAD MALFUNCTIONED AND CLOSED. SOV-1278 WAS REPLACED BUT PENETRATION PRESSURIZATION STILL COULD NOT BE MAINTAINED. LEAKAGE PAST ONE OR BOTH CONTAINMENT PURGE EXHAUST VALVES APPARENTLY CAUSED THE PRESSURE LOSS. A PLANT SHUTDOWN WAS COMMENCED. A SUBSEQUENT INVESTIGATION REVEALED THAT THERE WAS LEAKAGE PAST FCV-1172 VALVE SEAT AND THAT FCV-1173 APPEARED TO BE SLIGHTLY OPEN. THE TEE-RING SEAT AND COMPRESSION RING WERE REPLACED ON FCV-1172 AND FCV-1173 WAS CYCLED SEVERAL TIMES AND LEFT IN THE

CLOSED POSITION. THE VALVES WERE SUCCESSFULLY TESTED AND RETURNED TO SERVICE. THE PLANT WAS RESTARTED AND RETURNED TO SERVICE ON 1/7/84.

[148] INDIAN POINT 3 DOCKET 50-286 LER 84-002
 REACTOR TRIP.
 EVENT DATE: 012884 REPORT DATE: 022484 NSSS: WE TYPE: PWR
 VENDOR: BUSSMANN MFG (DIV OF MCGRAW-EDISON)

(NSIC 189216) ON JANUARY 28, 1984, WITH THE REACTOR CRITICAL AT ZERO POWER, A TRIP WAS INITIATED BY THE INTERMEDIATE RANGE NUCLEAR INSTRUMENTATION. THE CAUSE FOR THE TRIP WAS FOUND TO BE A BLOWN POWER SUPPLY FUSE FOR CHANNEL 32 OF THE INTERMEDIATE RANGE INSTRUMENTATION. ALL EQUIPMENT IN THE REACTOR PROTECTION SYSTEM PERFORMED ITS DESIGNATED FUNCTION. THE FUSE WAS REPLACED, AND THE REACTOR WAS RETURNED TO CRITICALITY IN ACCORDANCE WITH ESTABLISHED PROCEDURES.

[149] KEWAUNEE DOCKET 50-305 LER 83-035
 COMMON DRIFTING OF ALL RPI'S DUE TO VOLTAGE REGULATOR FAILURE.
 EVENT DATE: 121083 REPORT DATE: 012984 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 188403) WITH THE REACTOR AT 100% POWER OPERATION, ALL RODS OUT, AND IN MANUAL, THE OPERATORS NOTICED THAT ALL ROD POSITION INDICATORS (RPI) WERE GRADUALLY DRIFTING DOWNWARDS. THE COMMON DRIFTING OF ALL RPI WAS DUE TO A VOLTAGE REGULATOR FAILURE, THUS THE RPI SYSTEM WAS AT NO TIME DECLARED INOPERABLE. BASED ON EXCORE INDICATIONS, WHICH REMAINED NORMAL THE ENTIRE TIME, AND NO CHANGE IN BANK DEMAND POSITION, THERE WAS NO ROD MISALIGNMENT. BECAUSE OF THE POTENTIAL SAFETY SIGNIFICANCE INVOLVED WE FEEL THIS INCIDENT IS WORTHY OF A 30 DAY REPORT. DRIFTING RPI WAS BECAUSE THE CONTACT POINT IN THE VOLTAGE REGULATOR WAS TARNISHED DUE TO AGE AND WEAR CAUSING A LOWER OUTPUT VOLTAGE. THE VOLTAGE ADJUST POT WAS WIPED THROUGH THE BAD SPOT, THE VOLTAGE READJUSTED, AND ALL RPI RETURNED TO NORMAL. LONG TERM ACTIONS INCLUDE ADDING THE OUTPUT VOLTAGE READINGS TO THE ANNUAL SURVEILLANCE TEST AND REPLACING THE POWER SUPPLY ONCE A NEW ONE CAN BE PURCHASED. NO FURTHER ACTION IS REQUIRED AT THIS TIME.

[150] KEWAUNEE DOCKET 50-305 LER 84-001
 POTENTIAL LOSS OF BOTH TRAINS OF THE SHIELD BUILDING VENT SYSTEM.
 EVENT DATE: 031384 REPORT DATE: 041284 NSSS: WE TYPE: FWR

(NSIC 189220) AT 0905 ON MARCH 13, 1984, WITH THE PLANT AT 83% POWER, THE SHIELD BUILDING VENT SYSTEM (SBVS) TRAIN "B" EXHAUST FAN WAS TAGGED OUT FOR PERFORMANCE OF SURVEILLANCE PROCEDURE SP-08-185, "CHARCOAL FILTER HEAT DETECTOR TEST". MAINTENANCE PERSONNEL INADVERTENTLY INITIATED THE SURVEILLANCE ON TRAIN "A", MAKING IT INOPERABLE. BECAUSE THE "B" TRAIN HAD NOT BEEN DEMONSTRATED OPERABLE WITH THE EXHAUST FAN OUT OF SERVICE PRIOR TO COMMENCING WORK ON TRAIN "A", BOTH TRAINS OF THE SBVS WERE CONSIDERED OUT OF SERVICE. THIS CONDITION WENT UNNOTICED UNTIL APPROXIMATELY 1000 WHEN THE MAINTENANCE PERSONNEL COMPLETED THEIR WORK, AND NOTIFIED THE CONTROL ROOM. AT THIS TIME, THE ERROR WAS IDENTIFIED. TRAIN "B" WAS RETURNED TO ITS NORMAL CONFIGURATION AT 1007, DEMONSTRATED TO BE OPERABLE, AND RETURNED TO SERVICE AT 1015. A CONSERVATIVE DETERMINATION WAS MADE TO REPORT THE INCIDENT PER 10CFR 50.72(B) (2) (III). THE SURVEILLANCE PROCEDURE WAS COMPLETED WITH BOTH TRAINS BEING BACK IN SERVICE AT 1133. TO PREVENT A RECURRENCE OF THIS EVENT, THE SBVS FILTER HOUSINGS HAVE BEEN MARKED SO THEY CAN BE READILY IDENTIFIED. ALSO, THE SURVEILLANCE PROCEDURE IS BEING REVISED.

[151] LA SALLE 1 DOCKET 50-373 LER 83-051
 CHLORINE DETECTOR FAILS.
 EVENT DATE: 051583 REPORT DATE: 061383 NSSS: GE TYPE: BWR

(NSIC 183224) ON MAY 15, 1983 AT 0500 HOURS WITH UNIT 1 IN COLD SHUTDOWN, THE "B" VC CHLORINE DETECTOR TRIPPED AND WOULD NOT RESET. ANOTHER TRAIN OF THE CONTROL ROOM HVAC SYSTEM WAS AVAILABLE AND OPERATING PROPERLY. THE CAUSE OF THIS OCCURRENCE WAS A LOOSE GROUND WIRE ON THE CIRCUIT BOARD. THE LOOSE GROUND WIRE WAS PROMPTLY TIGHTENED UNDER WORK REQUEST NUMBER L24705 AND PRESENTLY FUNCTIONS PROPERLY.

[152] LA SALLE 1 DOCKET 50-373 LER 84-003
 REACTOR SCRAM - MAIN GENERATOR TRIP.
 EVENT DATE: 011384 REPORT DATE: 020684 NSSS: GE TYPE: BWR

(NSIC 189065) UNIT 1 WAS OPERATING AT 80% POWER. THE "A" PHASE POTENTIAL TRANSFORMER FUSE CABINET FOR THE MAIN GENERATOR WAS NOT PROPERLY SECURED AND OPENED WHEN BRUSHED. THE MAIN GENERATOR TRIPPED DUE TO SEEING A POWER/LOAD UNBALANCE. THE MAIN TURBINE TRIPPED ON INTERLOCK. THE REACTOR SCRAMMED FROM THE MAIN TURBINE TRIP. ALL TURBINE AND REACTOR PROTECTION SYSTEM COMPONENTS FUNCTIONED AS DESIGNED. AFTER PROPER CHECK OUT OF ALL POT FUSE CABINETS AND COMPONENTS, THE UNIT WAS RESTARTED WITHOUT INCIDENT.

[153] LA SALLE 1 DOCKET 50-373 LER 84-004
 SECONDARY CONTAINMENT ISOLATES.
 EVENT DATE: 011884 REPORT DATE: 021084 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
 VENDOR: AGASTAT RELAY CO.

(NSIC 188998) ON 1-18-84 AT 1120 HRS A PRIMARY CONTAINMENT ISOLATION SIGNAL (JM) WAS RECEIVED ON UNIT 2. PCIS GROUPS 2 AND 4 LOGIC ACTIVATED ISOLATING THE SECONDARY CONTAINMENT, SHUTTING DOWN THE UNIT 1 AND 2 REACTOR BUILDING VENTILATION SYSTEM (VA). STANDBY GAS TREATMENT (BH) STARTED AS A RESULT. THE ISOLATION OCCURRED WHEN A RELAY (2B21H-K66) ON THE 2H13-P622 PANEL WAS JOSTLED BY A STATION CONSTRUCTION PERSON. THIS RELAY PROCDED THE GROUP 2 AND 4 ISOLATION. AT THE TIME OF THE OCCURRENCE, UNIT ONE WAS IN HOT SHUTDOWN, UNIT TWO WAS IN REFUEL. THE GROUP 2 ISOLATION IN UNIT 2 HAD NO EFFECT ON THE PLANT DURING REFUEL. HAD THE GROUP 2 ISOLATION OCCURRED UNDER DIFFERENT CONDITIONS, LOSS OF DRYWELL PNEUMATICS WOULD HAVE OCCURRED. THIS WOULD CAUSE THE POSSIBLE DRIFTING CLOSE OF THE MAIN STEAM ISOLATION VALVES, CAUSING A REACTOR SCRAM. THE WORK BEING PERFORMED ON RELAYS WAS SUSPENDED, WITH THE JOB SUPERVISOR BEING BRIEFED AS TO THE SERIOUSNESS OF THE OCCURRENCE AND WHAT THE IMPACT ON THE PLANT WOULD HAVE BEEN HAD BOTH UNITS BEEN OPERATING. THE SUPERVISOR INVOLVED IS NOW WORKING MORE CLOSELY WITH THE OPERATING DEPARTMENT.

[154] LA SALLE 1 DOCKET 50-373 LER 84-006
 APRM READING LOW.
 EVENT DATE: 012184 REPORT DATE: 021784 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 188999) AT ABOUT 5% POWER DURING UNIT 1 STARTUP, TWO AVERAGE POWER RANGE MONITORING (APRM) CHANNELS WERE READING LOWER THAN EXPECTED. A HALF SCRAM WAS TAKEN ON THE APPLICABLE TRIP SYSTEM. INVESTIGATION OF THE PROBLEM FOUND DEFECTIVE OPERATIONAL AMPLIFIERS IN FOUR APRM CHANNELS. THE OP AMPS WERE REPLACED AND APRM'S SATISFACTORILY TESTED.

[155] LA SALLE 1 DOCKET 50-373 LER 84-007
 REACTOR SCRAMS FOLLOWING INADVERTENT RCIC STARTUP.
 EVENT DATE: 020384 REPORT DATE: 030284 NSSS: GE TYPE: BWR

(NSIC 189125) AN IMPROPERLY PLACED OHMMETER DURING THE PERFORMANCE OF A REQUIRED SURVEILLANCE CAUSED RCIC TO INITIATE WHILE THE REACTOR WAS AT 89% POWER. A RCIC INITIATION WILL CAUSE A TURBINE GENERATOR TRIP WHICH SUBSEQUENTLY RESULTS IN A REACTOR SCRAM ABOVE 30% POWER WHEN THE TURBINE STOP VALVES CLOSE. REACTOR WATER LEVEL AND PRESSURE WERE QUICKLY BROUGHT UNDER CONTROL, NO ECCS OR PCIS ACTUATIONS WERE REQUIRED AND RPS INSERTED ALL CONTROL RODS. DISCIPLINARY ACTION WAS CARRIED OUT ON THE TECHNICIAN INVOLVED.

[156] LA SALLE 1 DOCKET 50-373 LER 84-011
 LOSS OF CONDENSER VACUUM CAUSES SCRAM.
 EVENT DATE: 021384 REPORT DATE: 031484 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
 VENDOR: TEMP FLEX DIV. ASSOCIATED PIPING

(NSIC 189190) A UNIT 1 SCRAM RESULTED WHEN THE TURBINE GENERATOR TRIPPED FROM LOSS OF CONDENSER VACUUM. THERE WAS NO TESTING OR MAINTENANCE IN PROGRESS THAT CAUSED THE TRIP. THE REACTOR ISOLATED ON A GROUP 1 PCIS SIGNAL DUE TO THE LOSS OF VACUUM. RCIC AND SRV'S WERE USED TO CONTROL REACTOR WATER LEVEL AND PRESSURE. THE TURBINE GENERATOR LOST VACUUM BECAUSE AN EXPANSION JOINT IN THE 14A LOW PRESSURE HEATER EXTRACTION STEAMLINE FAILED, RUPTURING THE BOOT SEAL BETWEEN THE TURBINE AND CONDENSER. THE EXPANSION JOINT LINER WAS REDESIGNED TO REDUCE VIBRATION WHICH IS THOUGHT TO BE THE FAILURE MECHANISM AND NEW EXPANSION JOINTS WERE INSTALLED IN EXTRACTION STEAMLINES TO THE 14A/B/C LOW PRESSURE HEATERS. THE BOOT SEAL IN THE A CONDENSER HOOD WAS ALSO REPAIRED. A LOSS OF SERVICE AIR RESULTED IN A UNIT 2 SCRAM BECAUSE SCRAM AIR HEADER PRESSURE REDUCED TO A POINT THAT ALLOWED THE SCRAM VALVES TO OPEN. UNIT 2 REACTOR WAS IN COLD SHUTDOWN, RECENTLY HAVING COMPLETED INITIAL FUEL LOAD. THE SERVICE AIR HEADER WAS CROSSCONNECTED BETWEEN THE UNITS AND THE U-1 SERVICE AIR COMPRESSOR SURGED AND WOULD NOT RELOAD SHORTLY AFTER THE UNIT 1 SCRAM. THE ONLY OTHER RUNNING AIR COMPRESSOR COULD NOT MAINTAIN SYSTEM PRESSURE.

[157] LA SALLE 1 DOCKET 50-373 LER 84-012
 CONTAINMENT LEAKAGE LIMIT EXCEEDED.
 EVENT DATE: 021484 REPORT DATE: 031584 NSSS: GE TYPE: BWR
 VENDOR: ACF INDUSTRIES INC.
 ANCHOR/DARLING VALVE CO.

(NSIC 189129) ON FEB. 14, 1984 WITH UNIT ONE SHUTDOWN, LOCAL LEAK RATE TESTS WERE PERFORMED. IT WAS DETERMINED THAT THE TECH SPEC 3.6.1.2 LIMIT OF .6LA WAS EXCEEDED. THE LEAKING VALVES WERE: 1B21-F010A, 1HG001A/2A, 1HG005B/6B, AND 1RE024/25. THE FEEDWATER CHECK VALVE LEAKAGE WAS A RESULT OF A MISALIGNMENT PROBLEM WHICH PREVENTED THE DISC FROM CLOSING SQUARELY AGAINST THE SEAT. VISUAL INSPECTIONS OF THE SOFT SEAL MATERIAL SHOWED IT TO BE IN GOOD CONDITION. THE HG VALVE SEATS SHOWED SOME SLIGHT PITTING, POSSIBLY A RESULT OF CONDENSATION/OXIDATION IN THE LINE. THE VALVE SEATS WERE WORN SLIGHTLY WITH MINUTE GROOVES WORN INTO THE VALVE DISCS. SOME DEBRIS WAS ALSO FOUND IN THE LINE. THE FW CHECK VALVE WAS WORKED ON TO CORRECT THE MISALIGNMENT PROBLEM. THE HINGE PINS WERE MACHINED TO EQUALIZE SIDE CLEARANCES AND ELIMINATE SIDE SHIFTS. THE HG VALVE SEATS AND DISCS WERE LAPPED TO REMOVE THE PITTED SURFACES. THE VALVE DISCS WERE MACHINED TO REMOVE THE SMALL GROOVES AND ALL DEBRIS WAS REMOVED. ACCEPTABLE LEAK RATE TESTS WERE PERFORMED ON ALL VALVES.

[158] LA SALLE 1 DOCKET 50-373 LER 84-008
 SCRAM OCCURS FOLLOWING BUMPED IRM CABLE.
 EVENT DATE: 021884 REPORT DATE: 031384 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CORP. (NUCLEAR ENG DIV)

(NSIC 189126) ON 2-18-84 AT 2045 HOURS, A NONCOINCIDENT SCRAM OCCURRED FROM AN UPSCALE TRIP ON IRM E. MECHANICAL MAINTENANCE PERSONNEL WERE WORKING UNDERNEATH THE VESSEL ON CRD 26-35 AND INADVERTENTLY BUMPED IRM E CAUSING THE EVENT. AT THE TIME OF THE OCCURRENCE, THE UNIT WAS IN REFUEL MODE WITH THE SHORTING LINKS REMOVED. THIS EVENT DID NOT AFFECT PLANT SAFETY. OPERATIONS RESET THE SCRAM AND MMD PERSONNEL WERE NOTIFIED OF THE SENSITIVITY OF THE IRM CABLES.

[159] LA SALLE 1 DOCKET 50-373 LFR 84-010
 RPS ACTIVATION FROM AN IRM.
 EVENT DATE: 021984 REPORT DATE: 031384 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CORP. (NUCLEAR ENG DIV)

(NSIC 189128) ON 2-19-84 AT 1010 HOURS A NONCOINCIDENT SCRAM OCCURRED FROM AN UPSCALE TRIP ON IRM A. MECHANICAL MAINTENANCE PERSONNEL WERE WORKING UNDERNEATH THE VESSEL ON CRD 10-47 AND INADVERTENTLY BUMPED IRM A CAUSING THE EVENT. AT THE TIME OF THE OCCURRENCE, THE UNIT WAS IN REFUEL MODE WITH THE SHORTING LINKS REMOVED. THIS EVENT DID NOT AFFECT PLANT SAFETY. OPERATIONS RESET THE SCRAM AND MMD PERSONNEL WERE NOTIFIED OF THE SENSITIVITY OF THE IRM CABLES.

[160] LA SALLE 2 DOCKET 50-374 LER 84-001
 VOLTAGE SPIKE CAUSES SCRAM.
 EVENT DATE: 010584 REPORT DATE: 013184 NSSS: GE TYPE: BWR
 VENDOR: AMPHENOL

(NSIC 189066) ON 1/5/84 AT 1418 A REACTOR SCRAM OCCURRED FROM "E" IRM CHANNEL. AN IM WAS WORKING IN THE UNDERVESSEL AREA AT THE TIME. THE IM BUMPED "E" IRM CABLE AND CONNECTOR. A SPIKE CAUSED A REACTOR SCRAM. THE RPS "SHORTING LINKS" WERE REMOVED, INITIAL FUEL LOAD WAS IN PROGRESS. NO ROD MOTION OCCURRED. ALL RPS COMPONENTS FUNCTIONED AS DESIGNED.

[161] LA SALLE 2 DOCKET 50-374 LER 84-002
 VOLTAGE SPIKE CAUSES SCRAM.
 EVENT DATE: 011384 REPORT DATE: 021084 NSSS: GE TYPE: BWR
 VENDOR: AMPHENOL

(NSIC 189067) AT 0540 ON JANUARY 13, 1984, A REACTOR SCRAM WAS INITIATED FROM A SPURIOUS HI IRM SPIKE ON CHANNEL "C". THE REACTOR WAS IN THE REFUEL MODE WITH ALL CONTROL RODS INSERTED. THE RPS SHORTING LINKS WERE REMOVED WHICH PERMITTED A SINGLE IRM CHANNEL TRIP TO INSERT A FULL SCRAM. THE IRM AND RPS SYSTEMS PERFORMED AS EXPECTED. THE SCRAM PROBABLY RESULTED FROM A SPURIOUS SPIKE CREATED BY LOOSE IRM CABLE CONNECTOR FITTINGS. NO OTHER MECHANISM WAS IDENTIFIED AND IRM SPIKES HAVE OCCURRED WHICH ARE ATTRIBUTED TO THESE CONNECTORS. A WORK REQUEST TO REPLACE THE IRM CABLE CONNECTORS WAS INITIATED PRIOR TO THIS EVENT AND WAS PARTIALLY COMPLETE WHEN THE SCRAM OCCURRED.

[162] LA SALLE 2 DOCKET 50-374 LER 84-003
 FAILURE OF ACB TO TRIP.
 EVENT DATE: 020284 REPORT DATE: 030184 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189131) DURING THE PERFORMANCE OF LTS-800-3, ON FEB. 2, 1984, AN OVERCURRENT SIGNAL WAS MANUALLY INITIATED ON THE DIESEL GENERATOR 2B PROTECTIVE

RELAY. SINCE THE DIESEL GENERATOR WAS PARALLELED WITH THE SYSTEM AUXILIARY TRANSFORMER (SAT) THE SAT FEED BREAKER SHOULD TRIP. NO TRIP OCCURRED BECAUSE THE AUXILIARY CONTACTS ON THE DIESEL GENERATOR DID NOT OPERATE WHEN THE BREAKER OPERATED. A PLUNGER ON THE BREAKER WAS FOUND TO BE TOO SHORT TO ACTUATE THE AUXILIARY CONTACTS. THE PLUNGER WAS LENGTHENED PER THE VENDOR MANUAL ON WORK REQUEST L32694. THE CIRCUITRY WAS SATISFACTORILY TESTED PER LST-84-70 ON FEB. 28, 1984. THE DIESEL GENERATOR 2B HAD NOT BEEN DECLARED OPERABLE SINCE UNIT 2 LICENSE, THEREFORE, SAFE PLANT OPERATION WAS MAINTAINED.

[163] LA SALLE 2 DOCKET 50-374 LER 84-004
 DIVISION TWO ISOLATION.
 EVENT DATE: 021284 REPORT DATE: 030684 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 1 (BWR)

(NSIC 189281) ON FEBRUARY 12, 1984, AT 0707 HOURS, A DIVISION TWO ISOLATION SIGNAL WAS RECEIVED ON UNIT 2. PCIS GROUPS 1 THRU 7 WERE ACTUATED (EXCEPT FOR THE MSIV'S). THIS ALSO CAUSED A SECONDARY CONTAINMENT ISOLATION, UNITS 1 AND 2, AND BOTH STANDBY GAS TREATMENT SYSTEMS TO START (UNIT 1 WAS RESTORED WITHIN 1 HOUR). THE CAUSE OF THE OCCURENCE WAS ATTRIBUTED TO AN ELECTRICAL FUSE BLOWING ON THE DC INBOARD ISOLATION LOGIC, IN PANEL 2PA14J. THIS FUSE BLOWING HAD THE SAME EFFECT AS IF THE "D" MANUAL ISOLATION PUSHBUTTON WERE DEPRESSED. AT THE TIME OF THE OCCURENCE, THE UNIT 2 REACTOR WAS IN REFUEL, AND UNIT 1 REACTOR AT APPROXIMATELY 85% POWER. THE CONSEQUENCES OF THIS EVENT WERE MINIMAL SINCE UNIT 2 HAS NOT YET BEEN CRITICAL, AND PRIMARY CONTAINMENT HAS NEVER BEEN ESTABLISHED. THE BLOWN FUSE WAS REPLACED AT THE 2PA14J PANEL. ALL DIVISION 2 ISOLATIONS WERE RESET BACK TO NORMAL WITH THE REACTOR BUILDING VENTILATION AND STANDBY GAS TREATMENT SYSTEM SECURED. NO REASON FOR THE FUSE BLOWING CAN BE DETERMINED.

[164] LA SALLE 2 DOCKET 50-374 LER 84-005
 HPCS PUMP BREAKER FAILS TO CLOSE.
 EVENT DATE: 021584 REPORT DATE: 031584 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189132) ON FEB. 15, 1984, AT 2100 HRS, DURING THE PERFORMANCE OF LOS-HP-Q1 (HPCS SYSTEM INSERVICE TEST), THE HPCS PUMP BREAKER FAILED TO RECLOSE A SECOND TIME. DURING THIS TIME, UNIT 2 REACTOR WAS IN MODE 4 (COLD SHUTDOWN). THE CAUSE OF THIS OCCURENCE WAS ATTRIBUTED TO A BREAKER POSITION SWITCH, 52 LS, ASSOCIATED WITH THE SWITCHGEAR CLOSING CIRCUIT. WHEN THE BREAKER WAS CYCLED FOR A SECOND TIME, THE BREAKER POSITION SWITCH, 52 LS, FAILED TO STAY CLOSED; THIS PREVENTED THE BREAKER CLOSING COIL FROM ENERGIZING AND CLOSING THE BREAKER CONTACTS. NORMALLY WHEN THE BREAKER IS RACKED-UP, THIS POSITION SWITCH ENABLES THE CLOSING COIL CIRCUIT. ANALYSIS OF THE OCCURENCE INDICATES THAT THE BREAKER MAY NOT HAVE BEEN RACKED-IN COMPLETELY BY ITS MOTOR. UPON CYCLING THE BREAKER A SECOND TIME, THE BREAKER MOVED DOWN IN THE SWITCHGEAR, OPENING THE POSITION SWITCH. THE CONSEQUENCES OF THIS EVENT WERE MINIMAL. IF AN INJECTION SIGNAL (LOW VESSEL LEVEL) HAD BEEN PRESENT, HPCS WOULD HAVE INITIATED AS REQUIRED. IF AFTER RESETTING THE INITIATION LOGIC, ANOTHER INITIATION SIGNAL OCCURRED, HPCS WOULD HAVE FAILED TO OPERATE. WITHOUT HPCS INITIATION, LPCS AND LPCI WOULD HAVE INITIATED TO MAINTAIN VESSEL LEVEL. THE HPCS PUMP BREAKER WAS RERACKED, AND CYCLED 3 TIMES FROM THE CONTROL ROOM WITH NO PROBLEMS OBSERVED. A PLACARD WILL BE INSTALLED ON THIS SWITCHGEAR WARNING THE OPERATOR TO VERIFY COMPLETE RACKING OF THE BREAKERS.

[165] LA SALLE 2 DOCKET 50-374 LER 84-007
 REACTOR WATER CLEANUP ISOLATES ON VENT HI DIFF TEMP.
 EVENT DATE: 021884 REPORT DATE: 032184 NSSS: GE TYPE: BWR
 VENDOR: AMERICAN WARMING & VENTILATING INC.
 RILEY COMPANY, THE - PANALARM DIVISION

(NSIC 189134) AT 0402 ON 2/18/84, UNIT 2 REACTOR WATER CLEANUP (IJ) ISOLATED ON "A" PUMP ROOM H1 DIFFERENTIAL TEMPERATURE. THE CAUSE OF THE TRIP HAS BEEN DETERMINED TO BE A DIFFERENCE IN THE ROOM TEMPERATURE CAUSED BY A MISCONFIGURATION OF THE AREA VENTILATION SYSTEM. SARGENT AND LUNDY IS REVIEWING FOR THE MOST ACCEPTABLE SOLUTION.

[166] LA SALLE 2 DOCKET 50-374 LER 84-006
 REACTOR WATER CLEANUP SYSTEM ISOLATES ON VENT HIGH DIFFERENTIAL TEMPERATURE.
 EVENT DATE: 022384 REPORT DATE: 032284 NSSS: GE TYPE: BWR
 VENDOR: AMERICAN WARMING & VENTILATING INC.
 RILEY COMPANY, THE - PANALARM DIVISION

(NSIC 189133) AT 2130 ON 2/23/84, THE UNIT 2 REACTOR WATER CLEANUP (RWCU) SYSTEM ISOLATED ON A PUMP ROOM 'C' VENTILATION DIFFERENTIAL TEMPERATURE (DELTA T) HIGH. AT THE TIME OF THE RWCU ISOLATION, THE UNIT 2 REACTOR WAS IN COLD SHUTDOWN, OPERATING CONDITION 4. THE RWCU LEAK DETECTION SYSTEM WAS THEN BYPASSED, THE ISOLATION SIGNAL RESET, AND THE RWCU SYSTEM RESTARTED. THE CAUSE OF THE RWCU ISOLATION APPEARS TO BE THE RESULT OF A NORMAL OPERATING TEMPERATURE GRADIENT ACROSS THE PUMP ROOMS DUE TO COLD REACTOR BUILDING AIR BLASTING THE INLET TEMPERATURE ELEMENTS VIA THE ROOM GRAVITY DAMPERS. ACTION ITEM RECORDS #1-84-67030 AND 1-84-67038, AND WORK REQUEST L34337 HAVE BEEN GENERATED TO INVESTIGATE THE UNIT 2 RWCU PUMP ROOM VENTILATION PROBLEM WITH RECOMMENDATIONS TO MOVE OR SHIELD THE AFFECTED INLET TEMPERATURE ELEMENTS, AND TO REPAIR THE UNIT 2 REACTOR BUILDING VENTILATION FLOW SENSING EQUIPMENT TO ALLOW THE BLAST COILS TO ENERGIZE PER DESIGN.

[167] LA SALLE 2 DOCKET 50-374 LER 84-011
 REACTOR VESSEL WATER LEVEL HIGH-HPCS INJECTION VALVE CLOSURE.
 EVENT DATE: 031684 REPORT DATE: 041084 NSSS: GE TYPE: BWR
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 189310) ON MARCH 16, 1984 AT 1000 HOURS DURING PERFORMANCE OF LIS-HP-10, THE SETPOINTS OF 2B21-N100A AND N100B WERE FOUND OUT OF TOLERANCE IN THE NONCONSERVATIVE DIRECTION. THESE SWITCHES PERFORM THE AUTO CLOSE OF THE HIGH PRESSURE CORE SPRAY (HPCS, BG) INJECTION VALVE ON HIGH WATER (LEVEL 8). AS A RESULT, THE HPCS INJECTION VALVE WOULD NOT HAVE CLOSED UNTIL +66.52" VESSEL LEVEL, WHICH EXCEEDS THE TECH SPEC LCO OF LESS THAN OR EQUAL TO 56.0". OUT OF TOLERANCE IN THE NONCONSERVATIVE DIRECTION HAS BEEN ATTRIBUTED TO INSTRUMENT DRIFT DURING NORMAL USAGE AND HAS OCCURRED ON SEVERAL OCCASIONS IN THE PAST. TREND ANALYSIS IS CURRENTLY IN PROGRESS FOR THESE SWITCHES, BARTON MODEL 288A, AND THE RESULTS WILL DETERMINE WHETHER INSTRUMENT REPLACEMENT IS THE APPROPRIATE ACTION. AS A RESULT OF THE EVENT, THE CONSEQUENCES WERE MINIMAL SINCE THE UNIT WAS IN COLD SHUTDOWN, MODE 4, AND HAD NEVER BEEN PRESSURIZED WITH NUCLEAR STEAM. THE SWITCHES WERE IMMEDIATELY RECALIBRATED TO WITHIN TOLERANCE PER THE LIS UPON DISCOVERY.

[168] LACROSSE DOCKET 50-409 LER 84-001
 REACTOR SCRAM.
 EVENT DATE: 010784 REPORT DATE: 013184 NSSS: AC TYPE: BWR

(NSIC 189077) DURING A PLANT STARTUP, THE 1A 480V ESSENTIAL BUS MAIN FEED BREAKER OPENED. THE 1A EMERGENCY DIESEL GENERATOR STARTED AND ASSUMED THE 1A 480V ESSENTIAL BUS LOAD. THE REACTOR SCRAMMED FROM APPROXIMATELY 30 PERCENT POWER. IT WAS DETERMINED THAT THE BREAKER TRIPPED DUE TO UNDERVOLTAGE AS A RESULT OF THE PICKUP VOLTAGE BEING SET TOO HIGH. THE PICKUP VOLTAGE IS THE VOLTAGE AT WHICH THE UNDERVOLTAGE RELAY INDUCTION DISK STARTS ROTATING. THE 69KV GRID LINE VOLTAGE HAD DECREASED FROM THE NORMAL 118V (70.8KV) TO 116V (69.6KV), WHICH CAUSED THE BREAKER UNDERVOLTAGE RELAY DISK TO START ROTATING AND EVENTUALLY TRIP

THE BREAKER. MAINTENANCE HAD BEEN PERFORMED ON THE UNDERVOLTAGE RELAY DURING THE REFUELING OUTAGE DUE TO THE RECEIPT OF NEW TECH SPECS WHICH ESTABLISHED HIGHER UNDERVOLTAGE TRIP SETPOINTS. FOLLOWING THE COMPLETION OF MAINTENANCE, THE PICKUP VOLTAGE HAD NOT BEEN CHECKED. IT HAD HOWEVER BEEN AFFECTED BY THE ADJUSTMENTS WHICH WERE PERFORMED. THE PICKUP VOLTAGE WAS RESET FOLLOWING THE REACTOR SCRAM.

[169] LACROSSE DOCKET 50-409 LER 84-003
ECCS START AND CONTAINMENT BUILDING (CB) ISOLATION DUE TO HIGH CB PRESSURE SIGNAL.
EVENT DATE: 022084 REPORT DATE: 031284 NSSS: AC TYPE: BWR

(NSIC 189078) DURING STEADY STATE OPERATION, AN ERRONEOUS HIGH CONTAINMENT BUILDING PRESSURE SIGNAL OCCURRED WHEN A FUSE FAILED. THE 1A HIGH PRESSURE CORE SPRAY PUMP AND 1A HIGH PRESSURE SERVICE WATER/ALTERNATE CORE SPRAY (HPSW/ACS) PUMP STARTED AND CONTAINMENT BUILDING ISOLATION VALVES WHICH CLOSE ON HIGH CONTAINMENT BUILDING PRESSURE CLOSED. THE 1A HIGH PRESSURE CORE SPRAY PUMP INJECTED WATER INTO THE REACTOR FOR LESS THAN A MINUTE PRIOR TO BEING SECURED. THE 1A HPSW/ACS PUMP WAS SECURED WITHOUT WATER INJECTION. THE FUSE WAS REPLACED, WHICH CLEARED THE HIGH PRESSURE SIGNAL. SYSTEMS WERE RESTORED TO NORMAL. REACTOR OPERATION WAS MINIMALLY AFFECTED BY THIS INCIDENT.

[170] MAINE YANKEE DOCKET 50-309 LER 83-044
MOTOR DRIVEN AUX FEEDWATER PUMP OUT OF SERVICE DURING STARTUP.
EVENT DATE: 121083 REPORT DATE: 010984 NSSS: CE TYPE: PWR

(NSIC 188684) DURING PLANT STARTUP, THE POWER OPERATING CONDITION WAS REACHED WITH P-25A, A MOTOR DRIVEN STEAM GENERATOR AUXILIARY FEEDWATER PUMP, OUT OF SERVICE. EXCESSIVE VIBRATION IN THE PUMP, AFTER PARTS HAD BEEN INSTALLED TO CORRECT AN EXCESSIVE SEAL LEAKAGE PROBLEM, FORCED ADDITIONAL REPAIR WORK. THE OTHER MOTOR DRIVEN STEAM GENERATOR AUXILIARY FEEDWATER PUMP WAS AVAILABLE DURING THIS PERIOD AND WOULD HAVE AUTOMATICALLY STARTED IN THE EVENT OF A LOW STEAM GENERATOR WATER LEVEL. INITIALLY NEW THRUST BEARING SHOES, SHAFT SLEEVE, STUFFING BOX BUSHING, BEARING LINING AND GLAND SEAL PACKING WERE INSTALLED PRIMARILY TO REPAIR AN EXCESSIVE SEAL LEAKAGE PROBLEM. SINCE THE PUMP CASING HAD NOT BEEN OPENED, MAINTENANCE PERSONNEL DECIDED NOT TO PERFORM A FULL SHAFT AXIAL REALIGNMENT. AFTER REASSEMBLY THE PUMP VIBRATED EXCESSIVELY INDICATING POSSIBLE AXIAL MISALIGNMENT. DISASSEMBLY AND INSPECTION SHOWED THE BALANCING DRUM CLEARANCES TO BE OUT OF TOLERANCE, A DAMAGED RADIAL BEARING AND DAMAGED THRUST BEARINGS. THE OLD THRUST BEARINGS WERE INSTALLED AND THE BALANCING DRUM CLEARANCE SHIMMED TO WITHIN TOLERANCE. UPON REASSEMBLY THE PUMP TESTED SATISFACTORILY.

[171] MAINE YANKEE DOCKET 50-309 LER 84-001
MANUAL PLANT TRIP DURING A POWER REDUCTION FOR A DROPPED CONTROL ROD.
EVENT DATE: 011284 REPORT DATE: 021384 NSSS: CE TYPE: PWR
VENDOR: POWER-MATE

(NSIC 189327) WHILE OPERATING AT 80% TO ELIMINATE CONDENSER CHLORIDE INTRUSION, A CONTROL ELEMENT ASSEMBLY (CEA) DROPPED INTO THE CORE AT 0758 DURING A CONTROL ELEMENT DRIVE SYSTEM (CEDs) ALARM INVESTIGATION. A RAPID POWER REDUCTION WAS INITIATED IN ACCORDANCE WITH THE DROPPED CEA PROCEDURE. THE CEA COULD NOT BE WITHDRAWN MORE THAN 36 OF 181 STEPS. DURING THE POWER REDUCTION, TURBINE LOAD WAS REDUCED MORE QUICKLY THAN REACTOR POWER. IN ADDITION TO OTHER EFFECTS, THIS MISMATCH CAUSED A RAPID INCREASE IN STEAM GENERATOR PRESSURE AND AN ASSOCIATED SHRINK IN STEAM GENERATOR LEVEL. SINCE THE 100% CAPACITY TURBINE DRIVEN FEED PUMP (TDFP) DID NOT APPEAR TO BE RECOVERING STEAM GENERATOR LEVELS, A 50% CAPACITY MOTOR DRIVEN FEED PUMP (MDFP) WAS STARTED TO ASSIST. COINCIDENT OPERATION OF BOTH PUMPS RESULTED IN LOW CONDENSATE SYSTEM PRESSURE AND A LOW SUCTION PRESSURE TDFP TRIP. SINCE THE REMAINING OPERATING MDFP COULD NOT PROVIDE

REQUIRED FEED FLOW FOR THE EXISTING 73% POWER LEVEL, THE PLANT WAS MANUALLY TRIPPED AT 0821. AS A RESULT OF A SUBSEQUENT MANAGEMENT REVIEW BOARD INVESTIGATION, OPERATORS WERE CAUTIONED AGAINST RUNNING THE TWO DIFFERENT TYPES OF PUMPS IN PARALLEL AND INSTALLATION OF A TDFP LOW SUCTION PRESSURE TRIP TIME DELAY WAS EXPEDITED.

[172] MAINE YANKEE DOCKET 50-309 LER 84-002
 REPLACEMENT OF SAFETY RELATED SHOCK SUPPRESSORS.
 EVENT DATE: 012584 REPORT DATE: 022184 NSSS: CE TYPE: PWR

(NSIC 189221) MAINE YANKEE IS INTENTIONALLY ENTERING THE REMEDIAL ACTION OF TECH SPEC 3.20 TO REPLACE SAFETY RELATED SHOCK SUPPRESSORS AT POWER AS PART OF AN EXTENSIVE OVERHAUL PROGRAM. TO ENSURE THAT THEIR SERVICE LIFE WILL NOT EXPIRE PRIOR TO THE 1985 REFUELING OUTAGE, FIFTY-SIX OF SEVENTY-TWO HYDRAULIC SNUBBERS WILL BE REBUILT PRIOR TO THE END OF THE 1984 REFUELING OUTAGE. TO EXPEDITE THE PROGRAM, SIXTEEN SNUBBERS ARE BEING REMOVED ONE AT A TIME AND IMMEDIATELY REPLACED WITH PREVIOUSLY REBUILT UNITS WHILE AT POWER UNDER THE TECH SPEC 3.20 REMEDIAL ACTION. THE REMAINING SHOCK SUPPRESSORS WILL BE REBUILT DURING THE UPCOMING 1984 REFUELING PERIOD. THIS EVENT IS NOT SPECIFICALLY REPORTABLE IN ACCORDANCE WITH 10CFR 50.73. MAINE YANKEE HAS DISCUSSED THIS MATTER WITH THE SENIOR RESIDENT INSPECTOR AND THIS LER IS BEING SUBMITTED FOR INFORMATION AT HIS REQUEST.

[173] MCGUIRE 5 DOCKET 50-369 LER 84-004
 LEAK CHECK OF INCORE DETECTOR NOT PERFORMED WITHIN 31 DAYS PRIOR TO INSTALLATION.
 EVENT DATE: 111783 REPORT DATE: 032684 NSSS: WE TYPE: PWR

(NSIC 189188) PRIOR TO INSTALLATION OF AN INCORE DETECTOR ON NOVEMBER 17, 1983, A SOURCE LEAK TEST WAS NOT PERFORMED. PURSUANT TO TECH SPEC SECTION 3.7.9, A LEAK TEST IS REQUIRED WITHIN 31 DAYS PRIOR TO INSTALLATION OF THE DETECTOR IN THE REACTOR CORE. "THIS INCIDENT IS ATTRIBUTED TO PERSONNEL ERROR, WITH A CONTRIBUTING PROCEDURAL DEFICIENCY. THE PROCEDURE, "MOVABLE INCORE DETECTOR MAINTENANCE," DID NOT REQUIRE A SIGNOFF WHEN PERSONNEL WERE CONTACTED TO PERFORM THE LEAK TEST. UNIT 1 WAS IN MODE 1 AT 96% POWER AT THE TIME OF THIS INCIDENT. THE PROCEDURE WILL BE REVISED TO REQUIRE A SIGNOFF AT THE STEP REQUIRING A LEAK CHECK ON THE NEW DETECTOR. THIS INCIDENT WILL BE COVERED WITH ALL APPROPRIATE PERSONNEL.

[174] MCGUIRE 1 DOCKET 50-369 LER 84-001
 UNAUTHORIZED REMOVAL OF SUPPORT/RESTRAINTS.
 EVENT DATE: 010984 REPORT DATE: 021584 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: MCGUIRE 2 (PWR)

(NSIC 189063) DURING UNRELATED MAINTENANCE ACTIVITY ON SEPTEMBER 16, 1983 IN THE AUXILIARY BUILDING, MAINTENANCE PERSONNEL FOUND A UNIT 1 VALVE SUPPORT CLAMP REMOVED AND THE SUPPORT REMOVED FROM ITS NORMAL POSITION UNDER VALVE 1KC-51A ON THE COMPONENT COOLING SYSTEM. DURING A MAINTENANCE INSPECTION ON 733' ELEVATION ON OCTOBER 16, 1983, MAINTENANCE PERSONNEL IDENTIFIED TWO UNIT 1 SAFETY INJECTION SYSTEM 1" DIAMETER PIPE SUPPORT/RESTRAINTS (S/RS), ONE WHICH WAS UNBOLTED AND ONE WHICH WAS LOOSENED FROM THE CLAMP SECTION OF THE S/R. DURING A HOUSEKEEPING INSPECTION ON OCTOBER 21, 1983, TWO UNIT 2 SUPPORT/RESTRAINTS FOR A 2" DIAMETER MAIN FEEDWATER (MF) PIPE WERE FOUND REMOVED FROM THEIR MOUNTINGS AND LYING ON THE FLOOR. DURING SUBSEQUENT INSERVICE INSPECTION MAINTENANCE PERSONNEL FOUND TWO ADDITIONAL 2" DIAMETER PIPE S/RS REMOVED FROM THE MF SYSTEM. THESE INCIDENTS ARE EXAMPLES OF AN ADMINISTRATIVE DEFICIENCY IN THAT THE S/R INSTALLATION AND REMOVAL AND REPLACEMENT PROGRAM WAS NOT PROPERLY IMPLEMENTED ON THESE OCCASIONS. THE SUPPORT/RESTRAINTS WERE REINSTALLED, REPAIRED, OR DELETED AS APPROPRIATE, AND AN INSPECTION OF ALL HANGERS IN THE MF SYSTEM CONDUCTED. THE "HANGER, INSTALLATION,

AND REMOVAL AND REPLACEMENT PROCEDURE" WILL BE REVIEWED WITH ALL APPROPRIATE PERSONNEL TO ENSURE PROPER IMPLEMENTATION OF THE S/R CONTROL PROGRAM.

[175] MCGUIRE 1 DOCKET 50-369 LER 84-003
 IMPROPER REMOVAL AND RESTORATION OF CENTRIFUGAL CHARGING PUMP BREAKER.
 EVENT DATE: 022084 REPORT DATE: 032184 NSSS: WE TYPE: PWR

(NSIC 189187) ON FEBRUARY 20, 1984 DURING NORMAL ROTATION OF EQUIPMENT, AN UNSUCCESSFUL ATTEMPT WAS MADE TO START CENTRIFUGAL CHARGING PUMP 1A. THE PUMP'S BREAKER WAS SUBSEQUENTLY DISCOVERED NOT IN THE FULLY "CONNECT" POSITION. ON FEBRUARY 13, 1984 THE BREAKER HAD BEEN MOVED TO THE "DISCONNECT" POSITION TO OBTAIN A ROUTINE OIL SAMPLE FOR ANALYSIS. FOLLOWING THE SAMPLING THE CIRCUIT BREAKER WAS NOT SUCCESSFULLY RETURNED TO THE "CONNECT" POSITION (THE BREAKER RACKING LEAD SCREW WAS APPROXIMATELY ONE HALF TURN FROM THE "CONNECT" POSITION). THIS IS ATTRIBUTED TO PERSONNEL ERROR BECAUSE THE BREAKER WAS IMPROPERLY CONNECTED AND INDEPENDENT VERIFICATION OF THE BREAKER POSITION WAS NOT PROPERLY PERFORMED. THE PUMP REMAINED INOPERABLE DURING THE PERIOD FROM FEBRUARY 13 TO FEBRUARY 20, DURING WHICH TIME UNIT 1 WAS IN MODE 1 AT 95% POWER. THIS BREAKER WAS MOVED TO THE "CONNECT" POSITION AND THE PUMP WAS STARTED ON FEBRUARY 20, 1984. THIS EVENT HAS BEEN THOROUGHLY COVERED WITH APPROPRIATE PERSONNEL, AND THE IMPORTANCE OF INDEPENDENT VERIFICATION AND DAILY VERIFICATION STRESSED. A PROCEDURE WILL BE WRITTEN TO COVER THE CONNECTING/DISCONNECTING OF BREAKERS. DISCIPLINARY ACTIONS HAVE BEEN TAKEN AGAINST APPROPRIATE PERSONNEL.

[176] MCGUIRE 1 DOCKET 50-369 LER 84-005
 INADVERTENT BLACKOUT SIGNAL GENERATED RESULTING IN DIESEL GENERATOR 1B STARTING.
 EVENT DATE: 030284 REPORT DATE: 040284 NSSS: WE TYPE: PWR

(NSIC 189296) ON MARCH 2, 1984 AT APPROXIMATELY 1115, WHILE DRILLING A HOLE ON THE DIESEL GENERATOR 1B LOAD SEQUENCER PANEL FOR A MODIFICATION, THE DRILL BIT STRUCK SOME WIRES INSIDE THE CABINET, CAUSING A SHORT CIRCUIT. THIS SHORT CIRCUIT CAUSED A BLACKOUT SIGNAL TO BE GENERATED. THE BLACKOUT SIGNAL STARTED DIESEL GENERATOR (D/G) 1B WHICH WAS SUBSEQUENTLY LOADED BY THE LOAD SEQUENCER. THE SHORT CIRCUITED WIRES WERE SEPARATED. TWO FUSES WERE REPLACED, AND THE BLACKOUT SIGNAL WAS CLEARED AT 1625. THIS INCIDENT IS ATTRIBUTED TO PERSONNEL ERROR DUE TO THE ELECTRICIAN NOT TAKING THE NECESSARY PRECAUTIONS WHEN DRILLING HOLES IN THE CABINET. UNIT 1 WAS IN MODE 5 AT THE TIME OF THE INCIDENT.

[177] MCGUIRE 1 DOCKET 50-369 LER 84-006
 DIESEL GENERATORS START DUE TO A DISTRIBUTION SYSTEM DISTURBANCE.
 EVENT DATE: 030584 REPORT DATE: 040484 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: MCGUIRE 2 (PWR)

(NSIC 189298) DIESEL GENERATORS (D/G) 1B, 2A, AND 2B EXPERIENCED AN INVALID AUTOMATIC START ON MARCH 5, 1984 (D/G 1A WAS INOPERABLE DUE TO MAINTENANCE). THE D/G'S STARTED ON A BLACK-OUT SIGNAL GENERATED BY A MOMENTARY POWER DISTRIBUTION SYSTEM DISTURBANCE WHEN THE SOUTH MOUNTAIN TRANSMISSION LINE EXPERIENCED A FAULT. UNIT 1 WAS IN MODE 5 AND UNIT 2 WAS IN MODE 3 AT THE TIME OF THIS OCCURRENCE. THIS INCIDENT IS ATTRIBUTED TO AN UNUSUAL SERVICE CONDITION, DUE TO THE POWER DISTRIBUTION SYSTEM DISTURBANCE. THE BLACKOUT SIGNAL CLEARED IN LESS THAN 1 SECOND, THEREFORE, THE D/G'S WERE NOT LOADED. THE D/G'S WERE SHUT DOWN AFTER OPERATING FOR APPROXIMATELY 7-9 MINUTES.

[178] MCGUIRE 1 DOCKET 50-369 LER 84-007
 MISSED SURVEILLANCE ON UNIT 1 AND UNIT 2 REACTOR COOLANT PUMP OVERCURRENT PROTECTIVE DEVICES.
 EVENT DATE: 030684 REPORT DATE: 040584 NSSS: WE TYPE: PWR

OTHER UNITS INVOLVED: MCGUIRE 2 (PWR)

(NSIC 189297) ON MARCH 6, 1984, IT WAS DETERMINED THAT THE 18 MONTH FUNCTIONAL TESTING OF THE REACTOR COOLANT PUMP (NCP) TIME DELAY OVERCURRENT PROTECTIVE DEVICES WHICH HAD BEEN PERFORMED FOR UNIT 1 (ON FEBRUARY 21, 1983) AND UNIT 2 (ON JANUARY 13, 1984) WAS INADEQUATE FOR COMPLIANCE WITH TECH SPEC SURVEILLANCE REQUIREMENT 4.8.4.1.A.1.B. NCP 1B AND NCP 2A TIME DELAY (TD) OVERCURRENT RELAYS WERE SUBSEQUENTLY DECLARED INOPERABLE (THE TWO RELAYS WERE CHOSEN AT RANDOM TO MEET THE 10% TESTING REQUIREMENTS OF TECH SPEC 4.8.4.1.A.1). UNIT 1 WAS IN MODE 5 AND UNIT 2 WAS IN MODE 1 AT 98% POWER AT THE TIME OF DISCOVERY. THIS MISSED SURVEILLANCE IS ATTRIBUTED TO PROCEDURAL DEFICIENCY, IN THAT THE PROCEDURE DID NOT FUNCTIONALLY TEST THE TD OVERCURRENT RELAY TO ACTUALLY TRIP THE ASSOCIATED NCP. A REVISED PROCEDURE WAS DEVELOPED FOR BOTH UNITS. POWER ON UNIT 2 WAS REDUCED TO APPROXIMATELY 15% AND THE NCP 2A RELAY SATISFACTORILY RETESTED AND DECLARED OPERABLE (ON MARCH 7, 1984). ALL 8 TD OVERCURRENT RELAYS ON UNIT 1 WILL BE FUNCTIONALLY TESTED PRIOR TO ENTERING MODE 4, AND ALL 8 RELAYS ON UNIT 2 WILL BE TESTED AT THE NEXT UNIT 2 REFUELING.

[179] MCGUIRE 2 DOCKET 50-370 LER 84-007
LEAK CHECK OF INCORE DETECTORS NOT PERFORMED WITHIN 31 DAYS PRIOR TO INSTALLATION.
EVENT DATE: 011984 REPORT DATE: 032684 NSSS: WE TYPE: PWR

(NSIC 189189) PRIOR TO INSTALLATION OF TWO INCORE DETECTORS ON JANUARY 19 AND FEBRUARY 10, 1984, A SOURCE LEAK TEST WAS NOT PERFORMED. PURSUANT TO TECH SPEC SECTION 3.7.9, A LEAK TEST IS REQUIRED WITHIN 31 DAYS PRIOR TO INSTALLATION OF THE DETECTOR IN THE REACTOR COL.6. THIS INCIDENT IS ATTRIBUTED TO PERSONNEL ERROR WITH A CONTRIBUTING PROCEDURAL DEFICIENCY BECAUSE THE "MOVABLE INCORE DETECTOR MAINTENANCE" PROCEDURE DID NOT REQUIRE A SIGNOFF WHEN PERSONNEL WERE CONTACTED TO PERFORM THE LEAK TEST. UNIT 2 WAS IN MODE 4 AT THE TIME THIS INCIDENT WAS DISCOVERED. THE PROCEDURE WILL BE REVISED TO REQUIRE A SIGNOFF AT THE STEP REQUIRING A LEAK CHECK ON THE NEW DETECTOR. THIS INCIDENT WILL BE COVERED WITH ALL APPROPRIATE PERSONNEL.

[180] MCGUIRE 2 DOCKET 50-370 LER 84-003
OVERPRESSURIZATION DURING RCS LEAK TEST CAUSES REACTOR TRIP.
EVENT DATE: 012284 REPORT DATE: 022184 NSSS: WE TYPE: PWR

(NSIC 189064) A "REACTOR COOLANT SYSTEM LEAK TEST" IS PERFORMED PRIOR TO REACTOR START-UP IF THE REACTOR COOLANT SYSTEM HAS BEEN OPENED DURING UNIT SHUTDOWN. THE SYSTEM IS PRESSURIZED TO 2350-2400 PSIG, AND AN INSPECTION IS PERFORMED TO VERIFY LEAK TIGHTNESS OF THE SYSTEM. DURING PERFORMANCE OF THIS TEST ON JANUARY 22, 1984 A REACTOR TRIP OCCURRED AT 2324 WHEN PRESSURIZER PRESSURE EXCEEDED 2385 PSIG, THE SETPOINT FOR THE PRESSURIZER HIGH PRESSURE REACTOR TRIP. AT THE TIME UNIT 2 WAS IN MODE 3 WITH THE SHUTDOWN ROD BANKS WITHDRAWN. THIS INCIDENT IS ATTRIBUTED TO PERSONNEL ERROR BECAUSE THE CONTROL OPERATORS MONITORED PRESSURE FROM AN INSTRUMENT WHICH IS NOT PART OF THE TRIP LOGIC (I.E. REACTOR COOLANT SYSTEM WIDE RANGE PRESSURE RATHER THAN ONE OF THE PRESSURIZER PRESSURE CHANNELS), AND THEY CHOSE A TARGET SYSTEM PRESSURE TOO CLOSE TO THE TRIP SETPOINT, GIVEN INSTRUMENT ACCURACY. THE REACTOR TRIPPED AS DESIGNED AND NO ANOMALIES ARISING FROM THE TRANSIENT WERE OBSERVED. THE TEST PROCEDURE WILL BE REVISED TO REQUIRE THAT PRESSURE BE MONITORED FROM ONE OF THE PRESSURIZER PRESSURE CHANNELS.

[191] MILLSTONE 2 DOCKET 50-336 LER 83-009 REV 1
UPDATE ON INOPERABLE PLANT PROCESS COMPUTER.
EVENT DATE: 032683 REPORT DATE: 022384 NSSS: CE TYPE: PWR
VENDOR: IBM CORP.

(NSIC 189239) DURING STEADY STATE OPERATION THE PLANT PROCESS COMPUTER WHICH

PROVIDES INDICATION OF LINEAR HEAT RATE USING INCORE DETECTORS WAS DETERMINED TO BE INOPERABLE AND POWER WAS REDUCED TO 86% IN ACCORDANCE WITH ACTION B FOR THE EXCORE DETECTOR MONITORING SYSTEM LIMITS OF TECH SPEC SECTION 3.2.1. THE COMPUTER HAD BEEN INOPERABLE FOR NEARLY 5 HOURS AND THUS THE PLANT HAD BEEN OPERATING FOR MORE THAN 1 HOUR IN EXCESS OF THE LIMITS FOR EXCORE DETECTOR MONITORING SECTION 3.2.1. DURING TROUBLESHOOTING THE COMPUTER WAS RETURNED TO NORMAL OPERATION AND THE EXACT CAUSE OF FAILURE WAS A CIRCUIT CARD, IBM PART NO. 5800199. TOTAL TIME OUT OF SERVICE WAS 11 HOURS, 15 MINUTES. THE PRESENT PLANT PROCESS COMPUTER IS SCHEDULED TO BE REPLACED IN 1985 AND THAT REPLACEMENT COMPUTER WILL HAVE ALARM CAPABILITIES FOR PARTIAL OR TOTAL FAILURE.

[182] MILLSTONE 2 DOCKET 50-336 LER 84-003
 LEVELS IN SAFETY INJECTION TANKS OUT OF SPECIFICATION.
 EVENT DATE: 010384 REPORT DATE: 020284 NSSS: CE TYPE: PWR
 VENDOR: FOXBORO CO., THE

(NSIC 189054) DURING A NORMAL START-UP, WITH THE UNIT IN MODE 3 AT A TEMPERATURE OF 532 AND A PRESSURE OF 2260, ABNORMALITIES WERE OBSERVED IN #2 AND #3 SAFETY INJECTION TANKS. THIS ABNORMALITY CONSISTED OF AN INCREASING LEVEL IN BOTH TANKS WITHOUT ACTUALLY FEEDING EITHER TANK WITH WATER. THE OPERATIONS DEPARTMENT TOOK THE APPROPRIATE CORRECTIVE ACTION, CONSISTING OF DRAINING THESE TANKS TO REMAIN WITHIN TECH SPEC LIMITS. THE OPERATIONS DEPARTMENT ALSO REQUESTED THE INSTRUMENT CONTROL DEPARTMENT TO RECALIBRATE THE 2 LEVEL INSTRUMENTS. DURING THE RECALIBRATION OF THESE INSTRUMENTS WATER WAS FOUND IN THE DE REFERENCE LEGS OF THE INSTRUMENTS ACCOUNTING FOR THE LEVEL DEVIATION. AT THE CONCLUSION OF THIS RECALIBRATION IT WAS DISCOVERED THAT THE LEVEL IN BOTH TANKS WAS BELOW MINIMUM LEVEL PER TECH SPECS. THE UNIT ENTERED ACTION STATEMENT 3.5.1.B AND FILLED THE TANKS TO ACCEPTABLE LEVELS IN 10 MINUTES, WITHIN THE HOUR AS REQUIRED BY THIS ACTION STATEMENT.

[183] MILLSTONE 2 DOCKET 50-336 LER 84-001
 PARTIAL ENGINEERED SAFEGUARDS ACTUATION.
 EVENT DATE: 010664 REPORT DATE: 020384 NSSS: CE TYPE: PWR

(NSIC 189333) THE PLANT WAS IN MODE 2 AT 0.4% POWER. DURING ROUTINE SURVEILLANCE ON THE ENGINEERED SAFEGUARDS ACTUATION SYSTEM (ESAS) USING THE MANUAL TEST INSERTION (MTI), A RANDOM PARTIAL ACTUATION OCCURRED. THE MTI TEST WAS SECURED AND ESAS EQUIPMENT WAS RESTORED TO NORMAL. THE OPERATOR RESPONSE TO THE ACTUATION WAS TO VERIFY DESIRED OPERATING PARAMETERS AND RESTORE ESAS EQUIPMENT TO DESIRED STATUS. THE CAUSE OF THE ACTUATION IS UNKNOWN. A POSSIBLE CAUSE IS ELECTROMAGNETIC INTERFERENCE (NOISE) FROM THE MTI TEST EQUIPMENT. A SECOND SIMILAR OCCURRENCE TOOK PLACE ON 1/9/84, WITH THE PLANT IN MODE 2 AT 0.6% POWER.

[184] MILLSTONE 2 DOCKET 50-336 LER 84-005
 CONTAINMENT LOCAL LEAK RATE LIMITS EXCEEDED.
 EVENT DATE: 012884 REPORT DATE: 022784 NSSS: CE TYPE: PWR
 VENDOR: FISHER CONTROLS CO.
 MASONEILAN INTERNATIONAL, INC.

(NSIC 188991) WHILE PERFORMING TYPE B AND C, CONTAINMENT PENETRATION LOCAL LEAK RATE TESTS DURING REFUELING, A COMBINED LEAKAGE RATE IN EXCESS OF THAT ALLOWED BY TECH SPEC 3.6.1.2.B WAS NOTED. ADDITIONALLY THE COMBINED SECONDARY CONTAINMENT BYPASS LEAKAGE RATE WAS IN EXCESS OF THAT ALLOWED BY 3.6.1.2.C. SEVERAL CLOSED COOLING WATER ISOLATION VALVES AND BOTH CONTAINMENT SUMP ISOLATION VALVES WERE FOUND TO HAVE VARIOUS MECHANICAL DEFICIENCIES RESULTING IN EXCESS LEAKAGE RATES. REPAIRS TO THESE VALVES WERE AFFECTED. ALL DEFICIENCIES WERE CORRECTED AND THE AFFECTED PENETRATIONS RETESTED SATISFACTORILY. THE PLANT REMAINED IN MODE 5

UNTIL BOTH LEAKAGE RATES WERE RESTORED TO WITHIN THE LIMITS SPECIFIED IN TECH SPECS 3.6.12.B AND 3.6.12.C.

[185] MILLSTONE 2 DOCKET 50-336 LER 84-006
RCS RTD RESPONSE TIME PROBLEM.
EVENT DATE: 021384 REPORT DATE: 031484 NSSS: CE TYPE: PWR
VENDOR: WEED INSTRUMENT COMPANY, INC.

(NSIC 189300) WITH THE UNIT OPERATING AT 100% REACTOR POWER, RESPONSE TIME TESTING OF THE PRIMARY COOLANT LOOP RTD'S (TH + TC) WAS INITIATED PER SURVEILLANCE PROCEDURE SP 2401Q AS REQUIRED BY PARAGRAPH 4.3.1.1.4 OF TECH SPECS. A TOTAL OF 16 RTD'S WERE TESTED, OF WHICH 12 EXCEEDED THE TECH SPEC LIMIT OF 8 SECONDS OR LESS (TABLE 3.3-2 OF TECH SPECS). THE UNIT OPERATED IN ACCORDANCE WITH TECH SPEC A.S. 3.0.3 AND WAS PLACED IN MODE 2. THE BASELINE DATA ACCUMULATED DURING THE TESTING WAS EVALUATED TO DETERMINE THE CAUSE OF THE EXCESSIVE RESPONSE TIMES. SEVERAL FACTORS WERE DETERMINED TO CONTRIBUTE TO THE LARGE TIME CONSTANTS FOR THE RTD'S. THESE FACTORS INCLUDED THE TIME CONSTANT OF THE RTD ELEMENT ITSELF, THE INSTALLATION OF THE RTD IN THE THERMOWELL (INSUFFICIENT INSERTION DEPTH), AND A SENSOR-THERMOWELL MISMATCH. A CONTAINMENT ENTRY WAS MADE TO CORRECT THE LATTER TWO CAUSES FOR THE EXCESSIVE RESPONSE TIMES. ONCE THESE REPAIRS HAD BEEN EFFECTED, THE RESPONSE TIME OF ALL BUT 2 RTD'S WAS ACCEPTABLE. BOTH WERE REMOVED FROM SERVICE PER PLANT DESIGN CHANGE REQUEST #2-07-84. THE UNIT WAS THEN RETURNED TO 100% REACTOR POWER.

[186] MONTICELLO DOCKET 50-263 LER 83-003
RHR SERVICE WATER LOOP REMOVED FROM SERVICE.
EVENT DATE: 020783 REPORT DATE: 030983 NSSS: GE TYPE: BWR
VENDOR: FISHER CONTROLS CO.

(NSIC 188475) DURING NORMAL OPERATION #12 RHR HX DP NOT MAINTAINABLE. B RHR SW LOOP MADE INOPERABLE TO REPAIR HX CONTROL VALVE (CV-1729). TECH SPEC 3.5.C.3 ALLOWS ONE RHR SW LOOP TO BE INOPERABLE FOR 7 DAYS. REPORTED PER TECH SPEC 6.7.B.2.B. AFTER CV-1729 REPAIR WAS COMPLETED, THE A RHR SW LOOP WAS MADE INOPERABLE TO REPAIR #11 HX CONTROL VALVE. REPAIRS TO BOTH LOOPS COMPLETED IN 6 DAYS. TWO PREVIOUS SIMILAR OCCURRENCES (RO-81-02, RO-82-06). REDUNDANT LOOP WAS OPERABLE AND TESTED DAILY PER TECH SPEC 4.5.C.1. ROOT CAUSE - PISTON RING WEAR. FISHER, 8", 657ED AIR ACTUATED CONTROL VALVE. PISTON RING WEAR DUE TO NORMAL FLOW INDUCED VIBRATION. ORIGINAL GRAPHITE RINGS REPLACED WITH SPRING LOADED TEFLON RINGS. RHR SW OPERABILITY TESTS PERFORMED AFTER REPAIRS.

[187] MONTICELLO DOCKET 50-263 LER 83-019
VACUUM BREAKER LEAKS.
EVENT DATE: 080183 REPORT DATE: 081583 NSSS: GE TYPE: BWR
VENDOR: FISHER CONTROLS CO.

(NSIC 188485) DURING NORMAL OPERATION, WHILE PERFORMING SURVEILLANCE TEST, THE AIR OPERATED REACTOR BUILDING TO TORUS VACUUM BREAKER, AO-2380, WAS FOUND LEAKING IN EXCESS OF TECH SPEC ACCEPTANCE CRITERIA (TECH SPEC 4.7.A.2.F). THE REDUNDANT SELF-ACTUATING CHECK VALVE DID NOT EXHIBIT ANY LEAKAGE. FOUR PREVIOUS SIMILAR OCCURRENCES, AO-24, RO-74-05, RO-80-08 AND RO-82-12. CAUSE UNKNOWN. VALVE CYCLED ONCE WITH NORMAL CONTROL POWER. THIS REDUCED LEAKAGE TO WITHIN ACCEPTANCE CRITERIA. VALVE PLACED ON ACCELERATED SURVEILLANCE PROGRAM. INVESTIGATION CONTINUING.

[188] MONTICELLO DOCKET 50-263 LER 84-002
 CONTROL ROOM HVAC SYSTEM ISOLATES.
 EVENT DATE: 010784 REPORT DATE: 020684 NSSS: GE TYPE: BWR

(NSIC 189030) THE EMERGENCY FILTRATION TRAIN SYSTEM (CONTROL ROOM HVAC) TRANSFERRED TO THE EMERGENCY MODE AS THE RESULT OF A SPURIOUS TRIP OF THE HYDROGEN CHLORIDE MONITOR.

[189] MONTICELLO DOCKET 50-263 LER 84-003
 HPCI ISOLATION VALVE TIME DELAY RELAY FAILS.
 EVENT DATE: 010984 REPORT DATE: 020884 NSSS: GE TYPE: BWR
 VENDOR: AGASTAT RELAY CO.

(NSIC 189031) DURING NORMAL OPERATION, WHILE PERFORMING HPCI HIGH STEAM FLOW SENSOR TEST AND CALIBRATION PROCEDURE, THE TIME DELAYED HIGH STEAM FLOW ISOLATION SIGNAL EXCEEDED THE TECH SPEC LIMIT OF SIXTY SECONDS. A VERY SMALL AMOUNT OF FOREIGN MATERIAL WAS FOUND LOOSE BETWEEN THE DIAPHRAGM EXHAUST AND THE TIMING GROOVE ON THE AGASTAT TIME DELAY RELAY. IT IS BELIEVED THAT THIS SMALL AMOUNT OF MATERIAL IS THE CAUSE FOR THE ERRATIC DELAY TIMES. EXACT REPLACEMENT RELAY INSTALLED AND TESTED SATISFACTORILY. NO CORRECTIVE ACTIONS ARE REQUIRED.

[190] MONTICELLO DOCKET 50-263 LER 84-004
 CONTROL ROOM HVAC SYSTEM ISOLATES.
 EVENT DATE: 011084 REPORT DATE: 020984 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 189032) THE EMERGENCY FILTRATION TRAIN, EFT, PROVIDES CONTROL ROOM VENTILATION UNDER TOXIC SUBSTANCE AND RADIATION ACCIDENT CONDITIONS. THE EFT SYSTEM (CONTROL ROOM HVAC) TRANSFERRED TO THE EMERGENCY MODE WHEN ONE CHLORINE MONITOR TAPE CASSETTE RAN OUT RESULTING IN A TAPE BREAK AND SPURIOUS TRIP OF THE MONITOR.

[191] MONTICELLO DOCKET 50-263 LER 84-006
 SBGTS INITIATES DURING AREA RADIATION MONITOR FUNCTIONAL TEST.
 EVENT DATE: 011984 REPORT DATE: 022484 NSSS: GE TYPE: BWR

(NSIC 188957) DURING A ROUTINE MONTHLY AREA RADIATION MONITOR FUNCTIONAL CHECK, A REACTOR BUILDING ISOLATION AND INITIATION OF STANDBY GAS TREATMENT OCCURRED WHEN A RADIATION CHECK SOURCE WAS BROUGHT TOO CLOSE TO THE REFUEL FLOOR SPENT FUEL POOL MONITOR.

[192] MONTICELLO DOCKET 50-263 LER 84-008
 RECIRC MG SET FIELD BREAKER FAILS.
 EVENT DATE: 020784 REPORT DATE: 030684 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189094) FOLLOWING A NORMAL REACTOR (RCI) SHUTDOWN, AN OPERATING RECIRC PUMP (P) WAS SHUTDOWN. THE ASSOCIATED RECIRC PUMP MG SET (MG) GENERATOR FIELD BREAKER (BKR) DID NOT TRIP. THE BREAKER FAILURE WAS NOT IMMEDIATELY DISCOVERED AS THE MG SET WAS BEING SHUTDOWN WHEN THE FAILURE OCCURRED AND THE FAILURE CAUSED NO ABNORMAL SYSTEM INDICATIONS. THIS BREAKER IS USED TO TRIP THE RECIRC PUMPS IN AN ATWS EVENT. CORRECTIVE ACTIONS WILL BE TO: (A) INCREASE PREVENTATIVE MAINTENANCE FREQUENCY, (B) REQUIRE THOROUGH CLEANING AND RELUBRICATION OF ALL BEARINGS, ROLLERS, AND OTHER LOW FRICTION DEVICES ON PREVENTATIVE MAINTENANCE PROCEDURES, AND (C) REBUILD ALL BREAKERS OF THIS TYPE AT MONTICELLO TO RETURN THEM TO ORIGINAL SPECIFICATIONS AND TOLERANCES.

[193] MONTICELLO DOCKET 50-263 LER 84-009
 CONTROL ROOM HVAC SYSTEM OPERATES IN EMERGENCY MODE FIVE TIMES.
 EVENT DATE: 020784 REPORT DATE: 030884 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 189147) DURING COLD SHUTDOWN ON FEBRUARY 7, 1984 AT APPROXIMATELY 1033 THE EFT SYSTEM (CONTROL ROOM HVAC SYSTEM) (SYSTEM CODE VI) AUTOMATICALLY TRANSFERRED TO THE TOXIC CHEMICAL EMERGENCY MODE (ISOLATION OF OUTSIDE AIR INTAKE AND EXHAUST) WHEN THE AMMONIA MONITOR AT 9031 (MDA SCIENTIFIC MODEL 7060 FAN) DETECTOR TAPE BROKE RESULTING IN A SPURIOUS TRIP OF THE MONITOR. THE TAPE WAS REPAIRED AND THE EFT SYSTEM RETURNED TO NORMAL OPERATION. CAUSE OF THE EVENT WAS EXCESSIVE FRICTION BETWEEN THE OPTICS BLOCK AND THE TAPE. THE OPTICS BLOCK SPRING TENSION HAD BEEN INCREASED JUST PRIOR TO THE EVENT TO REDUCE SAMPLE LEAKAGE AROUND THE BLOCK. IMMEDIATE CORRECTIVE ACTION WAS TO REDUCE THE SPRING TENSION; SUBSEQUENTLY, THE OPTICS BLOCK WAS REPLACED. OPERATION OF THE MONITOR SINCE THE EVENT HAS BEEN SATISFACTORY. SIMILAR EVENTS OCCURRED ON FEB. 15, 17, 20 AND MARCH 5 INVOLVING VARIOUS MONITORS WHERE THE DETECTOR TAPE BROKE RESULTING IN A SPURIOUS TRIP OF THE MONITOR WHICH INITIATED THE TOXIC CHEMICAL EMERGENCY MODE OF THE EFT SYSTEM. THE TAPCS WERE REPAIRED AND THE EFT SYSTEM RETURNED TO NORMAL OPERATION.

[194] MONTICELLO DOCKET 50-263 LER 84-010
 EMERGENCY FILTER TRAIN TRIPS DUE TO CHLORINE LEAKAGE IN CHLORINE TANK ROOM.
 EVENT DATE: 021784 REPORT DATE: 031684 NSSS: GE TYPE: BWR

(NSIC 189033) THE EMERGENCY FILTRATION TRAIN (EFT) SYSTEM (CONTROL ROOM HVAC) TRANSFERRED TO THE TOXIC CHEMICAL EMERGENCY MODE DUE TO THE RELEASE OF A SMALL AMOUNT OF CHLORINE IN THE CHLORINE TANK STORAGE ROOM. THIS TRANSFER OCCURRED TWICE ON THE SAME DAY WHILE A MODIFICATION TO THE CHLORINE SYSTEM WAS BEING INSTALLED. THE TANKS WERE PROPERLY ISOLATED FOR THIS WORK. A SMALL AMOUNT OF CHLORINE LEFT IN THE LINES WAS SUFFICIENT TO INITIATE THE TRIP WHEN THE LINES WERE OPENED UP. IT IS PLANNED TO DETERMINE THE FEASIBILITY OF REMOVING THESE MONITORS AS AN INITIATING INSTRUMENT.

[195] MONTICELLO DOCKET 50-263 LER 84-011
 CRACK INDICATIONS ON PRIMARY SYSTEM PRESSURE BOUNDARY PIPING.
 EVENT DATE: 021884 REPORT DATE: 031984 NSSS: GE TYPE: BWR

(NSIC 189095) CRACK INDICATIONS WERE FOUND IN TWO SYSTEMS: 1. RECIRCULATION SYSTEM SENSING LINE PENETRATION PIPING, 2. RESIDUAL HEAT REMOVAL. THE DEGRADED PIPING WILL BE REPLACED WITH IGSCC RESISTANT MATERIAL.

[196] NORTH ANNA 1 DOCKET 50-338 LER 84-001
 REACTOR COOLANT SYSTEM HIGH UNIDENTIFIED LEAK RATE.
 EVENT DATE: 010984 REPORT DATE: 020884 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 189055) ON JAN. 9, 1984 NORTH ANNA 1 WAS SHUT DOWN DUE TO HIGH REACTOR COOLANT SYSTEM UNIDENTIFIED LEAKAGE. WHEN IT WAS DETERMINED THAT A SIGNIFICANT PORTION OF THE UNIDENTIFIED LEAKAGE WAS PROBABLY PRIMARY TO SECONDARY LEAKAGE THROUGH THE STEAM GENERATORS, THE UNIT WAS TAKEN TO COLD SHUTDOWN TO EXAMINE THE STEAM GENERATORS. PRESSURE LEAK TESTING AND EDDY CURRENT EXAMINATION IDENTIFIED SEVERAL DEFECTIVE TUBES AND LEAKING TUBE PLUGS. ALL TUBES WERE PLUGGED AND SEVERAL LEAKING PLUGS WERE REPAIRED. THE STEAM GENERATOR REPAIRS IN CONJUNCTION WITH OTHER MAINTENANCE PERFORMED ON THE REACTOR COOLANT SYSTEM REDUCED THE UNIDENTIFIED LEAK RATE TO LESS THAN THE TECH SPEC LIMIT.

[197] NORTH ANNA 1 DOCKET 50-338 LER 84-002
 INADVERTENT SINGLE TRAIN ECCS ACTUATION SIGNAL.
 EVENT DATE: 011884 REPORT DATE: 021084 NSSS: WE TYPE: PWR

(NSIC 189058) ON JAN. 18, 1984, AT 0500 HRS WITH UNIT 1 IN MODE 5, AND THE REACTOR COOLANT SYSTEM VENTED AND AT A TEMPERATURE OF 110 F, AN INADVERTENT SINGLE TRAIN EMERGENCY CORE COOLING SYSTEM (ECCS) ACTUATION OCCURRED DURING THE REMOVAL OF THE SOLID STATE PROTECTION SYSTEM (SSPS) OUTPUT FUSES. ECCS IS NOT REQUIRED IN MODE 5 AND THE SSPS OUTPUT FUSES WERE REMOVED TO PRECLUDE THE POSSIBILITY OF AN INADVERTENT ECCS ACTUATION OCCURRING DURING EXTENSIVE MAINTENANCE WHICH WOULD CAUSE EQUIPMENT REALIGNMENT AND POSSIBLY ENDANGER PERSONNEL. THE ECCS ACTUATION OCCURRED AFTER ONE TRAIN OF SSPS OUTPUT FUSES HAD BEEN REMOVED AND THE INSTRUMENT TECHNICIAN REQUESTED THAT THE PRESSURIZER LOW PRESSURE SAFETY INJECTION (SI) BLOCKS BE REINSTATED. THE OPERATOR MISINTERPRETED THE REQUEST TO MEAN RESET LOW PRESSURIZER PRESSURE SI. THE RESET ALLOWED LOW PRESSURIZER PRESSURE ACTUATION TO OCCUR. NO PROCEDURE EXISTED FOR THE PULLING OF THE FUSES WHICH RESULTED IN CONFUSION BETWEEN PERSONNEL INVOLVED. TO PRECLUDE FURTHER SIMILAR OCCURRENCES, REMOVAL OF THE SSPS OUTPUT FUSES WILL BE INCLUDED IN A PROCEDURE. NO TRANSIENT OCCURRED DUE TO THE ACTUATION, ALL PUMPS RECEIVING START SIGNALS WERE IN PULL-TO-LOCK. NO FURTHER CORRECTIVE ACTIONS ARE REQUIRED.

[198] OCCNEE 1 DOCKET 50-269 LER 84-001
 CORE FLOOD TANK BORON CONCENTRATION OUT OF SPECIFICATION.
 EVENT DATE: 030184 REPORT DATE: 040284 NSSS: BW TYPE: PWR

(NSIC 189211) ON MARCH 1, 1984, WITH UNIT 1 OPERATING AT 100% FULL POWER, IT WAS NOTED THAT THE BORON CONCENTRATIONS OF TWO INDEPENDENT "1A" CORE FLOOD TANK (CFT) SAMPLES WERE LESS THAN THE TECH SPEC 3.3.3 REQUIRED MINIMUM CONCENTRATION IN EACH CFT OF 1835 PPM BORON WHEN THE REACTOR COOLANT SYSTEM (RCS) IS ABOVE 800 PSIG. THE "1A" CFT WAS DECLARED INOPERABLE, AND AN UNUSUAL EVENT WAS DECLARED. REACTOR POWER WAS REDUCED AND THE UNIT WAS PLACED IN HOT SHUTDOWN WITHIN 12 HOURS. THE CAUSE OF THIS INCIDENT WAS ADMINISTRATIVE DEFICIENCY DEMONSTRATED BY THE LACK OF ADEQUATE MANAGEMENT CONTROL OVER A KNOWN PROBLEM. IT WAS DETERMINED IN AUGUST 1983 THAT THE "1A" CFT HAD AN INLEAKAGE OF WATER CAUSED BY LEAKING VALVES, AND SUFFICIENT COMPENSATORY ACTIONS HAD NOT BEEN TAKEN. DURING THE TIME OF THE LOWEST MEASURED BORON CONCENTRATION (1340 PPM), THE CFT CONTENT WOULD STILL HAVE PERFORMED ITS INTENDED FUNCTION AND PROVIDED THE REQUIRED 1% SHUTDOWN MARGIN IF NEEDED. THE "1A" CFT WAS RESAMPLED TO VERIFY THE INITIAL SAMPLE RESULTS. BORATED WATER WAS ADDED TO THE TANK FROM THE UNIT 1 & 2 BORIC ACID MIXING TANK. PROCEDURES WILL BE EVALUATED AND REVISED AS NECESSARY TO ENSURE THAT THE PROPER GUIDELINES ARE INCLUDED WHEN CORE FLOOD TANKS HAVE AN INLEAKAGE PROBLEM.

[199] OCCNEE 3 DOCKET 50-287 LER 84-001
 SWITCHGEAR LOAD SHED FUSE BLOCK NOT INSTALLED.
 EVENT DATE: 010584 REPORT DATE: 020684 NSSS: BW TYPE: PWR

(NSIC 188963) ON JAN. 5, 1984 AT 1400 HRS WITH UNIT 3 AT 100% FP, THE JTE SWITCHGEAR LOAD SHED SOURCE B FUSE BLOCK WAS DISCOVERED TO NOT BE INSTALLED. THIS SOURCE B FUSE BLOCK PROVIDES POWER TO ONLY LOAD SHED RELAY 3ELS2. THIS RELAY IS ONE OF THE TWO RELAYS THAT CAN TRIP EIGHT NONESSENTIAL COMPONENTS DURING A LOAD SHED ACTUATION. TECH SPEC 3.7.2(B) STATES THAT 'THE CIRCUITS OR CHANNELS OF ANY SINGLE FUNCTIONAL UNIT OF THE EPSL (EMERGENCY POWER SWITCHING LOGIC) MAY BE INOPERABLE FOR TEST OR MAINTENANCE FOR PERIODS NOT EXCEEDING 24 HRS' (PROVIDED THAT CERTAIN CONDITIONS ARE MET). PART OF CHANNEL B WAS NOT OPERATIVE CAUSING IT TO BE DEGRADED FOR AN UNDETERMINED AMOUNT OF TIME. THIS WAS A VIOLATION OF TECH SPEC 3.7.2(B), AND IS REPORTABLE TO THE NRC PER THE REQUIREMENTS OF 10 CFR 50.73(A)(2)(I). THE FUSE BLOCK WAS REINSTALLED AT 1540. A STATION MODIFICATION TO BE COMPLETED WILL ADD COMPUTER ALARMS FOR LOSS OF LOAD SHED CONTROL POWER. IT APPEARS THE FUSE BLOCK WAS MANUALLY PULLED BY AN UNKNOWN PERSON AT SOME TIME

SINCE OCT. 1983 WHEN IT WAS LAST VERIFIED TO BE IN PLACE. THIS IS THE BASIS FOR CLASSIFYING THIS INCIDENT AS UNKNOWN.

[200] OCONEE 3 DOCKET 50-287 LER 84-002
 REACTOR TRIP ON HIGH RCS PRESSURE DUE TO RCS FLOW TRANSMITTER FAILURE.
 EVENT DATE: 021684 REPORT DATE: 031984 NSSS: BW TYPE: PWR
 VENDOR: BAILEY METER COMPANY

(NSIC 189217) ON FEBRUARY 16, 1984, A UNIT 3 REACTOR TRIP WAS INITIATED BY THE REACTOR PROTECTION SYSTEM WHEN THE HIGH REACTOR COOLANT SYSTEM (RCS) PRESSURE SETPOINT WAS REACHED. A FLOW TRANSMITTER FALSELY INDICATED NO FLOW THROUGH THE "A" STEAM GENERATOR, CAUSING A FEEDWATER RERATIO, INCREASING THE RCS PRESSURE TO 2290 PSIG. UNIT 3 WAS AT 100% POWER AT THE TIME OF THE TRIP. THIS EVENT IS ATTRIBUTED TO THE FAILURE OF THE RC LOOP "A" FLOW TRANSMITTER DUE TO A MALFUNCTIONING AMPLIFIER ASSEMBLY. THE REACTOR TRIPPED AS DESIGNED AND NO ANOMALIES ARISING FROM THE EVENT OCCURRED. THE INTEGRATED CONTROL SYSTEM RCS FLOW INDICATION SOURCE WAS SWITCHED BACK TO THE NORMAL CHANNEL LINEUP. THE UNIT REACHED 100% FP 34 HOURS AFTER THE TRIP.

[201] PEACH BOTTOM 2 DOCKET 50-277 LER 83-025
 CLOSURE TIME ON OUTBOARD MSIV EXCEEDS LIMIT.
 EVENT DATE: 122983 REPORT DATE: 040384 NSSS: GE TYPE: BWR

(NSIC 189203) ON DECEMBER 29, 1983, WITH UNIT 2 AT 56% POWER, ST 6.4 IDENTIFIED THAT THE OUTBOARD MSIV, AO-2-2-86B, FAST CLOSURE TIME WAS 5.5 SECONDS. THIS EXCEEDS THE MAXIMUM LIMIT OF 5 SECONDS SPECIFIED IN THE TECH SPEC TABLE 3.7.1. THIS EVENT HAS INSIGNIFICANT CONSEQUENCES BECAUSE THE INBOARD MSIV, AO-2-2-80B, CLOSED IN 3.43 SECONDS AND THE AVERAGE ISOLATION TIME FOR ALL STEAM LINES WAS 4.26 SECONDS. ALSO BOTH INBOARD AND OUTBOARD MSIV'S ON THE 'B' STEAM LINE PASSED AN LLRT. THE 5.5 SECOND CLOSURE TIME HAS BEEN ATTRIBUTED TO INSUFFICIENT FLOW THROUGH THE FAST CLOSURE NEEDLE VALVE ON THE OIL DASHPOT. THE VALVE WAS IMMEDIATELY READJUSTED AND RETESTED SATISFACTORILY. EXCESSIVE CLOSURE TIME COULD NOT BE REPRODUCED. FAILURE TO REPORT THE EVENT WITHIN 30 DAYS IS DUE TO PERSONNEL ERROR. THE PERSON WAS COUNSELED.

[202] PEACH BOTTOM 2 DOCKET 50-277 LER 84-001
 INOPERABLE B RHR INJECTION VALVE.
 EVENT DATE: 011784 REPORT DATE: 022784 NSSS: GE TYPE: BWR
 VENDOR: CUTLER-HAMMER

(NSIC 189960) DURING SURVEILLANCE TESTING OF THE 'B' RHR INJECTION VALVE MO 2-10-1548, THE VALVE FAILED TO REOPEN AFTER BEING CLOSED. THIS SURVEILLANCE TEST WAS PERFORMED WHILE PBAPS UNIT 2 WAS AT POWER BEFORE A PLANNED DIESEL GENERATOR OUTAGE. THE 'B' RHR SYSTEM WAS THEN DECLARED INOPERABLE. BOTH CORE SPRAY SYSTEMS AND THE REDUNDANT RHR SYSTEM WERE TESTED SATISFACTORILY AS REQUIRED BY TECH SPEC 3.5.A.5. AN INVESTIGATION REVEALED THAT A CUTLER-HAMMER MOTOR CONTACTOR (NEMA SIZE 3 CATALOG NO. A50BN0) HAD STUCK IN THE CLOSED POSITION WHICH ULTIMATELY RESULTED IN THE BURNING OPEN OF ONE PHASE OF THE 3 PHASE FEED TO THE MOTOR AND THE TRIPPING OF THE VALVE MOTOR CIRCUIT BREAKER. THIS EVENT ALSO DAMAGED THE CUTLER-HAMMER THERMAL OVERLOAD DEVICE (NEMA SIZE 3 CATALOG NO. C300ENA3) WHEN A HEATER IN THE OVERLOAD DEVICE MELTED. THE CONTACTOR AND THE THERMAL OVERLOAD DEVICE WERE REPLACED AND THE 'B' RHR SYSTEM SURVEILLANCE TESTED SATISFACTORILY.

[203] PEACH BOTTOM 3 DOCKET 50-278 LER 84-002
 REACTOR VESSEL HEATUP RATE EXCEEDED 100 DEGREES FAHRENHEIT PER HOUR.
 EVENT DATE: 012484 REPORT DATE: C22384 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189097) TECH SPEC 3.6.A.1 STATES THAT AVERAGE RATE OF REACTOR COOLANT TEMPERATURE CHANGE DURING NORMAL HEATUP OR COOLDOWN SHALL NOT EXCEED 100 DEGREES FAHRENHEIT INCREASE (OR DECREASE) IN ANY ONE HOUR PERIOD. DURING A UNIT STARTUP, A CALCULATIONAL ERROR RESULTED IN A REACTOR HEATUP RATE OF 111 DEGREES FAHRENHEIT PER HOUR. UPON DISCOVERY OF THE ERROR, THE HEATUP RATE WAS REDUCED IMMEDIATELY BY THE REACTOR OPERATOR TO BRING THE UNIT TO LESS THAN ITS TECH SPEC LIMIT OF 100 DEGREES FAHRENHEIT PER HOUR. BECAUSE ORIGINAL DESIGN ANALYSIS CONSIDERED REACTOR VESSEL THERMAL TRANSIENTS FAR GREATER THAN 111 DEGREES FAHRENHEIT PER HOUR, THIS EVENT IS CONSIDERED TO HAVE MINIMAL SAFETY SIGNIFICANCE. AN ENGINEERING EVALUATION THAT SPECIFICALLY ADDRESSES THIS EVENT WILL BE PROVIDED IN A FOLLOW-UP REPORT.

[204] PEACH BOTTOM 3 DOCKET 50-278 LER 84-004
FEEDWATER INJECTION INTO THE REACTOR VESSEL DURING COLD SHUTDOWN.
EVENT DATE: 012584 REPORT DATE: 030184 NSSS: GE TYPE: BWR

(NSIC 189098) THE VESSEL WAS SLIGHTLY PRESSURIZED AND THE REACTOR COOLANT TEMPERATURE DROPPED TO BELOW 120 DEGREES FAHRENHEIT WHEN FEEDWATER WAS INADVERTENTLY PUMPED INTO THE REACTOR VESSEL DURING A COLD SHUTDOWN. THIS VIOLATES THE TECH SPEC LIMITS OF 120 DEGREES FAHRENHEIT AND 0 PSI AS REFERENCED IN PARAGRAPH 3.6.A, FIGURE 3.6.2. THE TRANSIENT WAS CAUSED BY FAILURE OF THE OPERATOR TO CLOSE THE FEEDWATER INLET VALVES TO THE REACTOR VESSEL BEFORE INITIATING LONG PATH RECIRCULATION (A FEEDWATER SYSTEM FLUSH TO THE CONDENSER). THIS EVENT WILL BE DISCUSSED IN DETAIL DURING FUTURE SHIFT MEETINGS.

[205] PEACH BOTTOM 3 DOCKET 50-278 LER 84-005
TURBINE CONTROL FAILURE CAUSES SCRAM.
EVENT DATE: 020984 REPORT DATE: 030784 NSSS: GE TYPE: BWR
VENDOR: AGASTAT RELAY CO.
ZURN INDUSTRIES, INC.

(NSIC 189160) ON FEBRUARY 9, 1984, AT 6:07 P.M., A RUNBACK AND SUBSEQUENT RELAY FAILURE IN THE MAIN TURBINE ELECTROHYDRAULIC CONTROL SYSTEM (EHC) RESULTED IN A UNIT 3 REACTOR AUTO SCRAM ON HIGH NEUTRON FLUX. WITH UNIT 3 OPERATING AT ABOUT 92% POWER, THE 3B REACTOR FEED PUMP (RFP) TURBINE EXPERIENCED HIGH VIBRATION. MANUALLY TRIPPING THE REACTOR FEED PUMP TURBINE CAUSED AN AUTOMATIC RUNBACK OF THE RECIRCULATION PUMPS AND THE TURBINE EHC SYSTEM. A FAULTY RELAY CONTACT IN THE EHC SYSTEM KEPT THE CLOSING CIRCUIT OF THE MAIN TURBINE CONTROL VALVES ENERGIZED WHICH RESULTED IN A REACTOR AUTO SCRAM ON HIGH NEUTRON FLUX. THE FAULTY EHC RELAY AND A FAULTY REACTOR FEED PUMP TURBINE COUPLING WHICH WAS CAUSING THE VIBRATION WERE REPLACED. A ROUTINE TEST WILL BE INSTITUTED TO FUNCTIONALLY TEST THIS RELAY AND THE EHC RUNBACK LOGIC EACH REFUELING OUTAGE.

[206] POINT BEACH 1 DOCKET 50-266 LER 84-001
CRACKED AND MISSING CONTROL ROD GUIDE TUBE SPLIT PINS.
EVENT DATE: 022584 REPORT DATE: 032884 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELEC CORP.-NUCLEAR ENERGY SYS

(NSIC 189149) ON 02/25/84, A VISUAL INSPECTION OF THE CONTROL ROD GUIDE TUBE SPLIT PINS REVEALED THAT 3 NUTS WERE MISSING. THE VISUAL INSPECTION WAS PERFORMED AFTER AN ULTRASONIC INSPECTION OF THE PINS IDENTIFIED CRACKS IN 67 OF 74 PINS (2 PINS PER GUIDE TUBE). THE PINS ARE MADE OF INCONEL X-750 AND BECAUSE OF THE HEAT TREATMENT TEMPERATURE ARE SUBJECT TO STRESS CORROSION CRACKING. THE PIN DESIGN AND MATERIAL IS GENERIC TO WESTINGHOUSE PWR'S, AND THE CRACKING PROBLEM HAS BEEN ADDRESSED IN A WESTINGHOUSE BULLETIN AND AN NRC INFORMATION NOTICE.

[207] POINT BEACH 1 DOCKET 50-266 LER 84-002
 REACTOR VESSEL OUTLET NOZZLE-TO-SHELL WELD INDICATIONS.
 EVENT DATE: 022884 REPORT DATE: 032884 NSSS: WE TYPE: PWR
 VENDOR: BABCOCK & WILCOX COMPANY

(NSIC 189150) DURING UNIT 1 REFUELING 11, AN INSPECTION OF THE REACTOR VESSEL OUTLET NOZZLE-TO-SHELL WELDS WAS PERFORMED USING PROGRAMMED AND REMOTE MECHANIZED ULTRASONICS. THIS EXAMINATION WAS A PART OF THE FIRST PERIOD INSERVICE INSPECTION FOR THE SECOND TEN-YEAR INTERVAL. FOUR INDICATIONS IN THE "A" NOZZLE AND SEVEN INDICATIONS IN THE "C" NOZZLE WERE RECORDED, SIZED, AND EVALUATED. ON 02/28/84, THE LICENSEE WAS NOTIFIED THAT THERE WAS ONE INDICATION IN EACH OF THE OUTLET NOZZLE WELDS THAT EXCEEDED THE CODE ALLOWABLE SIZE. THESE INDICATIONS ARE LOCATED IN THE ROOT AREA OF THE WELDS AND ARE BELIEVED, BY THE EVALUATOR, TO BE SLAG. THE LICENSEE'S CONSULTANT (SWRI) HAS PERFORMED BEAM SPREAD EXPERIMENTS ON THE POINT BEACH CALIBRATION BLOCK AND FRACTURE ANALYSIS OF THE FLAW INDICATIONS. FINAL RESULTS FROM THESE STUDIES BY SWRI INDIVIDUALLY DEMONSTRATE THAT THE INDICATIONS MEET THE ACCEPTANCE CRITERIA OF ASME SECTION XI, THEREBY CONFIRMING THE CONTINUED SERVICEABILITY OF THE REACTOR VESSEL.

[208] PRAIRIE ISLAND 1 DOCKET 50-282 LER 84-001
 SG OVERPEED DURING STARTUP CAUSES REACTOR TRIP.
 EVENT DATE: 010384 REPORT DATE: 020284 NSSS: WE TYPE: PWR

(NSIC 189040) IN RESTART AFTER REFUELING, THE UNIT WAS AT 10% POWER AND OPERATORS WERE SWITCHING FROM THE FEEDWATER BYPASS VALVES TO THE MAIN REGULATING VALVES. THE STEAM GENERATORS WERE OVERPED AND REACTOR COOLANT SYSTEM AVERAGE TEMPERATURE DROPPED. THE REACTOR OPERATOR WITHDREW CONTROL RODS IN RESPONSE TO THE TEMPERATURE DECREASE AND THE REACTOR TRIPPED ON OVERPOWER (THE LOW RANGE SETPOINT).

[209] QUAD CITIES 1 DOCKET 50-254 LER 84-002
 LEAK RATE FROM ALL VALVES AND PENETRATIONS IN EXCESS OF TECHNICAL SPECIFICATIONS.
 EVENT DATE: 030784 REPORT DATE: 032284 NSSS: GE TYPE: BWR

(NSIC 189091) WHILE PERFORMING REFUELING OUTAGE LOCAL LEAK RATE TESTING, THE MEASURED COMBINED LEAKAGE RATE FOR ALL PENETRATIONS AND VALVES, EXCEPT MAIN STEAM ISOLATION VALVES, WAS FOUND TO LEAK IN EXCESS OF 293.75 SCFH (0.61 LA). A DETAILED ANALYSIS OF THE SAFETY IMPLICATION OF THE VALVE LEAKAGES WILL BE INCLUDED IN A SUPPLEMENTAL REPORT. THE PROBABLE CAUSE OF EXCESSIVE LEAKAGE IN THE VALVES THAT CAUSED THE TOTAL MEASURED LEAKAGE TO EXCEED THE LIMIT (TECH SPEC 4.7.A.2) IS NOT KNOWN AT THIS TIME. A SUPPLEMENTAL REPORT WILL BE SUBMITTED LISTING THE NECESSARY REPAIRS AND CORRECTIVE ACTIONS TAKEN TO REDUCE THE TOTAL LEAKAGE BELOW THE LIMITS.

[210] QUAD CITIES 2 DOCKET 50-265 LER 83-020 REV 3
 UPDATE ON CRACK INDICATIONS IN RHR AND RECIRCULATION PIPING.
 EVENT DATE: 102883 REPORT DATE: 022184 NSSS: GE TYPE: BWR
 VENDOR: DRAVO, INC.

(NSIC 189084) DURING THE QUAD CITIES UNIT 2 REFUEL OUTAGE, ULTRASONIC EXAMINATIONS OF LARGE BORE STAINLESS STEEL PIPE WELDS PERFORMED TO COMPLY WITH THE REQUIREMENTS OF I. E. BULLETIN 83-02 IDENTIFIED 11 WELDS AS HAVING CRACK INDICATIONS. 9 WELDS ON THE REACTOR RECIRCULATION SYSTEM AND 2 WELDS ON THE RHR SHUTDOWN COOLING LINE WERE IDENTIFIED AS HAVING LINEAR INDICATIONS IN THE HEAT-AFFECTED ZONE OF THE WELDS. THE SLOW GROWTH RATE, TYPICAL WITH THIS TYPE OF INDICATIONS, COMBINED WITH THE REDUCED ALLOWABLE CONTAINMENT LEAKAGE RATE WOULD HAVE BEEN SUFFICIENT TO READILY IDENTIFY ANY POSSIBLE LEAKAGE AND PRECLUDE A GROSS FAILURE. THE CAUSE OF THIS OCCURRENCE IS POSTULATED AS BEING INTERGRANULAR

STRESS CORROSION CRACKING. THE WELD REPAIR PROGRAM INVOLVED EITHER PERFORMING A WELD OVERLAY OR LEAVING THE WELD IN ITS PRESENT CONDITION. INDUCTION HEAT STRESS IMPROVEMENT (IHSI) WAS ALSO EMPLOYED IN ORDER TO ARREST FURTHER CRACK GROWTH. ADDITIONAL INSPECTION TECHNIQUES WERE USED ON SEVERAL WELDS, AND NO CRACK INDICATIONS COULD BE IDENTIFIED USING THESE ADVANCED TECHNIQUES.

[211] QUAD CITIES 2 DOCKET 50-265 LER 84-001
 UNIT SCRAM WHILE 'A' RPS BUS WAS OUT OF SERVICE.
 EVENT DATE: 010384 REPORT DATE: 013084 NSSS: GE TYPE: BWR

(NSIC 189034) ON JAN. 3 AND 5, 1984, REACTOR SCRAMS OCCURRED WHILE THE 'A' REACTOR PROTECTION SYSTEM (RPS) WAS OUT OF SERVICE FOR CIRCUIT BREAKER MAINTENANCE. IN BOTH CASES, THE UNIT WAS SHUTDOWN FOR A REFUELING OUTAGE. NO ANNUNCIATORS OR COMPUTER ALARMS CAME UP TO EXPLAIN THE REASON FOR THE 'B' RPS CHANNEL TRIP AND RESULTANT SCRAM. THROUGHOUT THE TIME SPAN OF THE EVENTS, INTERMEDIATE RANGE MONITOR (IRM) 18 HAD BEEN SPIKING SPURIOUSLY DUE TO A FAULTY DETECTOR CABLE. IT IS POSTULATED THAT THE SPIKING IRM HAD CAUSED THE 'B' RPS CHANNEL TRIP, ALTHOUGH NO ALARMS WERE PRESENT TO VERIFY IT. THE DETECTOR CABLE FOR IRM 18 WAS REPLACED. PREVENTATIVE MAINTENANCE ON RPS BUSES IS NOT ROUTINELY ACCOMPLISHED DURING POWER OPERATION. THE CONDITIONS SURROUNDING THIS EVENT WOULD NOT EXIST DURING OPERATION; THEREFORE, NO FURTHER CORRECTIVE ACTION IS DEEMED APPROPRIATE AT THIS TIME.

[212] QUAD CITIES 2 DOCKET 50-265 LER 84-002
 REACTOR SCRAM ON LOSS OF 48 VOLT BATTERY SYSTEM.
 EVENT DATE: 010684 REPORT DATE: 012784 NSSS: GE TYPE: BWR

(NSIC 189035) ON JAN. 6, 1984, AFTER PERFORMING A BATTERY DISCHARGE TEST ON THE NEWLY INSTALLED '2A' 48V BATTERY, BATTERY LOADS WERE BEING TRANSFERRED TO THE '2A' 48V DISTRIBUTION PANEL TO FACILITATE REPLACEMENT OF THE '2B' BATTERY. DURING THE TRANSFER, BOTH DISTRIBUTION PANELS WERE INADVERTENTLY DE-ENERGIZED SIMULTANEOUSLY. THIS CAUSED A REACTOR SCRAM ON THE LOSS OF BOTH NEUTRON MONITORING CHANNELS. THE TRANSFER WAS COMPLETED IMMEDIATELY AND THE SCRAM SIGNAL WAS RESET. THE UNIT WAS SHUT DOWN AT THE TIME FOR A REFUELING OUTAGE. A COGNITIVE ERROR ON THE PART OF THE ENGINEER OVERSEEING THE OPERATOR ALLOWED BOTH PANELS TO BE DE-ENERGIZED TOGETHER INSTEAD OF SEPARATED INDIVIDUALLY. LOAD TRANSFERS ARE NOT PERFORMED DURING NORMAL OPERATION. SINCE ALL SYSTEMS PERFORMED AS DESIGNED AND THE INTENT TO PREVENT THE PARALLELING OF BATTERY SYSTEMS WAS SUCCESSFUL, NO CORRECTIVE ACTION IS DEEMED NECESSARY AT THIS TIME.

[213] QUAD CITIES 2 DOCKET 50-265 LER 84-003
 MAIN FEED BREAKER TO 480V ESSENTIAL SERVICE BUS TRIPS.
 EVENT DATE: 021184 REPORT DATE: 030884 NSSS: GE TYPE: BWR

(NSIC 189036) AT 0718 HRS ON FEB. 11, 1984, THE MAIN FEED BREAKER TO 480V ESSENTIAL SERVICE BUS 29, FROM 4000V BUS 24-1, TRIPPED WHILE 480V BUS 28 WAS BEING FED FROM BUS 29 THROUGH THE BUS 28-BUS 29 CROSSTIE. THE BUS CROSSTIES ARE ONLY USED DURING OUTAGES FOR PERFORMING MAINTENANCE ON THE NORMAL FEED BREAKERS. DURING OPERATION, THE 480V BUSES ARE FED FROM DIFFERENT SOURCES SO THAT A LOSS OF ONE FEED WOULD RESULT IN A LOSS OF ONLY ONE BUS. THE REASON FOR THIS TRIP WAS AN OVERCURRENT CONDITION THROUGH THE CROSSTIE. LOADS WERE STRIPPED FROM THE BUSES WHICH WERE RE-ENERGIZED. LOADS WERE LIMITED SO THE OVERCURRENT CONDITION WOULD NOT OCCUR AGAIN.

[214] QUAD CITIES 2 DOCKET 50-265 LER 84-004
 NSIV LIMIT SWITCH FAILURE CAUSES SCRAM
 EVENT DATE: 021584 REPORT DATE: 031384 NSSS: GE TYPE: BWR
 VENDOR: NAMCO CONTROLS

(NSIC 189148) AT 0052 HOURS ON FEBRUARY 15, 1984, A FULL SCRAM WAS RECEIVED WHILE THE REACTOR WAS SHUTDOWN. THE SCRAM OCCURRED DURING SURVEILLANCE TESTING AND WAS CAUSED BY A FAULTY 10% CLOSURE LIMIT SWITCH ON MAIN STEAM ISOLATION VALVE AO 2-203-2A. (THE LIMIT SWITCH WAS LATER REPLACED AND THE SURVEILLANCES COMPLETED SATISFACTORILY.) DURING PERFORMANCE OF MAIN STEAM ISOLATION VALVE CLOSURE MONTHLY SCRAM FUNCTIONAL TEST, FUSES WERE REMOVED AND BLOCKS INSTALLED DURING THE NORMAL PERFORMANCE OF THE PROCEDURE UP TO THE POINT WHEN THE 10% FAULTY LIMIT SWITCH WAS DISCOVERED. IN THE PROCESS OF RESTORING THE SYSTEMS TO A NORMAL CONFIGURATION SO THAT MAINTENANCE COULD BE PERFORMED, THE BLOCKS WERE REMOVED BEFORE THE FUSES WERE INSTALLED, AND THE SCRAM OCCURRED. DUE TO THE FACT THAT THE UNIT WAS SHUTDOWN, THERE WAS NO SAFETY SIGNIFICANCE TO THIS EVENT.

[215] RANCHO SECO DOCKET 50-312 LER 84-001
 EXHAUST FAN BEARING FAILURES.
 EVENT DATE: 010584 REPORT DATE: 020384 NSSS: BW TYPE: PWR
 VENDOR: BUFFALO ELECTRIC CO.

(NSIC 188977) THE BEARING FOR FAN EFA-18, WHICH SUPPLIES EXHAUST SERVICE FOR THE PASS CONTROL CABINET, FAILED. A MANUFACTURER RECOMMENDED EQUIVALENT BEARING FAILED TWO WEEKS LATER. THE FAN WAS SUBSEQUENTLY REBALANCED AND THE ORIGINAL TYPE BEARINGS WERE REINSTALLED. THE FAN WAS RETURNED TO SERVICE ON 1/19/84.

[216] RANCHO SECO DOCKET 50-312 LER 84-002
 SUBMITTAL OF IN-SERVICE INSPECTION RESULTS TO NRC LATE.
 EVENT DATE: 010984 REPORT DATE: 020984 NSSS: BW TYPE: PWR

(NSIC 188978) ON JAN. 9, 1984, A QA AUDIT OF NUCLEAR OPERATIONS REPORTING REQUIREMENTS DISCLOSED THAT, CONTRARY TO TECH SPECS, SECTIONS 6.9.5 AND 4.2.4, WHICH INCLUDES BY REFERENCE ASME XI, IWA-6220, PARAGRAPH B., THE RESULTS OF THE IN-SERVICE INSPECTION WERE NOT SUBMITTED TO THE NRC WITHIN 3 MONTHS OF THE COMPLETION OF THE INSPECTIONS. THE SUMMARY ISI REPORT WAS DUE IN NOV. 1983. THE REPORT WAS SUBMITTED ON JAN. 25, 1984.

[217] RANCHO SECO DOCKET 50-312 LER 84-005
 EMERGENCY SIREN MALFUNCTION.
 EVENT DATE: 011084 REPORT DATE: 021784 NSSS: BW TYPE: PWR
 VENDOR: MOTOROLA

(NSIC 189222) ON JANUARY 10, 1984, AT 0830 DURING A SIREN READINESS TEST FOR AMADOR COUNTY, A TRANSMISSION MONITOR INDICATED THAT THE SIRENS WERE NOT RESPONDING. A REPAIR TEAM WAS DISPATCHED TO CHECK OUT THE SIRENS. CONTACT WITH AMADOR COUNTY OFFICIALS INDICATED THAT A FAILURE HAD OCCURRED ON THEIR TRANSMITTER/ENCODER. THIS WAS REPAIRED AND THE SYSTEM DECLARED OPERATIONAL BY 1805 HOURS. ADDITIONAL TESTS WERE PERFORMED ON 1/13/84, A SILENT TEST AND A GROWL TEST, TO ENSURE COMPLETE SYSTEM OPERABILITY. THE NRC (MR. S. LONG) WAS INFORMED OF THIS SITUATION ON JANUARY 10, 1984, AT 1702 HOURS, BY TELEPHONE.

[218] RANCHO SECO DOCKET 50-312 LER 84-003
 PROCEDURE WRITTEN IN CONTRADICTION TO TECH SPEC.
 EVENT DATE: 011784 REPORT DATE: 021784 NSSS: BW TYPE: PWR
 VENDOR: ROSEMOUNT, INC.

(NSIC 189335) A PROCEDURE CHANGE TO SURVEILLANCE PROCEDURE SP 210.01A WAS MADE AND APPROVED, ALTERING THE METHOD BY WHICH THE AUXILIARY FEEDWATER PUMPS (AFP) FLOW CAPACITY IS VERIFIED DURING PERIODIC TESTING. THIS CHANGE SPECIFIED THAT A NEWLY INSTALLED FLOW METER, FT-31850, BE USED TO VERIFY FLOW. THE TECH SPECS, HOWEVER, REQUIRE SPECIFICALLY THAT THE AFP FLOW BE VERIFIED USING CONDENSATE TANK LEVEL DECREASE TO EVALUATE FLOW. THE DISTRICT WAS PREPARING A TECH SPEC AMENDMENT TO CHANGE THAT REQUIREMENT, BUT THE PROPOSED AMENDMENT HAD NOT BEEN SUBMITTED TO THE NRC. THE PROCEDURE WAS REVISED TO RESTORE THE ORIGINAL REQUIREMENT AND THE SURVEILLANCE WAS PERFORMED SUCCESSFULLY ON THE PUMPS. ADDITIONALLY, A PROBLEM WITH THE FLOW TRANSMITTER DESIGN WAS DISCOVERED WHICH PRECLUDES THE DISTRICT FROM USING THE TRANSMITTER AT THE PRESENT TIME. THIS WILL BE RESOLVED BY THE DISTRICT'S ENGINEERS PRIOR TO ANY FURTHER USE OF THIS FLOW TRANSMITTER.

[219] RANCHO SECO DOCKET 50-312 LER 84-004
 METEOROLOGICAL TOWER POWER FAILURE.
 EVENT DATE: 012484 REPORT DATE: 030284 NSSS: BW TYPE: PWR
 VENDOR: WEATHER MEASURE CORP.

(NSIC 189308) ON JAN. 24, 1984, THE POWER SUPPLY FOR THE METEOROLOGICAL TOWER INSTRUMENTATION FAILED. THE TOWER WAS AT THAT TIME BEING POWERED BY A TEMPORARY OVERHEAD POWER LINE FROM THE OFFSITE 12 KV DISTRIBUTION SYSTEM. THE SYSTEM WAS FIXED AND FAILED TWO MORE TIMES, ON JAN 26 AND ON JAN 31. PRESENTLY THE NORMAL FEEDER, A BURIED LINE, HAS BEEN REPAIRED AND IS BACK IN SERVICE. INVESTIGATION OF THIS PROBLEM DISCLOSED THAT THE TEMPORARY OVERHEAD FEEDER WAS EXPERIENCING MANY SEVERE SPIKES AND SWITCHING TRANSIENTS. THIS IS CONSIDERED BY THE DISTRICT'S ENGINEERS TO BE THE CAUSE OF THE POWER SUPPLY FAILURES.

[220] RANCHO SECO DOCKET 50-312 LER 84-006
 FIRE BRIGADE TRAINING NOT ATTENDED.
 EVENT DATE: 013184 REPORT DATE: 030284 NSSS: BW TYPE: PWR

(NSIC 188979) ON JAN. 31, 1984 IT WAS REPORTED TO PLANT MANAGEMENT THAT, FOR THE CALENDAR TRAINING YEAR 1983, 23 OPERATORS AND 16 SECURITY PERSONNEL DEDICATED TO THE ON-SITE FIRE BRIGADE, OUT OF A TOTAL OF 60 INDIVIDUALS, DID NOT ATTEND A QUARTERLY CLASSROOM TRAINING SESSION AS REQUIRED BY TECH SPECS SECTION 6.4.2. THIS PROBLEM APPEARED TO RESULT FROM SCHEDULING PROBLEMS DURING THE 1983 EXTENDED OUTAGE FOR TMI-RELATED MODIFICATIONS AND THE SUBSEQUENT REFUELING AND STARTUP. THESE FACTORS COMBINED TO RESULT IN THE TRAINING FOR THE FIRE BRIGADE TO BE OVERLOOKED. THIS TRAINING IS UNDER THE SAFETY DEPARTMENT AT RANCHO SECO. TO PREVENT RECURRENCE OF THIS PROBLEM, THE SITE TRAINING DEPARTMENT IS INCLUDING, IN ITS TRAINING SCHEDULE, SPECIFIC TIME FOR FIRE BRIGADE TRAINING. THIS WILL ENSURE PROPER VISIBILITY OF THIS REQUIREMENT SO THAT THE TRAINING WILL OCCUR WITHIN THE SPECIFIED INTERVAL.

[221] RANCHO SECO DOCKET 50-312 LER 84-007
 REACTOR TRIP RESULTING FROM STOPPING A REACTOR COOLANT PUMP.
 EVENT DATE: 022984 REPORT DATE: 032984 NSSS: BW TYPE: PWR

(NSIC 189100) ON FEBRUARY 29, 1984, RANCHO SECO WAS OPERATING AT APPROXIMATELY 65% FULL POWER, WITH THE INTEGRATED CONTROL SYSTEM (ICS) IN FULL AUTO IN PREPARATION FOR REMOVING THE "A" REACTOR COOLANT PUMP (RCP) FROM SERVICE. A LOW LUBRICATION OIL LEVEL NECESSITATED THE POWER REDUCTION AND SUBSEQUENT SECURING OF THE PUMP. AT 1739 HOURS THE RCP WAS SECURED. DURING THE TRANSITION FROM FOUR TO THREE RCP'S, A FEEDWATER (FW) TRANSIENT RESULTED. DESIRED VALUES OF FEEDWATER FLOWRATE DID NOT CORRESPOND TO CHANGING REACTOR COOLANT SYSTEM (RCS) FLOWRATES. THIS CAN BE ATTRIBUTED TO BOTH A COINCIDENT FREQUENCY UPSET IN THE CALIFORNIA GRID SYSTEM AND, APPARENTLY, A LOWER THAN NORMAL AUTOMATIC RESPONSE OF THE

FEEDWATER SYSTEM. THE RESULTING TRANSIENT LED TO AN AUTOMATIC REACTOR PROTECTION SYSTEM (RPS) HIGH PRESSURE TRIP (SETPOINT 2300 PSIG) OF THE REACTOR AT 1743 HOURS. THE DISTRICT, WITH ASSISTANCE FROM THE BABCOCK & WILCOX TRANSIENT ASSESSMENT TEAM, HAS REVIEWED AND ANALYZED THIS TRANSIENT AND HAS PREPARED A PRELIMINARY REPORT WHICH OUTLINES SOME RECOMMENDATIONS FOR CORRECTIVE ACTIONS. THESE RECOMMENDATIONS WILL BE REVIEWED BY THE PLANT REVIEW COMMITTEE AND THE PLANT SUPERINTENDENT. AFTER EVALUATION OF THESE RECOMMENDATIONS, THE DISTRICT WILL IMPLEMENT THOSE ACTIONS DEEMED APPROPRIATE BY PLANT MANAGEMENT.

[222] RANCHO SECO DOCKET 50-312 LER 84-008
FAILURE OF PASS ION CHROMATOGRAPH.
EVENT DATE: 022984 REPORT DATE: 032984 NSSS: BW TYPE: PWR
VENDOR: DIONEX CORP

(NSIC 189101) ON FEBRUARY 29, 1984, HEALTH PHYSICS REPORTED THAT THEY WERE UNABLE TO ANALYZE FOR CHLORIDES AND BORON FROM THE PASS SYSTEM DUE TO HIGH TEMPERATURES CAUSING THE ION CHROMATOGRAPH PROGRAMMER TO TRIP. THE ROOM IN WHICH THE ION CHROMATOGRAPH PROGRAMMER IS LOCATED HAS BEEN AIR CONDITIONED AND THE MAIN CPU CHIP IN THE PROGRAMMER HAS BEEN REPLACED IN ORDER TO PREVENT A TRIP DUE TO THERMAL OVERLOAD FROM REOCCURRING.

[223] RANCHO SECO DOCKET 50-312 LER 84-009
LIFTING SLING FAILURE WHILE LIFTING FUEL ELEMENTS IN FUEL CELL.
EVENT DATE: 022984 REPORT DATE: 032984 NSSS: BW TYPE: PWR

(NSIC 189102) ON FEBRUARY 29, 1984, WHILE MOVING A SPENT FUEL RACK AS A PART OF THE SPENT FUEL REPACKING PROJECT, A RACK BECAME BOUND AGAINST AN ADJACENT RACK. AS A RESULT, ONE OF THE TWO SLINGS BEING USED TO LIFT THE RACK FAILED. THE SECOND SLING REMAINED INTACT AND THE RACK WAS SAFELY LOWERED WITHOUT DROPPING. INVESTIGATION OF THIS EVENT REVEALED THAT THE RACK HAD BEEN IMPROPERLY RIGGED AND THE LOAD CELL FOR THE LIFTING CRANE WAS SET TOO HIGH. ALL WORK WAS STOPPED UNTIL THE INVESTIGATION WAS COMPLETED. THE GOVERNING PROCEDURES HAVE BEEN REVISED TO CLARIFY PROPER RIGGING AND LOAD CELL USAGE AND TO REQUIRE SIGN OFFS BY THE COGNIZANT SMUD ENGINEERS AND QUALITY CONTROL INSPECTORS AT APPROPRIATE STEPS IN THE PROCEDURES.

[224] RANCHO SECO DOCKET 50-312 LER 84-010
FAILURE TO COMPLETE SURVEILLANCE PROCEDURE ON ISOLATION VALVES.
EVENT DATE: 030184 REPORT DATE: 033084 NSSS: BW TYPE: PWR

(NSIC 189103) ON MAR. 1, 1984 A REVIEW WAS PERFORMED BY QA ON SURVEILLANCE PROCEDURES SP 205.07 A AND C (ISOLATION VALVE SURVEILLANCE TEST), AND IT WAS DISCOVERED THAT THE PROCEDURES WERE ONLY PARTIALLY PERFORMED PRIOR TO COMING OUT OF THE LAST REFUELING OUTAGE (FEB. 17, 1983 TO AUGUST 6, 1983).

[225] RANCHO SECO DOCKET 50-312 LER 84-012
MISSED STACK SAMPLE.
EVENT DATE: 030184 REPORT DATE: 040284 NSSS: BW TYPE: PWR

(NSIC 189223) ON MARCH 3, 1984, DURING POWER ESCALATION, THE CHEM-RAD ASSISTANT MISSED SAMPLING THE AUXILIARY BUILDING STACK, EVEN THOUGH THE GAS CONCENTRATION AT THE SITE BOUNDARY EXCEEDED 10% OF THE MAXIMUM PERMISSIBLE CONCENTRATION (MPC) FOR XENON 133 AS CALCULATED USING DEFAULT METEOROLOGY VALUES. THE IMPORTANCE OF OBTAINING THE DAILY SAMPLE REQUIRED BY TECH SPEC, WHEN GREATER THAN 10% MPC, HAS BEEN REEMPHASIZED TO THE CHEM-RAD ASSISTANT RESPONSIBLE FOR THIS OVERSIGHT. A SAMPLE WAS ALSO TAKEN ON MARCH 6, 1984, IN ACCORDANCE WITH THE REQUIREMENTS OF TECH SPEC. THESE ACTIONS WILL SATISFACTORILY CORRECT THE PROBLEMS OF THIS EVENT.

[226] ROBINSON 2 DOCKET 50-261 LER 84-001
 SHUTDOWN BANK TRIP DUE TO SOURCE RANGE DETECTOR FAILING HIGH.
 EVENT DATE: 012684 REPORT DATE: 022484 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 188956) WITH THE REACTOR SHUT DOWN AND SHUTDOWN BANK RODS WITHDRAWN, ONE OF THE TWO SOURCE RANGE DETECTORS, N-31, FAILED HIGH CAUSING A SHUTDOWN BANK TRIP. THE N-31 DETECTOR WAS FOUND TO BE SHORTED OUT. THE DETECTOR WAS REPLACED AND THE CHANNEL RETURNED TO SERVICE ON FEB. 1, 1984. THE CAUSE OF FAILURE WAS NORMAL END OF LIFE OF THE DETECTOR. NO FURTHER ACTION IS PLANNED.

[227] SALEM 1 DOCKET 50-272 LER 84-001
 REACTOR TRIP FROM 10% POWER DURING STARTUP OPERATIONS.
 EVENT DATE: 010184 REPORT DATE: 013184 NSSS: WE TYPE: PWR

(NSIC 189037) ON JAN. 1, 1984, A REACTOR TRIP OCCURRED DURING UNIT STARTUP OPERATIONS. THE STEAM DUMP WAS IN MANUAL CONTROL, AND STEAM GENERATOR FEEDWATER WAS BEING TRANSFERRED FROM AUXILIARY FEED TO MAIN FEED. POWER WAS BEING INCREASED TO 8% IN PREPARATION FOR LATCHING AND ROLLING THE TURBINE. WITH THE VARYING STEAM DEMAND, DUE TO THE POWER INCREASE AND FEED TRANSFER OPERATION, DIFFICULTY WAS ENCOUNTERED WITH CONTROLLING THE STEAM GENERATOR FEED. AN OVERFEED CONDITION DEVELOPED, WHICH CAUSED REACTOR COOLANT SYSTEM TEMPERATURE TO DECREASE. STEAM DEMAND WAS NOT DECREASED IN TIME TO PREVENT REACTOR POWER FROM EXCEEDING 10%. THIS RESULTED IN A REACTOR TRIP, DUE TO EXCEEDING 10% POWER WITH THE TURBINE NOT BEING LATCHED. THE PRIMARY FUNCTION OF THIS REACTOR TRIP IS TO REDUCE THE PRIMARY PLANT TRANSIENT RESULTING FROM A LOSS OF THE TURBINE AT POWER LEVELS GREATER THAN 10%. AS PREVIOUSLY STATED, THE TURBINE WAS NOT IN OPERATION. ON-THE-SPOT CHANGES WERE MADE TO PROCEDURES FOR CLARIFICATION AND TO PROVIDE MORE MARGIN FOR POSSIBLE OVERFEED CONDITIONS WHILE UTILIZING MANUAL FEED CONTROL.

[228] SALEM 1 DOCKET 50-272 LER 84-002
 SG HIGH LEVEL CAUSES REACTOR TRIP.
 EVENT DATE: 010784 REPORT DATE: 020684 NSSS: WE TYPE: PWR
 VENDOR: HAGAN CONTROLS
 HANCOCK CO.
 MASONFILAN INTERNATIONAL, INC.

(NSIC 189152) ON JANUARY 7, 1984, A TURBINE TRIP OCCURRED DUE TO HIGH-HIGH LEVEL IN NO. 14 STEAM GENERATOR; THIS RESULTED IN A REACTOR TRIP. THE INITIATING EVENT WAS A HIGH LEVEL SPURGE IN 15C FEEDWATER HEATER, WHICH CAUSED THE HEATER STRING INLET VALVE (13CN27) TO CLOSE. THE LOW PRESSURE FEEDWATER HEATER BYPASS VALVE (1CN47) FAILED TO OPEN AUTOMATICALLY. THIS CAUSED NO. 11 STEAM GENERATOR FEED PUMP TO TRIP ON LOW SUCTION PRESSURE; LOAD WAS RAMPED DOWN TO COMPENSATE FOR THE FEED PUMP LOSS. A BLOWN FUSE ON THE SIGNAL SUMMATOR MODULE FOR NO. 14 STEAM GENERATOR FEEDWATER LEVEL CONTROL SYSTEM CAUSED THE HIGH-HIGH LEVEL, WHICH TRIPPED THE TURBINE AND THE REACTOR. THE CAUSE WAS NOT KNOWN, SO THE ENTIRE MODULE WAS REPLACED. 1CN47 DIFFERENTIAL PRESSURE TRANSMITTER SETPOINT WAS FOUND TO BE HIGH, AND THE TRANSMITTER WAS RECALIBRATED. 1CN47 WAS THOROUGHLY TESTED, AND ITS OPERATION WAS FOUND TO BE SATISFACTORY. DURING THE TRANSIENT, 14MS167 DRIFTED OFF OF ITS OPEN SEAT DUE TO A DIFFERENTIAL PRESSURE CREATED ACROSS ITS OPERATING PISTON; THIS WAS CAUSED BY A COMBINATION OF THE POWER REDUCTION AND LEAKAGE FROM ITS SEAT ASSIST VALVES. THE REACTOR PROTECTION SYSTEM FUNCTIONED AS DESIGNED.

[229] SALEM 1 DOCKET 50-272 LER 84-003
 REACTOR TRIP ON SG OVERFEED DURING UNIT STARTUP.
 EVENT DATE: 011084 REPORT DATE: 020984 NSSS: WE TYPE: PWR
 VENDOR: HAGAN CONTROLS

(NSIC 189038) ON JAN. 10, 1984, DURING UNIT STARTUP OPERATIONS, A TURBINE TRIP OCCURRED DUE TO HIGH-HIGH LEVEL IN NO. 14 STEAM GENERATOR (SG). THIS RESULTED IN A REACTOR TRIP. STEAM GENERATOR WATER LEVEL CONTROL WAS IN AUTOMATIC OPERATION. COINCIDENT WITH LATCHING THE TURBINE, AN OVERFEED CONDITION DEVELOPED ON NO. 13 AND NO. 14 SG'S. THIS OVERFEED CONDITION CAUSED REACTOR COOLANT SYSTEM TEMPERATURE TO DECREASE WHICH, IN TURN, INCREASED REACTOR POWER ABOVE 10%. WHEN THE HIGH-HIGH WATER LEVEL SETPOINT IN NO. 14 STEAM GENERATOR WAS REACHED, A TURBINE TRIP OCCURRED. THIS CAUSED A REACTOR TRIP BECAUSE POWER LEVEL WAS GREATER THAN 10%. AT POWER LEVELS BELOW APPROXIMATELY 15%, AUTOMATIC RESPONSE OF THE WATER LEVEL CONTROL SYSTEMS, TO CHANGES IN STEAM GENERATOR LEVEL, IS VERY SLOW. THIS RESULTS IN OVERCOMPENSATION, AND RELATIVELY LARGE SG WATER LEVEL VARIATIONS. DURING THIS OCCURRENCE, THE OSCILLATIONS WERE LARGER THAN NORMAL. BECAUSE OF THIS, SG FEEDWATER LEVEL CONTROL SYSTEMS FOR NO. 13 AND NO. 14 STEAM GENERATORS WERE THOROUGHLY TESTED. THE SYSTEM INPUT AND OUTPUT CONTROL SIGNALS WERE MONITORED WITH THE AID OF A BRUSH RECORDER FOR OVER TWO WEEKS; NO PROBLEMS NOTED. THE CONTROL SYSTEMS HAVE FUNCTIONED SATISFACTORILY DURING SUBSEQUENT UNIT STARTUPS, AND DURING POWER OPERATION.

[230] SALEM 1 DOCKET 50-272 LER 84-004
 SG LOW LEVEL CAUSES REACTOR TRIP.
 EVENT DATE: 012184 REPORT DATE: 021784 NSSS: WE TYPE: PWR
 VENDOR: MASONEILAN INTERNATIONAL, INC.

(NSIC 188958) ON JAN. 21, 1984, A REACTOR TRIP OCCURRED DUE TO A LOW-LOW WATER LEVEL IN NO. 13 STEAM GENERATOR. THE INITIATING EVENT WAS THE CLOSURE OF THE INLET VALVE TO A LOW PRESSURE FEEDWATER HEATER STRING, DUE TO A HIGH LEVEL SPIKE IN A FEEDWATER HEATER. THE BYPASS VALVE AROUND THE HEATERS (1CN47) FAILED TO OPEN AUTOMATICALLY, AND WOULD NOT RESPOND TO REMOTE-MANUAL CONTROL SIGNALS. THIS CAUSED NO. 11 STEAM GENERATOR FEEDWATER PUMP TO TRIP ON LOW SUCTION PRESSURE, WHICH LED TO THE LOW LEVEL CONDITION IN THE STEAM GENERATOR. WATER LEVEL DECREASED TO THE LOW-LOW LEVEL SETPOINT, WHICH CAUSED THE REACTOR TRIP. 1CN47 WAS FOUND TO BE INTERMITTENTLY BINDING WHEN IN THE SHUT POSITION. A SIMILAR OCCURRENCE ON JAN. 7, 1984 WAS DOCUMENTED IN LER 84-002-00. EXTENSIVE TESTING, AT THAT TIME, DID NOT REVEAL THE INTERMITTENT BINDING PROBLEM. THE VALVE HAS BEEN ADJUSTED TO LIMIT THE TRAVEL, WHICH WILL PREVENT THE VALVE FROM BINDING WHEN IN THE SHUT POSITION. THE PURPOSE OF THE REACTOR TRIP IS TO PREVENT OPERATION WITH THE STEAM GENERATOR WATER LEVEL BELOW THE MINIMUM VOLUME REQUIRED FOR ADEQUATE HEAT REMOVAL. THE REACTOR PROTECTION SYSTEM FUNCTIONED AS DESIGNED, AND THE HEAT SINK WAS MAINTAINED. DUE TO THE AUTOMATIC OPERATION OF THE REACTOR PROTECTION SYSTEM, THE EVENT IS REPORTABLE IN ACCORDANCE WITH 10CFR50.73(A)(2)(IV).

[231] SALEM 1 DOCKET 50-272 LER 84-006
 SERVICE WATER LEAK INSIDE CONTAINMENT.
 EVENT DATE: 020284 REPORT DATE: 021684 NSSS: WE TYPE: PWR

(NSIC 189153) ON FEBRUARY 2, 1984, DURING NORMAL POWER OPERATION, BOTH CONTAINMENT SUMP PUMPS STARTED. UNIDENTIFIED CONTAINMENT SUMP IN-LEAKAGE INDICATED GREATER THAN 1 GPM. BOTH PUMPS AND THE CONTAINMENT SUMP LEVEL MONITORING SYSTEM WERE DETERMINED TO BE FUNCTIONING PROPERLY. A REACTOR COOLANT SYSTEM WATER INVENTORY BALANCE WAS INITIATED, AND A CONTAINMENT ENTRY WAS MADE TO IDENTIFY THE SOURCE OF LEAKAGE. A LEAK WAS DISCOVERED ON NO. 15 CONTAINMENT FAN COIL UNIT SERVICE WATER VENT LINE. SERVICE WATER TO THE FAN COIL UNIT WAS ISOLATED, AND THE UNIT WAS DECLARED INOPERABLE. EXCESSIVE WELDING OF THE JOINT DURING INITIAL INSTALLATION APPARENTLY DAMAGED THE CEMENT LINING, WHICH RESULTED IN CORROSION IN THE AREA OF THE WELD. THE OTHER FAN COIL UNITS WERE INSPECTED, WITH NO INDICATION OF SIMILAR DAMAGE. THE VENT LINE WAS REPLACED, INSPECTED, AND TESTED. NO. 15 CFCU WAS RESTORED TO AN OPERABLE STATUS THE FOLLOWING DAY. THE LEAK WAS IMMEDIATELY DETECTED AND ISOLATED. ALL SYSTEMS FUNCTIONED AS DESIGNED. NO WATER ACCUMULATED INSIDE CONTAINMENT, AND NO OTHER EQUIPMENT WAS AFFECTED BY

THE EVENT. THE REDUNDANT FAN COIL UNITS REMAINED IN AN OPERABLE STATUS THROUGHOUT THE OCCURRENCE. DUE TO THE SERVICE WATER LEAK INSIDE CONTAINMENT, THIS REPORT IS REQUIRED IN ACCORDANCE WITH IE BULLETIN NUMBER 80-24.

[232] SALEM 1 DOCKET 50-272 LER 84-009
 TECHNICAL DISCREPANCY IN DESIGN ELEVATION CALCULATIONS FOR SERVICE WATER INTAKE STRUCTURE.
 EVENT DATE: 022984 REPORT DATE: 033084 NSSS: WE TYPE: PWR

(NSIC 189212) IN NOVEMBER, 1983, OBSERVATIONS BY AN NRC STAFF HYDROLOGIST REVEALED A POSSIBLE TECHNICAL DISCREPANCY WITH THE MAXIMUM WATER LEVEL CALCULATIONS PERFORMED FOR THE SALEM SERVICE WATER INTAKE STRUCTURE (SWIS). THE SWIS IS THE ONLY PORTION OF THE PLANT AFFECTED BY THIS ERROR. DAMES & MOORE COMPLETED THE REVISED CALCULATIONS IN DECEMBER, 1983. A THIRD PARTY VERIFICATION WAS COMPLETED BY A BECHTEL STAFF HYDROLOGIST ON FEBRUARY 29, 1984. THIS MATTER WAS VERBALLY REPORTED TO THE NRC RESIDENT INSPECTOR IN NOVEMBER 1983; HOWEVER, OFFICIAL NOTIFICATION TO THE NRC WAS NOT DONE UNTIL RECEIPT OF BECHTEL'S CONFIRMATION OF THE CORRECTNESS OF THE REVISED CALCULATIONS. THE CALCULATIONS WERE ORIGINALLY BASED ON SIGNIFICANT WAVE HEIGHT INSTEAD OF MAXIMUM WAVE HEIGHT, AS REQUIRED BY THE CORPS OF ENGINEER'S SHORE PROTECTION MANUAL. THE REVISED CALCULATIONS INDICATE THAT MINOR MODIFICATIONS TO THE AIR INTAKES AND EXHAUSTS ON THE SWIS WILL HAVE TO BE EFFECTED TO ENSURE WATER TIGHT INTEGRITY IN THE EVENT OF A MAXIMUM CALCULATED CREDIBLE WAVE OCCURRENCE (POSTULATED TO OCCUR EVERY 1000 YEARS). IN ADDITION THERE ARE NO SAFETY CONCERNS ASSOCIATED WITH THE CONTINUED OPERATION OF EITHER UNIT, FOR A SHORT INTERIM, UNTIL THE NECESSARY MODIFICATIONS CAN BE AFFECTED.

[233] SALEM 1 DOCKET 50-272 LER 84-008
 WELD AREA DEGRADATION OF SERVICE WATER PIPING.
 EVENT DATE: 030984 REPORT DATE: 040584 NSSS: WE TYPE: PWR
 VENDOR: PULLMAN PWR PROD CORP

(NSIC 189155) ON MAR. 9, 1984, DURING A REFUELING OUTAGE, RADIOGRAPHY OF 16 WELDS, IN THE SERVICE WATER PIPING ASSOCIATED WITH NO. 12 COMPONENT COOLING HEAT EXCHANGER, REVEALED POSSIBLE INDICATIONS IN THE VICINITY OF 9 OF THE WELDS. A COUPON WAS REMOVED AND SENT TO PSE&G RESEARCH CORPORATION AND TO THE UNIVERSITY OF DELAWARE FOR ANALYSIS. PRELIMINARY RESULTS REVEAL THAT THE DEGRADATION IS IN THE BASE MATERIAL. THERE IS NO EVIDENCE OF WELD DEGRADATION. THIS RADIOGRAPHY WAS PERFORMED AS THE RESULT OF WELD REPAIRS WHICH WERE EFFECTED DURING THE PREVIOUS REFUELING OUTAGE. THE PREVIOUS REPAIRS WERE PERFORMED BECAUSE OF WELD DEGRADATION WHICH WAS RELATED TO BIO-FOULING (LER 82-091/01X-1 DOCUMENTED THAT OCCURRENCE). THE PIPING DEGRADATION IS NOT BELIEVED TO BE SUFFICIENT ENOUGH TO HAVE PREVENTED THE SYSTEM FROM FUNCTIONING AS DESIGNED. A SUITABLE REPAIR WILL BE DECIDED UPON WHEN THE CAUSE HAS BEEN DETERMINED. A SUPPLEMENT WILL BE ISSUED UPON RESOLUTION OF THE MATTER. BECAUSE OF THE DEGRADED CONDITION OF THIS SAFETY-RELATED SYSTEM, THIS REPORT IS BEING SUBMITTED IN ACCORDANCE WITH 10 CFR 50.73(A)(2)(V).

[234] SALEM 2 DOCKET 50-311 LER 81-115 REV 2
 UPDATE ON CONTAINMENT FAN COIL UNIT LEAK.
 EVENT DATE: 112781 REPORT DATE: 120981 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 188825) ON NOVEMBER 25, 1981, DURING A ROUTINE CONTAINMENT INSPECTION, AN OPERATOR DISCOVERED SERVICE WATER LEAKING FROM THE SECOND FROM TOP PRIMARY COOLING COIL ON NO. 24 CONTAINMENT FAN COIL UNIT (CFCU), AT A RATE OF APPROXIMATELY 0.5 GALLONS PER MINUTE. THE CFCU WAS ISOLATED BY CLOSING THE INLET AND OUTLET VALVES FROM THE CONTROL ROOM, BUT REMAINED OPERABLE AND CAPABLE OF

FUNCTIONING ADEQUATELY UNDER EMERGENCY CONDITIONS. NO. 24 CFCU WAS DECLARED INOPERABLE AND ACTION STATEMENT 3.6.2.3.A WAS ENTERED AT 0343 HOURS, NOVEMBER 27, 1981. THE SECOND FROM TOP PRIMARY COIL ON NO. 24 CFCU WAS SATISFACTORILY REPAIRED WITH BELZONA METAL FILLER. IT WAS TESTED SATISFACTORILY AND RETURNED TO SERVICE. AT 1718 HOURS, NOVEMBER 28, 1981, NO. 24 CFCU WAS DECLARED OPERABLE AND ACTION STATEMENT 3.6.2.3.A WAS TERMINATED. A DESIGN CHANGE REQUEST HAS BEEN SUBMITTED TO REPLACE THIS COOLER DURING THE FIRST REFUELING OUTAGE; HOWEVER, NO SUPPLEMENTARY REPORT WILL BE ISSUED. (81-64, 81-90, 81-94, 81-114).

[235] SALEM 2 DOCKET 50-311 LER 84-004
DIESEL GENERATOR FAILS TO START.
EVENT DATE: 021484 REPORT DATE: 031584 NSSS: WE TYPE: PWR

(NSIC 189167) ON FEBRUARY 12, 1984, DURING A MAINTENANCE SHUTDOWN, THE FUEL OIL SUPPLY VALVES FOR 2B DIESEL GENERATOR WERE SHUT WHEN A FUEL OIL LEAK DEVELOPED ON ONE CYLINDER. THE DIESEL WAS TAGGED TO PREVENT OPERATION WHILE THE LEAK WAS REPAIRED; BUT DUE TO OVERSIGHT, THE FUEL OIL VALVES WERE NOT ADDED TO THE TAGGING REQUEST. UPON COMPLETION OF REPAIRS, THE DIESEL WAS RUN FOR APPROXIMATELY FIVE MINUTES. THE TEST RUN WAS SATISFACTORY, AND THE DIESEL WAS RETURNED TO SERVICE. ON FEBRUARY 14, WHILE ATTEMPTING TO PERFORM ROUTINE SURVEILLANCE, 2 B DIESEL FAILED TO START DUE TO THE FUEL OIL VALVES BEING CLOSED. THE VALVES WERE OPENED, AND THE SURVEILLANCE WAS SUCCESSFULLY PERFORMED. APPARENTLY, THERE WAS ENOUGH FUEL IN THE SUPPLY HEADER TO TEST RUN THE DIESEL (TO SATISFY THE POST MAINTENANCE TESTING REQUIREMENTS, TWO DAYS EARLIER). AS REQUIRED BY THE TECH SPECS, TWO DIESEL GENERATORS WERE OPERABLE THROUGHOUT THE OCCURRENCE. UNIT 2 TECH SPEC REQUIRE ALL DIESEL TEST FAILURES, VALID OR NON-VALID TO BE REPORTED TO THE COMMISSION. OPERATIONS PERSONNEL WERE DIRECTED TO ENSURE THAT ALL VALVES OUT OF THE NORMAL POSITION BE TAGGED OR ENTERED IN TRIS. IN ADDITION, THE PROCEDURE WILL BE CHANGED TO REQUIRE THE DIESELS TO BE RUN FOR A MINIMUM OF FIFTEEN MINUTES FOLLOWING MAINTENANCE.

[236] SALEM 2 DOCKET 50-311 LER 84-003
PRESSURIZER OVERPRESSURE PROTECTION SYSTEM ACTUATION.
EVENT DATE: 021584 REPORT DATE: 031584 NSSS: WE TYPE: PWR

(NSIC 189166) ON FEBRUARY 15, 1984, DURING A MAINTENANCE SHUTDOWN, THE PRESSURIZER OVERPRESSURE PROTECTION SYSTEM (POWER OPERATED RELIEF VALVES 2PR-1 AND 2PR-2) ACTUATED DUE TO THE INDUCED PRESSURE TRANSIENT CAUSED BY STARTING A REACTOR COOLANT PUMP. THE REACTOR COOLANT PUMP WAS STARTED AS PART OF THE PROCEDURE DURING REACTOR COOLANT SYSTEM FILL AND VENT OPERATIONS. THE HIGHEST SYSTEM PRESSURE OBSERVED WAS 350 PSIG. BOTH RELIEF VALVES CLOSED WITHIN THREE TO FOUR SECONDS FOLLOWING ACTUATION, AND REACTOR COOLANT SYSTEM PRESSURE RETURNED TO 325 PSIG. OPERATIONS WERE IN ACCORDANCE WITH OPERATING PROCEDURES; E.G., THE REACTOR COOLANT PUMP WAS NOT STARTED UNTIL THE MINIMUM PRESSURE LIMIT FOR OPERATION (325 PSIG) WAS REACHED, AND ALL STEAM GENERATOR SECONDARY TEMPERATURES WERE LESS THAN FIFTY DEGREES ABOVE REACTOR COOLANT LOOP TEMPERATURES. THE RELIEF VALVE SETPOINTS WERE LOW IN THE REQUIRED BAND. THIS, COUPLED WITH THE MINIMUM REQUIRED PRESSURE FOR OPERATING REACTOR COOLANT PUMPS DURING FILL AND VENT OPERATIONS, RESULTED IN THE POPS ACTUATION. ALL SYSTEMS AND INDICATIONS FUNCTIONED AS DESIGNED. THIS SPECIAL REPORT IS BEING SUBMITTED, IN ACCORDANCE WITH THE TECH SPECS, BECAUSE POPS WAS USED TO MITIGATE A REACTOR COOLANT SYSTEM PRESSURE TRANSIENT. THE OPERATING PROCEDURE IS BEING AMENDED TO PROVIDE ADDITIONAL PRESSURE CONTROL GUIDANCE TO OPERATORS DURING FILL AND VENT OPERATIONS.

[237] SALEM 2 DOCKET 50-311 LER 84-005
DIESEL GENERATOR OUTPUT BREAKER TRIPS DURING TEST.
EVENT DATE: 022284 REPORT DATE: 032384 NSSS: WE TYPE: PWR

(NSIC 189328) ON FEB 22, 1984, DURING ROUTINE SURVEILLANCE TESTING OF 2A DG, THE GENERATOR OUTPUT BREAKER TRIPPED ON OVERCURRENT. THE TRIP OCCURRED FOLLOWING THE STARTING OF A REACTOR COOLANT PUMP AND AN AUXILIARY FEED PUMP (APPROXIMATELY FIVE MINUTES APART, AND ONE MINUTE AFTER THE AUXILIARY FEED PUMP WAS STARTED). 2A DG WAS DECLARED INOPERABLE. TESTING VERIFIED PROPER OPERATION OF BOTH THE BREAKER AND THE OVERCURRENT RELAY. THE GENERATOR WAS AGAIN SYNCHRONIZED, AND THE STARTING SEQUENCE OF THE PUMPS WAS REPEATED. NORMAL STARTING CURRENT AND OPERATION OF THE RELAY WERE OBSERVED. THE BREAKER DID NOT TRIP, AND THE PROBLEM COULD NOT BE DUPLICATED. NO SIMILAR PROBLEMS HAD EVER BEEN EXPERIENCED, AND THE OCCURRENCE WAS ATTRIBUTED TO AN ISOLATED CASE OF THE OVERCURRENT RELAY NOT FULLY RESETTING FOLLOWING THE REACTOR COOLANT PUMP START. SINCE THIS TRIP IS NORMALLY BYPASSED IN THE EMERGENCY OPERATING MODE, A ROUTINE SURVEILLANCE TEST RUN WAS SATISFACTORILY PERFORMED, AND 2A DG WAS RETURNED TO AN OPERABLE STATUS. THE RELAY WILL BE REPLACED WHEN A SUITABLE REPLACEMENT CAN BE OBTAINED. THE REDUNDANT DIESEL GENERATORS WERE MAINTAINED IN AN OPERABLE STATUS AT ALL TIMES. THIS REPORT IS BEING SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF TECH SPEC SURVEILLANCE REQUIREMENT 4.8.1.1.4 FOR INFORMATIONAL PURPOSES.

[238] SAN ONOPRE 1 DOCKET 50-206 LER 84-001
 TEAR GAS CAUSES FIRE WATCHES TO BE ABANDONED.
 EVENT DATE: 021584 REPORT DATE: 031684 NSSS: WE TYPE: PWR

(NSIC 188948) ON 2/15/84, AT APPROXIMATELY 0730, WITH UNIT 1 IN MODE 5, UNIT 2 IN MODE 2, AND UNIT 3 IN MODE 5, TEAR GAS APPARENTLY DRIFTED ONTO THE SAN ONOPRE SITE. AS A PRECAUTION, THE UNIT 1 CONTROL ROOM EMERGENCY AIR TREATMENT SYSTEM (CREATS) AND THE UNITS 2 AND 3 TOXIC GAS ISOLATION SYSTEM (TGIS)/CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) WERE MANUALLY INITIATED. TWENTY PEOPLE WERE TAKEN TO OFFSITE MEDICAL FACILITIES FOR TREATMENT OF A BURNING SENSATION IN THE EYES, NOSE AND THROAT. TO AVOID THE GAS, PERSONNEL WERE DIRECTED TO SEEK SHELTER INSIDE OF PLANT BUILDINGS AND SOME PERSONNEL WERE TEMPORARILY RELOCATED. TECH SPEC REQUIRED FIRE WATCHES IN AREAS CONTAINING SAFETY RELATED EQUIPMENT WERE SUSPENDED FOR APPROXIMATELY 1 HR TO AVOID THE GAS. BY 0930, THE GAS DISSIPATED AND PERSONNEL WERE ADVISED TO RESUME THEIR NORMAL DUTIES. SUSPENDED FIRE WATCHES WERE REPOSTED AND THE UNITS 1, 2, AND 3 VENTILATION SYSTEMS WERE RETURNED TO NORMAL. AN INVESTIGATION INTO THIS OCCURRENCE IS BEING CONDUCTED BY THE MARINE CORPS TO DETERMINE IF THE GAS CAME FROM NEARBY MARINE CORPS TRAINING EXERCISES AT CAMP PENDLETON.

[239] SAN ONOPRE 1 DOCKET 50-206 LER 84-002
 SPURIOUS STARTING OF DIESEL GENERATOR.
 EVENT DATE: 030984 REPORT DATE: 040984 NSSS: WE TYPE: PWR

(NSIC 189141) ON 3/9/84, AT 1003, WITH UNIT 1 IN AN EXTENDED MODE 5 OUTAGE, DURING ROUTINE SURVEILLANCE TRIP TESTING OF ELECTRICAL CIRCUITS, THE NO. 2 DG SPURIOUSLY ACTUATED. FOLLOWING THIS START, NO. 2 DG TRIPPED ON OVERSPEED. SINCE NO. 1 DG WAS ALSO INOPERABLE AT THIS TIME, LIMITING CONDITION FOR OPERATION (LCO) 3.7.II(2) REQUIRED SUSPENSION OF ANY OPERATIONS INVOLVING CORE ALTERATIONS OR POSITIVE REACTIVITY CHANGES. NONE WERE UNDERWAY, HOWEVER, THE REQUIREMENT OF LCO 3.2.A(1) TO MAINTAIN ONE CHARGING PUMP OR THE TEST PUMP OPERABLE COULD NOT BE MET SINCE NO EMERGENCY ELECTRICAL POWER SOURCE WAS AVAILABLE. ON 3/11/84, AT 1645, NO. 2 DG WAS DECLARED OPERABLE AND LCO 3.2.A(1) WAS SATISFIED. SINCE THE NO. 1 DG HAS NOW BEEN RETURNED TO SERVICE AND THE NO. 2 DG IS NOW INOPERABLE FOR ITS CORRESPONDING INSPECTION OUTAGE, FURTHER INVESTIGATIONS INTO THIS MATTER HAVE BEEN DELAYED. AT THE CONCLUSION OF THE INVESTIGATION, A REV. TO THIS LER WILL BE SUBMITTED TO PROVIDE THE CAUSE AND CORRECTIVE ACTIONS. THERE WAS NO LOSS OF SAFETY FUNCTION SINCE NO. 2 DG REMAINED MANUALLY OPERABLE THROUGHOUT THIS EVENT, AND DUE TO THE LARGE SHUTDOWN MARGIN BEING MAINTAINED IN UNIT 1, THE NO. 1 DG COULD HAVE BEEN RETURNED TO SERVICE BEFORE BORATION CAPABILITY OR RESIDUAL HEAT REMOVAL WOULD HAVE BEEN REQUIRED.

[240] SAN ONOPRE 2 DOCKET 50-361 LER 84-004
 SPURIOUS CONTAINMENT PURGE ISOLATION SIGNAL.
 EVENT DATE: 011684 REPORT DATE: 021584 NSSS: CE TYPE: PWR

(NSIC 189183) ON 1/16/84, AT 1050, WITH UNIT 2 IN MODE 5 AND A ROUTINE MAIN PURGE IN PROGRESS, THE TRAIN "A" CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) WAS SPURIOUSLY ACTUATED FROM A SPIKE ON CONTAINMENT AREA RADIATION MONITOR 2RE7856. ALL TRAIN "A" CPIS ACTUATED VALVES CLOSED TO ISOLATE THE CONTAINMENT PURGE. OPERATORS USED REDUNDANT CONTAINMENT AREA RADIATION MONITOR 2RE7857 TO VERIFY THAT THE ACTUAL CONTAINMENT AREA RADIATION LEVELS WERE BELOW THE CPIS ACTUATION SETPOINT. TRAIN "A" CPIS AND 2RE7856 WERE RESET, AND THE CONTAINMENT PURGE WAS REINITIATED. AT 1445, ON 1/16/84, TRAIN "A" CPIS WAS AGAIN SPURIOUSLY ACTUATED FROM A SPIKE ON 2RE7856, AND THE CONTAINMENT PURGE WAS AGAIN ISOLATED. AFTER VERIFYING THAT ACTUAL CONTAINMENT RADIATION LEVELS WERE BELOW THE CPIS ACTUATION SETPOINT, THE CONTAINMENT PURGE WAS REINITIATED. THE ISOLATION WAS CAUSED BY SPIKES ON 2RE7856 COINCIDED WITH TRAIN "A" ENGINEERED SAFETY FEATURES (ESF) SUBGROUP RELAY TESTING. A VOLTAGE TRANSIENT ON THE ESF BUS, RESULTING FROM SUBGROUP RELAY ACTUATION, CAUSED THE SENSITIVE GAMMA DETECTOR IN 2RE7856 TO SPIKE, THEREBY INITIATING THE CPIS. NO CORRECTIVE ACTION IS PLANNED SINCE MINOR VOLTAGE TRANSIENTS ARE EXPECTED DURING ESF SUBGROUP RELAY TESTING. HOWEVER, THE CONTAINMENT PURGE WAS TERMINATED UNTIL THE COMPLETION OF THE TRAIN "A" ESF TESTING.

[241] SAN ONOPRE 2 DOCKET 50-361 LER 84-003
 CONTAINMENT PURGE ISOLATION SYSTEM ACTUATION.
 EVENT DATE: 012284 REPORT DATE: 022184 NSSS: CE TYPE: PWR

(NSIC 188993) ON 1/22/84, AT 2100, WITH UNIT 2 IN MODE 5 AND A CONTAINMENT NORMAL PURGE IN PROGRESS, THE CONTAINMENT PURGE ISOLATION SYSTEM WAS ACTUATED WHEN THE GASEOUS ACTIVITY ALARM SETPOINT WAS REACHED ON TRAIN A CONTAINMENT AIRBORNE MONITOR 2RT7804. ALL CONTAINMENT PURGE ISOLATION SYSTEM ACTUATED COMPONENTS FUNCTIONED PROPERLY. THE ALARM WAS CAUSED BY A GRADUAL INCREASE IN CONTAINMENT BACKGROUND RADIATION WHICH EXCEEDED A CONSERVATIVELY ESTABLISHED SETPOINT. AS CORRECTIVE ACTION, A NEW CONTINUOUS GASEOUS WASTE RELEASE PERMIT WAS ISSUED AND THE GASEOUS ACTIVITY ALARM SETPOINT WAS RAISED. CONTAINMENT NORMAL PURGE WAS SUBSEQUENTLY REESTABLISHED ON 1/23/84, AT 0220.

[242] SAN ONOPRE 2 DOCKET 50-361 LER 84-007
 SPURIOUS MAIN STEAM ISOLATION SIGNALS.
 EVENT DATE: 020384 REPORT DATE: 030584 NSSS: CE TYPE: PWR

(NSIC 189118) ON 2/3/84, AT 0150, WITH UNIT 2 IN MODE 5 AND STEAM GENERATOR E-088 BLOWDOWN IN PROGRESS, THE TRAIN A AND B MAIN STEAM ISOLATION SYSTEM (MSIS) SPURIOUSLY ACTUATED ON A LOW PRESSURE SIGNAL FROM E-088. ALL MSIS ACTUATED COMPONENTS FUNCTIONED PROPERLY. ON 2/4/84, AT 0910, WITH UNIT 2 IN MODE 5 BUT WITH NO BLOWDOWN IN PROGRESS, TRAIN A AND B MSIS ACTUATED SPURIOUSLY ON A LOW PRESSURE SIGNAL FROM E-088. ALL MSIS ACTUATED COMPONENTS FUNCTIONED PROPERLY. THE SPURIOUS MSIS ACTUATIONS ARE BELIEVED TO HAVE BEEN CAUSED BY VOLTAGE FLUCTUATIONS RESULTING FROM ELECTRICAL REALIGNMENTS, TESTING, AND MAINTENANCE. THE TRIPS OCCURRED WITH THE UNIT IN MODE 5 WHILE THE STEAM GENERATOR PRESSURE WAS VERY CLOSE TO THE LOW PRESSURE TRIP SETPOINT. SINCE MSIS IS NOT REQUIRED IN MODES 5 AND 6, AS CORRECTIVE ACTION, PRESSURE SIGNALS WILL BE SIMULATED WHEN THE PLANT IS IN MODE 5 OR 6.

[243] SAN ONOPRE 2 DOCKET 50-361 LER 84-009
 DECALIBRATION OF CALCULATED STATIC THERMAL POWER.
 EVENT DATE: 021484 REPORT DATE: 031584 NSSS: CE TYPE: PWR

(NSIC 189119) THIS SUBMITTAL PROVIDES AN INFORMATIONAL LICENSEE EVENT REPORT ON THE DECALIBRATION OF CALCULATED STATIC THERMAL POWER FOR UNITS 2 AND 3. AN ANALYSIS OF STARTUP TEST DATA FOR UNITS 2 AND 3 ESTABLISHED THAT CALCULATED THERMAL POWER (BDT), CALCULATED BY THE CORE PROTECTION CALCULATORS (CPCS), MAY BECOME DECALIBRATED RELATIVE TO SECONDARY CALORIMETRIC POWER AS A RESULT OF CHANGES IN RADIAL CORE POWER DISTRIBUTION. THIS COULD RESULT IN THE GENERATION OF NONCONSERVATIVE VALUES OF LOCAL POWER DENSITY AND DEPARTURE FROM NUCLEATE BOILING RATIO. COMBUSTION ENGINEERING HAS EXPLICITLY EVALUATED THE IMPACT OF DECALIBRATION OF THE CPC STATIC THERMAL POWER CALCULATION, AND HAS CONCLUDED THAT UNIT 2 HAS OPERATED WITHIN THE BOUNDS OF ITS SAFETY ANALYSIS. THE EVALUATION OF UNIT 3 IS NOT YET COMPLETED. AS CORRECTIVE ACTION TO PREVENT DECALIBRATION, PROCEDURE S023-5-1.7 WAS CHANGED TO INCLUDE PROVISIONS FOR VERIFYING BDT CALIBRATION AT 20% POWER INTERVALS DURING POWER ASCENSION AND FOLLOWING MOVEMENT OF CONTROL ELEMENT ASSEMBLIES (CEA'S). THIS CHANGE WILL REMAIN IN EFFECT UNTIL AN INTERIM CHANGE CAN BE MADE TO THE APPROPRIATE CPC ADDRESSABLE CONSTANTS SO THAT ANY UNCERTAINTY IN THERMAL POWER IS GROUPED CONSERVATIVELY INTO THE CEA DEVIATION PENALTY.

[244] SAN ONOPRE 2 DOCKET 50-361 LER 84-011
CONTAINMENT PURGE ISOLATION SYSTEM ACTUATION.
EVENT DATE: 022584 REPORT DATE: 032284 NSSS: CE TYPE: PWR
VENDOR: NUCLEAR MEASUREMENTS CORP.

(NSIC 189120) ON 2/25/84, AT 2250, WITH UNIT 2 IN MODE 1 AT 100% POWER, THE CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) WAS ACTUATED WHEN CONTAINMENT AIRBORNE MONITOR 2RE-7804 GASEOUS CHANNEL 'C' FAILED. ALL CPIS COMPONENTS FUNCTIONED PROPERLY. THE FAILURE OF 2RE-7804C WAS DUE TO WATER IN THE GASEOUS DETECTOR CELL, SHORT CIRCUITING THE PRE-AMP. THE WATER IN THE DETECTOR CELL WAS REMOVED, THE PRE-AMP WAS REPLACED AND THE MONITOR WAS RETURNED TO SERVICE AT 0125 ON MAR. 5, 1984. THE CAUSE OF THE WATER IN THE DETECTOR CELL IS UNKNOWN. AN ENGINEERING EVALUATION WILL BE PERFORMED TO INVESTIGATE THE SOURCE OF WATER. NO OTHER COMPONENTS OR SYSTEMS MALFUNCTIONED AS A RESULT OF THIS EVENT.

[245] SAN ONOPRE 2 DOCKET 50-361 LER 84-012
SPURIOUS TOXIC GAS ISOLATION SYSTEM (TGIS) ACTUATIONS.
EVENT DATE: 030184 REPORT DATE: 040284 NSSS: CE TYPE: PWR

(NSIC 189184) ON MARCH 1, 1984, AT 0619, A SPURIOUS TOXIC GAS ISOLATION SYSTEM (TGIS) ACTUATION OCCURRED. SUBSEQUENT TO THIS DATE ADDITIONAL SPURIOUS ACTUATIONS OCCURRED ON MARCH 4, 7, 10, 14, 17, 22, 26, 27, AND 31. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) ACTUATED ON EACH TGIS AS REQUIRED. THE CAUSE OF THE SPURIOUS ACTUATIONS IS THAT THE ANALYSIS LEADING TO THE TGIS SETPOINT CONTAINED UNNECESSARY CONSERVATISMS. ON EACH OCCASION, THE ACTUATION WAS VERIFIED TO BE SPURIOUS AND THE TGIS WAS RESET. THE LONG TERM CORRECTIVE ACTION IS TO REANALYZE THE BASIS FOR THE TGIS SETPOINT AND PROVIDE A TECH SPEC AMENDMENT TO RAISE THE TGIS SETPOINT REQUIREMENT. IN ADDITION, A REQUEST FOR EXEMPTION FROM REPORTING INVALID ACTUATIONS UNDER 10 CFR 50.72 AND 10 CFR 50.73 IS BEING CONSIDERED.

[246] SAN ONOPRE 3 DOCKET 50-362 LER 84-005
FUEL ELEMENT LEAK CAUSES COOLANT ACTIVITY.
EVENT DATE: 010684 REPORT DATE: 020684 NSSS: CE TYPE: PWR

(NSIC 189121) PURSUANT TO LIMITING CONDITION FOR OPERATION (LCO) 3.4.7, ACTION STATEMENT 'D' OF APPENDIX A, TECH SPECS TO FACILITY OPERATING LICENSE NPF-15 FOR SAN ONOPRE UNIT 3, THIS SUBMITTAL PROVIDES THE REQUIRED 30-DAY WRITTEN LICENSEE EVENT REPORT (LER) FOR AN OCCURRENCE INVOLVING THE REACTOR COOLANT SYSTEM SPECIFIC ACTIVITY. ON 1/6/84, AT 0515, WITH UNIT 3 IN MODE 2 FOLLOWING A REACTOR

TRIP FOR TESTING, A REACTOR COOLANT SYSTEM (RCS) SAMPLE ANALYSIS INDICATED THAT RCS SPECIFIC ACTIVITY EXCEEDED 1.0 MICROCURIE/GRAM DOSE EQUIVALENT (DE) I-131. PURIFICATION FLOW WAS INCREASED, AND RCS SPECIFIC ACTIVITY WAS REDUCED TO LESS THAN 1.0 MICROCURIE/GRAM DE I-131 AT 2000 ON 1/6/84. NO FURTHER CORRECTIVE ACTION IS PLANNED.

[247] SAN ONOPRE 3 DOCKET 50-362 LER 84-003
DROPPED CONTROL ROD ASSEMBLY CAUSES REACTOR TRIP.
EVENT DATE: 010784 REPORT DATE: 020684 NSSS: CE TYPE: PWR
VENDOR: COMBUSTION ENGINEERING, INC.

(NSIC 189261) ON 1/7/84, AT 0030, WITH UNIT 3 IN MODE 3 AT 0% POWER, WHILE PERFORMING A PLANNED REACTOR SHUTDOWN, CONTROL ELEMENT ASSEMBLY (CEA) 64 SLIPPED THIRTY (30) INCHES. THE CONTROL ELEMENT ASSEMBLY CALCULATORS (CEAC) DETECTED THE DEVIATION OF CEA 64 FROM ITS GROUP AND GENERATED PENALTY FACTORS, WHICH, WHEN USED BY THE CORE PROTECTION CALCULATORS (CPC'S), RESULTED IN DEPARTURE FROM NUCLEATE BOILING RATIO (DNBR) AND LOCAL POWER DENSITY (LPD) TRIPS ON ALL FOUR REACTOR PROTECTION CHANNELS. ALL EIGHT REACTOR TRIP BREAKERS OPENED, FULLY INSERTING ALL CEA'S NOT ALREADY INSERTED. THE CEA 64 SLIP WAS CAUSED BY SLUGGISH OPERATION OF THE CEA DRIVE MECHANISM. THE VENDOR HAS BEEN REQUESTED TO REVIEW THIS EVENT AND TO PROVIDE APPROPRIATE CORRECTIVE ACTION.

[248] SAN ONOPRE 3 DOCKET 50-362 LER 84-007
SPURIOUS REACTOR PROTECTION SYSTEM TRIP.
EVENT DATE: 030584 REPORT DATE: 032984 NSSS: CE TYPE: PWR

(NSIC 189185) ON 3/5/84, AT 1800, WITH UNIT 3 IN MODE 3, A REACTOR PROTECTION SYSTEM TRIP OCCURRED. ALL EIGHT REACTOR TRIP BREAKERS OPENED, FULLY INSERTING ALL CONTROL ELEMENT ASSEMBLIES NOT ALREADY INSERTED. NO TRIP BISTABLES ACTUATED DURING THIS EVENT. CHANNEL FUNCTIONAL TESTING AND OTHER INVESTIGATIONS OF SUSPECTED PORTIONS OF THE REACTOR PROTECTION SYSTEM COULD NOT DETERMINE A CAUSE FOR THE TRIP.

[249] SEQUOYAH 1 DOCKET 50-327 LER 84-001
CONTAINMENT VENTILATION ISOLATION.
EVENT DATE: 010284 REPORT DATE: 013184 NSSS: WE TYPE: PWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 189107) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED A CONTAINMENT VENT ISOLATION (CVI) TO OCCUR. INVESTIGATION REVEALED THAT A VOLTAGE SPIKE MAY HAVE OCCURRED AS A RESULT OF A CLOGGED AIR FILTER CAUSING A LOW FLOW ALARM SWITCH TO ACTUATE AND GENERATE SOME ELECTROMAGNETIC INTERFERENCE (EMI). RADIATION LEVELS WERE NOT ABOVE NORMAL DURING THIS TIME. THE SPURIOUS HIGH RADIATION ALARM WAS RESET AND THE MONITOR WAS RETURNED TO SERVICE. FLOW SWITCHES ARE BEING MOUNTED ON SHOCK ABSORBING RUBBER MOUNTS AND THEIR FLOW RATES ARE BEING RECHECKED TO HELP PREVENT MORE SPURIOUS SPIKES. ALSO, THE PREFILTER PAPER IS BEING REPLACED DAILY TO HELP PREVENT A LOW FLOW ALARM.

[250] SEQUOYAH 1 DOCKET 50-327 LER 84-005
COLD LEG ACCUMULATOR GAS HIGH BORON CONCENTRATION.
EVENT DATE: 010984 REPORT DATE: 020684 NSSS: WE TYPE: PWR

(NSIC 188985) THE NUMBER 3 COLD LEG ACCUMULATOR WAS DECLARED INOPERABLE WHEN BORON SAMPLES INDICATED THE BORON CONCENTRATION OF THE ACCUMULATOR WAS APPROXIMATELY 2130 TO 2150 PPM. THIS EVENT REQUIRED ENTRY, AT 0045 CST ON 01/09/84, INTO LCO 3.5.1.1 WHICH REQUIRES THE BORON CONCENTRATION BE MAINTAINED BETWEEN 1900 AND 2100 PPM. THE UNIT WAS SUBSEQUENTLY SHUT DOWN WHEN THE BORON

CONCENTRATION IN THE ACCUMULATOR COULD NOT BE RESTORED TO THE ALLOWABLE RANGE WITHIN THE REQUIRED ACTION TIME. THE NUMBER 3 COLD LEG ACCUMULATOR WAS PARTIALLY DRAINED AND DILUTED WITH LOWER BORON CONCENTRATED WATER FROM THE REFUELING WATER STORAGE TANK. THE BORON CONCENTRATION IN THE ACCUMULATOR WAS RETURNED WITHIN THE ALLOWABLE RANGE AT 0748 CST ON 01/09/84.

[251] SEQUOYAH 1 DOCKET 50-327 LER 84-006
 REACTOR TRIP DUE TO LOW-LOW LEVEL IN SG.
 EVENT DATE: 011084 REPORT DATE: 020884 NSSS: WE TYPE: PWR

(NSIC 189174) AT 0204 CST ON 01/10/84, UNIT 1 EXPERIENCED A TURBINE AND REACTOR TRIP. UNIT 1 WAS IN MODE 1 (2230 PSIG, 552 DEGREES F) AT 13% REACTOR POWER JUST PRIOR TO THE EVENT. THE TURBINE TRIP WAS CAUSED BY HIGH-HIGH LEVEL IN THE NUMBER FOUR STEAM GENERATOR. SUBSEQUENT STEAM GENERATOR LEVEL SHRINK RESULTED IN A REACTOR TRIP DUE TO LOW-LOW LEVEL IN THE NUMBER TWO STEAM GENERATOR. UNIT 1 STABILIZED AT 547 DEGREES F FOLLOWING THE REACTOR TRIP.

[252] SEQUOYAH 1 DOCKET 50-327 LER 84-007
 REACTOR TRIP DUE TO LOW LEVEL IN SG.
 EVENT DATE: 011084 REPORT DATE: 020884 NSSS: WE TYPE: PWR

(NSIC 188986) AT 1610 CST ON 01/10/84, UNIT 1 EXPERIENCED A TURBINE AND REACTOR TRIP. UNIT 1 WAS IN MODE 1 (22354 PSIG, 557 F) AT 23% REACTOR POWER JUST PRIOR TO THE EVENT. THE TURBINE TRIP WAS CAUSED BY A HIGH-HIGH LEVEL IN THE NUMBER THREE STEAM GENERATOR. SUBSEQUENT STEAM GENERATOR LEVEL SHRINK RESULTED IN A REACTOR TRIP DUE TO LOW-LOW LEVEL IN THE NUMBER FOUR STEAM GENERATOR. UNIT 1 STABILIZED AT 547 F FOLLOWING THE REACTOR TRIP.

[253] SEQUOYAH 1 DOCKET 50-327 LER 84-002
 AUXILIARY BUILDING VENTILATION ISOLATION.
 EVENT DATE: 011284 REPORT DATE: 020884 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 189108) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED AN AUXILIARY BUILDING VENTILATION ISOLATION (ABI) TO OCCUR. INVESTIGATION REVEALED THAT A VOLTAGE SPIKE CAUSED BY SWITCH ACTUATION GENERATED SOME ELECTROMAGNETIC INTERFERENCE (EMI) TO CAUSE A HIGH RADIATION TRIP. ALSO, ONE OF THREE CHANNELS WERE BLOCKED WHEN A FILTER WAS CHANGED TO PREVENT A SPIKE, BUT ONE OF THE UNBLOCKED CHANNELS HAD A SPURIOUS SPIKE. ALL RADIATION LEVELS WERE NORMAL, BELOW SETPOINT, DURING THIS TIME. THE SPURIOUS HIGH RADIATION ALARM WAS RESET AND THE MONITOR WAS RETURNED TO SERVICE. RUBBER MOUNTS ARE BEING ADDED TO SWITCHES AND A BLOCK SWITCH IS BEING MODIFIED TO BLOCK ALL THREE CHANNELS, TOTAL GAS, PARTICULATE AND IODINE, INSTEAD OF JUST ONE CHANNEL AT A TIME. ALSO, THE SWITCHES ARE BEING CONNECTED WITH POLYFLOW TUBES INSTEAD OF STAINLESS TO PREVENT VIBRATION. BETTER COORDINATION BETWEEN MAINTENANCE AND OPERATIONS WHEN WORK SUCH AS FILTER CHANGES IS DONE WILL ALSO HELP PREVENT SPURIOUS SPIKES.

[254] SEQUOYAH 1 DOCKET 50-327 LER 84-004
 CONTROL ROOM VENTILATION ISOLATION.
 EVENT DATE: 011484 REPORT DATE: 021084 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 189109) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED A CONTROL ROOM ISOLATION (CRI) TO OCCUR. INVESTIGATION REVEALED THAT A VOLTAGE SPIKE MAY HAVE OCCURRED AS A RESULT OF ELECTROMAGNETIC INTERFERENCE (EMI) WHICH WAS PROBABLY GENERATED BY A SWITCH ACTUATION. RADIATION LEVELS WERE NOT ABOVE NORMAL DURING THIS TIME. THE SPURIOUS HIGH RADIATION ALARM WAS RESET AND THE MONITOR WAS

RETURNED TO SERVICE. FLOW SWITCHES HAVE BEEN MOUNTED ON SHOCK ABSORBING RUBBER MOUNTS AND THEIR FLOW RATES ARE BEING CHECKED DAILY AND FILTERS CHANGED TO HELP PREVENT MORE SPURIOUS SPIKES.

[255] SEQUOYAH 1 DOCKET 50-327 LER 84-003
CONTAINMENT BUILDING VENTILATION ISOLATION OCCURS TWICE.
EVENT DATE: 012084 REPORT DATE: 021784 NSSS: WE TYPE: PWR
VENDOR: GENERAL ATOMIC CO

(NSIC 188984) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED A CONTAINMENT VENTILATION ISOLATION (CVI) TO OCCUR. INVESTIGATION REVEALED THAT A VOLTAGE SPIKE OCCURRED AS A RESULT OF ELECTROMAGNETIC INTERFERENCE (EMI) WHICH WAS PROBABLY GENERATED BY SWITCH ACTUATION WHEN AN ALARM CAME IN. RADIATION LEVELS WERE NOT ABOVE NORMAL DURING THIS TIME. THE SPURIOUS HIGH RADIATION ALARM WAS RESET AND THE MONITOR WAS RETURNED TO SERVICE. FLOW RATES ARE BEING CHECKED DAILY AND FILTERS CHANGED TO HELP PREVENT MORE SPURIOUS SPIKES. ALSO, FILTER PAPER THAT IS ON ROLLS WILL BE CHECKED TO SEE IF PAPER IS CLOSE TO RUNNING OUT.

[256] SEQUOYAH 1 DOCKET 50-327 LER 84-008
AUXILIARY BUILDING VENTILATION ISOLATION OCCURS FIVE TIMES.
EVENT DATE: 012484 REPORT DATE: 022284 NSSS: WE TYPE: PWR

(NSIC 189306) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED AN AUXILIARY BUILDING ISOLATION (ABI) TO OCCUR. INVESTIGATION REVEALED TWO SEPARATE CAUSES; THE RELIEVING OF PRESSURE (BURPING) IN THE VOLUME CONTROL TANK (VCT) AND THE OVERFLOWING OF THE CONDENSATE DEMINERALIZER WASTE EVAPORATOR (CDWE). AIRBORNE RADIATION WAS NOT SIGNIFICANTLY ABOVE NORMAL DURING THIS TIME. THE AUXILIARY BUILDING WAS EVACUATED, GAS SAMPLES COLLECTED, AIRBORNE RADIATION AREAS POSTED, AND THE BUILDING CLEANED AS FILTERING PERMITTED. NO PERSONNEL WERE SERIOUSLY CONTAMINATED, AND ANY RADIATION RELEASED TO THE ENVIRONMENT WAS WELL WITHIN TECH SPEC LIMITS.

[257] SEQUOYAH 1 DOCKET 50-327 LER 84-011
SEISMIC EVENT COULD CAUSE CONTROL ROOM HABITABILITY SYSTEM FAILURE.
EVENT DATE: 012584 REPORT DATE: 022484 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 189111) A DESIGN REVIEW HAS REVEALED THAT, DURING A SEISMIC EVENT, VARIOUS PIPING (FIRE PROTECTION, POTABLE WATER, DEMINERALIZED WATER, TOILET DRAINS, FLOOR AND EQUIPMENT DRAINS) WHICH PENETRATE THE CONTROL ROOM HABITABILITY PRESSURIZATION BOUNDARY COULD FAIL. IN THE EVENT OF SUCH A CONDITION, THE CONTROL ROOM EMERGENCY VENTILATION SYSTEM MAY NOT BE CAPABLE OF PRESSURIZING THE CONTROL ROOM AREA. AT THE PRESENT TIME, THE CONTROL ROOM EMERGENCY VENTILATION SYSTEM IS OPERABLE, AND THE ABOVE DESCRIBED CONDITION COULD ONLY OCCUR DURING A SEISMIC EVENT.

[258] SEQUOYAH 1 DOCKET 50-327 LER 84-009
CONTAINMENT BUILDING VENTILATION ISOLATION.
EVENT DATE: 012884 REPORT DATE: 022784 NSSS: WE TYPE: PWR
VENDOR: DRAGON VALVE, INC.

(NSIC 189173) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED A CONTAINMENT VENTILATION ISOLATION (CVI) TO OCCUR. INVESTIGATION REVEALED THAT THE PARTICULATE AND TOTAL GAS CHANNELS WERE ABOVE SETPOINT. THE RADIATION LEVELS WERE STILL WELL BELOW TECH SPEC LIMITS. CONTAINMENT BUILDING ACTIVITY WAS MONITORED TO DETERMINE RADIATION LEVELS AND A POSSIBLE SOURCE. THE UNIT WAS SHUT

DOWN AND A ROOT VALVE ON THE PRESSURIZER WAS FOUND TO BE LEAKING THROUGH THE PACKING. THE VALVE WAS BACKSEATED. NO FURTHER ACTION IS REQUIRED.

[259] SEQUOYAH 1 DOCKET 50-327 LER 84-010
 AUXILIARY BUILDING VENTILATION ISOLATION.
 EVENT DATE: 012884 REPORT DATE: 022784 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 189110) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED AN AUXILIARY BUILDING ISOLATION (ABI) TO OCCUR. INVESTIGATION REVEALED THAT A VOLTAGE SPIKE OCCURRED AS A RESULT OF ELECTROMAGNETIC INTERFERENCE (EMI) WHICH WAS GENERATED BY A SWITCH ACTUATION ON THE LOW FLOW ALARM IN THE RADIATION MONITOR. RADIATION LEVELS WERE NOT ABOVE SETPOINT DURING THIS TIME. THE INADVERTENT HIGH RADIATION ALARM WAS RESET AND THE MONITOR WAS RETURNED TO SERVICE. EMI PROTECTION IS BEING INSTALLED TO HELP PREVENT MORE SPURIOUS SPIKES. THE ABI IS BEING BLOCKED DURING MAINTENANCE, PER REVISED PROCEDURES, TO PREVENT INADVERTENT SPIKES FROM BEING GENERATED.

[260] SEQUOYAH 1 DOCKET 50-327 LER 84-013
 REACTOR TRIP DUE TO LOW-LOW SG LEVEL.
 EVENT DATE: 013084 REPORT DATE: 022884 NSSS: WE TYPE: PWR

(NSIC 189049) AT 1930 CST ON 01/30/84, UNIT 1 EXPERIENCED A TURBINE TRIP FOLLOWED BY A REACTOR TRIP. UNIT 1 WAS IN MODE 1 (2235 PSIG, 559 DEGREES F,) AT 17% REACTOR POWER JUST PRIOR TO THE EVENT. THE TURBINE TRIP WAS CAUSED BY A HIGH-HIGH LEVEL IN THE NUMBER FOUR STEAM GENERATOR. SUBSEQUENT STEAM GENERATOR LEVEL SHRINK RESULTED IN A REACTOR TRIP DUE TO LOW-LOW LEVEL IN THE NUMBER 3 STEAM GENERATOR. UNIT 1 STABILIZED AT 547 F FOLLOWING THE REACTOR TRIP.

[261] SEQUOYAH 1 DOCKET 50-327 LER 84-018
 ISOLATED FIRE PROTECTION SPRAY HEADER WITHOUT FIRE WATCH.
 EVENT DATE: 022184 REPORT DATE: 032084 NSSS: WE TYPE: FWR

(NSIC 189050) ON 02/23/84 AT 1200(C), FIRE PROTECTION DELUGE VALVE 0-FCV-26-211 WAS FOUND ISOLATED WITH NO CONTINUOUS FIRE WATCH IN PLACE. INVESTIGATION REVEALED THAT THE DELUGE VALVE HAD BEEN ISOLATED AT APPROXIMATELY 0353(C) ON 02/21/84 IN ORDER TO DRAIN THE SPRINKLER HEADER WHICH HAD BEEN CHARGED BY A SPURIOUS SIGNAL. THE UNIT OPERATOR FAILED TO INITIATE A CONTINUOUS FIRE WATCH AS REQUIRED BY LCO 3.7.11.2 AND LATER FAILED TO HAVE THE ISOLATION VALVE REOPENED AFTER THE SPRINKLER HEADER HAD DRAINED. A CONTINUOUS FIRE WATCH WAS INITIATED ON DISCOVERY OF THE CONDITION, AND THE ISOLATION VALVE (0-HCV-26-1125) WAS REOPENED AT 1249(C) ON 02/23/84.

[262] SEQUOYAH 1 DOCKET 50-327 LER 84-016
 AUXILIARY BUILDING VENTILATION ISOLATION.
 EVENT DATE: 022584 REPORT DATE: 031684 NSSS: WE TYPE: PWR

(NSIC 189112) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED AN AUXILIARY BUILDING ISOLATION (ABI) TO OCCUR. INVESTIGATION REVEALED THAT A VACUUM CLEANER HAD BEEN PULLED OUT OF THE FUEL TRANSFER CANAL AFTER CLEANUP OF CONTAMINATION IN THE CANAL. HEALTH PHYSICS WAS WAITING AT THE TOP OF THE CANAL TO SURVEY THE VACUUM CLEANER WHEN IT WAS BROUGHT UP. RADIATION LEVEL ON CONTACT WAS APPROXIMATELY 12 REM PER HOUR. THE VACUUM CLEANER WAS PLACED IN A BAG AND REMOVED TO THE RADIATION WASTE AREA. NO AIRBORNE RADIATION WAS DETECTED AND NO PERSONNEL WERE CONTAMINATED.

[263] SEQUOYAH 1 DOCKET 50-327 LER 84-017
 CONTAINMENT BUILDING VENTILATION ISOLATION.
 EVENT DATE: 022784 REPORT DATE: 032784 NSSS: WE TYPE: PWR

(NSIC 189206) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED A CONTAINMENT VENTILATION ISOLATION (CVI) TO OCCUR. INVESTIGATION REVEALED THAT FOLLOWING THE REMOVAL OF THE PRIMARY SIDE MANWAY COVER OF A STEAM GENERATOR, A SMALL AMOUNT OF AIRBORNE RADIATION ESCAPED. AN INCREASE IN THE RADIATION LEVEL IN LOWER CONTAINMENT WAS EXPECTED DURING THIS OPERATION. DURING FUTURE PERFORMANCES OF THIS ACTIVITY, THE SETPOINT OF THE RADIATION MONITOR WILL BE TEMPORARILY REVISED UPWARD TO ALLOW FOR EXPECTED INCREASES IN RADIATION.

[264] SEQUOYAH 2 DOCKET 50-328 LER 84-001
 CONTAINMENT VENTILATION ISOLATION.
 EVENT DATE: 010584 REPORT DATE: 020884 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 189113) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED A CONTAINMENT VENTILATION ISOLATION (CVI) TO OCCUR. INVESTIGATION REVEALED THAT A VOLTAGE SPIKE MAY HAVE OCCURRED AS A RESULT OF CHANGING A TRITIUM TRAP WHICH CAUSED A SWITCH ACTUATION TO EMIT ELECTROMAGNETIC INTERFERENCE (EMI). ALSO, A SOURCE CHECK WAS NOT ALLOWED TO DECAY BEFORE THE MONITOR WAS PUT BACK INTO NORMAL MODE. RADIATION LEVELS WERE NOT ABOVE NORMAL DURING THIS TIME. THE HIGH RADIATION ALARM WAS DETERMINED TO BE SPURIOUS AND THE CHANNEL WAS BLOCKED. THE CVI WAS RESET AND THE MONITOR WAS RETURNED TO SERVICE. FLOW SWITCHES ARE BEING MOUNTED ON SHOCK ABSORBING RUBBER MOUNTS AND OPERATIONS IS CHECKING FLOW EVERY SHIFT TO PREVENT LOW FLOW ALARM FROM ACTUATING. ALSO, PROCEDURES ARE BEING REVISED TO HELP PREVENT FUTURE SPURIOUS SPIKES.

[265] SEQUOYAH 2 DOCKET 50-328 LER 84-002
 CONTAINMENT BUILDING VENTILATION ISOLATION OCCURS SIX TIMES.
 EVENT DATE: 012784 REPORT DATE: 022484 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 189987) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED A CONTAINMENT VENTILATION ISOLATION (CVI) TO OCCUR. INVESTIGATION REVEALED THAT A VOLTAGE SPIKE OCCURRED AS A RESULT OF ELECTROMAGNETIC INTERFERENCE (EMI) WHICH WAS GENERATED BY A SWITCH ACTUATION ON LOW FLOW OR LOW PAPER IN THE RADIATION MONITOR. RADIATION LEVELS WERE NOT ABOVE NORMAL DURING THIS TIME. THE INADVERTENT HIGH RADIATION ALARM WAS RESET AND THE MONITOR WAS RETURNED TO SERVICE. FLOW RATES ARE BEING CHECKED, FILTERS CHANGED, AND EMI PROTECTION INSTALLED TO HELP PREVENT MORE SPURIOUS SPIKES. ALSO, THE ALARM IS BEING BLOCKED PER REVISED PROCEDURES DURING MAINTENANCE TO PREVENT INADVERTENT SPIKES FROM BEING GENERATED.

[266] SEQUOYAH 2 DOCKET 50-328 LER 84-003
 CONTAINMENT BUILDING VENTILATION ISOLATIONS.
 EVENT DATE: 022784 REPORT DATE: 032784 NSSS: WE TYPE: PWR

(NSIC 189240) A VITAL INVERTER FAILED DUE TO A BLOWN FUSE WHEN PERSONNEL PERFORMED AN INCORRECT CONNECTION WHICH CAUSED A CONTAINMENT VENTILATION ISOLATION (CVI) TO OCCUR. ANOTHER CVI OCCURRED WHEN A BLOCK SWITCH ON A RADIATION MONITOR WAS ACTUATED. RADIATION LEVELS WERE NOT ABOVE NORMAL DURING THIS TIME. THE CVIS WERE RESET AND THE INVERTER AND THE SWITCH WERE RETURNED TO SERVICE. NOTHING WAS FOUND WRONG WITH THE SWITCH, BUT THE INVERTER HAD TO BE REPAIRED.

[267] SEQUOYAH 2 DOCKET 50-328 LER 84-005
 ESP SURVEILLANCE INSTRUCTION INTERVAL MISSED.
 EVENT DATE: 032984 REPORT DATE: 042784 NSSS: WE TYPE: PWR

(NSIC 189312) SURVEILLANCE INSTRUCTION (SI) 269, "CHANNEL FUNCTION TEST OF ESP INSTRUMENTATION FOR AUTOMATIC SWITCHOVER TO CONTAINMENT SUMP," WAS NOT COMPLETED WITHIN THE 1.25 SURVEILLANCE INTERVAL ALLOWED BY TECH SPECS. THIS TEST OF SUMP LEVEL AND REFUELING WATER STORAGE TANK (RWST) LEVEL INSTRUMENT CHANNELS WAS PERFORMED AND FOUND WITHIN TOLERANCE UPON DISCOVERY. THE SCHEDULING AND TRACKING PROGRAM FOR SIS HAS BEEN MODIFIED TO PREVENT FUTURE RECURRENCE OF THIS PERSONNEL ERROR.

[268] ST. LUCIE 1 DOCKET 50-335 LER 81-039 REV 1
 UPDATE ON PORV BLOCK VALVE FAILS TO CLOSE.
 EVENT DATE: 080281 REPORT DATE: 031984 NSSS: CE TYPE: PWR
 VENDOR: VELAN VALVE CORP.

(NSIC 189202) DURING POWER OPERATION, A ROUTINE SURVEILLANCE SHOWED THAT PORV BLOCK VALVE MV1403 WOULD NOT CLOSE. MV1403 WAS MANUALLY CLOSED AND DE-ENERGIZED PER TECH SPEC 3.4.12. EXCESSIVE LEAKAGE THROUGH THE PACKING OF THE MV1403 RESULTED IN A TECH SPEC CHANGE REQUEST ALLOWING DE-ENERGIZING THE PORV AND BACKSEATING MV1403. THIS REQUEST WAS APPROVED AND IMPLEMENTED ON AUG. 4. FOR PREVIOUS SIMILAR FAILURES OF A PORV BLOCK VALVE, SEE LERS 81-18 AND 82-8. THE CAUSE OF THE FAILURE OF MV1403 HAS BEEN DETERMINED TO BE A LOOSE ELECTRICAL CONNECTION ON THE VALVE LIMIT SWITCH. THE LOOSE CONNECTION WAS FOUND AND TIGHTENED DURING THE OCTOBER 1981 REFUELING OUTAGE.

[269] ST. LUCIE 2 DOCKET 50-389 LER 84-001
 TURBINE/REACTOR TRIP - GENERATOR GROUND.
 EVENT DATE: 011984 REPORT DATE: 021884 NSSS: CE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 189070) WHILE AT 100% POWER, THE TURBINE AND REACTOR TRIPPED. THE TRIP APPEARED TO BE CAUSED BY A GENERATOR GROUND, AS THE ASSOCIATED ANNUNCIATOR WAS IN ALARM. ALL AUTOMATIC AND MANUAL CONTROL SYSTEMS FUNCTIONED NORMALLY AFTER THE TRIP. THE PLANT WAS MAINTAINED IN HOT STANDBY WHILE TROUBLESHOOTING OF THE MAIN GENERATOR TOOK PLACE. ELECTRICAL MAINTENANCE PERSONNEL FOUND THAT POTENTIAL TRANSFORMER DRAWER DISCONNECT CONTACTS WERE MISALIGNED. THESE CONTACTS (WESTINGHOUSE MODEL #64C2289G01) WERE REALIGNED AND RETURNED TO SERVICE. AFTER CONTACT REALIGNMENT THE GROUND ALARM CLEARED. THE GENERATOR WAS VERIFIED TO BE CLEAR OF GROUNDS BY MEGGER AND DOBLE TESTING AND THE PLANT WAS RETURNED TO POWER. NO FUTURE CORRECTIVE ACTION IS PLANNED AT THIS TIME, HOWEVER, THE EQUIPMENT MALFUNCTION WILL BE EXAMINED IN DEPTH TO PROVIDE RECOMMENDATIONS WITH RESPECT TO HARDWARE MODIFICATIONS AND/OR REVISED MAINTENANCE PROCEDURES IN ORDER TO PREVENT A RECURRENCE OF THIS TYPE. THIS IS THE FIRST LER OF ITS TYPE.

[270] ST. LUCIE 2 DOCKET 50-389 LER 84-003
 TURBINE TRIP/REACTOR TRIP DUE TO HIGH STEAM GENERATOR WATER LEVEL.
 EVENT DATE: 012984 REPORT DATE: 022884 NSSS: CE TYPE: PWR
 VENDOR: FISHER CONTROLS CO.

(NSIC 189071) WHILE INCREASING POWER FROM 0% TO 30% AFTER AN OUTAGE, THE OPERATOR WAS TRANSFERRING FEEDWATER CONTROL FROM THE 15% BYPASS VALVES TO THE MAIN FEEDWATER REGULATING VALVES. DURING THIS EVOLUTION A HI-HI STEAM GENERATOR LEVEL TURBINE TRIP OCCURRED WHICH RESULTED IN A REACTOR TRIP. THE HI-HI STEAM GENERATOR LEVEL OCCURRED DUE TO LEAKAGE THROUGH THE "A" MAIN FEED REG VALVE. AS THE MAIN FEED BLOCK VALVES WERE OPENED IN PREPARATION FOR TRANSFER FROM THE 15% BYPASS VALVES, LEAKAGE THROUGH THE "A" MAIN FEED REG VALVE CAUSED "A" S/G LEVEL TO

INCREASE. LEAKAGE THROUGH THE "B" MAIN FEED REG VALVE WAS SIGNIFICANTLY SMALLER THAN THROUGH THE "A". WHILE THE OPERATOR TURNED HIS ATTENTION TO THE "A" S/G TO REDUCE LEVEL, THE "B" S/G LEVEL BEGAN TO DECREASE. THE OPERATORS ATTENTION WAS THEN DIVERTED TO RESTORING "B" S/G LEVEL AND "A" S/G LEVEL REACHED HI-HI AND THE TURBINE TRIPPED WHICH TRIPPED THE REACTOR. ALL AUTOMATIC SYSTEMS FUNCTIONED PROPERLY, THE REACTOR WAS RESTARTED AND THE PLANT RETURNED TO 100% POWER. A PLANT WORK ORDER HAS BEEN ISSUED TO PERFORM MAINTENANCE ON THE VALVE DURING THE NEXT REFUELING OUTAGE.

[271] ST. LUCIE 2 DOCKET 50-389 LER 84-002
 MODE CHANGES WITH INOPERABLE EQUIPMENT.
 EVENT DATE: 013084 REPORT DATE: 022984 NSSS: CE TYPE: PWR

(NSIC 189135) WHILE AT 100% POWER, IT WAS FOUND THAT ON THREE OCCASIONS MODE CHANGES HAD BEEN MADE WITH TECH SPECS REQUIRED EQUIPMENT OUT OF SERVICE.

[272] SUMMER 1 DOCKET 50-395 LER 84-001
 MISSED DAILY GRAB SAMPLE OF SERVICE WATER EFFLUENTS.
 EVENT DATE: 010384 REPORT DATE: 013084 NSSS: WE TYPE: PWR

(NSIC 189072) ON THE FOLLOWING DATES, DECEMBER 23 THROUGH 27 AND 29, 1983, WITH THE PLANT IN MODE 1, DAILY GRAB SAMPLES OF THE SERVICE WATER EFFLUENT WERE NOT TAKEN BECAUSE OF PERSONNEL ERROR. HEALTH PHYSICS PROCEDURE (HPP) 810, "SAMPLING OF RADIOACTIVE GASES AND LIQUIDS," PROVIDES CONTROLS AND FREQUENCIES FOR SAMPLING REQUIRED BY PLANT TECH SPEC 3.11.1, "LIQUID EFFLUENT." THERE WERE NO ADVERSE CONSEQUENCES DUE TO THIS EVENT. NO RADIOACTIVE MATERIAL WAS RELEASED DURING THE PERIOD AND SAMPLES TAKEN PRIOR TO AND AFTER THE AFOREMENTIONED DATES SHOWED NO TRACE OF RADIOACTIVE MATERIAL IN THE SYSTEM. DISCIPLINARY ACTION WAS TAKEN AGAINST THE INDIVIDUAL INVOLVED. PREVIOUSLY, THESE SURVEILLANCE REQUIREMENTS WERE GROUPED ON A LIST WITH OTHER COUNT ROOM ACTIVITIES. TO ASSURE THAT THE SURVEILLANCE REQUIREMENTS ARE NOT MISSED IN THE FUTURE, A SEPARATE LIST OF DAILY, WEEKLY AND MONTHLY TECHNICAL SPECIFICATION REQUIREMENTS IS BEING GENERATED. THIS LIST WILL ALSO SERVE AS A RECORD OF TASK COMPLETION AND WILL BE MAINTAINED AS A PLANT RECORD. THIS ACTION IS SCHEDULED TO BE COMPLETED BY FEBRUARY 1, 1984.

[273] SUMMER 1 DOCKET 50-395 LER 84-002
 MISSED FIRE WATCH PATROL.
 EVENT DATE: 011184 REPORT DATE: 020284 NSSS: WE TYPE: PWR

(NSIC 189002) AT 0800, JAN. 11, 1984, IT WAS IDENTIFIED THAT THE HOURLY ROVING FIRE WATCH PATROL FOR THE AUXILIARY BUILDING (WEST PENETRATION), ROOM 63-03, HAD NOT BEEN PERFORMED DURING THE PREVIOUS 8 HRS AS REQUIRED BY TECH SPEC 3.7-10, "FIRE RATED ASSEMBLIES." THE CAUSE OF THIS EVENT WAS PERSONNEL ERROR. THE APPLICABLE INFORMATION WAS NOT TRANSFERRED FROM THE PREVIOUS DAILY FIRE WATCH LOG TO THAT OF JAN. 11TH. PROBABLE CONSEQUENCES OF THIS EVENT WERE MINIMAL. THE AREA IS PROTECTED BY SMOKE DETECTORS, AND THE ZONE FIRE LOADING FOR THE AREA IS 8,800 BTU/FT². THE FOLLOWING ACTION HAS BEEN TAKEN TO PRECLUDE RECURRENCE. THE ROVING FIRE WATCHES ON MIDSHIFT ARE NOW VERIFYING REQUIRED CHECKS, PER THE REMOVAL AND RESTORATION LOG, DAILY WITH THE SHIFT SUPERVISOR AT MIDNIGHT.

[274] SUMMER 1 DOCKET 50-395 LER 84-003
 COMPOSITE SAMPLE OF GASEOUS EFFLUENT LOST/DISCARDED.
 EVENT DATE: 011284 REPORT DATE: 020984 NSSS: WE TYPE: PWR

(NSIC 189073) ON JANUARY 12, 1984, IT WAS FOUND THAT TWENTY-FOUR (24) PERCENT OF RM-A3 (MAIN PLANT VENT EXHAUST) AND SIXTY-SIX (66) PERCENT OF RM-A4 (REACTOR BUILDING FURGE) QUARTERLY COMPOSITE SAMPLES WERE MISSING. THE SAMPLES HAD BEEN

ANALYZED FOR THE MONTHLY GROSS ALPHA AND HAD ALSO BEEN ANALYZED FOR GAMMA ACTIVITY USING A GE(LI) DETECTOR IN ACCORDANCE WITH THE SURVEILLANCE REQUIREMENTS OF TECH SPEC 3.11.2, "GASEOUS EFFLUENTS," PRIOR TO BEING LOST OR DISCARDED. THE CAUSE OF THIS EVENT HAS BEEN ATTRIBUTED TO PERSONNEL ERROR. THE CONSEQUENCES DUE TO THIS EVENT WERE MINIMAL. NO GAMMA OR ALPHA ACTIVITY WAS DETECTED EITHER ON THE LOST FILTERS OR ON THE REMAINING FILTERS FROM THE COMPOSITE PERIOD. THE ABSENCE OF ANY MEASURED GAMMA OR ALPHA ACTIVITY IS AN INDICATION THAT THE REMAINING FILTERS ARE REPRESENTATIVE OF THE LOST FILTERS WITH REGARD TO SR-89 OR SR-90 ACTIVITY. THE REMAINING FILTERS WILL BE ANALYZED FOR SR-89 AND SR-90 ACTIVITY. TO PRECLUDE RECURRENCE, A SPECIAL CONTAINER HAS BEEN FABRICATED FOR FILTER STORAGE, AND A SIGN-IN/SIGN-OUT LOG ESTABLISHED FOR FILTERS BEING ADDED TO OR REMOVED FROM THE CONTAINER.

[275] SUMMER 1 DOCKET 50-395 LER 84-004
 DEGRADED FIRE BARRIERS.
 EVENT DATE: 011784 REPORT DATE: 021584 NSSS: WE TYPE: PWR

(NSIC 189074) DURING THE PERFORMANCE OF SURVEILLANCE TEST PROCEDURE (STP) 128.035, "PENETRATION ACCESS AREA FIRE BARRIER INSPECTION," (412' ELEVATION) THE FOLLOWING FIRE BARRIER DISCREPANCIES WERE NOTED: (1) TWO CABLE JUNCTION BOXES WERE NOT WRAPPED WITH KAOWOOL. (2) ONE CABLE RUN HAD KAOWOOL DAMAGED IN THREE DIFFERENT AREAS, THE MOST SIGNIFICANT BEING AN AREA OF APPROXIMATELY EIGHTEEN INCHES WHERE THE WRAP HAD PULLED LOOSE FROM THE CONDUIT; THE OTHER TWO AREAS CONSISTED OF EXPOSED ONE-HALF INCH AND TWO INCHES OF CONDUIT. THE AFOREMENTIONED DISCREPANCIES HAVE BEEN ATTRIBUTED TO CONSTRUCTION AND MAINTENANCE ACTIVITY IN THE AREA. COMBUSTIBLES IN THIS AREA CONSIST OF CABLE INSULATION, WHICH MAKES THE PROBABILITY OF A FIRE SPREADING FROM ONE AREA TO ANOTHER MINIMAL. THE NOTED DISCREPANCIES WERE REPAIRED. THE LICENSEE WILL CONTINUE SURVEILLANCE OF THE PLANT'S FIRE BARRIERS TO ENSURE COMPLIANCE WITH REGULATORY REQUIREMENTS. THE LICENSEE HAS ALSO INCLUDED IN THE STATION ORIENTATION TRAINING (INITIAL AND REQUALIFICATION) THE IMPORTANCE OF THE FIRE PROTECTION PROGRAM AND ACTION TO BE TAKEN IF A FIRE BARRIER IS DEGRADED DURING MAINTENANCE ACTIVITY.

[276] SUMMER 1 DOCKET 50-395 LER 84-005
 TESTING ERROR ON STEAM GENERATOR STEAM PRESSURE INSTRUMENTS CAUSES REACTOR TRIP.
 EVENT DATE: 011784 REPORT DATE: 021584 NSSS: WE TYPE: PWR

(NSIC 189195) ON JANUARY 17, 1984, THE PLANT TRIPPED FROM 100% POWER BECAUSE OF STEAM GENERATOR (SG) "B" LOW-LEVEL COINCIDENT WITH FEEDWATER FLOW LOW REACTOR TRIP. SURVEILLANCE TEST PROCEDURE (STP) 303.008, "STEAM GENERATOR "A" STEAM PRESSURE (IPT-475) INSTRUMENT OPERATIONAL TEST," WAS IN PROGRESS PRIOR TO THE TRIP. THE OPERATOR AT THE CONTROLS (OATC) WAS DIRECTED TO PERFORM STEP 7.1.1 WHICH SELECTS THE STEAM FLOW FOR STEAM GENERATOR "B". THE OATC SELECTED FY-475-A BUT LEFT THE CONTROL CHANNEL SELECTED TO FY-484A ON STEAM GENERATOR "B". AS PART OF THE STP, THE I&C TECHNICIAN THEN APPROPRIATELY TRIPPED BISTABLES, WHICH ULTIMATELY CAUSED FY-484 TO INDICATE ZERO STEAM FLOW FOR THE "B" STEAM GENERATOR. THE STEAM GENERATOR WATER LEVEL CONTROL (SGWLC) SYSTEM THEN CLOSED THE "B" FEED REG. VALVE, SECURING FEED TO THE "B" STEAM GENERATOR. ACTUAL STEAM FLOW REMAINED NEAR 100%. STEAM GENERATOR "B" LEVEL DECREASED AND ULTIMATELY CAUSED THE TRIP. THE PLANT RESPONSE TO THE TRIP WAS AS EXPECTED WITH NO SAFETY LIMITS EXCEEDED. THE CAUSE OF THIS WAS PERSONNEL ERROR. THE STP IS BEING REVISED TO CLARIFY THE REQUIRED ACTION TO BE PERFORMED BY THE OATC. THIS ACTION IS EXPECTED TO BE COMPLETE BY FEBRUARY 15, 1984.

[277] SUMMER 1 DOCKET 50-395 LER 84-006
 OMITTED TECH SPEC ITEM.
 EVENT DATE: 013184 REPORT DATE: 030184 NSSS: WE TYPE: PWR

(NSIC 189075) ON JANUARY 31, 1984, IT WAS IDENTIFIED THAT THE OVERCURRENT PROTECTION DEVICES FOR THE PLANT PAGING SYSTEM (GAI TRONICS) WAS NOT INCLUDED IN TABLE 3.8-1 OF TECH SPEC 3.8.4, "CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTION DEVICES." THE OVERCURRENT PROTECTION FOR THE GAI TRONICS IS TWO 10 AMP 250V FUSES (FU-B AND FU-G) IN SERIES. IMMEDIATE CORRECTIVE ACTION TAKEN WAS TO REVISE THE APPLICABLE SURVEILLANCE TEST PROCEDURE TO INCLUDE FUSES FU-B AND FU-G. THE FUSES WERE THEN TESTED AND FOUND TO BE ACCEPTABLE. A REVISION TO THE TECH SPEC WILL BE SUBMITTED ADDING FUSES FU-B AND FU-G TO TABLE 3.8-1. THERE WERE NO ADVERSE CONSEQUENCES BECAUSE OF THIS EVENT. THE REACTOR BUILDING PENETRATION (XRP-34), IN WHICH THE CIRCUIT IS LOCATED, IS A NON-SAFETY RELATED PENETRATION AND CONTAINS NO CIRCUITS REQUIRED TO SHUT DOWN THE REACTOR OR TO MAINTAIN IT IN A SAFE SHUTDOWN CONDITION. THE LICENSEE PLANS NO ADDITIONAL CORRECTIVE ACTION.

[278] SUMMER 1 DOCKET 50-395 LER 84-008
 REACTOR TRIP DUE TO LOW-LOW SG LEVEL.
 EVENT DATE: 020784 REPORT DATE: 030584 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 189076) ON FEBRUARY 7, 1984, THE REACTOR TRIPPED FROM NORMAL OPERATIONS AT 100% BECUASE OF A LOW-LOW LEVEL IN STEAM GENERATOR "B". A MAIN FEEDWATER REGULATING VALVE PARTIALLY CLOSED WHEN AN ELECTRONIC CARD (FCY-488) IN ITS CONTROL CIRCUITRY FAILED. THE PARTIALLY CLOSED FEEDWATER REGULATING VALVE SUBSEQUENTLY CAUSED THE STEAM GENERATOR "B" LOW-LOW LEVEL CONDITION. THE PLANT RESPONDED AS EXPECTED DURING THE TRANSIENT. A POST TRIP REVIEW WAS SATISFACTORILY CONDUCTED AND PLANS WERE MADE TO RESTART THE REACTOR.

[279] SUMMER 1 DOCKET 50-395 LER 84-011
 REACTOR TRIP WITH SAFETY INJECTION.
 EVENT DATE: 021084 REPORT DATE: 030884 NSSS: WE TYPE: PWR

(NSIC 189283) AT APPROXIMATELY 0510 HOURS ON FEBRUARY 10, 1984, THE REACTOR TRIPPED FROM 18% POWER DUE TO A TURBINE TRIP ON LOW DISCHARGE PRESSURE OF THE SHAFT-DRIVEN OIL PUMP. THE CAUSE OF THE TRIP WAS PROCEDURAL INADEQUACY IN NOT VERIFYING THE OPERATION OF THE MOTOR SUCTION PUMP (MSP) PRIOR TO PLANT RESTART FROM HOT STANDBY. THE APPROPRIATE OPERATING PROCEDURE WAS REVISED TO PREVENT RECURRENCE. AT 0537 HOURS A SAFETY INJECTION (SI) OCCURRED ON HIGH STEAM LINE DIFFERENTIAL PRESSURE. A MAIN STEAM ISOLATION VALVE (MSIV) HAD INADVERTENTLY BEEN OPERATED INSTEAD OF THE MAIN STEAM ISOLATION BYPASS VALVE. THE MSIV HAD PREVIOUSLY BEEN ISOLATED TO SLOW THE COOLDOWN RATE OF THE PRIMARY PLANT. THE SI WAS TERMINATED AFTER OPERATIONS PERSONNEL VERIFIED PLANT PARAMETERS. PLANT RESPONSE DURING THE TRANSIENTS WAS NORMAL. PLANT MANAGEMENT REVIEWED THE EVENT AND IDENTIFIED A NUMBER OF ACTION ITEMS TO IMPROVE PERSONNEL PERFORMANCE.

[280] SUMMER 1 DOCKET 50-395 LER 84-016
 ACTUATION OF EMERGENCY SAFETY FEATURE LOAD SEQUENCER (ESFLS).
 EVENT DATE: 030184 REPORT DATE: 040384 NSSS: WE TYPE: PWR

(NSIC 189197) AT 1935 HOURS, ON MARCH 1, 1984, FOLLOWING A MAINTENANCE OUTAGE, DIESEL GENERATOR "A" WAS STARTED. WHEN THE DIESEL BREAKER SHUT, EMERGENCY SAFETY FEATURE LOAD SEQUENCER (ESFLS) STARTED TO SEQUENCE. THE UNDERVOLTAGE RELAYS AND "A" ESFLS WERE RESET AND DIESEL GENERATOR "A" SECURED. A SECOND DIESEL START WAS INITIATED AND AGAIN THE ESFLS SEQUENCED. AFTER ALLOWING THE DIESEL TEMPERATURES TO STABILIZE, THE LICENSEE PLACED THE ESFLS "AUTO TEST CIRCUIT" IN THE OFF POSITION AND INITIATED ANOTHER START. NO ACTIVATION OF THE ESFLS WAS EXPERIENCED. IMMEDIATE CORRECTIVE ACTION WAS TO LEAVE THE "AUTO TEST CIRCUIT" OFF AND INITIATE A STATION ORDER TO TEST THE SEQUENCER ONCE PER EIGHT (8) HOURS UNTIL REPAIRED. REPAIRS WERE COMPLETED, THE SYSTEM TESTED, AND DECLARED OPERABLE AT

2300 HOURS, ON MARCH 3, 1984. THE CAUSE OF THE FAILURE WAS DUE TO FAILURE OF A MULTIVIBRATION ELECTRONIC CARD.

[281] SUMMER 1 DOCKET 50-395 LER 84-013
 SMOKE DETECTORS TEMPORARILY INOPERABLE.
 EVENT DATE: 030984 REPORT DATE: 040384 NSSS: WE TYPE: PWR

(NSIC 189196) ON MARCH 9, 1984, AT 2100 HOURS, THE PLANT INTEGRATED FIRE AND SECURITY SYSTEM WAS MODIFIED WITH NEW SOFTWARE. DURING AN ADMINISTRATIVE OVERVIEW ON MARCH 13, 1984, IT WAS DISCOVERED THAT THE MODIFICATION HAD DELETED THE MONITORING OF SMOKE DETECTORS IN ZONES PFF AND MMM IN THE INTERMEDIATE BUILDING. THE CONDITION DISABLED THE MAIN CONTROL ROOM OPERATORS' ABILITY OF RECEIVING AN ALARM UPON ACTUATION OF THE AFFECTED SMOKE DETECTORS. THE BALANCE OF THE SYSTEM REMAINED OPERABLE AND ALL AFFECTED AREAS WERE ENTERED ON AT LEAST A 24 HOUR BASIS FOR THE SURVEILLANCE OF PLANT FIRE DOORS. DUE TO THE FIRELOADING IN THE AREA, THE HIGHEST BEING 20,600 BTU PER SQUARE FOOT, THE PROBABILITY OF A FIRE WITHIN THESE AREAS WAS MINIMAL. THE DISCREPANCY WAS CORRECTED, TESTED, AND VERIFIED OPERABLE PRIOR TO 1200 HOURS, MARCH 13, 1984. THE LICENSEE PLANS NO FURTHER ACTIONS AT THIS TIME.

[282] SUMMER 1 DOCKET 50-395 LER 84-017
 DIESEL GENERATOR START ON BUS UNDERVOLTAGE.
 EVENT DATE: 032984 REPORT DATE: 041284 NSSS: WE TYPE: PWR

(NSIC 189326) AT 1750 HRS ON MAR 29, 1984, THE PLANT WAS SHUT DOWN FOR SURVEILLANCE TESTING. ELECTRICAL MAINTENANCE PERSONNEL WERE ATTEMPTING TO ISOLATE A GROUND FAULT ON TRAIN 'A' BATTERY BUS 1HA (TRAIN 'A' VITAL 125V DC BUS) BY SELECTIVELY CYCLING BREAKERS. THE DC CONTROL POWER WAS MOMENTARILY INTERRUPTED TO SAFEGUARDS BUS 1DA UNDERVOLTAGE RELAYS. THE INTERRUPTION STARTED THE 'A' DIESEL GENERATOR ON BUS UNDERVOLTAGE AND ACTUATED THE BLACKOUT LOAD SEQUENCER WHICH DE-ENERGIZED 1DA FOR LESS THAN 10 SECONDS. THE SEQUENCER FUNCTIONED PROPERLY, AND THE DG ENERGIZED THE BUS. THE NORMAL POWER SOURCE TO THE BUS WAS RESTORED IN APPROXIMATELY 10 MINS. THE CAUSE OF THE EVENT IS DUE TO PERSONNEL ERROR. MAINTENANCE PERSONNEL WERE AWARE OF INTERRUPTING THE DC CONTROL POWER TO 1DA BUT WERE UNAWARE THAT ACTUATION OF THE UNDERVOLTAGE RELAY SCHEME WOULD RESULT.

[283] SURRY 1 DOCKET 50-280 LER 84-002
 REACTOR TRIP.
 EVENT DATE: 011884 REPORT DATE: 021384 NSSS: WE TYPE: PWR
 VENDOR: COPES-VULCAN, INC.
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 189161) THE UNIT WAS AT FULL POWER ON 1-18-84, AT 0834 HOURS, WHEN NUMEROUS CONTROL ROOM INDICATIONS AND ANNUNCIATORS STARTED BEHAVING ERRATICALLY. IT WAS DETERMINED THAT A VOLTAGE SPIKE WAS IN PROGRESS AND THE UNIT WAS MANUALLY TRIPPED TO PLACE IT IN A SAFE CONDITION. DURING CABLE REMOVAL FROM A NO LONGER USED HEAT TRACING BREAKER FOR A DESIGN CHANGE, A CABLE FELL OUT OF AN ADJACENT BREAKER BECAUSE OF AN APPARENT LOOSE SCREW. THIS ADJACENT BREAKER WAS THE FEEDER FOR THE SEMI VITAL BUS. THE LOOSE CABLE BEGAN ARCING, AND THIS WAS THE CAUSE OF THE ERRATIC INDICATIONS. THE SEMI VITAL BUS BREAKER WAS OPENED FOR ABOUT ONE MINUTE SO THE LOOSE CABLE COULD BE RECONNECTED.

[284] SURRY 1 DOCKET 50-280 LER 84-003
 REACTOR TRIP LOW STEAM GENERATOR LEVEL.
 EVENT DATE: 020684 REPORT DATE: 030684 NSSS: WE TYPE: PWR
 VENDOR: COPES-VULCAN, INC.

WESTINGHOUSE ELECTRIC CORP.

(NSIC 189315) ON FEBRUARY 6, WITH THE UNIT AT 100% POWER, A REACTOR TRIP OCCURRED AS A RESULT OF A LOW STEAM GENERATOR LEVEL WITH A STEAM FLOW/FEED FLOW MISMATCH IN "A" STEAM GENERATOR. THIS CONDITION WAS THE CONSEQUENCES OF CLOSING A TRIPPED FEEDER BREAKER IN THE CONDENSATE POLISHING BUILDING THAT CAUSED THE INLET VALVES TO THE DEMINERALIZER BEDS TO CLOSE. THE CLOSED INLET VALVES DECREASED THE CONDENSATE SUPPLY TO THE MAIN FEED PUMPS WHICH RESULTED IN A DECREASE IN MAIN FEED WATER FLOW AND STEAM GENERATOR LEVEL. FOLLOWING THE TRIP, NORMAL VALVE LINEUP WAS ESTABLISHED IN THE CONDENSATE POLISHING BUILDING AND THE TRIPPED BREAKER WAS REPLACED WITH A SPARE.

[285] SURRY 2 DOCKET 50-281 LER 83-052 REV 1
 UPDATE ON CONTAINMENT SPRAY PUMP TRIPS DURING TESTS.
 EVENT DATE: 111283 REPORT DATE: 040584 NSSS: WE TYPE: PWR
 VENDOR: ITE IMPERIAL CORPORATICN

(NSIC 189214) WITH UNIT NO. 2 AT 100% POWER, 2-CS-P-1B TRIPPED WHILE ATTEMPTING TO START DURING THE PERFORMANCE OF THE MONTHLY SURVEILLANCE TEST: THIS IS CONTRARY TO TECH SPEC 3.4.A.1 AND REPORTABLE PER TECH SPEC 6.6.2.B.(2). THE REDUNDANT SPRAY SUBSYSTEM REMAINED OPERABLE. THE CAUSE OF THE TRIP WAS DUE TO A LOOSE ARMATURE STOP SCREW ON THE BREAKER OVERLOAD DEVICE. THE SCREW WAS TIGHTENED AND THE PUMP MOTOR AND CIRCUIT BREAKERS WERE TESTED SATISFACTORILY. THE PUMP WAS RETURNED TO SERVICE.

[286] SURRY 2 DOCKET 50-281 LER 83-060
 FEEDER BREAKER FOR HEAT TRACING PANEL FOUND TRIPPED.
 EVENT DATE: 122083 REPORT DATE: 042384 NSSS: WE TYPE: PWR
 VENDOR: THERMON MANUFACTURING

(NSIC 189318) ON 12-20-83, WITH THE UNIT CRITICAL, IT WAS DISCOVERED THAT THE FEEDER BREAKER FOR HEAT TRACING PANEL 2B1 WAS TRIPPED. THIS IS CONTRARY TO TECH SPEC 3.3.B.5 AND IS REPORTABLE PER TECH SPEC 6.6.2.B.(2). THE REDUNDANT PANEL WAS VERIFIED OPERABLE. THE DEVIATION FOR THIS EVENT WAS INITIALLY CLASSIFIED INCORRECTLY. THIS ERROR WAS DISCOVERED ON 4-4-84 AND IT WAS RECLASSIFIED. THE HEAT TRACING PANEL FEEDER BREAKER TRIPPED DUE TO A GROUND FAULT THAT OCCURRED WHEN THE POWER SUPPLY A.C. FUSE BLEW. THE PANEL WAS CHECKED FOR GROUND FAULTS. NONE WERE FOUND AND THE FUSE WAS REPLACED. THE GROUND FAULT CIRCUIT FOR THE FEEDER BREAKER WAS REMOVED TO PREVENT LOSING AN ENTIRE PANEL ON A GROUND FAULT.

[287] SURRY 2 DOCKET 50-281 LER 84-001
 MANUAL REACTOR TRIP FOLLOWING MAIN STEAM TRIP VALVE CLOSURE.
 EVENT DATE: 011384 REPORT DATE: 021384 NSSS: WE TYPE: PWR
 VENDOR: LIMITORQUE CORP.
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 189162) ON JANUARY 13, A MANUAL REACTOR TRIP WAS INITIATED UPON CLOSURE OF "A" MAIN STEAM TRIP VALVE. UNWARRANTED CLOSURE OF "A" MAIN STEAM TRIP VALVE WAS DUE TO A HAIRLINE CRACK IN AN AIR LINE PIPE NIPPLE ON THE VALVE'S ACTUATOR. THE REDUCED AIR PRESSURE IN THE ACTUATOR ALLOWED THE DISC TO BE DEFLECTED AND CLOSED BY MAIN STEAM. IT IS SUSPECTED THAT THE NIPPLE FAILURE WAS DUE TO MECHANICAL FATIGUE. THE LEAKING NIPPLE WAS REPLACED AND THE TRIP VALVE INSTRUMENT AIR LINES FOR ALL MAIN STEAM TRIP VALVES WERE INSPECTED FOR LEAKS. TESTING WAS PERFORMED TO VERIFY ACCEPTABLE CLOSURE TIME FOR THE MAIN STEAM TRIP VALVES AND PROVE THE SAFEGUARDS SIGNAL TO THE VALVES.

[288] SURRY 2 DOCKET 50-281 LER 84-002
 REACTOR TRIP DUE TO REACTOR TRIP BREAKER DE-ENERGIZING.
 EVENT DATE: 011484 REPORT DATE: 021384 NSSS: WE TYPE: PWR

(NSIC 188961) ON 1-14-84 FOLLOWING A TRIP ON 1-13-84, THE UNIT WAS AT 2% POWER. THE ELECTRICIANS WERE REPLACING AN OPEN COIL IN A REACTOR TRIP RELAY. WHEN THE FIRST COIL LEAD WAS REMOVED THE 'A' REACTOR TRIP BREAKER DE-ENERGIZED RESULTING IN A REACTOR TRIP. THE EMP USED TO REPLACE REACTOR TRIP RELAY COILS HAS 2 STEPS TO PREVENT UNNECESSARY REACTOR TRIPS. THESE TWO STEPS ARE 1) A PRECAUTION TO CLOSE THE REACTOR TRIP BYPASS BREAKER, AND 2) INSTALLATION OF A JUMPER TO PREVENT DE-ENERGIZING OTHER RELAYS IN THE TRAIN. THE BYPASS BREAKER WAS NOT CLOSED, AND DUE IN PART TO THE COMPLICATED WIRING CONNECTIONS OF THE REACTOR TRIP RELAYS, THE JUMPER WAS INSTALLED INCORRECTLY. WHEN THE FIRST COIL LEAD WAS LIFTED, THE 'A' RTB WAS DE-ENERGIZED RESULTING IN THE TRIP. THE DEFECTIVE COIL WAS REPLACED. THE INDIVIDUALS INVOLVED WERE DISCIPLINED FOR NOT FOLLOWING PROCEDURES.

[289] SURRY 2 DOCKET 50-281 LER 84-003
 REACTOR TRIPS ON HIGH STEAM GENERATOR LEVEL.
 EVENT DATE: 011484 REPORT DATE: 021384 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 188962) WITH REACTOR POWER AT 23%, THE FEED FLOW TO 'A' STEAM GENERATOR INCREASED TO FULL FLOW. THE OPERATOR WAS NOT QUICK ENOUGH TO CLOSE THE VALVE AND THE 'A' STEAM GENERATOR HIGH LEVEL TRIP INITIATED A TURBINE TRIP, WHICH TRIPPED THE REACTOR. AN ELBOW IN THE AIR SUPPLY PIPING TO THE 'A' FEED REGULATING VALVE WAS DAMAGED AND LEAKING. THE 1/2 INCH LINE WAS NOT SECURED AND VIBRATION HAD CAUSED IT TO HIT AGAINST IT'S SUPPORT.

[290] SURRY 2 DOCKET 50-281 LER 84-006
 EXCESSIVE COOLDOWN RATE.
 EVENT DATE: 031684 REPORT DATE: 040584 NSSS: WE TYPE: PWR

(NSIC 189163) ON MARCH 16, 1984, AT APPROXIMATELY 1405 HOURS, WITH THE PRIMARY SYSTEM TEMPERATURE LESS THAN 440F, THE COOLDOWN RATE EXCEEDED 50F/HR. APPROPRIATE STRIP CHARTS WERE REVIEWED AND A COOLDOWN RATE OF APPROXIMATELY 65F WAS DETERMINED. AT THE TIME OF THE EVENT, OPERATORS WERE PERFORMING A PRIMARY PLANT COOLDOWN WITH STEAM DUMPS, WHEN THE BORON INJECTION TANK (BIT) AND ASSOCIATED LINES WERE FLUSHED TO THE PRIMARY SYSTEM USING COLDER RWS^T WATER INSTEAD OF NORMAL CHARGING. THE FLUSH, PERFORMED UNDER A PRE-APPROVED PROCEDURE, HAD BEEN SCHEDULED TO BE DONE PRIOR TO THE PRIMARY PLANT COOLDOWN. THE BIT FLUSH DONE IN CONJUNCTION WITH THE COOLDOWN RESULTED IN THE COOLDOWN RATE EXCEEDING THE TECH SPEC LIMIT. THIS EVENT WAS CAUSED BY THE CONTROL ROOM OPERATORS FAILURE TO RECOGNIZE AN INCREASING COOLDOWN RATE. PERSONNEL INVOLVED HAVE BEEN REINSTRUCTED AND THE LER WILL BE REQUIRED READING FOR OPERATORS.

[291] SURRY 2 DOCKET 50-281 LER 84-007
 ACCUMULATORS MOV BREAKERS NOT LOCKED.
 EVENT DATE: 032084 REPORT DATE: 040584 NSSS: WE TYPE: PWR

(NSIC 189164) THE UNIT WAS AT COLD SHUTDOWN AND DRAINED TO MID NOZZLE WITH THE PRIMARY SYSTEM TEMPERATURE AND PRESSURE AT 150F AND ATMOSPHERIC. THE BREAKERS FOR THE ACCUMULATOR DISCHARGE VALVES ARE REQUIRED TO BE LOCKED OPEN WITH THE VALVES CLOSED WHEN BOTH PRESSURIZER PORV'S ARE INOPERABLE. DUE TO AN INADEQUATE REVIEW OF THE TECH SPEC, THESE BREAKERS WERE OPEN BUT NOT LOCKED. LOCKS WERE PLACED ON THE BREAKERS.

[292] FURRY 2 DOCKET 50-281 LER 84-008
 RHR MOTOR LEADS HAVE WRONG INSULATION.
 EVENT DATE: 032384 REPORT DATE: 042384 NSSS: WE TYPE: PWR

(NSIC 189317) ON MARCH 23, 1984 WITH UNIT 2 AT COLD SHUTDOWN, A REVIEW OF PAST MAINTENANCE REPORTS REVEALED THAT THE 4160 VOLT MOTOR LEADS FOR THE UNIT'S RESIDUAL HEAT REMOVAL (RH) PUMP MOTORS WERE IMPROPERLY ELECTRICALLY INSULATED WITH HEAT SHRINKABLE MATERIAL RATED FOR 1000 VOLTS. THE MAINTENANCE PROCEDURE USED TO REPAIR THE RH MOTORS WAS INADEQUATE IN THAT IT DID NOT SPECIFY THE APPROPRIATE REFERENCE MANUAL OR INSTRUCTIONS FOR INSTALLING HEAT SHRINKABLE INSULATION. THE HEAT SHRINKABLE INSULATION WAS REPLACED WITH QUALIFIED TAPE ON BOTH MOTORS. THE CORRECTIVE MAINTENANCE PROCEDURE FOR ALL 4160 VOLT MOTORS WILL BE CHANGED TO REFERENCE THE APPROPRIATE INSTRUCTION MANUAL TO INSURE THE CORRECT MATERIAL IS USED AND INSTALLED PROPERLY. IN ADDITION, ALL SAFETY RELATED 4160 VOLT MOTOR CONNECTIONS WILL BE INSPECTED TO INSURE PROPER INSTALLATION DURING SCHEDULED SURVEILLANCE.

[293] SUSQUEHANNA 1 DOCKET 50-387 LER 83-164 REV 0
 UPDATE ON CLAMPS ON CONTROL ROD DRIVE FITTINGS POTENTIALLY OVERLOADED.
 EVENT DATE: 122183 REPORT DATE: 030984 NSSS: GE TYPE: BWR

(NSIC 189282) RESULTS FROM TEST PERFORMED BY TELEDYNE, REQUESTED BY PP&L, INDICATE THE 3 WAY CLAMPS ON THE CRD INSERT AND WITHDRAWAL LINES MAY NOT BE ABLE TO WITHSTAND WORST CASE AXIAL WATER HAMMER LOADS. LCO PER TECH SPEC 3.1.3.1.C WAS ENTERED TO PREVENT CONTROL ROD MOVEMENT IN ORDER TO RESTRAIN LOADS ON THE LINES. DURING THIS EVENT THE UNIT REMAINED SHUTDOWN, AND ALL CONTROL RODS REMAINED INSERTED; LONG TERM STUDIES BY BWR OWNERS GROUP RESULTED IN PP&L'S STUDY OF LOADS EXERTED ON THREE WAY CLAMPS FOR THE CRD INSERT AND WITHDRAWAL LINES. ADDITIONAL TESTING WAS DONE TO DETERMINE WHAT CORRECTIVE ACTIONS WERE NEEDED PRIOR TO UNIT 1 STARTUP AND UNIT 2 FUEL LOAD. PLANT MODIFICATIONS WERE COMPLETED AND THE NEW CLAMPS CONFORM TO THE SYSTEM STRESS ANALYSIS.

[294] SUSQUEHANNA 1 DOCKET 50-387 LER 84-001
 H(2)/O(2) ANALYZERS NOT SUITED FOR POST ACCIDENT ENVIRONMENT.
 EVENT DATE: 010384 REPORT DATE: 020284 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)
 VENDOR: COMSIP CUSTOM LINE CORP.

(NSIC 189068) THE H(2)/O(2) ANALYZERS IN THE CONTAINMENT ATMOSPHERE MONITORING SYSTEM WERE DECLARED INOPERABLE DUE TO ERRORS MADE IN ASSUMPTIONS DURING THE DESIGN OF THE CATALYST THAT RESULTED IN IT NOT BEING ABLE TO WITHSTAND IODINE CONCENTRATIONS THAT WOULD EXIST IN THE REACTOR CONTAINMENT OF A 3000 MEGAWATT REACTOR UNDER THE WORST CONDITIONS DURING A LOSS OF COOLANT ACCIDENT (LOCA). SUBSEQUENTLY, THE COMPANY THAT PRODUCED THE CATALYST HAS DEVELOPED A MODIFIED CATALYST CAPABLE OF OPERATING IN THE H(2)/O(2) ANALYZERS UNDER THE WORST CONDITIONS. REPLACEMENT OF THE CATALYST IN THE UNIT 1 H(2)/O(2) CONTAINMENT ATMOSPHERE MONITORING SYSTEM ANALYZERS IS SCHEDULED FOR FEBRUARY 1, 1984, PRIOR TO STARTUP, AND BY FEBRUARY 15, 1984 FOR UNIT 2. UNIT 1 WAS SHUT DOWN FOR THE TIE-IN OUTAGE WITHIN UNIT 2 WHEN THE MODIFICATION TO THE ANALYZERS WAS IDENTIFIED AND PERFORMED.

[295] SUSQUEHANNA 1 DOCKET 50-387 LER 84-002
 EMERGENCY SERVICE WATER SPRAY NETWORKS IN DEGRADED CONDITION.
 EVENT DATE: 010684 REPORT DATE: 020384 NSSS: GE TYPE: BWR
 VENDOR: JAMES BURY CORP.
 SPRAY ENGINEERING COMPANY

(NSIC 189191) BECAUSE THE 'B1' EMERGENCY SERVICE WATER (ESW) SPRAY NETWORK INLET

VALVE WAS LEAKING PAST ITS SEAT, THE 'B1' SPRAY RISERS COULD NOT BE PUMPED DOWN. TO PREVENT THE WATER IN THE RISERS FROM FREEZING, THE APPROPRIATE ESG PUMPS WERE RUN INTERMITTENTLY (B/D), DISCHARGING THROUGH THE 'B' NETWORK. ICE FORMATION ON THE SPRAY NOZZLES CAUSED SOME SPRAY DISTRIBUTION ARMS TO BREAK OFF OF THE RISER ASSEMBLIES. INVESTIGATION SHOWED THAT THERE WAS MINIMAL THREAD ENGAGEMENT BETWEEN THE DISTRIBUTION ARM COUPLING AND RISER NIPPLE FOR MOST DISTRIBUTION ASSEMBLIES. THE DISTRIBUTION ARM WILL BE WELDED TO THE DISTRIBUTION ARM COUPLING AND THE COUPLING WELDED TO THE RISER NIPPLE FOR ALL ASSEMBLIES. ADDITIONAL CORRECTIVE ACTIONS ARE UNDER EVALUATION.

[296] SUSQUEHANNA 1 DOCKET 50-387 LER 84-003
 CIRCUIT ISOLATORS PROVIDE INSUFFICIENT ISOLATION.
 EVENT DATE: 010684 REPORT DATE: 020384 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)
 VENDOR: TECHNOLOGY FOR ENERGY CORP.

(NSIC 189192) TWENTY-SEVEN (27) SIGNAL ISOLATORS PURCHASED FROM TECHNOLOGY FOR ENERGY CORPORATION MAY NOT PROVIDE ADEQUATE ELECTRICAL ISOLATION BETWEEN CLASS 1E AND NON 1E CIRCUITS. SPECIFICALLY, THE POWER SUPPLY AND OUTPUT OF THE SIGNAL ISOLATOR ARE CONNECTED. SINCE THE ISOLATOR SIGNAL OUTPUT IS NOT CLASS 1E, THE POWER SUPPLY MUST ALSO NOT BE CLASS 1E, OTHERWISE CONNECTING THE TWO THROUGH THE ISOLATOR MAY FAULT A CLASS 1E SOURCE OF POWER. FIFTEEN (15) SIGNAL ISOLATORS WERE INSTALLED IN UNIT 2 FOR WHICH REPORT 84-01, "SPDS ISOLATORS," HAS BEEN SUBMITTED TO THE NRC. ONE (1) ISOLATOR WAS LOCATED IN STORAGE AND ELEVEN (11) WERE INSTALLED IN SYSTEMS AT UNIT 1. OF THESE ELEVEN (11), SIX (6) WERE INSTALLED IN THE AVERAGE POWER RANGE MONITORING RANGE SYSTEM DURING THIS OUTAGE AND SINCE HAVE BEEN REWIRED TO ENSURE THAT A NON 1E POWER SUPPLY IS CONNECTED TO THE NON 1E OUTPUT OF THE ISOLATOR. FOUR (4) SIGNAL ISOLATORS INSTALLED IN THE EMERGENCY SERVICE WATER SYSTEM AND THE LIQUID RADWASTE SYSTEM HAD A NON 1E SOURCE OF POWER SUPPLIED TO THEM AND IN THE HPCI CIRCUITRY. THE POWER SUPPLIED TO THIS ISOLATOR IS SUPPLIED BY A CLASS 1E SOURCE THAT IS PHYSICALLY CONNECTED TO THE ISOLATORS NON 1E OUTPUT CIRCUITRY. HPCI AT UNIT 1 IS CURRENTLY INOPERABLE PENDING THE EVALUATION OF CORRECTIVE ACTIONS THAT NEED TO BE TAKEN.

[297] SUSQUEHANNA 1 DOCKET 50-387 LER 84-004
 CONDENSATE STORAGE TANK LEVEL SWITCHES FREEZE.
 EVENT DATE: 011384 REPORT DATE: 021084 NSSS: GE TYPE: BWR
 VENDOR: MAGNETROL, INC.
 NELSON ELEC MFG (SUB GEN SIGNAL)

(NSIC 189069) DURING THE PERFORMANCE OF A QUARTERLY SURVEILLANCE CALIBRATION, THE TWO LEVEL SWITCHES LOCATED AT THE CONDENSATE STORAGE TANK (CST) THAT PROVIDE THE SIGNAL THAT AUTOMATICALLY TRANSFERS THE HIGH PRESSURE COOLANT INJECTION PUMP SUCTION FROM THE CST TO THE SUPPRESSION POOL WERE FOUND INOPERABLE DUE TO FREEZING. HEAT TRACING ON THE AFFECTED INSTRUMENT LINES AND SWITCHES WAS RESTORED AND THE SWITCHES WERE CALIBRATED AND RETURNED TO SERVICE.

[298] SUSQUEHANNA 1 DOCKET 50-387 LER 84-006
 TECH SPEC ERROR DOES NOT ALLOW MOVEMENT OF IRM AND SRM FOR TESTING.
 EVENT DATE: 012584 REPORT DATE: 022484 NSSS: GE TYPE: BWR

(NSIC 189001) IT WAS DETERMINED THAT THE PERFORMANCE OF WEEKLY SRM AND IRM SURVEILLANCES REQUIRED WITH THE UNIT IN MODE 5 IS A CORE ALTERATION AS DEFINED BY TECH SPEC DEFINITION 1.7. SUCH CORE ALTERATIONS ARE PROHIBITED BY VARIOUS TECH SPECS. IT WAS DETERMINED THAT THE NUCLEAR INSTRUMENTATION MOVEMENT REQUIRED BY THE SURVEILLANCES (APPROXIMATELY ONE INCH) POSES NO SAFETY HAZARD AND THAT THE SURVEILLANCES SHOULD BE PERFORMED AS SCHEDULED. A TECH SPEC CHANGE IS IN PROCESS TO PROVIDE RELIEF FROM THE MOVEMENT RESTRICTION.

[299] SUSQUEHANNA 1 DOCKET 50-387 LER 84-005
 SERVICE WATER EFFLUENT GRAB SAMPLE MISSED.
 EVENT DATE: 012784 REPORT DATE: 022484 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 189000) SINCE THE SERVICE WATER EFFLUENT LINE RADIATION MONITOR WAS INOPERABLE, ONCE-PER-SHIFT (8HR) GRAB SAMPLING WAS INSTITUTED PER TECH SPEC TABLE 3.3.7.10-1, ACTION 101. THE GRAB SAMPLE WAS NOT TAKEN DURING THE DAY SHIFT ON JAN. 27, 1984. IT WAS DISCOVERED THAT THE SAMPLE WAS MISSED DURING TURNOVER BETWEEN THE DAY AND AFTERNOON SHIFTS. THE AFTERNOON SHIFT RESUMED SAMPLING. A PROCEDURAL CHANGE HAS BEEN ISSUED TO REQUIRE THE ONCOMING LEAD CHEMISTRY TECHNICIAN TO VERIFY THAT ALL CHEMISTRY LIMITING CONDITION FOR OPERATION ACTION ITEMS ARE ASSIGNED AND PERIODICALLY CHECKED.

[300] SUSQUEHANNA 1 DOCKET 50-387 LER 84-010
 RPS MANUAL SCRAM DURING TESTING OF ADS SRV'S.
 EVENT DATE: 022584 REPORT DATE: 032684 NSSS: GE TYPE: BWR
 VENDOR: CROSBY VALVE

(NSIC 189193) UNIT 1 REACTOR WAS MANUALLY SCRAMMED FROM 54% POWER WHEN DURING FUNCTIONAL TESTING OF THE AUTOMATIC DEPRESSURIZATION SYSTEM SAFETY RELIEF VALVES (SRV), ONE OF THE SIX VALVES STUCK OPEN AND COULD NOT BE CLOSED WITHIN TWO MINUTES. IT WAS DETERMINED THAT ONE OF THE THREE INDEPENDENT INSTRUMENT AIR CONTROL VALVE SOLENOIDS HAD STUCK OPEN SUPPLYING AIR TO THE PNEUMATIC PISTON WHICH OPENS THE SRV. THE SOLENOID WAS REPLACED AND THERE IS NO HISTORY OF THIS TYPE OF EVENT. THE REACTOR SCRAM SYSTEMS OPERATED PROPERLY AND SAFETY SYSTEMS WERE AVAILABLE TO MITIGATE ANY POSSIBLE ACCIDENT CONDITIONS.

[301] SUSQUEHANNA 1 DOCKET 50-387 LER 84-016
 MISSED CHANNEL CHECK OF NEW FUEL VAULT CRITICALITY MONITORS.
 EVENT DATE: 030884 REPORT DATE: 040684 NSSS: GE TYPE: BWR
 VENDOR: EBERLINE INSTRUMENT CORP.

(NSIC 189194) ON MARCH 8, 1984, THE SHIFTLY CHANNEL CHECK OF THE NEW FUEL CRITICALITY MONITORS WAS NOT COMPLETED DURING ITS SCHEDULED TIME PERIOD. CHANNEL CHECK DATA FOR THE TIME PERIODS SURROUNDING THE EVENT WERE SATISFACTORY. IT IS REASONABLE TO ASSUME THAT THE MONITORS WERE OPERABLE THROUGHOUT THE EVENT AND WOULD HAVE RESPONDED BY VISUAL AND AUDIBLE LOCAL ALARMS IF REQUIRED. APPROPRIATE HEALTH PHYSICS PERSONNEL HAVE BEEN ADVISED OF THE NEED TO COMPLETE SURVEILLANCES DURING REQUIRED INTERVALS.

[302] SUSQUEHANNA 1 DOCKET 50-387 LER 84-020
 RHR SHUTDOWN COOLING ISOLATION ACTUATION.
 EVENT DATE: 032184 REPORT DATE: 041884 NSSS: GE TYPE: BWR
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 189302) SPURIOUS ACTUATION OF RESIDUAL HEAT REMOVAL SYSTEM DIFFERENTIAL PRESSURE SWITCHES CAUSED CLOSURE OF THE SHUTDOWN COOLING SUCTION INBOARD AND OUTBOARD ISOLATION VALVES. THESE VALVES ARE PRIMARY CONTAINMENT ISOLATION VALVES, THUS, THEIR CLOSURE IS AN ENGINEERED SAFETY FEATURE ACTUATION. INVESTIGATION FOUND THE SWITCHES TO BE OPERATING PROPERLY. NO FURTHER ACTIONS ARE PLANNED.

[303] THREE MILE ISLAND 2 DOCKET 50-320 LER 84-002
 DEFECTIVE POLAR CRANE LOAD TEST PROCEDURE.
 EVENT DATE: 021384 REPORT DATE: 031484 NSSS: BW TYPE: PWR

(NSIC 188983) THE UNIT WAS IN THE RECOVERY MODE AT ZERO POWER. DECAY HEAT WAS BEING REMOVED BY LOSS TO AMBIENT. THE RCS WAS IN A PARTIALLY DRAINED DOWN CONDITION. THE MULTI-DAY POLAR CRANE LOAD TEST, INITIATED ON FEB. 13, 1984, WAS IN PROGRESS. THE INTERNALS INDEXING FIXTURE AND 4 MISSILE SHIELD BLOCKS HAD BEEN REMOVED FROM THEIR PROPER POSITIONS. ON FEB. 16, 1984, WHILE NO LOADS WERE BEING HANDLED, IT WAS DETERMINED THAT THE LOAD TEST FOR POLAR CRANE PROCEDURE, IMPLEMENTED BY UNIT WORK INSTRUCTION (UWI) 4370-3891-83-PC-1, FAILED TO INCORPORATE ADEQUATE ISOLATION REQUIREMENTS FOR NON-BORATED WATER SOURCES. THE SAFETY EVALUATION FOR THE POLAR CRANE LOAD TEST REQUIRED THE ISOLATION OF SELECTED NON-BORATED WATER SOURCES TO PREVENT POTENTIAL BORON DILUTION OF THE CONTAINMENT BUILDING SUMP. THEREFORE, THE POLAR CRANE LOAD TEST FROM FEB. 13 TO FEB. 16, 1984, WAS CONDUCTED IN AN UNANALYZED CONDITION, THAT IS, NOT TOTALLY IN CONFORMANCE WITH THE POLAR CRANE LOAD TEST SAFETY EVALUATION. ON FEB. 16, 1984, UWI 4370-3891-83-PC-1 WAS REVISED TO INCLUDE A LIST OF VALVES TO BE VERIFIED CLOSED SO AS TO ISOLATE IDENTIFIED NON-BORATED WATER SOURCES. THE POLAR CRANE LOAD TEST WAS THEN RESUMED. CORRECTIVE ACTION PLANNED INCLUDES THE USE OF THIS EVENT IN RESPONSIBLE TECH. REVIEWER (RTR) TRAINING TO HEIGHTEN REVIEWERS' AWARENESS TO THE IMPORTANCE OF REVIEWING PROCEDURES AGAINST THE DETAILS CONTAINED IN OTHER BASIS DOCUMENTS. SIMILAR LERS: 83-51, 83-42, 83-23, 81-23, 81-10, 80-24, 80-20, AND 79-21.

[304] THREE MILE ISLAND 2 DOCKET 50-320 LER 84-001
 LOSS OF AUXILIARY BUILDING EXHAUST SYSTEM.
 EVENT DATE: 021484 REPORT DATE: 030984 NSSS: BW TYPE: PWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189337) AT APPROXIMATELY 0855 HOURS ON FEBRUARY 14, 1984, THE AUXILIARY BUILDING EXHAUST FANS AH-E-8A/B TRIPPED WHICH, BY DESIGN, TRIPPED THE AUXILIARY BUILDING SUPPLY FANS AH-E-7A/B. HOWEVER, DUE TO NOT RECEIVING AN ALARM ON PANEL 25 TO ALERT THE OPERATORS, THE EVENT WAS NOT DISCOVERED UNTIL 0935 HOURS. SINCE SUBMERGED DEMINERALIZER SYSTEM PROCESSING AND REACTOR BUILDING PURGING WERE IN PROGRESS AT THE TIME OF THE EVENT, TECH SPEC 3.9.12.2 AND OPERATING PROCEDURE 2104-9.1 (REACTOR BUILDING PURGE USING THE MODIFIED PURGE SYSTEM) WERE VIOLATED. THIS EVENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I)(B) AND 50.73(A)(2)(II)(C). AT 1235 HOURS ON FEBRUARY 14, 1984, THE EXHAUST AND SUPPLY FANS WERE RESTARTED BY LIFTING THE LEADS ON THE FLOWSWITCHES FOR THE EXHAUST FANS. THE CAUSE OF THE FAN TRIPS CANNOT BE POSITIVELY IDENTIFIED, HOWEVER, IT IS BELIEVED THAT FLUCTUATION OF THE EXHAUST FLOWRATE MAY HAVE CAUSED THE D/P ACROSS THE FLOWSWITCH FOR 8A TO DECREASE BELOW THE TRIP SETPOINT. THIS LER IS SIMILAR IN NATURE TO LER'S 83-48 AND 83-07.

[305] THREE MILE ISLAND 2 DOCKET 50-320 LER 84-003
 CONTAINMENT ISOLATION VALVE FOUND OPEN.
 EVENT DATE: 021584 REPORT DATE: 031384 NSSS: BW TYPE: PWR

(NSIC 189169) AT 1000 HOURS ON FEBRUARY 15, 1984, DURING THE PERFORMANCE OF SURVEILLANCE PROCEDURE 4301-M8, "CONTAINMENT ISOLATION VERIFICATION," VALVE MU-V25 WAS FOUND OPEN INSTEAD OF CLOSED AS REQUIRED BY THE PROCEDURE. THE VALVE WAS IMMEDIATELY CLOSED; HOWEVER, SINCE THE VALVE WAS OPEN FOR AN UNDETERMINABLE AMOUNT OF TIME, THE ACTION STATEMENT OF TECH SPEC 3.6.1.1 WAS VIOLATED. THIS EVENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I). PERSONNEL ERROR WAS THE CAUSE OF THIS EVENT IN THAT THE VALVE'S POSITION WAS NOT PHYSICALLY VERIFIED PRIOR TO RED-TAGG. 4G IT.

[306] THREE MILE ISLAND 2 DOCKET 50-320 LER 84-005
 IMPROPER VALVE LINEUP OF THE REACTOR BUILDING PURGE SYSTEM.
 EVENT DATE: 022284 REPORT DATE: 032684 NSSS: BW TYPE: PWR

(NSIC 189170) AT 1000 HOURS ON FEBRUARY 24, 1984, DURING THE PERFORMANCE OF A QUALITY ASSURANCE MONITORING, THE FOLLOWING EVENT WAS DETERMINED TO BE REPORTABLE. BETWEEN 0900 AND 0930 HOURS AND 1315 AND 1430 HOURS ON FEBRUARY 22, 1984, THE REACTOR BUILDING PURGE "A" TRAIN WAS TEMPORARILY SHUT DOWN. THE CONTROL ROOM OPERATOR WHO PERFORMED THE SHUTDOWNS UTILIZED THE WRONG REVISION OF OPERATING PROCEDURE 2104-4.91. THIS WAS DUE TO THE OPERATOR USING A SIGNED-OFF COPY OF THE PROCEDURE INSTEAD OF A "VERIFIED COPY" AS REQUIRED BY GPUNC PROCEDURES. THIS RESULTED IN THE FAILURE TO CLOSE CONTAINMENT VALVE AH-V-2A DURING THE TIMES THE PURGE SYSTEM WAS SHUT DOWN. THIS PLACED THE UNIT INTO A CONDITION NOT PERMITTED BY THE OPERATING PROCEDURE. CONTAINMENT ISOLATION WAS MAINTAINED SINCE CONTAINMENT ISOLATION VALVE AH-V-1A, LOCATED OUTSIDE OF THE REACTOR BUILDING DOWNSTREAM OF AH-V-2A, WAS CLOSED. THE CRO HAS BEEN COUNSELED REGARDING THIS EVENT.

[307] THREE MILE ISLAND 2 DOCKET 50-320 LER 84-006
 ABNORMAL REACTOR BUILDING SUMP LEVEL INDICATIONS DUE TO PLUGGED SENSING LINES.
 EVENT DATE: 030184 REPORT DATE: 032884 NSSS: BW TYPE: PWR

(NSIC 189171) AT 0830 HOURS ON MARCH 1, 1984, THE REACTOR BUILDING (RB) WATER LEVEL INDICATION WAS DECLARED OUT-OF-SERVICE DUE TO A HIGH READING ON RB SUMP LEVEL TRANSMITTER RBS-LT-6000. SINCE THE SENSING AND REFERENCE LINES WERE CALIBRATED AND FOUND TO BE ACCURATE, THE PROBLEM WAS BELIEVED TO BE DUE TO BACK PRESSURE IN THE SENSING LINE AS A RESULT OF BLOCKAGE IN THE TYGON TUBE LOCATED IN THE RB SUMP. AT 1730 HOURS ON MARCH 1, 1984, FOLLOWING SEVERAL BLOWDOWNS OF THE SENSING AND REFERENCE LINES, THE OBSTRUCTION WAS CLEARED AND THE LEVEL INDICATION RETURNED TO NORMAL. SINCE THE 8 HOUR TIMECLOCK OF TECH SPEC 3.3.3.6 WAS EXCEEDED, THIS EVENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I)(B). GPUNC IS EVALUATING ALTERNATIVE METHODS OF RB SUMP LEVEL INSTRUMENTATION. THIS LER IS SIMILAR IN NATURE TO LERS 83-61, 83-17, AND 82-35.

[308] THREE MILE ISLAND 2 DOCKET 50-320 LER 84-004
 INOPERABILITY OF BOTH DECAY HEAT REMOVAL SYSTEMS.
 EVENT DATE: 030284 REPORT DATE: 032984 NSSS: BW TYPE: PWR

(NSIC 189334) SINCE THE MARCH 28, 1979 ACCIDENT, THE DECAY HEAT REMOVAL SYSTEM VAULTS HAVE BEEN INACCESSIBLE DUE TO HIGH RADIATION LEVELS. WHILE DOSE REDUCTION EFFORTS NOW PERMIT PERSONNEL ENTRY, SURVEILLANCE TESTING WILL BE DELAYED UNTIL PREVENTATIVE MAINTENANCE ON DECAY HEAT REMOVAL SYSTEM COMPONENTS IS COMPLETED. AT 1010 HOURS ON MARCH 2, 1984, DECAY HEAT REMOVAL PUMP DH-P-1A WAS DECLARED INOPERABLE WHEN TECH SPEC SURVEILLANCE TESTING WAS NOT PERFORMED. THIS EVENT IS REPORTABLE UNDER 10 CFR 50.73(A)(2)(I)(B), CONDITION PROHIBITED BY THE PLANT'S TECH SPECS, BECAUSE THE "B" DECAY HEAT REMOVAL PUMP, PREVIOUSLY DECLARED INOPERABLE, CONTINUES OUT-OF-SERVICE FOR THE SAME REASON AS THE "A" PUMP. NO COMPONENT FAILURE HAS BEEN IDENTIFIED TO DATE.

[309] TROJAN DOCKET 50-344 LER 84-001
 MISSED SURVEILLANCE TESTING ON ESF ACTUATION CIRCUITRY.
 EVENT DATE: 011284 REPORT DATE: 020984 NSSS: WE TYPE: PWR

(NSIC 189059) DURING INVESTIGATION OF A QUALITY ASSURANCE LICENSE AUDIT FINDING, IT WAS DETERMINED THAT FOR SEVERAL YEARS THE SURVEILLANCE TESTING FOR A PORTION OF THE SAFETY INJECTION ACTUATION LOGIC WAS NOT PERFORMED AS FREQUENTLY AS CALLED FOR IN THE PLANT TECH SPECS TABLE 4.3-2, ITEM 6.B. IN ADDITION, THE REQUIREMENT FOR TESTING THE REACTOR TRIP ACTUATION LOGIC FROM AN AUTOMATIC SAFETY INJECTION IN TECH SPEC TABLE 4.3-1, ITEM 19 WAS NOT PERFORMED AS REQUIRED. IMMEDIATE CORRECTIVE ACTION INCLUDED COMPLETION OF PICT-10-1 FOR THE SAFETY INJECTION LOGIC AND REACTOR TRIP BREAKER ACTUATION TESTS. THE PERIODIC TEST SCHEDULE HAS BEEN REVISED TO PERFORM THESE TESTS MONTHLY AS REQUIRED BY THE STS, AND PICT-10-1 IS

BEING SIMILARLY REVISED. ADDITIONALLY, A LICENSE AMENDMENT IS BEING PURSUED TO MAKE STS REQUIREMENTS MORE CONSISTENT BY ALLOWING THESE ESF LOGIC TESTS TO BE PERFORMED EVERY OTHER MONTH AS THE OTHER REFERENCES TO LOGIC TESTING REQUIRE. TEMPORARY PROCEDURE TPT-7 HAS BEEN WRITTEN TO PERFORM THE REQUIRED 18 MO. MANUAL ESF ACTUATION TEST DURING THE NEXT PLANT SHUTDOWN. A CONTINUITY TEST WAS SATISFACTORILY COMPLETED ON THE MANUAL SAFETY INJECTION ACTUATION SWITCH ON CONTROL PANEL C-02. QA PERSONNEL ARE ALSO REVIEWING A PREVIOUS LICENSE AUDIT OF SURVEILLANCE REQUIREMENTS TO VERIFY THAT IDENTIFIED ITEMS WERE CLOSED OUT.

[310] TROJAN DOCKET 50-344 LER 84-002
SAFETY INJECTION PUMP LUBE OIL COOLER PLUGGED WITH SEDIMENT.
EVENT DATE: 012784 REPORT DATE: 022784 NSSS: WE TYPE: PWR
VENDOR: AMERICAN STANDARD, HEAT TRANSFER DIV.

(NSIC 189060) ON JAN. 27, 1984 THE 'B' TRAIN SAFETY INJECTION PUMP LUBE OIL COOLER WAS INSPECTED AND WAS FOUND TO BE PACKED WITH SEDIMENT. THE SEDIMENT PREVENTED SERVICE WATER FROM PASSING THROUGH THE COOLER. THIS CONDITION HAD BUILT UP OVER THE PAST SEVERAL MONTHS AND AS A RESULT THE PUMP HAD BEEN INOPERABLE FOR LONGER THAN THE 72-HR PERIOD ALLOWED BY TECH SPEC 3.5.2. THE SEDIMENT DEPOSITS WERE CAUSED BY A THROTTLED VALVE IN THE COOLER'S DISCHARGE LINE. THE RESULTING FLOW REDUCTION ALLOWED SEDIMENT TO GRADUALLY ACCUMULATE. CORRECTIVE ACTION WAS TAKEN ON JAN. 27, 1984 TO FLUSH THE SERVICE WATER SIDE OF THE COOLER AND SUBSEQUENTLY THE SUPPLY AND DISCHARGE LINES. OTHER SIMILAR SAFETY-RELATED EQUIPMENT COOLERS SUPPLIED BY SERVICE WATER WERE INSPECTED AND WERE FOUND TO HAVE SUFFICIENT COOLING WATER FLOW.

[311] TURKEY POINT 3 DOCKET 50-250 LER 83-015
CRITICAL HEAT TRACING CIRCUIT LOST.
EVENT DATE: 091183 REPORT DATE: 101183 NSSS: WE TYPE: PWR

(NSIC 188838) DURING NORMAL FULL POWER OPERATION, CRITICAL HEAT TRACING CIRCUIT #20 WAS DECLARED INOPERABLE. THIS CIRCUIT PROVIDES HEAT TRACING ON THE LINE FROM UNIT 3 BORIC ACID FILTER TO THE UNIT 3 CHARGING PUMPS. IN ACCORDANCE WITH TECH SPEC 3.6.C.5, LOAD REDUCTION WAS COMMENCED AND THE UNIT WAS BROUGHT TO HOT SHUTDOWN. A SHORT CIRCUIT WAS IDENTIFIED ON TRAIN A AND AN OPEN CIRCUIT WAS FOUND ON TRAIN B. THIS IS REPORTABLE IN ACCORDANCE WITH TECH SPEC 6.9.2.B.2. NO BLOCKAGE OCCURRED IN THE AFFECTED LINES. A SIMILAR EVENT WAS REPORTED AS LER 251-82-014. THE LAGGING WAS REMOVED FROM THE LINE NEAR MOV-350 (EMERGENCY BORATION VALVE) AND INSPECTION REVEALED THAT TRAIN B HEAT TRACING WAS CUT. AN INVESTIGATION WAS UNSUCCESSFUL IN DETERMINING THE CAUSE. A FAULTY POWER SUPPLY CONNECTION AND A FAULTY SPLICE IN THE HEAT TRACING WERE LOCATED ON TRAIN A. TRAIN B WAS STILL FUNCTIONING BETWEEN MOV-350 AND ITS POWER SUPPLY. REPAIRS WERE COMPLETED WITHIN 20 HOURS.

[312] TURKEY POINT 3 DOCKET 50-250 LER 83-026
AIR COMPRESSOR STRIKES EMERGENCY DG FUEL OIL TRANSFER PIPING.
EVENT DATE: 121583 REPORT DATE: 022284 NSSS: WE TYPE: PWR

(NSIC 188934) WITH UNIT 3 AT COLD SHUTDOWN UNDERGOING FILLING AND VENTING OF THE RCS AND UNIT 4 AT 100% POWER, THE PLANT SUPERVISOR-NUCLEAR WAS ADVISED BY CONSTRUCTION PERSONNEL OF AN INCIDENT INVOLVING A PORTABLE AIR COMPRESSOR ROLLING DOWN THE UNIT 3 CONTAINMENT EQUIPMENT HATCH RAMP AND STRIKING THE EMERGENCY DIESEL GENERATOR FUEL OIL TRANSFER PIPING ADJACENT TO THE STORAGE TANK. THERE WAS NO BREACH OF PIPE INTEGRITY. THE AVAILABILITY OF THE EMERGENCY DIESEL GENERATORS WAS NOT AFFECTED. THIS IS REPORTABLE PURSUANT TO TECH SPEC 6.9.2.B.3. THE ROOT CAUSE WAS DETERMINED TO BE LOSS OF FOOTING (TIRE STOPS) FOR THE PORTABLE AIR COMPRESSOR ALLOWING IT TO ROLL DOWN THE RAMP. AS A PRECAUTION AGAINST FIRE HAZARDS, THE FOLLOWING IMMEDIATE CORRECTIVE ACTIONS WERE TAKEN: 1) THE FUEL OIL

STORAGE TANK WAS TEMPORARILY ISOLATED, 2) THE OIL TRANSFER PUMPS WERE DE-ENERGIZED, AND 3) A FIRE TEAM WAS DISPATCHED TO THE AREA.

[313] TURKEY POINT 3 DOCKET 50-250 LER 84-004
 INOPERABLE AUXILIARY FEEDWATER PUMPS.
 EVENT DATE: 010484 REPORT DATE: 022284 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: TURKEY POINT 4 (PWR)
 VENDOR: WOODWARD GOVERNOR COMPANY

(NSIC 188949) WITH UNIT 3 AT HOT SHUTDOWN RETURNING FROM A REFUELING OUTAGE AND UNIT 4 AT 100% POWER, OPERATING PROCEDURE 7304.1, AUXILIARY FEEDWATER SYSTEM PERIODIC TEST WAS INITIATED. THE 'A' PUMP STARTED BUT DID NOT PRODUCE THE REQUIRED FLOW. THE PLANT SUPERVISOR - NUCLEAR SUSPENDED TESTING OF THE 'A' PUMP AND DECLARED THE PUMP OUT OF SERVICE. THE INSTRUMENT AND CONTROL STAFF WAS REQUESTED TO CHECK THE PUMP. FOLLOWING A THOROUGH INSPECTION, THE ROOT CAUSE WAS FOUND TO BE MISPOSITION OF THE MANUAL GOVERNOR SPEED CONTROL KNOB. AFTER RESETTING THE KNOB TO THE MAXIMUM POSITION THE 'A' PUMP WAS TESTED SATISFACTORILY. IN SUPPORT OF CONTINUING WITH OPERATING PROCEDURE 7304.1, THE 'C' PUMP WAS STARTED BUT ALSO DID NOT PRODUCE REQUIRED FLOW. IT WAS IMMEDIATELY STOPPED AND INVESTIGATIONS ALSO REVEALED THE MANUAL GOVERNOR SPEED CONTROL KNOB TO BE MISPOSITIONED. THE KNOB WAS RESET AND THE PUMP TESTED SATISFACTORILY. THE 'B' PUMP WAS TESTED AND PERFORMED SATISFACTORILY. RECENT MODIFICATIONS IN ACCORDANCE WITH NUREG 0737, SPLIT THE AUXILIARY FEEDWATER SYSTEM INTO TWO REDUNDANT TRAINS COMPOSED OF THE 'A' AND 'C' PUMPS FORMING THE 'A' TRAIN AND THE 'B' PUMP FORMING THE 'B' TRAIN. EACH TRAIN IS CAPABLE OF DRAWING STEAM FROM ALL STEAM GENERATORS ON EITHER UNIT AND DIRECTING WATER FROM EITHER CONDENSATE STORAGE TANK TO BOTH UNITS AS REQUIRED. SIMILAR OCCURRENCES: NONE.

[314] TURKEY POINT 3 DOCKET 50-250 LER 84-001
 SPURIOUS CLOSURE OF FEEDWATER VALVE RESULTS IN REACTOR TRIP.
 EVENT DATE: 010884 REPORT DATE: 020784 NSSS: WE TYPE: PWR

(NSIC 189023) ON JAN. 8, 1984, A REACTOR TRIP OCCURRED. THE ROOT CAUSE WAS DETERMINED TO BE DUE TO A SPURIOUS SIGNAL WHICH RESULTED IN CLOSURE OF THE 'A' STEAM GENERATOR FEEDWATER FLOW CONTROL VALVE. THE TRANSIENT RESULTED IN 'STEAM FLOW/FEEDWATER FLOW MISMATCH' COINCIDENT WITH 'LOW A S/G WATER LEVEL' PROTECTION SIGNALS WHICH TRIPPED THE REACTOR. ALL EQUIPMENT FUNCTIONED AS DESIGNED ON INITIATION OF THE ENGINEERED SAFETY FEATURE ACTUATION SIGNAL (ESFAS). PLANT PERSONNEL CHECKED THE FLOW CONTROL VALVE AND ASSOCIATED COMPONENTS AND SATISFACTORILY STROKED THE VALVE OPEN AND CLOSED. NO ABNORMALITIES WERE DETERMINED TO EXIST THAT COULD HAVE CAUSED THE VALVE TO CLOSE. THE FLOW CONTROL VALVE AND ASSOCIATED COMPONENTS HAVE FUNCTIONED WITHOUT PROBLEM SINCE. SIMILAR OCCURRENCES: LER 250-80-24.

[315] TURKEY POINT 3 DOCKET 50-250 LER 84-002
 EXCESSIVE STEAM USAGE DURING STARTUP RESULTS IN SAFETY INJECTION AND REACTOR TRIP.
 EVENT DATE: 010884 REPORT DATE: 020784 NSSS: WE TYPE: PWR

(NSIC 189024) ON JAN. 3, 1984, A REACTOR TRIP OCCURRED DUE TO INITIATION OF 'SAFETY INJECTION' WITH FLOW NOT REQUIRED TO BE DELIVERED TO THE CORE. THE ROOT CAUSE WAS DETERMINED TO BE DUE TO EXCESSIVE STEAM USAGE IN THE SECONDARY SYSTEM AND STEAM LEAKAGE THROUGH THE STEAM SUPPLY VALVES TO THE MOISTURE SEPARATOR REHEATERS. THE BYPASS VALVES FOR THE MAIN STEAM ISOLATION VALVES (MSIV'S) ARE OPENED TO WARM UP THE STEAM HEADER AND TO EQUALIZE THE STEAM HEADER PRESSURE WITH THE STEAM GENERATOR PRESSURES, EQUALIZING THE STEAM PRESSURES ACROSS THE MSIV'S WHICH IS REQUIRED TO OPEN THESE VALVES. HOWEVER, THE EXCESSIVE STEAM USAGE AND THE STEAM LEAKAGE IDENTIFIED ABOVE RESULTED IN HIGHER THAN NORMAL DIFFERENTIAL PRESSURES REMAINING ACROSS THE MSIV'S. EFFORTS TO REDUCE THE DIFFERENTIAL

PRESSURES ACROSS THE MSIV'S WERE ATTEMPTED BY INCREASING ATMOSPHERIC STEAM DUMP. THIS RESULTED IN 'HIGH STEAM FLOW' COINCIDENT WITH 'LOW T AVERAGE' PROTECTION SIGNALS AND INITIATED SI WHICH TRIPPED THE REACTOR. ALL EQUIPMENT FUNCTIONED AS DESIGNED ON INITIATION OF THE ENGINEERED SAFETY FEATURE ACTUATION SIGNAL (ESPAS). FOLLOWING COMPLETION OF THE POST-TRIP REVIEW, A WALKDOWN OF THE SECONDARY SYSTEM RESULTED IN A REDUCTION OF STEAM USAGE AND ISOLATION OF STEAM LEAK PATHS. ONGOING WORK TO UPGRADE EQUIPMENT IN THE SECONDARY SYSTEM WILL HELP PREVENT A RECURRENCE. ADDITIONALLY, PROCEDURE CHANGES ARE BEING INCORPORATED UNDER THE PROCEDURE REVIEW PROJECT.

[316] TURKEY POINT 3 DOCKET 50-250 LER 84-003
 OPERATOR OPENS WRONG REACTOR TRIP BREAKER CAUSING A REACTOR TRIP.
 EVENT DATE: 010984 REPORT DATE: 020884 NSSS: WE TYPE: PWR

(NSIC 189025) ON JAN. 9, 1984, A REACTOR TRIP OCCURRED. THE ROOT CAUSE WAS DETERMINED TO BE PERSONNEL ERROR IN THAT A LICENSED OPERATOR INADVERTENTLY TRIPPED REACTOR TRIP BREAKER 'A' WITH THE 'A' BYPASS BREAKER OPEN, INSTEAD OF TRIPPING THE 'B' REACTOR TRIP BREAKER. THE REACTOR TRIP AND ASSOCIATED LOGIC PERFORMED AS DESIGNED. THE FOLLOWING CORRECTIVE ACTIONS WILL BE TAKEN TO PREVENT RECURRENCE: 1) REVIEW OF THIS INCIDENT DURING THE REQUALIFICATION SESSIONS FOR LICENSED OPERATORS, 2) REVIEW OF PROCEDURE FOR HUMAN FACTORS CONSIDERATIONS. THIS WILL INCLUDE SUCH THINGS AS ADDITIONAL SIGN OFFS FOR CLOSING AND LOCKING THE RACK DOOR, PROCEEDING TO ANOTHER RACK, AND UNLOCKING AND OPENING THE DOOR FOR THAT RACK.

[317] TURKEY POINT 3 DOCKET 50-250 LER 84-005
 ENGINEERED SAFETY FEATURE ACTUATION REACTOR TRIP.
 EVENT DATE: 012584 REPORT DATE: 022384 NSSS: WE TYPE: PWR

(NSIC 188950) ON JAN. 25, 1984, A REACTOR TRIP OCCURRED. THE ROOT CAUSE WAS DETERMINED TO BE DUE TO AN ACCIDENTAL TRIP OF A 4160 VOLT BUS FEEDER BREAKER BY A MEMBER OF THE PLANT CONSTRUCTION WORK FORCE. THE BREAKER TRIP DE-ENERGIZED THE BUS AND ITS POWER SUPPLIES TO A MAIN FEEDWATER PUMP AND CONDENSATE PUMP. THE REDUCED FEEDWATER FLOW TRANSIENT RESULTED IN A REACTOR TRIP ON REACTOR PROTECTION SYSTEM LOGIC - 'STEAM FLOW/FEEDWATER FLOW MISMATCH' COINCIDENT WITH 'LOW C STEAM GENERATOR WATER LEVEL'. ALL EQUIPMENT FUNCTIONED AS DESIGNED ON INITIATION OF THE ENGINEERED SAFETY FEATURE ACTUATION SIGNAL (ESPAS). IMMEDIATE CORRECTIVE ACTIONS STOPPED ALL CONSTRUCTION WORK IN THE PLANT UNTIL A PLANT CONSTRUCTION ADMINISTRATIVE SITE PROCEDURE COULD BE PREPARED, APPROVED, AND IMPLEMENTED. LONG-TERM CORRECTIVE ACTION IS TO FOLLOW-UP IMPLEMENTATION OF THE NEW PROCEDURE, INCLUDING TRAINING OF PERSONNEL ON IMPLEMENTATION OF THE PROCEDURE AND POSSIBLE PROCEDURE REVISIONS TO CLARIFY AND STREAMLINE INSTRUCTIONS TO AFFECTED PERSONNEL. SIMILAR OCCURRENCES: LER 250-84-003.

[318] TURKEY POINT 3 DOCKET 50-250 LER 84-006
 LOSS OF MAIN FEED PUMP RESULTS IN SI AND REACTOR TRIP.
 EVENT DATE: 021284 REPORT DATE: 031384 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189143) ON FEB. 12, 1984, A REACTOR TRIP OCCURRED. THE ROOT CAUSE WAS DETERMINED TO BE DUE TO AN ELECTRICAL RELAY MALFUNCTION WHICH RESULTED IN LOSS OF POWER TO A NON-SAFETY RELATED 4160 V BUS. THIS DE-ENERGIZED THE 4160 V POWER SUPPLY TO A STEAM GENERATOR FEEDWATER PUMP. THE REDUCED FEEDWATER FLOW TRANSIENT RESULTED IN A REACTOR TRIP ON REACTOR PROTECTION SYSTEM LOGIC - 'STEAM FLOW/FEEDWATER FLOW MISMATCH' COINCIDENT WITH 'LOW 'C' S/G WATER LEVEL.' ALL EQUIPMENT FUNCTIONED AS DESIGNED ON INITIATION OF THE ENGINEERED SAFETY FEATURE ACTUATION SIGNAL (SI). IMMEDIATE CORRECTIVE ACTIONS INCLUDED A DESIGN REVIEW AND COMPLETION OF SATISFACTORY TESTING OF THE AUTOMATIC TURBINE GOVERNOR RUNBACK

LOGIC CIRCUITRY TO VERIFY THAT A RUNBACK IS INITIATED ON LOSS OF A S/G FEEDWATER PUMP. LONG TERM CORRECTIVE ACTIONS WILL BE ADDRESSED IN LER 250-84-007. SIMILAR OCCURRENCES: NONE.

[319] TURKEY POINT 3 DOCKET 50-250 LER 84-008
 INOPERABLE AUXILIARY FEEDWATER PUMP.
 EVENT DATE: 022384 REPORT DATE: 032684 NSSS: WE TYPE: PWR
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 189209) WHILE PERFORMING OPERATING PROCEDURE 7304.1, AUXILIARY FEEDWATER SYSTEM MONTHLY TEST, FLOW OSCILLATIONS WERE OBSERVED DURING THE "B" PUMP TEST. THE "B" PUMP WAS DECLARED OUT OF SERVICE AND THE MONTHLY TEST CONTINUED WITH THE "C" PUMP. AT THE TIME, UNIT 3 RCS TEMPERATURE WAS ABOUT 450 F WHILE HEATING UP FROM COLD SHUTDOWN. UNIT 4 WAS CRITICAL AND THE EVOLUTION FROM HOT SHUTDOWN TO POWER OPERATION WAS IN PROGRESS. INSTRUMENT AND CONTROL STAFF WERE NOTIFIED AND PROCEEDED TO WORK ON THE DIFFERENTIAL PRESSURE CELL (D/P CELL) WHICH WAS BELIEVED TO BE THE ROOT CAUSE OF THE FLOW OSCILLATIONS. FOLLOWING REPAIR EFFORTS, A SECOND TEST OF THE "B" PUMP INDICATED THE FLOW OSCILLATION CONDITION WAS STILL UNCORRECTED. AT THIS TIME, UPON RECOMMENDATION OF THE PLANT NUCLEAR SAFETY COMMITTEE, THE PLANT MANAGER (NUCLEAR) HALTED RCS HEAT UP (RCS TEMPERATURES AT 530 F). A TEMPORARY SYSTEM ALTERATION WAS REVIEWED AND APPROVED TO ISOLATE D/P CELL 2402. FOLLOWING ISOLATION OF THE D/P CELL, A SATISFACTORY TEST OF THE "B" AUXILIARY FEEDWATER PUMP PLACED IT BACK IN SERVICE. A SUBSEQUENT REVIEW OF THIS EVENT REVEALED THAT AN IMMEDIATE COOLDOWN TO BELOW 350 F ON UNIT 3 SHOULD HAVE BEEN INITIATED PER TECH SPEC 3.8.4 AND A SPECIAL INSTRUCTION WAS ISSUED TO THIS EFFECT. SIMILAR EVENTS: 250-83-012, 250-83-009, AND 250-80-006.

[320] TURKEY POINT 3 DOCKET 50-250 LER 84-009
 ENGINEERED SAFETY FEATURE ACTUATION - TURBINE RUNBACK.
 EVENT DATE: 030684 REPORT DATE: 040584 NSSS: WE TYPE: PWR

(NSIC 189144) WHILE AT 100% POWER, UNIT 3 EXPERIENCED A TURBINE RUNBACK TO APPROXIMATELY 410 MWE. THIS INCIDENT OCCURRED WHILE PERFORMING OPERATING PROCEDURE OP 1004.2, REACTOR PROTECTION TEST. AN INVESTIGATION WAS IMMEDIATELY INITIATED. UNIT 3 WAS STABILIZED AND HELD AT APPROXIMATELY 80% UNTIL THE INVESTIGATION WAS COMPLETED. I AND C STAFF, IN COORDINATION WITH OPERATIONS, RECONSTRUCTED THE CHAIN OF EVENTS LEADING TO THE TURBINE RUNBACK AND FOUND NO ABNORMAL INDICATIONS OF DEFICIENCIES IN THE LOGIC CIRCUITRY. THE INCIDENT IN CONJUNCTION WITH THE INVESTIGATION RESULTS WERE REVIEWED BY THE PLANT NUCLEAR SAFETY COMMITTEE THUS DETERMINING THAT THE ROOT CAUSE WAS A SPURIOUS SIGNAL TO THE ROD DROP LOGIC OF NIS N44. AUTHORIZATION WAS THEN GIVEN TO RETURN UNIT 3 TO FULL POWER AND THE REACTOR PROTECTION TEST WAS COMPLETED WITH NO FURTHER PROBLEMS. THE LONG TERM CORRECTIVE ACTION WILL BE FOR I AND C STAFF TO MONITOR UNIT 3 NIS N44 RACK WHILE PERFORMING REACTOR PROTECTION TESTS IN AN EFFORT TO DETERMINE, IN CASE OF RECURRENCE, THE ROOT CAUSE FOR THE TURBINE RUNBACK. ALL SAFETY EQUIPMENT AND ASSOCIATED LOGIC PERFORMED SATISFACTORILY. A SIGNIFICANT EVENT NOTIFICATION WAS MADE TO NRCOC VIA ENS. SIMILAR OCCURRENCES: THE SPURIOUS ROD DROP SIGNAL IN NIS N44 UNIT 3 HAS BEEN EXPERIENCED ONCE PRIOR TO THIS INCIDENT AND INVESTIGATIONS HAVE NOT REVEALED A DEFINITE ROOT CAUSE.

[321] TURKEY POINT 3 DOCKET 50-250 LER 84-011
 ENGINEERED SAFETY FEATURES ACTUATION - TURBINE RUNBACK.
 EVENT DATE: 032384 REPORT DATE: 042384 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 189316) WHILE AT 100% POWER, UNIT 3 EXPERIENCED A TURBINE RUNBACK RESULTING IN AN AUTOMATIC LOAD REDUCTION TO 83%. THE ROOT CAUSE WAS FOUND TO BE THE B DETECTOR READING LOW ON NIS POWER RANGE CHANNEL 42, THUS PRODUCING AN OVERPOWER

AND OVERTEMPERATURE DELTA T AND ROD DROP SIGNAL. A FLUX MAP VERIFIED THAT THERE WERE NO DROPPED RODS IN THE REACTOR. A SIGNIFICANT EVENT NOTIFICATION WAS MADE TO NRCOC VIA ENS IN ACCORDANCE WITH 10 CFR 50.72(B)(2)(II). SUBSEQUENT INVESTIGATIONS INTO THE FAILURE REVEALED THAT WATER HAD ENTERED THE RESPECTIVE CONTAINMENT PENETRATION CANISTER THUS PRODUCING AN INNER TO OUTERSHIELD SHORT IN THE "B" DETECTOR CABLE WHICH CONDUCTS THE POWER RANGE SIGNAL TO N42 CABINET. THE SOURCE OF THE WATER LEAK WAS FOUND AND SEALED. THE "A" DETECTOR WAS CHECKED AND FOUND SATISFACTORY. THE CABLES FOR THE "B" DETECTOR WERE DRIED AND ALL CONNECTOR INTERNAL PARTS WERE REPLACED EXCEPT FOR THE CENTER CONDUCTOR WHICH WAS CLEANED WITH FREON. THE "B" DETECTOR WAS THEN CHECKED AND FOUND TO BE PERFORMING PROPERLY. UNIT 3 WAS RETURNED TO FULL POWER OPERATION WITH NO FUTURE PROBLEMS. THE TOTAL TIME AT REDUCED POWER WAS 3 HOURS AND 40 MINUTES. SHORT TERM CORRECTIVE ACTION WAS TAKEN TO TEMPORARILY SEAL THE SEAMS ON THE ELECTRICAL PENETRATION ROOMS. LONG TERM CORRECTIVE ACTION WAS SEALING THE AUX. BLDG. ROOF. NO SIMILAR OCCURRENCES.

[322] TURKEY POINT 4 DOCKET 50-251 LER 84-001
 REACTOR TRIP DUE TO LOW SG LEVEL.
 EVENT DATE: 021284 REPORT DATE: 031384 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189145) ON FEBRUARY 12, 1984, A REACTOR TRIP OCCURRED. THE ROOT CAUSE WAS DETERMINED TO BE DUE TO AN ELECTRICAL RELAY MALFUNCTION WHICH RESULTED IN LOSS OF POWER TO A NON-SAFETY RELATED 4160 VOLT BUS AND OCCURRED DURING ATTEMPTS TO POWER ANOTHER NON-SAFETY RELATED 4160 VOLT BUS FROM ITS ALTERNATE POWER SUPPLY. THIS DE-ENERGIZED THE 4160 VOLT POWER SUPPLY TO A STEAM GENERATOR (S/G) FEEDWATER PUMP. THE REDUCED FEEDWATER FLOW TRANSIENT RESULTED IN A REACTOR TRIP ON REACTOR PROTECTION SYSTEM LOGIC - "STEAM FLOW/FEEDWATER FLOW MISMATCH" COINCIDENT WITH "LOW 'A' S/G WATER LEVEL." ALL EQUIPMENT FUNCTIONED AS DESIGNED ON INITIATION OF THE ENGINEERED SAFETY FEATURE ACTUATION SIGNAL (ESFAS). IMMEDIATE CORRECTIVE ACTIONS INCLUDED A DESIGN REVIEW AND COMPLETION OF SATISFACTORY TESTING OF THE AUTOMATIC TURBINE GOVERNOR RUNBACK LOGIC CIRCUITRY TO VERIFY THAT A RUNBACK IS INITIATED ON LOSS OF A S/G FEEDWATER PUMP. LONG TERM CORRECTIVE ACTIONS WILL BE ADDRESSED IN LER 251-84-003. SIMILAR OCCURRENCES: NONE.

[323] TURKEY POINT 4 DOCKET 50-251 LER 84-002
 STEAM FLOW TRANSMITTER FAILURE CAUSES REACTOR TRIP.
 EVENT DATE: 021284 REPORT DATE: 031384 NSSS: WE TYPE: PWR
 VENDOR: ROSEMOUNT, INC.

(NSIC 189026) WHILE UNIT 4 WAS AT 15% POWER AND ESCALATING TO FULL POWER FROM A PREVIOUS UNIT TRIP (LER 251-84-001), A REACTOR TRIP OCCURRED DUE TO STEAM FLOW GREATER THAN FEED FLOW COINCIDENT WITH LOW LEVEL IN THE 4A STEAM GENERATOR. THE ROOT CAUSE WAS FOUND TO BE A HIGH STEAM FLOW READING ON 4A STEAM GENERATOR. THIS COUPLED WITH AN ACTUAL STEAM GENERATOR LOW LEVEL MADE UP THE REQUIRED LOGIC FOR THE REACTOR TRIP. FEEDWATER FLOW CONTROL WAS IN THE MANUAL MODE AT THIS STAGE OF POWER ASCENSION. CORRECTIVE ACTION WAS TAKEN TO PERFORM A CALIBRATION CHECK ON THE TRANSMITTER. A ZERO SHIFT WAS CORRECTED. THE FOLLOWING DAY THE TRANSMITTER WAS OBSERVED TO BE READING HIGH AGAIN. THE MALFUNCTIONING TRANSMITTER WAS THEN REPLACED AND SHOP TESTED. THE INSTRUMENT LOOP WAS RETURNED TO SERVICE WITH NO FURTHER PROBLEMS AND THE UNIT WAS RESTORED TO FULL POWER OPERATION. SIMILAR OCCURRENCES: NONE.

[324] VERMONT YANKEE DOCKET 50-271 LER 81-028 REV 1
 UPDATE ON RECIRCULATION PUMP BREAKER FAILS TO OPEN.
 EVENT DATE: 101781 REPORT DATE: 123081 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189009) DURING ROUTINE SHUTDOWN OPERATIONS, WHEN B RRMG SET WAS SHUT DOWN, THE FIELD BREAKER FAILED TO OPEN. THIS EFFECTIVELY DISABLED THE RECIRC PUMP TRIP INSTRUMENTATION FOR B RRMG SET. TECH SPEC 3.2.I REQUIRES THIS INSTRUMENTATION TO BE OPERABLE DURING POWER OPERATION. THERE WERE NO SIGNIFICANT OCCURRENCES AS A RESULT OF THIS EVENT. A PREVIOUS SIMILAR OCCURRENCE WAS REPORTED AS LER 81-10/3L. THE CAUSE OF OCCURRENCE WAS BINDING OF THE OPERATING MECHANISM. A STUD WHICH OPERATES A SHORTING DISC ON THE CENTER CONTACT WAS FOUND TO BE TOO LONG, CAUSING OVERSTRESS OF THE CROSSBAR ASSEMBLY WHEN LOCKING THE BREAKER INTO ITS HOUSING. A NEW BREAKER, WITH THE STUD TRIMMED, WAS INSTALLED AND SUCCESSFULLY TESTED. THE BREAKER IS A GE MODEL AKF-2-25.

[325] VERMONT YANKEE DOCKET 50-271 LER 84-001
 REACTOR TRIPS DUE TO PRESSURE TRANSIENT AND ESF ACTUATION.
 EVENT DATE: 010584 REPORT DATE: 020384 NSSS: GE TYPE: BWR
 VENDOR: GLESNER INDUSTRIAL SUPPLY
 ROSEMOUNT, INC.

(NSIC 189151) AS A RESULT OF AN INSTABILITY IN THE TURBINE CONTROL SYSTEM, A PRESSURE TRANSIENT WAS GENERATED WHICH RESULTED IN A REACTOR TRIP. THE REACTOR TRIP OCCURRED AT 1042 PSIG AND RESULTED IN A PRESSURE DECREASE TO 847 PSIG WHERE A GROUP 1 PCIS ISOLATION OCCURRED. REACTOR LEVEL THEN DECREASED TO A LEVEL OF 122 INCHES, AS A RESULT OF THE ISOLATION, WHERE GROUPS 2,3,4 & 5 PCIS ISOLATIONS OCCURRED. LEVEL THEN RECOVERED TO A LEVEL OF 180 INCHES. AFTER SHUTDOWN, THE TURBINE CONTROL SYSTEM WAS INSPECTED AND TESTING WAS PERFORMED TO DETERMINE THE CAUSE OF THE PRESSURE TRANSIENT. SINCE THE MAIN FEED PUMP TRIP OCCURRED ABOVE THE REQUIRED VALUE, THE INSTRUMENTS WHICH PROVIDE THIS TRIP WERE CHECKED AND ONE CHANNEL WAS RECALIBRATED.

[326] WPPSS 2 DOCKET 50-397 LER 84-002
 SPURIOUS ACTUATION OF CONTROL ROOM EMERGENCY FILTRATION UNITS.
 EVENT DATE: 011184 REPORT DATE: 021084 NSSS: GE TYPE: BWR
 VENDOR: KAMAN SCIENCES CORP.

(NSIC 189198) CONTROL ROOM OUTSIDE AIR RADIATION MONITORS (WOA-RIS-31A, 31B, 32A, AND 32B) PERIODICALLY SPIKE TO TRIP THE ASSOCIATED HIGH RADIATION ALARMS RESULTING IN STARTING OF THE CONTROL ROOM EMERGENCY FILTRATION UNITS. THE SPIKING HAS BEEN DETERMINED AS BEING CAUSED BY EXCESSIVE ELECTRICAL NOISE INDUCED INTO THE RADIATION MONITORING SYSTEM. DATES OF EVENTS ARE AS FOLLOWS: 1/11/84, WOA-RIS-31A, 31B, 32A, AND 32B; 1/14/84, WOA-RIS-31B; AND 2/06/84, WOA-RIS-31B. CORRECTIVE ACTION TAKEN AS FOLLOWS: THE CONTROL ROOM EMERGENCY FILTRATION UNITS WERE AUTOMATICALLY INITIATED ON THREE OCCASIONS BY A HIGH-HIGH RADIATION ALARM ORIGINATING FROM THE OUTSIDE AIR INTAKE MONITORS (EQUIPMENT PIECE NUMBERS WOA-RIS-31A & B AND WOA-RIS-32A & B). ON 1/11/84 THEY WERE INITIATED BY ALL MONITORS; AND ON 1/14/84 AND 2/06/84, INITIATION WAS BY 32B ONLY. AFTER HAVING DETERMINED NORMAL RADIATION BACKGROUND LEVELS EXISTED AT THE MONITORS, THE INVESTIGATION LED TO EVIDENCE THAT EXCESSIVE ELECTRICAL NOISE WAS BEING INDUCED INTO THE RADIATION MONITORING SYSTEM.

[327] WPPSS 2 DOCKET 50-397 LER 84-004
 REACTOR SHUTDOWN - IRM FAILURES.
 EVENT DATE: 011984 REPORT DATE: 021684 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189003) IMMEDIATELY AFTER INITIAL CRITICALITY WAS ACHIEVED, INTERMEDIATE RANGE MONITOR CHANNELS A, R, AND D WERE DETERMINED TO BE INOPERABLE. TECH SPEC 3.3.1 REQUIRES A MINIMUM OF THREE OPERABLE INTERMEDIATE RANGE MONITOR CHANNELS PER REACTOR PROTECTION SYSTEM TRIP SYSTEM IN OPERATIONAL CONDITION 5. ACTION STATEMENT 3 WAS COMPLIED WITH AND ALL RODS WERE INSERTED WITHIN ONE HR.

INTERMEDIATE RANGE MONITOR DETECTORS A AND B WERE SHORTED AT THE ELECTRICAL CONNECTION BETWEEN THE SIGNAL CABLE AND THE DETECTOR, WHILE INTERMEDIATE RANGE MONITOR D HAD A FAILED ELECTRONIC COMPONENT IN ITS PREAMPLIFIER.

[328] WPPSS 2 DOCKET 50-397 LER 84-005
 DIESEL GENERATOR TWICE INADVERTENTLY AUTO STARTS.
 EVENT DATE: 012384 REPORT DATE: 022284 NSSS: GE TYPE: BWR
 VENDOR: GENERAL MOTORS

(NSIC 189004) 1. 01/23/84 INADVERTENT AUTO START OF HPCS DIESEL GENERATOR (DG-1C) DUE TO VIOLATION OF PROCEDURE. NO COMPONENT FAILURES INVOLVED. REPORTED TO NRC VIA TELEPHONE ON 01/23/84. 2. 02/08/84 INADVERTENT AUTO START OF HPCS DIESEL GENERATOR (DG-1C) DUE TO VIOLATION OF PROCEDURE. NO COMPONENT FAILURES INVOLVED. REPORTED TO NRC VIA TELEPHONE ON 02/08/84. BOTH EVENTS WERE CAUSED BY FAILURE TO PROPERLY TAG OUT THE UNIT FOR MAINTENANCE ACTIVITY IN VIOLATION OF APPROVED CLEARANCE ORDER PROCEDURE. ALL OPERATING PERSONNEL ARE BEING RETRAINED ON THE CLEARANCE ORDER PROCEDURE.

[329] WPPSS 2 DOCKET 50-397 LER 84-006
 CIRCUIT BREAKER LATCH LEVER GUIDE TUBE FAILURE.
 EVENT DATE: 012584 REPORT DATE: 022284 NSSS: GE TYPE: BWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 189005) WHILE ATTEMPTING TO RACK IN THE CIRCUIT BREAKER WHICH SUPPLIES RHR-P-2C, IT WAS DISCOVERED THAT THE CIRCUIT BREAKER WOULD NOT RACK IN. INSPECTION OF THE CIRCUIT BREAKER IDENTIFIED A CRACKED LATCH LEVER GUIDE TUBE. THE GUIDE TUBE WAS REPLACED AND THE CIRCUIT BREAKER SUCCESSFULLY RACKED INTO SERVICE.

[330] WPPSS 2 DOCKET 50-397 LER 84-007
 REACTOR TRIPS TWICE ON LOW VESSEL LEVEL INDICATION.
 EVENT DATE: 012784 REPORT DATE: 022484 NSSS: GE TYPE: BWR
 VENDOR: DRAGON VALVE, INC.

(NSIC 189006) A TEMPORARY REFERENCE LEG WAS USED DURING INITIAL FUEL LOAD TO READ REACTOR LEVEL. ORAL INSTRUCTIONS WERE GIVEN TO REFILL THE REFERENCE LEG WHEN THE REACTOR HEAD WAS PUT IN PLACE. TECHNICIANS OPENED THE VARIABLE LEG OF THE INSTRUMENT. THE COMMON VARIABLE LEG STARTED TO DRAIN AND CAUSED MS-LIS-24C AND MS-LIS-24D TO SHOW A FALSE LOW LEVEL. THIS CAUSED A REACTOR PROTECTION SYSTEM (RPS) TRIP AND A RESIDUAL HEAT REMOVAL (RHR) ISOLATION. RED CAUTION TAGS HAVE NOW BEEN INSTALLED AT ALL REACTOR LEVEL INSTRUMENTS WITH THE FOLLOWING INSCRIPTION: "CAUTION: REFERENCE LEG".

[331] WPPSS 2 DOCKET 50-397 LER 84-008
 SUPPRESSION POOL LEVEL EXCEEDS TECH SPEC LIMITS.
 EVENT DATE: 012884 REPORT DATE: 022484 NSSS: GE TYPE: BWR

(NSIC 189007) DURING NORMAL SHUTDOWN CONDITIONS PRIOR TO INITIAL POWER OPERATIONS, SUPPRESSION POOL (WETWELL) LEVEL INDICATION WAS OUT OF SERVICE FOR APPROXIMATELY 24 HRS. WHEN THE POOL LEVEL INDICATOR (CMS-LR/PR-4) WAS BEING RETURNED TO SERVICE IT WAS NOTED THAT CONDENSATION HAD ACCUMULATED IN THE ATMOSPHERIC REFERENCE LEG OF THE LEVEL TRANSMITTER. WATER WITHIN THE REFERENCE LEG CAUSED A FALSE LEVEL INDICATION IN THE CONTROL ROOM. PREVIOUSLY, WATER LEVEL HAD BEEN MAINTAINED USING THIS FALSE INDICATION. TECH SPECS LIMITS PER SECTION 4.5.3.1 REQUIRES MAINTENANCE OF A VOLUME EQUIVALENT TO A LEVEL OF 30 FEET 9 3/4 INCHES. ACTUAL LEVEL WAS DETERMINED TO BE APPROXIMATELY 30 FEET 5 INCHES. TH'7

CONDITION WAS REPORTED TO THE NRC PURSUANT TO 10 CFR 50.72(2)(III)(D). THIS LER PROVIDES WRITTEN FOLLOW-UP PURSUANT TO 10 CFR 50.73(A)(2)(I)(C).

[332] WPPSS 2 DOCKET 50-397 LER 84-013
 HYDROGEN RECOMBINERS FAIL.
 EVENT DATE: 021384 REPORT DATE: 031284 NSSS: GE TYPE: BWR
 VENDOR: AIR PRODUCTS EQUIP. COMPANY
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 189136) DURING NORMAL SHUTDOWN CONDITIONS PRIOR TO INITIAL POWER OPERATIONS, BOTH POST LOCA HYDROGEN RECOMBINER (CAC-HR-1A AND CAC-HR-1B) MOTORS TRIPPED ON ELECTRICAL OVERLOAD WITHIN A FEW MINUTES OF HAVING BEEN PLACED IN OPERATION DURING THE PCILRT AT 18 PSIG TO VERIFY FLOW FOR THE PREOPERATIONAL TEST. THIS WAS THE FIRST TIME THE RECOMBINERS HAD BEEN OPERATED AT ELEVATED PRESSURE. THE OVERLOADS AND FUSES HAD BEEN SIZED FOR 12 HP, THE NAMEPLATE DATA OF THE MOTORS, AND THIS WAS PROVEN TO BE ADEQUATE DURING INITIAL TESTING AT ATMOSPHERIC CONDITIONS. LATER TESTING AT ELEVATED PRESSURE (18 PSIG) PRODUCED ACTUAL DATA THAT ONE MOTOR WAS PUTTING OUT APPROXIMATELY 19 HP. THE HIGHER THAN EXPECTED HORSEPOWER WAS CONSISTENT WITH THE FACTORY ACCEPTANCE TEST RESULTS AND THE FUSES AND OVERLOADS SHOULD HAVE BEEN SIZED FOR DESIGN CONDITIONS. TECH SPEC 3.6.6.1 REQUIRES TWO INDEPENDENT HYDROGEN RECOMBINER SYSTEMS TO BE OPERABLE ONLY IN MODES 1 AND 2. TESTING, PRIOR TO POWER OPERATION BUT AFTER INITIAL CRITICALITY, REVEALED A POTENTIAL DESIGN DEFICIENCY THAT COULD HAVE RESULTED IN INTERMITTENT HYDROGEN RECOMBINER OPERATION IN THE EVENT OF A LOCA. THIS LER PROVIDES WRITTEN FOLLOW-UP PURSUANT TO 10 CFR 50.73(A)(2)(VII).

[333] WPPSS 2 DOCKET 50-397 LER 84-014
 HIGH PRESSURE CAUSES TRIP DURING OPERATIONAL LEAKAGE TEST.
 EVENT DATE: 021984 REPORT DATE: 031484 NSSS: GE TYPE: BWR

(NSIC 189137) WHILE PERFORMING AN OPERATIONAL LEAKAGE TEST OF THE REACTOR PRESSURE VESSEL (RPV), AN UNPLANNED REACTOR PROTECTION SYSTEM (RPS) TRIP OCCURRED WHEN THE WATER REJECTION FLOW PATH FROM THE RPV WAS ISOLATED WITHOUT ISOLATING OR REDUCING THE AMOUNT OF WATER BEING INJECTED INTO THE RPV. THIS CONDITION WAS REPORTED TO THE NRC PURSUANT TO 10 CFR 50.72(B)(2)(II). THIS LER PROVIDES WRITTEN FOLLOW-UP PURSUANT TO 10 CFR 50.73(A)(2)(IV).

[334] WPPSS 2 DOCKET 50-397 LER 84-018
 SPURIOUS START OF CONTROL ROOM EMERGENCY FILTRATION UNIT.
 EVENT DATE: 030684 REPORT DATE: 032884 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 189199) DUE TO A PROCEDURAL ERROR, THE CONTROL ROOM EMERGENCY FILTRATION FAN (DIV. II) INITIATED WHILE RUNNING SURVEILLANCE PROCEDURE TESTING (SECONDARY CONTAINMENT ISOL. REACTOR BUILDING VENT RADIATION - CHANNEL FUNCTIONAL TEST).

[335] WPPSS 2 DOCKET 50-397 LER 84-019
 AUTOMATIC ACTUATION OF AN ENGINEERED SAFETY FEATURE.
 EVENT DATE: 030884 REPORT DATE: 032884 NSSS: GE TYPE: BWR

(NSIC 189200) DURING TROUBLESHOOTING OF AN UPSCALE CHLORINE READING FROM WOA-SR-16, AN ALARM LIGHT WAS FOUND TO BE MISSING. WHEN THE LIGHT WAS REPLACED, A CURRENT SURGE/VOLTAGE SPIKE CAUSED A MOMENTARY HI CHLORINE ALARM AND STARTED WMA-FN-54B. IMMEDIATE ACTION WAS TO RESET THE ALARM AND RETURN THE H&V TO ITS NORMAL CONDITION. THERE WERE NO SAFETY CONSEQUENCES OR IMPLICATIONS ASSOCIATED WITH THIS EVENT.

[336] WPPSS 2 DOCKET 50-397 LER 84-023
 TECHNICAL SPECIFICATION VIOLATION ON TESTING DIESEL GENERATORS.
 EVENT DATE: 030884 REPORT DATE: 040484 NSSS: GE TYPE: BWR
 VENDOR: GENERAL MOTORS

(NSIC 189201) 1) ON 03/08/84, PERFORMED SURVEILLANCE ON #1 STANDBY DIESEL GENERATOR (DG1A) WITHOUT PRELUBE/WARMUP IN VIOLATION OF TECH SPEC 4.8.1.1.2.A.4, AND 2) ON 03/09/84, PERFORMED SURVEILLANCE ON #2 STANDBY DIESEL GENERATOR (DG1B) WITHOUT PRELUBE/WARMUP IN VIOLATION OF THE TECH SPEC 4.8.1.1.2.A.4. EVENTS ARE THE RESULT OF RECENT CHANGES TO TECH SPEC REQUIRING ACTION THAT THE COMPONENT DESIGN CURRENTLY DOES NOT ALLOW. CORRECTION ACTION: 1) OBTAIN TECH SPEC CHANGE TO ALLOW STARTING OF D.G. WITHOUT PRELUBE/WARMUP, AND 2) OBTAIN DESIGN CHANGE AND PERFORM MODIFICATION TO ALLOW OPERATION AT LOWER SPEEDS.

[337] WPPSS 2 DOCKET 50-397 LER 84-017
 CONTROL ROOM EMERGENCY FILTRATION UNIT INITIATION DURING TESTS.
 EVENT DATE: 031884 REPORT DATE: 041184 NSSS: GE TYPE: BWR

(NSIC 189313) DUE TO A PERSONNEL ERROR, THE CONTROL ROOM EMERGENCY FILTRATION FAN (DIV. II) INITIATED WHILE RUNNING SURVEILLANCE PROCEDURE TESTING (SECONDARY CONTAINMENT ISOL. REACTOR BUILDING VENT RADIATION - CHANNEL FUNCTIONAL TEST). A PROCEDURE DEVIATION AND LER 84-018 HAD BEEN WRITTEN ON THE SAME PROBLEM. HOWEVER, WHEN THE SUBSEQUENT SURVEILLANCE PROCEDURE WAS RUN, THE DEVIATED PROCEDURE WAS NOT USED AND THE EVENT OCCURRED AGAIN. THE PROCEDURE DEVIATION TRACKING SYSTEM WAS EXAMINED TO INSURE THERE WERE NO REVISIONS REQUIRED. THE PROCEDURE HAS NOW BEEN REVISED AND SUBSEQUENT SURVEILLANCES RUN SUCCESSFULLY WITH NO INADVERTENT ACTUATIONS.

[338] WPPSS 2 DOCKET 50-397 LER 84-025
 SPURIOUS TRIPS OF CONTROL ROOM EMERGENCY FILTRATION UNITS.
 EVENT DATE: 031984 REPORT DATE: 041284 NSSS: GE TYPE: EWR
 VENDOR: KAMAN SCIENCES CORP.

(NSIC 189314) CONTROL ROOM OUTSIDE AIR RADIATION MONITORS (WOA-RIS-31A, 31B, 32A, AND 32B) PERIODICALLY SPIKE TO TRIP THE ASSOCIATED HIGH RADIATION ALARMS RESULTING IN STARTING OF THE CONTROL ROOM EMERGENCY FILTRATION UNITS. THE SPIKING HAS BEEN DETERMINED TO BE CAUSED BY EXCESSIVE ELECTRICAL NOISE INDUCED INTO THE RADIATION MONITORING SYSTEM.

[339] YANKEE ROWE DOCKET 50-029 LER 84-001
 STEAM GENERATOR WATER BOX VENT LINE LEAKS.
 EVENT DATE: 012484 REPORT DATE: 022384 NSSS: WE TYPE: PWR

(NSIC 188947) DURING A ROUTINE, BIWEEKLY INSPECTION TOUR OF CONTAINMENT ON JAN. 24, 1984, A SMALL AMOUNT OF BORATED WATER WAS DISCOVERED IN THE BRASS DRAIN BOX AREA (CONTAINMENT FLOOR) BY A SENIOR REACTOR OPERATOR. AN OCCASIONAL DRIP WAS OBSERVED COMING FROM THE LAGGING OF A 3/4 INCH PIPE, LATER IDENTIFIED AS THE LOOP 1 STEAM GENERATOR WATER BOX VENT LINE. THE PLANT WAS AT 100% STEADY STATE POWER AT THE TIME OF DISCOVERY. THIS LEAK WAS CLASSIFIED AS A DEGRADATION OF THE PRIMARY COOLANT SYSTEM BOUNDARY AND AN UNUSUAL EVENT WAS DECLARED. AN ORDERLY SHUTDOWN OF THE PLANT WAS INITIATED IN ACCORDANCE WITH TECH SPEC 3.4.5.2A. AN INSPECTION OF THE LOOP 1 WATER BOX VENT LINE DISCLOSED A THROUGH-WALL PINHOLE LEAK. THE DEFECTIVE PIPE WAS REMOVED AND REPLACED. UPON COMPLETION OF REPAIRS, THE MAIN COOLANT SYSTEM, INCLUDING THE REPLACED SECTIONS OF PIPING, WAS SUCCESSFULLY HYDROSTATICALLY TESTED AND ACCEPTED FOR SERVICE.

[340] YANKEE ROWE DOCKET 50-029 LER 84-002
 EMERGENCY DIESEL GENERATOR STARTING RESPONSE TIME PROCEDURE INADEQUACY.
 EVENT DATE: 021484 REPORT DATE: 031584 NSSS: WE TYPE: PWR

(NSIC 189019) DURING THE REVIEW OF THE EMERGENCY DIESEL GENERATOR RESPONSE TIME FOR SEP TOPIC VI-10.A, A SURVEILLANCE PROCEDURE INADEQUACY WAS DISCOVERED. THE PROCEDURE REQUIRES THAT THE DIESEL START FROM AMBIENT CONDITIONS AND OBTAIN AN OUTPUT OF GREATER THAN OR EQUAL TO 400 VOLTS WITHIN 17.8 SECONDS. THIS REQUIREMENT HAS BEEN IN EFFECT SINCE MAR. 1977. THE TIME WAS BASED ON ACHIEVING FULL FLOW WITH THE LOW PRESSURE SAFETY INJECTION PUMPS WITHIN 25 SECONDS OF A SIMULTANEOUS LOSS OF STATION AC POWER AND A LOCA. THE CORE XIII LOCA ANALYSIS SUBMITTED IN MAY, JULY, AND SEPT. 1977, AND LATER APPROVED, ASSUMED FULL FLOW WITHIN 20 SECONDS. THE TECH SPEC CHANGES ASSOCIATED WITH THE APPROVED AMENDMENTS DID NOT CONTAIN A TIME REQUIREMENT. DURING THE PROCEDURAL REVIEW PROCESS TO INCORPORATE THE APPROVED CHANGES, THE TIME CHANGES WERE OVERLOOKED. THE PROCEDURE WAS CHANGED TO 14 SECONDS WHEN THE ERROR WAS DISCOVERED. A REVIEW OF PAST DATA SHOW THAT THE START TIMES HAVE BEEN ROUTINELY IN THE 10 TO 12 SECOND RANGE.

[341] ZION 1 DOCKET 50-295 LER 83-051
 HYDROGEN RECOMBINER INOPERABLE.
 EVENT DATE: 122883 REPORT DATE: 011284 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: ZION 2 (PWR)
 VENDOR: MCGRAW EDISON CO., POWER SYSTEMS DIV

(NSIC 188681) DURING PERIODIC TESTING, U-1 HYDROGEN RECOMBINER REACHED REQUIRED OPERATING TEMPERATURE AND THEN TRIPPED. TWO RECOMBINERS ARE REQUIRED OPERABLE WHENEVER EITHER REACTOR IS CRITICAL PER TECH SPEC 4.8.B.2. THE REDUNDANT U-2 RECOMBINER WAS IMMEDIATELY PROVEN OPERABLE. THE FAILED RECOMBINER WAS REPAIRED AND PROVEN OPERABLE WITHIN 12 HOURS. ONE MAIN HEATER POWER FUSE WAS FOUND ELECTRICALLY OPEN, ONE OTHER WAS INTERMITTENT. THE INTERMITTENT FUSE INITIALLY FAILED MECHANICALLY, CAUSING POWER SURGES. THIS RESULTED IN CIRCUIT BREAKER ARCING & FAILURE OF THE OTHER FUSE. ALL FUSES WERE REPLACED. THIS IS THE FIRST OCCURRENCE OF THIS TYPE. NO FURTHER CORRECTIVE ACTION REQUIRED.

[342] ZION 1 DOCKET 50-295 LER 84-002
 INADVERTENT SAFETY INJECTION.
 EVENT DATE: 010284 REPORT DATE: 011984 NSSS: WE TYPE: PWR

(NSIC 189041) DURING TESTING OF SAFEGUARDS (PERIODIC TEST PT-10) WITH UNIT 1 IN COLD SHUTDOWN AND RX COOLANT SYSTEM PRESSURE AT 375 PSI, THE UNIT OPERATOR IN THE PROCESS OF RETURNING THE SAFEGUARDS PANEL TO NORMAL, RESET THE INCORRECT RELAY. THIS ACTION RESULTED IN UNBLOCKING 'PRESSURIZER PRESSURE LOW SAFETY INJECTION,' THEREBY CAUSING AN INADVERTENT SAFETY INJECTION. ALL SAFEGUARD EQUIPMENT THAT WAS AVAILABLE AND REQUIRED TO OPERATE DID FUNCTION AS DESIGNED. PT-10 SATISFIES TECH SPEC REQUIREMENTS FOR QUARTERLY SURVEILLANCE TESTING OF SAFEGUARDS SYSTEMS AND COMPONENTS BY ENSURING PROPER ACTUATION FROM SAFEGUARDS SIGNALS. SINCE ALL REQUIRED ECCS COMPONENTS FUNCTIONED AS DESIGNED, NO SAFETY IMPLICATIONS EXISTED. THE USAGE FACTOR ON THE INJECTION NOZZLES REMAINS AT .16950, OF THE TOTAL LIFETIME USAGE FACTOR OF 1.0. THE UNIT OPERATOR HAS BEEN REINSTRUCTED TO ADHERE TO PROCEDURAL DETAILS WHEN TESTING PLANT EQUIPMENT. NO FURTHER CORRECTIVE ACTION IS REQUIRED.

[343] ZION 1 DOCKET 50-295 LER 84-001
 REACTOR TRIP FOLLOWING MOMENTARY INVERTER VOLTAGE LOSS.
 EVENT DATE: 010584 REPORT DATE: 020284 NSSS: WE TYPE: PWR

(NSIC 188964) A ZION UNIT 1 REACTOR TRIP OCCURRED ON JAN. 5, 1984 WHILE THE UNIT

WAS IN COLD SHUTDOWN AS PART OF A REFUELING OUTAGE. THE INITIATING SIGNALS CAME FROM THE NUCLEAR INSTRUMENT SYSTEM (NIS) CHANNEL II INTERMEDIATE AND SOURCE RANGE BISTABLES. THE NIS TRIP SIGNALS OCCURRED DUE TO A MOMENTARY LOSS OF THE 120 VOLT POWER SUPPLY TO THE NIS CHANNEL II. THE VOLTAGE LOSS OCCURRED WHEN A CAPACITOR IN THE INSTRUMENT INVERTER 112, WHICH SUPPLIES VOLTAGE TO INSTRUMENT BUS 112, FAILED. NIS CHANNEL II IS FED FROM INSTRUMENT BUS 112. THE VOLTAGE LOSS CAUSED THE NIS CHANNEL II BISTABLES TO TRIP. THE NIS CHANNEL II INTERMEDIATE AND SOURCE TRIP SIGNALS ARE BLOCKED DURING NORMAL POWER OPERATION. LOSS OF ONE INSTRUMENT BUS'S VOLTAGE WILL NOT CAUSE A TRIP DURING NORMAL OPERATION. THE TRIP OCCURRED ONLY BECAUSE THE UNIT WAS IN SHUTDOWN WITH THE REACTOR TRIP BREAKERS UNTRIPPED.

[344] ZION 1 DOCKET 50-295 LER 84-004
 INADVERTENT SAFETY INJECTION OCCURS.
 EVENT DATE: 012084 REPORT DATE: 021784 NSSS: WE TYPE: PWR

(NSIC 188966) THE UNIT 1 REACTOR COOLANT SYSTEM (RCS) WAS INADVERTENTLY SAFETY INJECTED AT 0912 ON 1-20-84. THE UNIT 1 REACTOR WAS IN THE HOT SHUTDOWN CONDITION WITH RC TEMPERATURE TO 448 F AND RC PRESSURE AT 2235 PSIG. RCS PRESSURE WAS BEING REDUCED TO 1000 PSIG FOR RCS LEAK REPAIRS. DURING THE RCS DEPRESSURIZATION, THE UNIT 1 OPERATOR DID NOT BLOCK THE PRESSURIZER LOW PRESSURE SAFETY INJECTION UPON ILLUMINATION OF THE P-11 PERMISSIVE AT 1915 PSIG. AN INADVERTENT SAFETY INJECTION OCCURRED AT 1815 PSIG. AFTER THE UNIT 1 RCS STABILIZED, THE OPERATOR TERMINATED THE SAFETY INJECTION. ALL ECCS EQUIPMENT AVAILABLE AND REQUIRED TO OPERATE FUNCTIONED AS DESIGNED, WITH THE EXCEPTION OF THE 1E REACTOR CONTAINMENT FAN WHICH DID NOT AUTO START. (THE OTHER 4 FUNCTIONED PROPERLY). A VISUAL INSPECTION OF THE RCS AND MS SYSTEMS INDICATED THAT NO DAMAGE OCCURRED RELATIVE TO THE SAFETY INJECTION. THE TRANSIENT EFFECTS OF THE SAFETY INJECTION ON THE SI NOZZLES WAS EVALUATED, AND THE CUMULATIVE USAGE FACTOR FOR THE NOZZLES CHANGED FROM 0.169500 TO 0.182321 OF THE TOTAL LIFETIME CUMULATIVE USAGE FACTOR OF 1.0. THE UNIT 1 OPERATOR WAS REPRIMANDED AND REINSTRUCTED TO ADHERE STRICTLY TO OPERATIONAL PROCEDURES. RESOLUTION OF THE PROBLEM WITH 1E REACTOR CONTAINMENT FAN IS ADDRESSED IN DEVIATION REPORT 22-1-34-17. NO FURTHER CORRECTIVE ACTION IS REQUIRED.

[345] ZION 1 DOCKET 50-295 LER 84-005
 SEAL TABLE HIGH PRESSURE SEAL FAILS.
 EVENT DATE: 012084 REPORT DATE: 021784 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELEC CORP.-NUCLEAR ENERGY SYS

(NSIC 188967) ON JAN. 20, 1984, WITH UNIT 1 IN HOT SHUTDOWN, 2 MECHANICS ENTERED UNIT 1 SEAL TABLE ROOM IN ORDER TO REPAIR A LEAKING HIGH PRESSURE SEAL AT THE SEAL TABLE. THE LEAK WAS FOUND TO BE AT THE CONDUIT OF INCORE THIMBLE E-11. AT 1635 HRS, WHILE ATTEMPTING TO REPAIR THE LEAKING SEAL, THE FITTING BROKE LOOSE CAUSING AN UNCONTROLLED UNISOLABLE LEAKAGE OF REACTOR COOLANT AT APPROXIMATELY 18 GPM. THE MECHANICS WERE NOT INJURED AND THE CONTAINMENT WAS IMMEDIATELY EVACUATED. UNIT DEPRESSURIZATION AND COOLDOWN WERE BEGUN IMMEDIATELY. ALL NOTIFICATIONS WERE MADE AND AN EMERGENCY PLAN (GSEP) ALERT STATUS DECLARED. NORMAL SYSTEM PARAMETERS WERE MAINTAINED AND UNIT COOLDOWN WAS COMPLETED PER GENERAL OPERATING PROCEDURES AT APPROXIMATELY 2045 HRS. ONCE SYSTEM PRESSURE WAS SUFFICIENTLY REDUCED, THE HIGH PRESSURE SEAL WAS REPLACED AND THE LEAK ISOLATED.

[346] ZION 1 DOCKET 50-295 LER 84-003
 REACTOR CONTAINMENT FAN COOLER SERVICE WATER LEAK.
 EVENT DATE: 012484 REPORT DATE: 020284 NSSS: WX TYPE: PWR

(NSIC 188965) THIS 14 DAY REPORT IS BEING SUBMITTED IN ACCORDANCE WITH THE IE BULLETIN NO. 80-24, REQUIREMENT TO REPORT SERVICE WATER LEAKS INSIDE CONTAINMENT. DURING A UNIT-1 CONTAINMENT INSPECTION WITH THE UNIT IN COLD SHUTDOWN, LEAKAGE OF

COOLING WATER TO THE 1B REACTOR CONTAINMENT FAN COOLER (RCFC) MOTOR COOLER WAS DISCOVERED. THE LEAKAGE OCCURRED AT A FLANGED CONNECTION ON THE FLEXIBLE COOLING WATER SUPPLY HOSE TO THE MOTOM. THE HOSE WAS ALSO LEAKING THROUGH SEVERAL PINHOLE PERFORATIONS. THE LEAK WAS ISOLATED AND THE RCFC TAKEN OUT OF SERVICE. REPLACEMENT HOSES HAVE BEEN ORDERED. THE 4 REMAINING UNIT 1 RCFC'S WERE INSPECTED AND NO LEAKAGE WAS FOUND. THERE WERE NO RADIOLOGICAL CONSEQUENCES TO THE LEAK SINCE SERVICE WATER PRESSURE IS HIGHER THAN CONTAINMENT PRESSURE.

[347] ZION 1 DOCKET 50-295 LER 84-006
LEAVING COLD SHUTDOWN WITH SAFEGUARDS DE-ENERGIZED.
EVENT DATE: 020384 REPORT DATE: 030284 NSSS: WE TYPE: PWR

(NSIC 189042) WHILE HEATING UP UNIT 1 PREPARING TO LEAVE COLD SHUTDOWN, THE REACTOR COOLANT SYSTEM INCREASED ABOVE 200 F ON THE COMPUTER CRT DISPLAY BEFORE ENERGIZING THE SAFEGUARDS SYSTEM. THE EQUIPMENT OPERATOR WAS DISPATCHED TO ENERGIZE THE SAFEGUARDS SYSTEM BEFORE THE REACTOR COOLANT SYSTEM REACHED 200 F, BUT HE WAS DELAYED WHILE EXPLAINING THE PROCEDURE TO A TRAINEE. THE REACTOR COOLANT SYSTEM TEMPERATURE REACHED 207 F BEFORE THE SYSTEM WAS ENERGIZED. GENERAL OPERATING PROCEDURE, GOP 1, REQUIRES THE SAFEGUARDS SYSTEM TO BE ENERGIZED BEFORE GOING ABOVE 200 F. OPERATORS WILL BE REMINDED TO COMPLETE ALL NECESSARY PREREQUISITES BEFORE INITIATING ACTION.

[348] ZION 1 DOCKET 50-295 LER 84-008
REACTOR TRIP ON HIGH STEAM GENERATOR LEVEL.
EVENT DATE: 022384 REPORT DATE: 032384 NSSS: WE TYPE: PWR

(NSIC 189309) ON FEBRUARY 23, 1984 WITH ZION UNIT 1 IN MODE 1 (AT 15% REACTOR POWER), THE OPERATOR ATTEMPTED TO GO ON THE MAIN FEEDWATER REGULATING VALVES FOR STEAM GENERATOR LEVEL CONTROL. LOOP D REG. VALVE FAILED TO OPEN AND THUS LEVEL IN THE D STEAM GENERATOR BEGAN TO FALL. THE LOOP D REG. VALVE WAS OPENED AFTER AN INSTRUMENT AIR LINE VALVE TO THE REG. VALVE WAS UNISOLATED. FEEDWATER PUMP SPEED WAS PICKED UP SO AS TO REESTABLISH THE PROPER LEVEL IN D STEAM GENERATOR. AS THE LEVEL BEGAN TO RECOVER, THE LEVEL IN B STEAM GENERATOR ALSO BEGAN TO RISE. THE OPERATOR THEN TRIED TO DECREASE THE PUMP SPEED BUT THE TURBINE TRIPPED ON B STEAM GENERATOR LEVEL GREATER THAN 70%. THIS ACTION INITIATED A REACTOR TRIP. THE UNIT WAS PLACED IN HOT SHUTDOWN PER PROCEDURE EOP-1 WITHOUT INCIDENT. THE SUBSEQUENT INVESTIGATION FOUND THAT A SUPERVISOR INADVERTENTLY LEFT THE INSTRUMENT AIR SUPPLY VALVE TO D REG. VALVE CLOSED WHILE PERFORMING STEP 32(B) OF GOP 2.

[349] ZION 1 DOCKET 50-295 LER 84-010
REACTOR TRIP DUE TO LOW FEEDWATER FLOW.
EVENT DATE: 022434 REPORT DATE: 032384 NSSS: WE TYPE: PWR
VENDOR: WILKERSON CORP.

(NSIC 189043) ON FEB. 24, 1984 WITH ZION UNIT 1 IN MODE 1 (AT 34% REACTOR POWER), 'C' FEEDWATER PUMP SUDDENLY DECREASED TO MINIMUM SPEED. DURING THIS PERIOD THE STEAM GENERATOR LEVELS WERE BEING CONTROLLED IN MANUAL. THE DECREASE IN FEEDWATER FLOW RESULTING FROM THE SPEED DROP CAUSED THE 'D' STEAM GENERATOR TO DROP BELOW THE 25% LEVEL. THE 'D' STEAM GENERATOR LOW LEVEL COINCIDENT WITH A STEAM FLOW-FEED FLOW MISMATCH TRIPPED THE REACTOR. THE UNIT WAS PLACED IN HOT SHUTDOWN PER PROCEDURE EOP-1 WITHOUT INCIDENT. THE SUBSEQUENT INVESTIGATION OF THE FEEDWATER PUMP CONTROL LOOPS INDICATED A POSSIBLE PROBLEM WITH THE LOCATION OF A SELF-BLEEDING MOISTURE TRAP (DOWNSTREAM OF AN AIR REGULATOR) ON AN INSTRUMENT AIR LINE. INSTRUMENT AIR LINE SERVES AS THE REGULATING MEDIUM FOR THE FEEDWATER PUMP CONTROL OIL FLOW CONTROL VALVE. PLANS HAVE BEEN MADE TO RELOCATE THE MOISTURE TRAP UPSTREAM OF THE AIR REGULATOR TO PREVENT AIR SYSTEM UPSETS.

[350] ZION 1 DOCKET 50-295 LER 84-011
 INADVERTENT SOURCE RANGE HIGH FLUX WHILE IN HSD.
 EVENT DATE: 040384 REPORT DATE: 042784 NSSS: WE TYPE: PWR

(NSIC 189320) THE UNIT WAS IN HSD WITH PT-5A. SOURCE RANGE CHANNEL FUNCTIONAL TEST, BEING PERFORMED. IN CLOSING OUT THE PROCEDURE, THE HIGH FLUX TRIP BYPASS SWITCH WAS RETURNED TO NORMAL MODE PRIOR TO RETURNING THE OPERATION SELECTOR SWITCH TO NORMAL. A HIGH LEVEL FLUX TRIP ENSUED. THE REACTOR PROTECTION SYSTEM RESPONDED NORMALLY TO A SOURCE RANGE HIGH FLUX SIGNAL.

[351] ZION 2 DOCKET 50-304 LER 83-027 REV 1
 UPDATE ON FAILURE OF CONTAINMENT STING RADIATION MONITOR PUMP.
 EVENT DATE: 072083 REPORT DATE: 032684 NSSS: WE TYPE: PWR
 VENDOR: POTTER & BRUMFIELD
 THOMAS PUMP COMPANY INC.

(NSIC 189085) DURING NORMAL OPERATION, INITIATION OF THE CHECK SOURCE CYCLE FOR THE CONTAINMENT SPING RADIATION MONITOR 2RIA-PR40 REVEALED THAT THE SAMPLE PUMP HAD FAILED, A VIOLATION OF TECH SPEC 3.14.1.A. SHIFTLY GRAB SAMPLING WAS INITIATED. INVESTIGATION SHOWED THAT THE PUMP BREAKER HAD TRIPPED. GRAB SAMPLES SHOWED NORMAL LEVELS OF RADIOACTIVITY. THE EXACT CAUSE OF THE BREAKER TRIP COULD NOT BE DETERMINED. THE BREAKER WAS CLOSED AND THE PUMP AND MONITOR WERE RETURNED TO SERVICE AT 1025 HRS ON 7-20--83. NO INCIDENTS OF THIS TYPE HAVE OCCURRED SINCE THE EVENT ON 7-19-83. NO FURTHER CORRECTIVE ACTION IS NECESSARY.

[352] ZION 2 DOCKET 50-304 LER 83-037 REV 1
 UPDATE ON PASSIVE GAS FAILURE MONITOR FAILURE.
 EVENT DATE: 091583 REPORT DATE: 030584 NSSS: WE TYPE: PWR
 VENDOR: POTTER & BRUMFIELD
 RAYMOND CONTROLS

(NSIC 189086) DURING SURVEILLANCE TESTING OF PASSIVE GAS FAILURE MONITOR 2 RP-PR15, NO FLOW WAS OBSERVED. AS THE FLOWMETER IS NOT DISPLAYED IN THE CONTROL ROOM, OPERATORS WERE UNAWARE THAT THE RADIATION MONITOR WAS INOPERABLE UNTIL 10/14/83, AT WHICH TIME SHIFTLY GAS SAMPLING WAS INITIATED AS REQUIRED BY TECH SPEC 3.14.1.C. OTHER RADIATION MONITORS SAMPLING THE SAME AREAS SHOWED NORMAL ACTIVITY DURING THIS PERIOD. LOSS OF FLOW WAS DUE TO A DEFECTIVE CIRCUIT BREAKER (POTTER AND BRUMFIELD, W91X11-2-7) WHICH CAUSED THE VALVES TO BE INOPERABLE, PREVENTING FLOW. THE BREAKER WAS REPLACED. I.M.'S HAVE BEEN FORMALLY INSTRUCTED TO NOTIFY THE SHIFT ENGINEER IN THE EVENT A RADIATION MONITOR WILL NOT BE RETURNED TO SERVICE ON THE SAME SHIFT.

[353] ZION 2 DOCKET 50-304 LER 84-001
 OPERATOR INADVERTENTLY OPENS REACTOR TRIP BREAKER.
 EVENT DATE: 010684 REPORT DATE: 020284 NSSS: WE TYPE: PWR

(NSIC 189044) THE REACTOR TRIP WAS DUE TO THE INADVERTENT OPENING OF REACTOR TRIP BREAKER TRAIN 'A'. AT THE CONCLUSION OF PERIODIC TESTS PT-5 AND PT-5B, THE REACTOR TRIP BREAKERS WERE RACKED-IN AND CLOSED AND THE REACTOR TRIP BYPASS BREAKERS WERE RACKED-IN AND OPEN. THE EQUIPMENT OPERATOR WAS INSTRUCTED TO RACK-OUT THE REACTOR TRIP BYPASS BREAKERS AND AFTER RACKING-OUT TRAIN 'A' REACTOR TRIP BYPASS BREAKER, HE PROCEEDED TO RACK-OUT TRAIN 'A' REACTOR TRIP BREAKER INSTEAD OF TRAIN 'B' REACTOR TRIP BYPASS BREAKER. THE UNIT RESPONDED NORMALLY TO THE REACTOR TRIP. THE REACTOR WAS PLACED IN A SAFE HOT SHUTDOWN CONDITION BY PROCEDURE (EOP-1).

[354] ZION 2 DOCKET 50-304 LER 84-002
 STEAM GENERATOR OVERFEED RESULTS IN TURBINE AND REACTOR TRIP.
 EVENT DATE: 010784 REPORT DATE: 020284 NSSS: WE TYPE: PWR

(NSIC 189045) ON JAN. 7, 1984 WITH ZION UNIT 2 IN MODE 1, THE OPERATORS STARTED AND BEGAN FEEDING THE STEAM GENERATORS FROM THE 2C MAIN FEEDWATER PUMP. AN OVERFEED CONDITION AROSE BECAUSE OF THE SLUGGISH CONTROLS ON THE FEEDWATER PUMP. THIS OVERFEED INCREASED REACTOR POWER TO GREATER THAN 10% AND 2D STEAM GENERATOR LEVEL TO 70%. THE 70% STEAM GENERATOR LEVEL PICKED UP P-14 AND TRIPPED THE TURBINE. A TURBINE TRIP WITH REACTOR POWER GREATER THAN 10% CAUSED A REACTOR TRIP (P-10). THE UNIT WAS PLACED IN HOT SHUTDOWN PER PROCEDURE EOP-1 WITHOUT INCIDENT. THE SUBSEQUENT INVESTIGATION FOUND A LOOSE RESET POT ON THE LOCAL FEEDWATER PUMP CONTROL LOOP. THE RESET POT WAS TIGHTENED AND BOTH THE RESET AND GAIN POTS WERE ADJUSTED TO GIVE THE BEST PUMP RESPONSE ATTAINABLE. THE PUMP WAS TESTED AFTER ALL ADJUSTMENTS WERE MADE AND NO RESPONSE PROBLEMS WERE SEEN.

[355] ZION 2 DOCKET 50-304 LER 84-003
 LOSS OF MAIN FEEDWATER PUMP RESULTS IN REACTOR TRIP.
 EVENT DATE: 011684 REPORT DATE: 021484 NSSS: WE TYPE: PWR
 VENDOR: UNITED ELECTRIC CONTROLS COMPANY

(NSIC 189046) ON JAN. 16, 1984 WITH ZION UNIT 2 IN MODE 1 (AT 99.5% REACTOR POWER), THE 2B FEEDWATER PUMP EMERGENCY OIL PUMP TEST CIRCUIT WAS ACTUATED. IMMEDIATELY 2B FEEDWATER PUMP TRIPPED. INSTRUMENT MECHANIC PERSONNEL WERE WORKING ON 2FT-522 STEAM FLOW LOOP AND HAD STEAM FLOW BISTABLES TRIPPED SIMULATING STEAM FLOW MUCH GREATER THAN FEED FLOW. THE REACTOR TRIPPED ON COINCIDENCE OF STEAM FLOW/FEEDWATER FLOW MISMATCH WITH LOW LEVEL IN 2A STEAM GENERATOR. THE UNIT WAS PLACED IN HOT SHUTDOWN PER PROCEDURE EOP-1 WITHOUT INCIDENT. THE SUBSEQUENT INVESTIGATION FOUND A PRESSURE SWITCH OUT OF CALIBRATION. THE PRESSURE SWITCH WAS CALIBRATED AND TESTED FOR PROPER OPERATION. UPON COMPLETION OF THE CALIBRATION AND AFTER ALL ADJUSTMENTS WERE MADE, THE FEEDWATER PUMP WAS LATCHED AND THE EMERGENCY OIL PUMP TEST CIRCUIT WAS ACTUATED WITHOUT INCIDENT.

[356] ZION 2 DOCKET 50-304 LER 84-004
 PLANT CONDITIONS NOT BOUNDED BY SAFETY ANALYSES.
 EVENT DATE: 012084 REPORT DATE: 021784 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: ZION 1 (PWR)

(NSIC 189303) THE WESTINGHOUSE LOSS OF FEEDWATER TRANSIENT ANALYSES RESULTS SHOW ZION I AND II WOULD PROVIDE INADEQUATE AUXILIARY FEEDWATER FLOW TO THE STEAM GENERATORS IN THE EVENT OF LOSING ALL FEEDWATER. THIS SHORTFALL IS MAINLY DUE TO THROTTLING VALVES WHICH ARE SET TO 105 GPM FOR EACH STEAM GENERATOR BECAUSE OF WATER HAMMER CONCERNS. A STANDING ORDER REQUIRING OPERATORS TO INSURE ADEQUATE FLOW DURING SUCH AN EVENT HAS BEEN ISSUED. FUTURE ACTIONS WILL BE DETERMINED PENDING THE RESULTS OF REEVALUATING THE CONSERVATIVE METHODS USED IN THE WESTINGHOUSE ANALYSES.

[357] ZION 2 DOCKET 50-304 LER 84-005
 INSTRUMENT TEST VALVE OUT OF POSITION BREACHING CONTAINMENT INTEGRITY.
 EVENT DATE: 021584 REPORT DATE: 031284 NSSS: WE TYPE: PWR
 VENDOR: KEROTEST MANUFACTURING CORP.

(NSIC 189047) DURING MAINTENANCE, THE INSTRUMENT FIVE-VALVE TEST MANIFOLD FOR 2PDT-RB85 (CONTAINMENT DIFFERENTIAL PRESSURE TRANSMITTER) WAS FOUND WITH IT'S EQUALIZING VALVE OPEN. 2PDT-RV85 HAS IT'S LOW SIDE VENTED TO THE AUXILIARY BUILDING, THUS PROVIDING A VENT PATH FROM THE CONTAINMENT TO THE AUXILIARY BUILDING. THE EQUALIZING VALVE WAS SHUT IMMEDIATELY AND WAS REPORTED TO THE

INSTRUMENT DEPARTMENT AND THE OPERATING DEPARTMENT. ZION STATION CONDUCTED AN INSPECTION OF ALL SIMILAR TYPE INSTRUMENT MANIFOLDS THAT COULD POSSIBLY BREAK CONTAINMENT INTEGRITY. NO OTHER VALVE MANIFOLDS WERE FOUND TO HAVE VALVES OUT OF POSITION. A TEST WAS PERFORMED ON A MOCK UP OF THE MANIFOLD AND IT WAS SHOWN THAT THE MAXIMUM FLOW THROUGH THIS VALVE AT 47 PSID WHEN ADDED TO THE RESULTS OF THE 1983 TYPE B AND C TESTS WAS BELOW THE TECH SPEC MAXIMUM LEAKAGE LIMIT. A MODIFICATION IS PROPOSED TO REPLACE THIS MANIFOLD WITH A SINGLE VALVE. MANAGEMENT VERIFICATION OF SIMILAR MANIFOLD VALVES IS BEING CONDUCTED WEEKLY UNTIL A LOCKING MECHANISM CAN BE DEVELOPED.

[358] ZION 2 DOCKET 50-304 LER 84-008
 INOPERABLE SAFETY RELATED SNUBBER.
 EVENT DATE: 031284 REPORT DATE: 041184 NSSS: WE TYPE: PWR
 VENDOR: ITT GRINNELL

(NSIC 189219) DURING NORMAL POWER OPERATION OF UNIT 2 AT 82% POWER, THE OPERATING DEPARTMENT WAS NOTIFIED THAT SHOCK SUPPRESSOR (SNUBBER) 2SIRS 2217 HAD BEEN RENDERED INOPERABLE IN EXCESS OF THE TECH SPEC LIMITING CONDITION FOR OPERATION OF 72 HOURS. ON FEBRUARY 18, 1984, WORK STARTED ON PIPING HANGER 2SI-007-RS3. THIS WORK REQUIRED THAT SNUBBER 2SIRS 2217 BE TEMPORARILY DISCONNECTED TO ALLOW FOR THE NEW PIPING HANGER INSTALLATION. THE WORK ON HANGER 2SI-007-RS3 WAS LISTED AND PROPERLY AUTHORIZED BY THE SHIFT ENGINEER ON THE DAILY WORK LIST. ON MARCH 12, 1984, SNUBBER 2SIRS 2217 WAS FOUND INOPERABLE DURING AN INSPECTION BEING CONDUCTED BY COMMONWEALTH EDISON PERSONNEL. TO CORRECT THE INOPERABLE SNUBBER, THE FOLLOWING CORRECTIVE ACTIONS WERE COMPLETED WITHIN 3 HOURS FROM FINDING SNUBBER 2SIRS 2217 INOPERABLE: (1) THE BASE PLATE AND SNUBBER WERE REINSTALLED, AND (2) STONE AND WEBSTER ENGINEERING CORPORATION COMPLETED A PIPING ANALYSIS INDICATING THE PIPING SYSTEM WAS SEISMICALLY OPERABLE WITHOUT 2SIRS 2217 CONNECTED.

[359] ZION 2 DOCKET 50-304 LER 84-009
 ISOLATION VALVE SEAL WATER SYSTEM TECHNICAL SPECIFICATION LIMIT EXCEEDED.
 EVENT DATE: 032084 REPORT DATE: 041984 NSSS: WE TYPE: PWR

(NSIC 189311) DURING NORMAL UNIT 2 OPERATION AT 86% POWER, THE UNIT OPERATOR NOTED HIGH/LOW ISOLATION VALVE SEAL WATER (IVSW) TANK PRESSURE ALARM. INVESTIGATION BY OPERATING PERSONNEL FOUND THE IVSW TANK AT 60 PSIG. ZION TECH SPEC LIMITING CONDITIONS FOR OPERATION REQUIRE THAT THE IVSW TANK BE MAINTAINED AT A MINIMUM PRESSURE OF 68 PSIG. OPERATING PERSONNEL IMMEDIATELY SWITCHED THE IVSW TANK PRESSURE SUPPLY FROM THE NITROGEN SYSTEM TO PENETRATION PRESSURIZATION SYSTEM. PRESSURE IN THE IVSW TANK WAS RESTORED TO GREATER THAN 68 PSIG. SUBSEQUENT TESTING OF THE IVSW SYSTEM DID NOT FIND A LINE BLOCKAGE. THE IVSW IS ABLE TO BE PRESSURIZED FROM THE NITROGEN AND PENETRATION PRESSURIZATION SYSTEMS. IVSW TANK PARAMETERS ARE CHECKED ONCE A SHIFT.

[360] ZION 2 DOCKET 50-304 LER 84-010
 INADVERTENT SOURCE RANGE HIGH FLUX TRIP WHILE IN CSD.
 EVENT DATE: 033084 REPORT DATE: 041984 NSSS: WE TYPE: PWR

(NSIC 189319) IN THE PROCESS OF CHECKING THE SPARE SOURCE RANGE DETECTOR, THE INSTRUMENT TECHNICIANS REMOVED THE CONTROL POWER FUSES FROM DRAWER 2N32, INDUCING A HIGH FLUX TRIP SIGNAL. THE UNIT WAS IN CSD WITH REACTOR TRIP BREAKERS ENERGIZED FOR TURBINE TESTING. THE REACTOR PROTECTION SYSTEM RESPONDED NORMALLY BY OPENING THE REACTOR TRIP BREAKERS. THERE WAS NO PLANT TRANSIENT INVOLVED IN THIS EVENT.

COMPONENT INDEX

This index is based on component and component-related keywords assigned by the NSIC staff when the summaries of the LERs are prepared for computer entry.

- ACCUMULATORS 113, 140, 182, 198, 250
 AIR 271
 BATTERIES & CHARGERS 130
 BEARING 96, 100, 170, 215
 BLOWERS 65, 68, 92, 150, 215, 271, 304, 334, 337
 BREAKER 42, 48, 49, 54, 59, 63, 66, 75, 84, 86, 87, 89, 95, 97, 103, 106, 128, 129, 134, 136, 162, 164, 168, 171, 175, 177, 192, 199, 213, 219, 237, 251, 280, 282, 284-286, 288, 291, 316-318, 322, 324, 329, 341, 343, 347, 351-353, 360
 BYPASS 228, 230, 252
 CABLES AND CONNECTORS 2, 10, 42, 46, 48, 49, 75, 80, 83, 85-87, 117, 128, 129, 131, 151, 158-161, 176, 177, 211, 213, 240, 260, 266, 268, 275, 282, 283, 288, 311, 317, 318, 321-323, 327, 328, 333, 343
 COMPONENTS 22, 23, 52-54, 63, 64, 78, 100, 105, 108, 118, 138, 157, 162, 186, 192, 193, 206, 222, 231, 235, 251, 283, 289, 335, 354
 COMPUTER, DIGITAL 5, 181, 243, 247
 CONDENSER 156
 CONTAINMENT SUMP 126
 CONTRACTOR PERSONNEL 24, 60, 77, 301
 CONTROL 1, 6, 92, 96, 102, 107, 113, 123, 138, 146, 155, 186, 200, 202, 205, 221, 228-230, 251, 256, 270, 276, 278, 283, 284, 287, 313, 314, 318, 322, 325, 348, 349, 354, 356
 CONTROL PANEL/ROOM 35, 42, 153, 212
 CONTROL ROD DRIVES 26, 226, 247, 293
 CONTROL RODS 4, 26, 81, 103, 171, 247
 CONTROLLER 39, 130, 202, 313, 318, 322
 COOLING 234
 COOLING DEVICE 53, 85, 231, 234, 310, 346
 CRANE 303
 DRAINAGE 82, 124, 144
 DRIVE 92, 100, 114, 118, 312
 ELECTRIC POWER 13, 42, 48, 49, 54, 59, 63, 66, 75, 80, 84, 86, 87, 89, 93, 95, 97, 103, 106, 128-130, 134, 136, 162, 164, 168, 171, 175, 177, 192, 199, 213, 219, 237, 251, 280, 282, 284, 285, 288, 291, 316-318, 322, 324, 329, 341, 343, 347, 351-353, 360
 ELECTRONIC FUNCTION UNITS 13, 21, 32, 41, 46, 52, 61, 62, 65, 80, 81, 83, 85, 92, 93, 100, 102, 113, 154, 171, 181, 192, 197, 200, 202, 219, 228, 244, 251, 266, 276, 278, 280, 288, 289, 327, 343, 355
 ENGINES, INTERNAL COMBUSTION 86, 89, 136, 176, 177, 239, 282, 336
 EQUIPMENT 3, 11, 12, 47, 56, 57, 64, 91, 96, 98, 118, 129, 139-141, 145, 170, 190, 202, 214, 223, 256, 262, 291, 293-295, 312, 329, 332, 335, 345, 349
 FAILURE, COMPONENT 22, 23, 52-54, 63, 64, 78, 100, 105, 108, 118, 138, 157, 162, 186, 192, 193, 206, 222, 231, 235, 251, 283, 289, 335, 354
 FAILURE, EQUIPMENT 1-14, 16-19, 21, 22, 24, 26, 27, 29, 31-35, 37-50, 52-73, 75-77, 79-87, 89-93, 95-107, 109, 110, 112-120, 122-126, 128-147, 149-153, 155-172, 174-177, 181, 182, 184, 186, 187, 190, 192-194, 196-199, 201-209, 211-215, 219, 221, 223-231, 234-237, 239-244, 246, 247, 249-254, 256-264, 266, 268-271, 274-276, 278-280, 282-289, 291-295, 297, 300, 302-308, 310-314, 316-319, 321-337, 341, 343, 345-349, 351-360
 FAILURE, INSTRUMENT 2, 4, 11, 13, 15-21, 23, 25, 26, 28, 30-32, 36, 38, 41, 44, 46, 48-51, 54, 55, 61-63, 65, 66, 71, 73, 74, 76, 78, 80, 83, 86, 89, 91-94, 96-98, 100, 102, 103, 106-109, 114, 117, 119, 121, 124, 126, 127, 129, 130, 132, 135, 141-143, 148, 149, 151-156, 160, 162-169, 171, 173, 176-180, 182, 185, 188-194, 199, 200, 202, 205, 211, 214, 217-219, 221, 222, 226, 228-230, 237, 240-244, 249, 251, 253-255, 259, 260, 262-267, 269, 271, 276-289, 294, 296-299, 301, 302, 304, 307, 309, 313, 314, 318-323, 325-328, 330-332, 334, 335, 337, 338, 341, 342, 349-352, 354, 355, 360
 FAILURE, PIPE 9, 19, 32, 37, 44, 53, 82, 124, 147, 194, 195, 210, 231, 233, 279, 286, 287, 289, 293, 294, 310, 312, 323, 339, 345
 FAILURE, TUBING 45, 118, 122, 125, 196
 FASTENER 3, 69, 100, 120, 146, 174, 205, 206, 283, 285, 324
 FILTERS 12, 17, 53, 326
 FIRE 281
 FLOW 1, 6, 11, 92, 102, 113, 123, 138, 146, 155, 200, 205, 221, 251, 256, 270, 276, 278, 283, 284, 287, 289, 314, 348, 349, 356
 FLUX DISTRIBUTION 13, 21, 148, 160, 173, 179, 211, 226, 287, 298, 321, 327
 FUEL ELEMENTS 76, 112, 208, 227, 243, 246
 FUSE 13, 21, 80, 83, 132, 148, 152, 163, 169, 171, 176, 199, 214, 228, 266, 277, 286, 328, 332, 341, 360
 GENERATOR, DIESEL 55, 86, 89, 106, 118, 120, 122, 125, 129, 136, 176, 177, 235, 239, 282, 328, 336

COMPONENT INDEX

- HEAT EXCHANGERS 6, 7, 53, 85, 100-102, 106, 156, 171, 196, 208, 227-231, 234, 251, 252, 260, 270, 271, 276, 278, 284, 289, 310, 314, 317, 318, 322, 323, 346, 348, 349, 354, 355
- HEATERS 8, 17, 228, 230, 251, 286, 297, 311
- HOSE 346
- INDICATORS 13, 15, 31, 36, 46, 76, 93, 100, 103, 109, 117, 119, 121, 135, 141, 148, 149, 156, 160, 188-191, 193, 194, 211, 222, 228, 240, 243, 244, 249, 253-255, 259, 262-267, 276, 283, 284, 287, 289, 294, 299, 301, 320, 326, 330, 338, 351, 352
- INSTRUMENT LINE 71, 122, 182, 307, 330, 331
- INSTRUMENT, ALARM 171, 217, 241, 281, 304, 335
- INSTRUMENT, AMPLIFIER 92, 154, 200, 244, 327
- INSTRUMENT, CONTROL 26, 86, 89, 260, 276, 279, 297, 309, 328
- INSTRUMENT, CURRENT 106, 178
- INSTRUMENT, FLOW 71, 143, 200, 218, 323
- INSTRUMENT, INTERLOCK 41, 288, 318
- INSTRUMENT, LIQUID LEVEL 182, 307, 325, 331
- INSTRUMENT, POSITION 23, 91, 96, 149, 164, 171, 214, 283, 284, 320
- INSTRUMENT, PROTECTIVE 202, 285
- INSTRUMENT, SPEED 76, 107, 313, 354
- INSTRUMENT, SWITCH 2, 4, 11, 16-20, 23, 25, 26, 28, 32, 38, 44, 50, 55, 73, 74, 86, 89, 91, 94, 97, 98, 108, 114, 119, 126, 129, 149, 155, 162, 164-167, 169, 192, 202, 205, 214, 242, 251, 260, 266, 269, 276, 279, 297, 302, 309, 328, 334, 337, 350, 355
- INSTRUMENT, VOLTAGE 48, 49, 54, 63, 89, 103, 127, 168, 176, 177, 199, 282, 328
- INSTRUMENTS, MISC. 121, 141, 151, 217, 228, 271
- INSULATION 275, 292
- INVERTER 80, 83, 87, 130, 135, 266, 343
- LICENSED OPERATOR 20, 26, 34, 40, 73, 76, 86, 87, 89, 99, 110, 171, 203, 204, 276, 304, 306, 316, 348, 350
- MONITOR 121, 141, 151, 271
- MOTORS 48, 49, 75, 100, 134, 142, 202, 292, 318, 322, 332
- NEUTRON 13, 21, 148, 160, 173, 179, 211, 226, 287, 298, 321, 327
- NONLICENSED OPERATOR 29, 48, 78, 259, 313
- NOZZLE 207
- OPERATOR ACTION 2-5, 7, 10-12, 14, 21, 27, 32, 33, 35, 36, 46, 53, 55, 57, 58, 61, 62, 66, 68, 72, 76, 77, 79, 80, 82, 83, 88, 101, 104, 107, 111, 115, 116, 119, 122, 125, 128-130, 132, 134, 135, 138-140, 143, 150, 152, 153, 155, 157-160, 162, 165, 166, 168, 170, 173-176, 178-180, 182, 183, 185, 190, 191, 197-199, 201, 206-208, 212, 214, 216, 218-220, 223-225, 229, 231-233, 235, 236, 238, 245, 251, 252, 261, 264, 266, 267, 271-275, 277, 279, 281, 282, 284, 288, 290-299, 303-305, 308, 309, 311, 317, 319, 322, 323, 328, 330, 332-337, 340, 342, 344, 345, 347, 348, 352, 353, 357, 358, 360
- OSCILLATION 61, 62
- PENETRATION 77, 82, 147, 257, 321
- PENETRATION, PIPE 82, 147
- PIPES AND PIPE FITTINGS 9, 17, 19, 32, 37, 44, 53, 124, 194, 195, 210, 231, 233, 279, 286, 287, 289, 293, 294, 310, 312, 323, 339, 345
- PNEUMATIC SYSTEM 50, 287, 289, 300, 348
- PRESSURE DROP 318, 322, 325
- PRESSURE RELIEF 38, 43, 144, 236, 268, 271
- PRESSURE VESSELS 11, 13, 45, 110, 156, 203, 204, 325, 333
- PRESSURE, INTERNAL 318, 322, 325
- PRESSURIZER 99, 171
- PUMPS 9, 11, 24, 39, 44, 48, 49, 55, 56, 60, 66, 70, 75, 76, 85, 92, 100, 101, 105, 106, 109, 116, 119, 126, 128, 133, 134, 141, 156, 170, 171, 175, 176, 196, 204, 205, 221, 228, 230, 236, 253, 256, 260, 279, 285, 302, 308, 310, 312, 313, 317-319, 322, 324, 325, 348, 351, 354, 355
- RADIATION MONITORS 15, 36, 78, 93, 100, 103, 119, 124, 191, 240, 241, 244, 249, 253-255, 259, 262-266, 283, 284, 289, 299, 301, 326, 338, 351, 352
- REACTOR 11, 13, 45, 110, 156, 203, 204, 325, 333
- RECOMBINERS 332, 341
- RECORDERS 78, 142, 331, 335
- RELAYS 21, 31, 41, 48-50, 54, 63, 65, 66, 76, 83, 89, 91, 103, 106, 127, 129, 153, 168, 176-178, 189, 199, 202, 205, 237, 240, 280, 282, 285, 287, 288, 304, 318, 322, 328, 334, 337, 342
- RESPONSE TIME 41, 129, 189, 237
- SAMPLING 225, 274
- SEAL 3, 18, 22, 60, 67, 156, 196, 256, 268, 287, 345
- SENSORS, FLOW 32, 46, 71, 143, 189, 200, 218, 276, 302, 304, 323
- SENSORS, LEVEL 13, 38, 55, 73, 74, 108, 126, 167, 182, 228, 267, 297, 307, 325, 330, 331
- SENSORS, PRESSURE 11, 19, 25, 28, 30, 32, 44, 94, 98, 102, 129, 155, 169, 180, 242, 319, 355
- SENSORS, TEMPERATURE 16, 17, 61, 62, 117, 142, 156, 165, 166, 185, 202, 243, 285, 297
- SERVOMECHANISM 1, 2, 96, 104, 105, 114,

COMPONENT INDEX

SERVOMECHANISM 131, 202, 268
SHOCK ABSORBER 90, 172, 358
SMOKE 281
SOLENOID 32, 50, 147, 300
SOLID STATE DEVICE 52, 65, 81, 93, 100,
102, 181, 266, 278, 280, 289, 343
STEAM GENERATOR 6, 7, 100-102, 171,
196, 208, 227-230, 251, 252, 260, 270,
276, 278, 284, 289, 314, 317, 318,
322, 323, 348, 349, 354, 355
STEEL 22, 231
STEEL, STAINLESS 210, 233, 323, 339
STORAGE CONTAINER 29, 72, 221, 256, 359
STRUCTURE 75
SUPPORT STRUCTURE 90, 120, 172, 174,
257, 358
SYSTEM CAPACITY 228-230
TRANSFORMERS 75, 86, 136, 149, 318, 343
TUBING 8, 17, 45, 118, 122, 125, 196,
234
TURBINE 19, 34, 73, 101, 106, 107, 123,
152, 155, 171, 228, 229, 251, 252,
260, 269, 270, 279, 289, 318, 321,
322, 348, 354
VALVE OPERATORS 1, 2, 14, 32, 50, 96,
104, 105, 114, 131, 145, 147, 202,
228, 236, 268, 271, 287, 289, 300,
348, 357
VALVE, CHECK 70, 144, 157
VALVES 1-3, 6, 10-12, 14, 16, 18, 19,
22, 27, 29, 31-33, 37, 38, 40, 41, 43-
45, 50, 55, 57, 58, 64, 67-73, 75, 79,
82, 95-97, 102, 104, 105, 113-118,
123-125, 128, 131, 132, 136-138, 140,
141, 143-147, 152, 155, 157, 163, 165-
167, 169, 176, 184, 186, 187, 193,
194, 198, 201, 202, 204, 205, 209,
224, 227, 228, 230, 235, 236, 240-242,
244, 249, 251-254, 256, 258, 259, 261-
264, 266, 268, 270, 271, 276, 278,
279, 283, 284, 287, 289, 295, 300,
302, 303, 305, 306, 310, 312, 314,
330, 333, 334, 348, 349, 352, 356, 357
WASTE MANAGEMENT 262

SYSTEM INDEX

This index is based on system and system-related keywords assigned by the NSIC staff when the summaries of the LERS are prepared for computer entry.

ACTUATOR 10, 11, 13, 18, 20, 25, 28, 31, 32, 40, 41, 51, 52, 74, 80, 89, 94, 98, 108, 132, 143, 153, 155, 167, 169, 183, 188, 190, 240, 245, 267, 276, 297, 300, 302, 324, 325, 337, 342

AIR 11, 22, 156, 289

ANNUNCIATORS 217, 304, 335

AUXILIARY 2, 56, 65, 66, 68, 87, 128, 170, 253, 256, 259, 260, 262, 266, 287, 304, 313, 319, 356

BUILDING 8, 12, 14, 15, 17, 41, 65, 68, 84, 87, 128, 135, 136, 188, 190, 193, 194, 223, 245, 253, 254, 256, 257, 259, 262, 266, 271, 304, 326, 334, 335, 337, 338

BUILDING/TSF 41, 256

BYPASS 45, 251

CALIBRATION 29, 58, 88, 138, 155, 175, 178, 183, 216, 218, 223, 224, 267, 273, 274, 277, 298, 299, 301, 303, 308, 309, 334, 336, 337, 340, 348, 350, 352, 360

COMMUNICATION SYSTEM 277

COMPONENT COOLING SYSTEM 70, 85, 174

COMPUTER, DIGITAL 139, 181

COMPUTER, DIGITAL/TSF 181

CONDENSER 156, 317

CONSTRUCTION 128, 153, 174, 317

CONTAINMENT 14, 15, 27, 41, 75, 85, 92, 95, 128, 133, 136, 146, 147, 150, 153, 163, 165, 166, 191, 231, 232, 234, 241, 255, 258, 265, 306, 321, 346, 359

CONTAINMENT ATMOSPHERE 29, 70, 332

CONTAINMENT ISOLATION 6, 10, 16, 31, 32, 37, 40, 41, 50, 57, 58, 67, 75, 77, 82, 91, 104, 117, 128, 138, 143, 144, 147, 157, 163, 169, 184, 187, 201, 209, 224, 228, 240-242, 244, 249, 258, 263, 264, 266, 279, 284, 287, 302, 305, 306, 333, 357, 359

CONTAINMENT ISOLATION/TSF 32

CONTAINMENT PURGE 133

CONTAINMENT SPRAY 105, 106, 285

CONTAINMENT SPRAY/SSF 105, 106, 285

CONTAINMENT SPRAY/TSF 105

CONTAINMENT/TSF 41, 232, 258

CONTROL 8, 11, 12, 14, 17, 22, 29, 70, 84, 87, 128, 135, 136, 156, 188, 190, 193, 194, 245, 254, 257, 266, 271, 289, 326, 332, 334, 335, 337, 338

CONTROL ROD DRIVES 22, 26, 48, 49, 129, 140, 206, 226, 247, 293

CONTROL SYSTEM 19, 23, 26, 45, 47, 76, 83, 85, 100, 102, 129, 149, 152, 171, 197, 200, 205, 228-230, 237, 247, 260, 276, 278, 283, 284, 287, 309, 314, 318, 322, 325, 328, 354

CONTROL SYSTEM/SSF 83, 197

CONTROL SYSTEM/TSF 85

COOLANT PURIFICATION SYSTEM 1, 6, 20, 60, 85, 128, 136, 143, 156, 165, 166, 175, 176, 256, 286, 311, 333, 358

COOLANT PURIFICATION SYSTEM/TSF 6, 20, 128, 143, 156, 165, 166, 311, 333

COOLING 106

COOLING SYSTEM, SECONDARY 2, 6, 7, 11, 32, 56, 64, 66, 73, 75, 76, 90, 100-102, 156, 170, 171, 174, 196, 200, 204, 205, 208, 221, 227-230, 251, 252, 260, 263, 270, 271, 276, 278, 279, 283, 284, 287, 289, 313-315, 317-319, 322, 323, 325, 339, 348, 349, 354-356

COOLING SYSTEM, SECONDARY/SSF 56, 66, 102, 170, 260, 289, 313, 314, 319

COOLING SYSTEM, SECONDARY/TSF 11, 75, 101, 171, 200, 208, 227, 229, 251, 252, 260, 284, 314, 315, 318, 322, 356

CORE 4, 23, 26, 76, 81, 103, 112, 171, 208, 227, 243, 246, 247

CORE REFLOODING SYSTEM 113, 182, 198, 250

CORE SPRAY 9, 48, 49, 96, 97, 129, 134, 136, 167, 169

CORE SPRAY/TSF 129, 134, 169

CORE/TSF 23

CYLINDER GAS 29, 113, 140, 194

DRAINAGE 116, 126

ELECTRIC POWER 42, 48, 49, 54, 59, 63, 66, 75, 84, 86, 87, 89, 95, 97, 103, 106, 127-131, 134, 136, 162-164, 168, 171, 175-178, 192, 199, 202, 212, 213, 219, 221, 242, 251, 269, 275, 280, 282-286, 288, 291, 296, 297, 311, 316-318, 322, 324, 328, 329, 332, 333, 341, 343, 347, 351-353, 360

ELECTRIC POWER/SSF 48, 49, 75, 128

ELECTRIC POWER/TSF 103, 168, 221, 242

ELECTRIC POWER, VITAL 80, 83, 85, 87, 128, 130, 135, 149, 168, 211, 240, 266, 283, 343

EMERGENCY COOLING SYSTEM 174, 310

EMERGENCY POWER, ELECTRIC 42, 55, 85, 86, 89, 106, 118, 120, 122, 125, 129, 176, 177, 235, 237, 239, 282, 312, 328, 336

EMERGENCY POWER, ELECTRIC/SSF 42, 55, 85, 86, 89, 118, 120, 122, 125, 129, 176, 177, 235, 237, 239, 282, 328, 336

EMERGENCY POWER, ELECTRIC/TSF 106, 176, 177, 239

ENGINEERED SAFETY FEATURE 10, 11, 13, 18, 20, 25, 28, 31, 32, 40, 41, 51, 52, 74, 80, 89, 94, 98, 108, 132, 143, 153, 155, 167, 169, 183, 188, 190, 240, 245, 267, 276, 297, 300, 302, 324, 325, 337, 342

ENGINEERED SAFETY FEATURE/SSF 13, 18, 32, 40, 41, 51, 80, 342

SYSTEM INDEX

- ENGINEERED SAFETY FEATURE/TSF 32, 183, 245, 324
- ENGINES, INTERNAL COMBUSTION 55, 106, 118, 120, 122, 125, 129, 235, 237, 312, 328
- ENVIRONMENT 78, 120, 257
- ENVIRONMENT/TSF 78, 120, 257
- EQUIPMENT 116, 126
- FAILURE, ADMINISTRATIVE CONTROL 104, 198, 201
- FAILURE, DESIGN ERROR 33, 68, 77, 116, 165, 166, 206, 218, 229, 232, 233, 245, 293, 294, 304, 357
- FAILURE, FABRICATION ERROR 14, 60-62, 190, 207, 295, 296, 323
- FAILURE, INSTALLATION ERROR 3, 12, 111, 122, 143, 162, 185, 231, 281, 332
- FAILURE, MAINTENANCE ERROR 3, 5, 10, 11, 20, 35, 36, 46, 53, 55, 57, 66, 72, 76, 80, 82-84, 104, 107, 116, 125, 129, 132, 134, 135, 150, 158-160, 168, 170, 173, 174, 176, 179, 191, 214, 219, 223, 235, 266, 275, 282, 288, 291, 292, 328, 330, 333, 335, 345, 358
- FAILURE, OPERATOR ERROR 4, 7, 21, 26, 32, 34, 40, 48, 68, 73, 76, 78, 79, 82, 86, 87, 89, 99, 101, 110, 115, 140, 171, 180, 182, 197, 203, 204, 208, 212, 220, 236, 251, 252, 259, 261, 264, 271, 276, 279, 284, 290, 304-306, 313, 316, 319, 342, 344, 347, 348, 353
- FEEDWATER 2, 11, 56, 66, 76, 100-102, 170, 171, 174, 200, 204, 205, 208, 221, 227-230, 251, 252, 260, 270, 276, 278, 283, 284, 287, 289, 313, 314, 317-319, 322, 325, 348, 349, 354-356
- FIRE PROTECTION 3, 65, 69, 116, 118, 261, 273, 275, 281
- FIRE PROTECTION/SSF 118
- FIRE PROTECTION/TSF 273
- FUEL ELEMENTS 15, 41, 223
- FUEL, FOSSIL 55, 118, 122, 125, 235, 312
- FUEL, FOSSIL/SSF 125
- GENERATORS 19, 34, 45, 73, 101, 152, 155, 171, 205, 227-229, 251, 252, 260, 269, 270, 279, 289, 318, 321, 322, 325, 348, 354
- HEAT EXCHANGERS 73
- HEATERS 286, 297, 311
- HPCI 10, 16, 18, 38, 74, 92, 106, 107, 296, 325
- HPCI/TSF 10, 16, 18, 38, 74, 106, 107, 296, 325
- HYDROGEN 29, 70, 332
- INSTRUMENT, ALARM 217, 304, 335
- INSTRUMENT, IN CORE 13, 21, 100, 103, 148, 154, 158-161, 173, 179, 211, 212, 226, 283, 284, 287, 289, 298, 321, 327, 343, 345, 350
- INSTRUMENT, IN CORE/SSF 148, 154, 212
- INSTRUMENT, NON-NUCLEAR 17, 23, 31, 38, 39, 44, 46, 55, 65, 73, 92, 96, 107, 109, 113, 117, 121, 122, 129, 135, 141, 151, 182, 193, 194, 218, 221, 242, 258, 268, 271, 283, 294, 297, 313, 319, 335, 349, 355
- LEAK DETECTION 15, 16, 30, 31, 124, 126, 142, 147, 156, 165, 166, 189, 191, 240, 241, 244, 249, 255, 263-267, 307, 351, 359
- LUBRICATION 19, 100, 279
- MAIN COOLING SYSTEM 6, 7, 11, 18, 22, 75, 99-102, 112, 137, 141, 171, 180, 195, 196, 200, 207, 208, 210, 221, 227-230, 236, 246, 251, 252, 260, 263, 268, 270, 271, 276, 278, 284, 289, 290, 294, 300, 314, 315, 317, 318, 322-324, 339, 348, 349, 354, 355
- MAIN COOLING SYSTEM/TSF 6, 18, 112, 196, 200, 208, 221, 227, 229, 246, 251, 290, 315
- MATERIAL & EQUIP. HANDLING SYSTEM 303, 312
- MONITOR 65, 281
- MONITORING PROGRAM, ENVIRONMENTAL 219
- MONITORING SYSTEM, RADIATION 36, 78, 93, 119, 253, 254, 259, 262, 299, 301, 326, 334, 338, 352
- OFF SITE 75, 89, 128, 136, 168, 177, 221, 318
- ON SITE 42, 48, 49, 54, 59, 63, 66, 84, 86, 95, 97, 103, 106, 127-129, 131, 134, 136, 162, 164, 175-178, 192, 199, 202, 213, 219, 242, 251, 269, 275, 280, 282-286, 288, 291, 296, 316-318, 322, 324, 328, 329, 332, 333, 341, 343, 347, 351-353, 360
- PNEUMATIC SYSTEM 11, 22, 68, 120, 156, 287, 289, 348, 349
- PNEUMATIC SYSTEM/TSF 22, 156
- POWER DISTRIBUTION 100, 149, 171, 247, 283
- PRESSURE RELIEF 11, 18, 22, 64, 137, 145, 300
- PRESSURE VESSELS 11, 13, 45, 110, 156, 203, 204, 287, 325, 333
- PRESSURIZER 99, 171, 180, 207, 236, 251, 268
- PRESSURIZER/TSF 180
- PROCESS MONITORING 4, 5, 32, 35, 57, 61, 62, 71, 79-81, 85, 91, 128, 180, 185, 200, 211, 214, 222, 243, 247, 248, 288, 320, 323, 330, 331, 355
- PROCESS MONITORING/TSF 79
- RADIATION PROTECTION PERSONNEL 24, 225, 272
- RCIC 37, 39, 107, 123, 155, 156, 325
- RCIC/TSF 37, 39, 107, 123, 155, 156, 325
- REACTOR CONTROL 23, 26, 47, 100, 149, 171, 247, 283
- REACTOR CONTROL/TSF 100

SYSTEM INDEX

REACTOR POWER 23, 26, 47
 REACTOR PROTECTION SYSTEM 4, 5, 32, 35, 61, 62, 71, 80, 81, 85, 91, 128, 180, 185, 200, 211, 214, 243, 247, 248, 288, 320, 323, 330, 355
 REACTOR PROTECTION SYSTEM/SSF 32, 71, 80, 91, 128, 211
 REACTOR PROTECTION SYSTEM/TSF 32, 248
 RHR 9, 24, 44, 48, 49, 53, 85, 106, 114, 115, 117, 128, 131, 132, 136, 195, 202, 210, 292, 302, 308, 344
 RHR/SSF 53, 106, 117, 202, 308
 RHR/TSF 44, 115, 128, 131, 302, 308, 344
 SERVICE WATER SYSTEM 33, 44, 48, 49, 105, 106, 186, 231, 233, 234, 272, 295, 299, 310, 346
 SERVICE WATER SYSTEM/SSF 44, 186, 295, 299
 SERVICE WATER SYSTEM/TSF 33, 44, 272
 SHUTDOWN SYSTEM, SECONDARY 43, 72
 SOLID STATE DEVICE 83, 85, 197, 309
 STACK 225
 STEAM GENERATOR 6, 7, 64, 100-102, 171, 196, 208, 227-230, 251, 252, 260, 263, 270, 271, 276, 278, 284, 289, 314, 317, 318, 322, 323, 339, 348, 349, 354, 355
 STORAGE CONTAINER 19, 100, 279
 STRUCTURE 232
 STRUCTURE/TSF 232
 SUBSYSTEM FAULT 13, 18, 27, 32, 40-42, 44, 48, 49, 51, 53, 55, 56, 65, 66, 71, 75, 80, 83-86, 89, 91, 102, 105, 106, 117, 118, 120, 122, 125, 128, 129, 135, 148, 150, 154, 170, 176, 177, 186, 197, 202, 211, 212, 235, 237, 239, 260, 282, 285, 289, 295, 299, 304, 306, 308, 313, 314, 319, 328, 336, 338, 342
 TESTING 29, 58, 88, 138, 155, 175, 178, 183, 216, 218, 223, 224, 267, 273, 274, 277, 298, 299, 301, 303, 308, 309, 334, 336, 337, 340, 348, 350, 352, 360
 TOTAL SYSTEM FAULT 6, 8, 10-12, 15-18, 20, 22, 23, 32, 33, 37-39, 41, 44, 74, 75, 78, 79, 85, 87, 100, 101, 103, 105-107, 112, 115, 120, 123, 128, 129, 131, 134, 136, 143, 146, 150, 153, 155, 156, 163, 165, 166, 168, 169, 171, 176, 177, 180, 181, 183, 188, 190, 191, 196, 200, 205, 208, 221, 227, 229, 232, 239, 241, 242, 245, 246, 248, 251, 252, 255-258, 260, 265, 272, 273, 284, 290, 296, 302, 304, 308, 311, 314, 315, 318, 322, 324, 325, 333, 335, 344, 356
 TURBINE 19, 34, 45, 73, 101, 152, 155, 156, 171, 205, 227-229, 251, 252, 260, 269, 270, 279, 289, 318, 321, 322, 325, 348, 354
 TURBINE/TSF 205
 VENTILATION SYSTEM 8, 12, 14, 15, 17, 27, 53, 65, 68, 84, 85, 87, 92, 95, 128, 133, 135, 136, 146, 150, 153, 163, 165, 166, 188, 190, 191, 193, 194, 215, 231, 234, 241, 245, 253-257, 259, 262, 265, 266, 271, 304, 306, 326, 334, 335, 337, 338, 346
 VENTILATION SYSTEM/SSF 27, 65, 84, 128, 135, 150, 304, 306, 338
 VENTILATION SYSTEM/TSF 8, 12, 15, 17, 87, 128, 136, 146, 150, 153, 163, 188, 190, 191, 241, 245, 255, 257, 265, 304, 335
 WASTE TREATMENT, GAS 124, 256, 341
 WASTE TREATMENT, LIQUID 256

KEYWORD INDEX

This index is based on the keywords assigned by the NSIC staff when the summaries of the LERs are prepared for computer entry.

- ACCUMULATORS 113, 170, 182, 198, 250
 ACTUATION 11, 13, 20, 32, 40, 50, 83, 85, 88, 89, 130, 135, 136, 155, 156, 169, 183, 279, 280, 302, 315, 317, 318, 321, 325, 337, 338, 342, 344
 ACTUATOR 10, 11, 13, 18, 20, 25, 28, 31, 32, 40, 41, 51, 52, 74, 80, 89, 94, 98, 108, 129, 132, 143, 153, 155, 167, 169, 183, 188, 190, 240, 245, 267, 276, 297, 300, 302, 324, 325, 337, 342, 357
 ADMINISTRATIVE PERSONNEL ERROR - SEE FAILURE, ADMINISTRATIVE CONTROL
 AGE EFFECT - SEE EFFECT, AGE
 AIR 11, 22, 156, 271, 289
 ANNUNCIATORS 9, 13, 30, 44, 55, 72, 93, 118, 121, 124, 140, 147, 171, 217, 236, 241, 255, 256, 259, 265, 266, 304, 326, 335, 338, 349
 ARKANSAS NUCLEAR 1 (PWR) 1, 3
 ARKANSAS NUCLEAR 2 (PWR) 2-7
 ARNOLD (BWR) 8-18
 AUXILIARY 2, 37, 56, 60, 65-68, 77, 87, 128, 170, 218, 253, 256, 259, 260, 262, 266, 273, 281, 287, 289, 304, 313, 319, 356
 BATTERIES & CHARGERS 130
 BEARING 96, 100, 170, 215
 BEAVER VALLEY 1 (PWR) 19-21
 BIG ROCK POINT (BWR) 22
 BLOWERS 65, 68, 92, 150, 215, 271, 304, 334, 337
 BREAKER 42, 48, 49, 54, 59, 63, 66, 75, 84, 86, 87, 89, 95, 97, 103, 106, 128, 129, 134, 136, 162, 164, 168, 171, 175, 177, 192, 199, 213, 219, 237, 251, 280, 282, 284-286, 288, 291, 316-318, 322, 324, 329, 341, 343, 347, 351-353, 360
 BROWNS FERRY 1 (BWR) 23-37
 BROWNS FERRY 2 (BWR) 27, 29, 33, 36, 38-40
 BROWNS FERRY 3 (BWR) 27, 29, 33, 41, 42
 BRUNSWICK 1 (BWR) 43-45, 48, 49
 BRUNSWICK 2 (BWR) 46-50
 BUILDING 3, 8, 12, 14, 15, 17, 36, 37, 41, 60, 65, 67, 68, 77, 82, 84, 87, 110, 118, 122, 125, 128, 135, 136, 151, 188, 190, 191, 193, 194, 223, 235, 245, 253, 254, 256, 257, 259, 261, 262, 266, 271, 273, 281, 289, 301, 304, 326, 331, 334, 335, 337, 338
 BUILDING/SSF 118
 BUILDING/TSF 41, 256, 273
 BWR REACTOR - SEE REACTOR, BWR
 BYPASS 45, 228, 230, 252
 CABLES AND CONNECTORS 2, 3, 10, 42, CABLES AND CONNECTORS 46, 48, 49, 75, 80, 83, 85-87, 117, 128, 129, 131, 151, 158-161, 176, 177, 211, 213, 240, 260, 266, 268, 275, 282, 283, 288, 311, 317, 318, 321-323, 327, 328, 333, 343
 CALIBRATION 29, 50, 88, 138, 155, 175, 178, 183, 216, 218, 223, 224, 267, 273, 274, 277, 298, 299, 301, 303, 308, 309, 334, 336, 337, 340, 348, 350, 352, 360
 CALVERT CLIPFS 1 (PWR) 51-60
 CALVERT CLIPFS 2 (PWR) 55, 61-68
 CLADDING FAILURE - SEE FAILURE, CLADDING
 COMMUNICATION 76, 110, 197, 352, 360
 COMMUNICATION SYSTEM 277
 COMPONENT COOLING SYSTEM 70, 85, 119, 174, 184
 COMPONENT FAILURE - SEE FAILURE, COMPONENT
 COMPONENTS 22, 23, 52-54, 63, 64, 78, 100, 105, 108, 118, 138, 157, 162, 186, 192, 193, 206, 222, 231, 235, 251, 283, 289, 335, 354
 COMPUTER, DIGITAL 5, 139, 181, 243, 247
 COMPUTER, DIGITAL/TSF 181
 CONCENTRATION 6, 72, 198, 250, 294
 CONDENSATION 124, 244, 321, 331
 CONDENSER 156, 317
 CONDENSER COOLING SYSTEM 297
 CONNECTICUT YANKEE (PWR) 69
 CONSTRUCTION 128, 153, 174, 317
 CONTAINMENT 14, 15, 18, 22, 25, 27, 28, 31, 38, 41, 67, 75, 77, 79, 82, 85, 92, 95, 113, 117, 126, 128, 133, 136, 140, 144, 146, 147, 150, 153, 157, 163, 165, 166, 169, 184, 187, 191, 231, 232, 234, 240, 241, 244, 249, 255, 258, 263-268, 287, 293, 294, 306, 307, 321, 323, 339, 345, 346, 351, 359
 CONTAINMENT ATMOSPHERE 29, 31, 70, 109, 121, 141, 157, 271, 294, 332
 CONTAINMENT ISOLATION 6, 10, 16, 31, 32, 37, 40, 41, 50, 57, 59, 67, 75, 77, 82, 91, 104, 117, 128, 138, 143, 144, 147, 157, 163, 169, 184, 187, 201, 209, 224, 228, 240-242, 244, 249, 258, 263, 264, 266, 277, 279, 284, 287, 302, 305, 306, 333, 357, 359
 CONTAINMENT ISOLATION/SSF 40
 CONTAINMENT PURGE 133, 169
 CONTAINMENT SPRAY 105, 106, 285
 CONTAINMENT SPRAY/SSF 105, 106, 285
 CONTAINMENT SPRAY/TSF 105
 CONTAINMENT SUMP 126

KEYWORD INDEX

- CONTAINMENT VACUUM BREAKER 187
 CONTAINMENT/TSP 41, 232, 258
 CONTAMINATION 78, 112, 246, 256, 262
 CONTRACTOR PERSONNEL 24, 60, 77, 301
 CONTROL 1, 3, 6, 8, 11, 12, 14, 17, 22, 29, 31, 36, 70, 84, 87, 92, 96, 102, 107, 109, 113, 121, 123, 128, 135, 136, 138, 141, 146, 151, 155-157, 186, 188, 190, 193, 194, 200, 202, 205, 221, 228-230, 245, 254, 256, 257, 261, 266, 270, 271, 276, 278, 283, 284, 287, 289, 294, 313, 314, 325, 326, 332, 334, 335, 337, 338, 348, 349, 354, 356
 CONTROL PANEL/ROOM 35, 42, 153, 212
 CONTROL ROD DRIVES 22, 26, 47-49, 54, 59, 63, 100, 127, 128, 140, 149, 171, 206, 226, 247, 283, 288, 293, 316, 343, 353, 360
 CONTROL ROD DRIVES/TSP 100
 CONTROL RODS 4, 26, 81, 103, 247
 CONTROL SYSTEM 19, 23, 26, 45, 47, 76, 83, 85, 100, 102, 129, 149, 152, 171, 197, 200, 205, 228-230, 237, 247, 260, 276, 278, 283, 284, 287, 309, 314, 318, 322, 325, 328, 354
 CONTROL SYSTEM/SSF 83, 197
 CONTROL SYSTEM/TSP 85
 CONTROLLER 39, 130, 202, 313
 COOK 1 (PWR) 70, 71
 COOK 2 (PWR) 72, 73
 COOLANT PURIFICATION SYSTEM 1, 6, 20, 60, 72, 85, 128, 136, 143, 156, 165, 166, 175, 176, 196, 256, 267, 286, 305, 311, 333, 358
 COOLANT PURIFICATION SYSTEM/TSP 6, 20, 128, 143, 156, 165, 166, 196, 311, 333
 COOLING 106, 234
 COOLING DEVICE 53, 85, 231, 234, 310, 346
 COOLING SYSTEM, SECONDARY 2, 6, 7, 11, 30, 32, 37, 40, 50, 51, 56, 64, 66, 73, 75, 76, 83, 85, 90, 91, 94, 100-102, 144, 157, 170, 171, 174, 196, 200, 201, 204, 205, 208, 214, 218, 221, 227-230, 242, 251, 252, 260, 263, 270, 271, 276, 278, 279, 283, 284, 287, 289, 313-315, 317-319, 322, 323, 325, 339, 348, 349, 354-356
 COOLING SYSTEM, SECONDARY/SSF 32, 56, 66, 102, 170, 260, 289, 313, 314, 319
 COOLING SYSTEM, SECONDARY/TSP 11, 75, 101, 171, 200, 208, 227, 229, 251, 252, 260, 284, 314, 315, 318, 322, 356
 COOPER (BWR) 74-76
 CORE 4, 5, 13, 21, 23, 26, 76, 81, 100, 103, 112, 148, 154, 158-161, 173, 179, 181, 208, 211, 212, 226, 227, 243, 246, 247, 283, 284, 287, 289, 298, 321, 327, 343, 345, 350
 CORE REFLOODING SYSTEM 113, 182, 198, 250, 291
 CORE SPRAY 9, 48, 49, 96, 97, 129, 134, 136, 138, 144, 164, 167, 169, 328
 CORE SPRAY/SSF 129, 328
 CORE SPRAY/TSP 129, 134, 169
 CORE/SSF 148, 154, 212
 CORE/TSP 23, 181
 CORROSION 123, 145, 157, 195, 210, 323
 CRACK 11, 92, 96, 120, 129, 141, 190, 193, 195, 206, 207, 210, 223, 231, 233, 293, 295, 311, 329, 339
 CRANE 303
 CRUD 18, 53, 67, 70, 98, 113, 189, 192, 201, 260, 307, 310
 CRYSTAL RIVER 3 (PWR) 77-79
 CYLINDER GAS 29, 113, 140, 194
 DAVIS-BESSE 1 (PWR) 80-82
 DEFORMATION 108, 118, 202, 312
 DEMINERALIZERS 144
 DESIGN ERROR - SEE FAILURE, DESIGN ERROR
 DIABLO CANYON 1 (PWR) 83-89
 DIABLO CANYON 2 (PWR) 84
 DIESEL GENERATOR - SEE GENERATOR, DIESEL
 DOSE MEASUREMENT, INTERNAL 256
 DRAINAGE 82, 116, 124, 126, 144, 157
 DRESDEN 2 (BWR) 90-97
 DRESDEN 3 (BWR) 96, 98
 DRIFT 25, 28, 39, 43, 54, 63, 94, 106, 107, 109, 113, 114, 127, 129, 145, 167, 241, 297, 318, 322, 325, 355
 DRIVE 92, 100, 114, 118, 312
 EARTHQUAKE 120, 257
 EFFECT, AGE 74, 149, 226, 289, 329, 343
 EFFECT, PH 294
 ELECTRIC POWER 13, 42, 48, 49, 54, 59, 63, 66, 75, 80, 84, 86, 87, 89, 93, 95, 97, 103, 106, 127-131, 134, 136, 162-164, 168, 171, 175-178, 192, 199, 202, 212, 213, 219, 221, 237, 242, 251, 269, 275, 280, 282-286, 288, 291, 292, 296, 297, 311, 316-318, 322, 324, 328, 329, 332, 333, 341, 343, 347, 351-353, 360
 ELECTRIC POWER/SSF 48, 49, 75, 128
 ELECTRIC POWER/TSP 103, 168, 221, 242
 ELECTRIC POWER, VITAL 80, 83, 85, 87, 128, 130, 135, 149, 168, 211, 240, 266, 283, 343
 ELECTRICAL FAILURE 11, 13, 18, 21, 32, 42, 46, 48-50, 75, 80, 83, 85-87, 92, 93, 97, 100, 103, 128-132, 135, 136, 148, 149, 151, 158-161, 163, 168, 169, 171, 176, 177, 202, 211-213, 219, 221, 226, 228, 240, 242, 244, 251, 260, 266, 269, 276, 280, 282, 283, 286, 288, 296, 304, 311, 317, 318, 321, 322, 327, 328, 332, 333,

KEYWORD INDEX

- ELECTRICAL FAILURE 341, 343
ELECTRONIC FUNCTION UNITS 13, 21, 32, 41, 46, 52, 61, 62, 65, 80, 81, 83, 85, 92, 93, 100, 102, 113, 154, 171, 181, 192, 197, 200, 202, 219, 228, 244, 251, 266, 276, 278, 280, 288, 327, 343, 355
EMERGENCY COOLING SYSTEM 174, 310
EMERGENCY POWER, ELECTRIC 42, 55, 85, 86, 89, 106, 118, 120, 122, 125, 129, 162, 176, 177, 235, 237, 239, 280, 282, 312, 328, 336
EMERGENCY POWER, ELECTRIC/SSF 42, 55, 85, 86, 89, 118, 120, 122, 125, 129, 176, 177, 235, 237, 239, 282, 328, 336
EMERGENCY POWER, ELECTRIC/TSF 106, 176, 177, 239
ENGINEERED SAFETY FEATURE 10, 11, 13, 18, 20, 25, 28, 31, 32, 40, 41, 50-52, 74, 80, 83, 85, 88, 89, 94, 98, 108, 129, 130, 132, 135, 136, 143, 153, 155, 156, 167, 169, 183, 188, 190, 240, 245, 267, 276, 279, 280, 297, 300, 302, 315, 317, 318, 321, 324, 325, 337, 338, 342, 344, 357
ENGINEERED SAFETY FEATURE/SSF 13, 18, 32, 40, 41, 51, 80, 342
ENGINEERED SAFETY FEATURE/TSF 32, 183, 245, 324
ENGINES, INTERNAL COMBUSTION 3, 55, 86, 89, 106, 118, 120, 122, 125, 129, 136, 176, 177, 235, 237, 239, 282, 312, 328, 336
ENVIRONMENT - SEE MONITORING PROGRAM, ENVIRONMENTAL
ENVIRONMENT/TSF 78, 120, 257
EQUIPMENT 3, 11, 12, 47, 56, 57, 64, 91, 96, 98, 116, 118, 126, 129, 139-141, 144, 145, 157, 170, 190, 202, 214, 223, 256, 262, 291, 293-295, 312, 329, 332, 335, 345, 349
EQUIPMENT FAILURE - SEE FAILURE, EQUIPMENT
EROSION 37
EXPOSURE - SEE PERSONNEL EXPOSURE, RADIATION
FABRICATION ERROR - SEE FAILURE, FABRICATION ERROR
FAILURE 1-360
FAILURE, ADMINISTRATIVE CONTROL 3, 34, 53, 58, 68, 72, 76, 79, 82, 104, 110, 125, 130, 134, 140, 170, 178, 179, 197, 198, 201, 218, 223, 224, 236, 264, 271, 277, 279, 282, 292, 298, 299, 303, 309, 333-337, 340, 350
FAILURE, CLADDING 112, 246
FAILURE, COMPONENT 22, 23, 52-54, 63, 64, 78, 100, 105, 108, 118, 138, 157, 162, 186, 192, 193, 206, 222, 231, 235, 251, 283, 289, 335, 354
FAILURE, DESIGN ERROR 33, 68, 77, 116, FAILURE, DESIGN ERROR 165, 166, 206, 218, 229, 232, 233, 245, 293, 294, 304, 357
FAILURE, EQUIPMENT 1-14, 16-19, 21, 22, 24, 26, 27, 29, 31-35, 37-50, 52-73, 75-77, 79-87, 89-93, 95-107, 109, 110, 112-120, 122-126, 128-147, 149-153, 155-172, 174-177, 181, 182, 184, 186, 187, 190, 192-194, 196-199, 201-209, 211-215, 219, 221, 223-231, 234-237, 239-244, 246, 247, 249-254, 256-264, 266, 268-271, 274-276, 278-280, 282-289, 291-295, 297, 300, 302-308, 310-314, 316-319, 321-337, 341, 343, 345-349, 351-360
FAILURE, FABRICATION ERROR 14, 60-62, 190, 207, 295, 296, 323
FAILURE, INSTALLATION ERROR 3, 12, 111, 122, 143, 162, 185, 231, 281, 332
FAILURE, INSTRUMENT 2, 4, 11, 13, 15-21, 23, 25, 26, 28, 30-32, 36, 38, 41, 44, 46, 48-51, 54, 55, 61-63, 65, 66, 71, 73, 74, 76, 78, 80, 83, 86, 89, 91-94, 96-98, 100, 102, 103, 106-109, 114, 117, 119, 121, 124, 126, 127, 129, 130, 132, 135, 141-143, 148, 149, 151-155, 160, 162-169, 171, 173, 176-180, 182, 185, 188-194, 199, 200, 202, 205, 211, 214, 217-219, 221, 222, 226, 228-230, 237, 240-244, 249, 251, 253-255, 259, 260, 262-267, 269, 271, 276-288, 294, 296-299, 301, 302, 304, 307, 309, 313, 314, 318-323, 325-328, 330-332, 334, 335, 337, 338, 341, 342, 349-352, 354, 355, 360
FAILURE, MAINTENANCE ERROR 3, 5, 10, 11, 20, 35, 36, 46, 53, 55, 57, 66, 72, 76, 80, 82-84, 104, 107, 116, 125, 129, 132, 134, 135, 150, 158-160, 168, 170, 173, 174, 176, 179, 191, 214, 219, 223, 235, 266, 275, 282, 288, 291, 292, 328, 330, 333, 335, 345, 358
FAILURE, OPERATOR ERROR 4, 7, 21, 26, 34, 40, 48, 68, 73, 76, 78, 79, 82, 86, 87, 89, 99, 101, 110, 115, 140, 180, 182, 197, 203, 204, 208, 212, 220, 236, 252, 259, 261, 264, 271, 276, 279, 284, 290, 304-306, 313, 316, 319, 342, 344, 347, 348, 353
FAILURE, PIPE 9, 19, 32, 37, 44, 53, 82, 124, 147, 194, 195, 210, 231, 233, 279, 286, 287, 289, 293, 294, 310, 312, 323, 339, 345
FAILURE, TUBING 45, 118, 122, 125, 196
FARLEY 1 (PWR) 99, 100
FARLEY 2 (PWR) 101-103
FASTENER 3, 69, 100, 120, 146, 174, 205, 206, 283, 285, 324
FATIGUE 45, 118, 287
FEEDWATER 2, 11, 56, 66, 76, 100-102,

KEYWORD INDEX

- FEEDWATER** 157, 170, 171, 174, 200, 204, 205, 208, 218, 221, 227-230, 251, 252, 260, 270, 276, 278, 283, 284, 287, 289, 313, 314, 317-319, 322, 325, 348, 349, 354-356
FILTERS 12, 17, 53, 326
FIRE 118, 122, 275, 281
FIRE PROTECTION 3, 48, 49, 65, 69, 116, 118, 261, 273, 275, 281
FIRE PROTECTION/SSF 48, 49, 118
FIRE PROTECTION/TSF 273
FITZPATRICK (BWR) 104-110
FLAW 195, 207, 210, 231
FLOOD 118, 232, 323
FLOW 1, 6, 11, 12, 17, 27, 32, 33, 39, 64, 76, 92, 102, 106, 113, 123, 124, 138, 141, 146, 155, 156, 186, 200, 201, 205, 208, 221, 227, 229, 252, 253, 256, 260, 270, 276, 278, 283, 284, 287, 289, 304, 313-315, 317, 318, 322, 333, 348, 349, 351, 352, 354, 356
FLOW BLOCKAGE 8, 12, 53, 98, 117, 125, 307, 310
FLUX DISTRIBUTION 13, 21, 23, 76, 148, 160, 173, 179, 211, 226, 243, 287, 298, 321, 327
FT. CALHOUN 1 (PWR) 111, 112
FUEL ELEMENTS 15, 41, 76, 82, 112, 191, 208, 223, 227, 243, 246, 301, 331
FUEL, FOSSIL 55, 118, 122, 125, 235, 312
FUEL, FOSSIL/SSF 125
FUSE 13, 21, 80, 83, 132, 148, 152, 163, 169, 171, 176, 199, 214, 228, 266, 277, 286, 328, 332, 341, 360
GENERATOR, DIESEL 55, 86, 89, 106, 118, 120, 122, 125, 129, 136, 176, 177, 235, 239, 282, 328, 336
GENERATORS 19, 34, 45, 73, 101, 152, 155, 156, 205, 221, 227-229, 252, 260, 269, 270, 279, 289, 318, 321, 322, 325, 348, 354
GINNA (PWR) 113-115
GRAND GULF 1 (BWR) 116-136
HATCH 1 (BWR) 137, 138
HATCH 2 (BWR) 139-145
HEAT EXCHANGERS 6, 7, 53, 73, 85, 101, 102, 106, 156, 171, 196, 208, 227-231, 234, 251, 252, 260, 270, 271, 276, 278, 284, 289, 310, 314, 317, 318, 322, 323, 346, 348, 349, 354, 355
HEATERS 8, 17, 228, 230, 286, 297, 311
HIGH 6, 22, 32, 34, 37, 38, 45, 54, 63, 73, 76, 80, 101, 110, 123, 156, 171, 180, 182, 185, 189, 200, 201, 203, 204, 208, 221, 227-230, 232, 236, 247, 250-252, 256, 260, 270, 289, 290, 294, 314, 315, 318, 322, 325, 331, 333, 348, 354
HIGH RADIATION 258, 262, 263
HIGH TEMPERATURE 92, 106, 156, 192, 202, 206, 222, 231, 295, 310
HOSE 346
HPCI 10, 16, 18, 38, 74, 92, 106, 107, 189, 296, 325
HPCI/TSF 10, 16, 18, 38, 74, 106, 107, 296, 325
HUMAN FACTORS 2, 7, 12, 14, 21, 27, 32, 33, 35, 57, 60-62, 68, 80, 99, 101, 104, 111, 116, 119, 122, 125, 128, 135, 138, 139, 157-159, 162, 165, 166, 168, 171, 173, 174, 182, 183, 185, 190, 191, 198, 199, 206-208, 212, 216, 218-220, 229, 231-233, 238, 245, 251, 252, 261, 266, 273-276, 281, 284, 290, 293-297, 304, 308, 311, 319, 322, 323, 332, 345, 347, 348, 357, 358
HUMBOLDT BAY (BWR) 146
HUMIDITY, RELATIVE 80, 313
HYDRAULIC EFFECT 293
HYDROGEN 29, 31, 70, 109, 121, 141, 157, 271, 294, 332
IMPACT SHOCK 96, 152, 160, 312
INCIDENT, HUMAN ERROR 10, 20, 24, 29, 36, 46, 66, 83, 84, 86, 87, 89, 107, 115, 129, 132, 143, 150, 152, 153, 155, 160, 174, 176, 180, 201, 235, 259, 267, 272, 279, 291, 301, 305, 316, 317, 330, 342, 344, 348, 353
INDIAN POINT 2 (PWR) 147
INDIAN POINT 3 (PWR) 148
INDICATORS 13, 15, 31, 36, 46, 76, 93, 103, 109, 117, 119, 121, 135, 141, 148, 149, 150, 160, 188-191, 193, 194, 211, 222, 228, 240, 243, 244, 249, 253-255, 259, 262-267, 276, 283, 284, 287, 294, 299, 301, 320, 326, 330, 338, 351, 352
INSPECTION 2, 3, 10, 18-20, 22-25, 27, 28, 32, 36, 38, 39, 43, 44, 46, 50, 52-57, 60, 62, 63, 65, 67-70, 72, 74, 75, 84, 85, 90, 91, 94, 97, 98, 102, 106-108, 111, 118, 120, 122, 123, 125, 127, 133, 137-139, 141, 144-146, 150, 157, 161, 162, 164, 167, 170, 174, 175, 183-187, 189, 191, 195, 198, 201, 206, 207, 209-211, 214, 217, 218, 233, 234, 250, 256, 267, 268, 272-275, 277, 280, 285, 291, 293, 297-301, 305, 309, 310, 312, 313, 319, 332, 334, 336, 337, 339, 341, 346, 351, 352, 355, 358
INSTALLATION ERROR - SEE FAILURE, INSTALLATION ERROR
INSTRUMENT FAILURE - SEE FAILURE, INSTRUMENT
INSTRUMENT LINE 71, 122, 182, 307, 330, 331
INSTRUMENT, ABNORMAL INDICATION 5, 13, 15, 16, 19, 21, 23, 30, 31, 35, 41,

KEYWORD INDEX

- INSTRUMENT, ABNORMAL INDICATION** 44,
 46-48, 51, 52, 61, 62, 65, 71, 73,
 76, 78, 83, 91-93, 96, 98, 100, 102,
 107, 108, 117, 119, 121, 124, 126,
 128, 135, 141, 143, 145, 148, 149,
 154-156, 160, 165, 166, 169, 180,
 182, 183, 190, 191, 193, 197, 200,
 205, 211, 214, 217-219, 222, 228,
 230, 240, 241, 244, 249, 253-
 255, 259, 260, 264, 264-266, 276,
 278, 280, 281, 283, 284, 294, 297,
 302, 304, 307, 314, 319-321, 323,
 325-327, 330, 331, 334, 335, 338,
 342, 349, 351, 352
INSTRUMENT, ALARM 9, 13, 30, 44, 55,
 72, 93, 118, 121, 124, 140, 147, 171,
 217, 236, 241, 255, 256, 259, 265,
 266, 281, 304, 326, 335, 338, 349
INSTRUMENT, AMPLIFIER 92, 154, 200,
 244, 327
INSTRUMENT, CONTROL 26, 86, 89, 260,
 276, 279, 297, 309, 328
INSTRUMENT, CURRENT 106, 178
INSTRUMENT, FLOW 71, 143, 200, 218,
 323
INSTRUMENT, IN CORE 13, 21, 100, 103,
 148, 154, 158-161, 173, 179, 211,
 212, 226, 283, 284, 287, 289, 298,
 321, 327, 343, 345, 350
INSTRUMENT, IN CORE/SSF 148, 154, 212
INSTRUMENT, INTERLOCK 41, 288, 318
INSTRUMENT, LIQUID LEVEL 182, 307,
 325, 331
INSTRUMENT, NON-NUCLEAR 17, 23, 31,
 38, 39, 44, 46, 55, 65, 73, 92, 96,
 107, 109, 113, 117, 121, 122, 129,
 135, 141, 151, 182, 193, 194, 218,
 221, 242, 259, 268, 271, 283, 294,
 297, 313, 319, 335, 349, 355
INSTRUMENT, POSITION 23, 91, 96, 149,
 164, 171, 214, 283, 284, 320
INSTRUMENT, PROTECTIVE 202, 285
INSTRUMENT, SPEED 76, 107, 313, 354
INSTRUMENT, SWITCH 2, 4, 11, 16-20,
 23, 25, 26, 28, 32, 38, 44, 50, 55,
 73, 74, 86, 89, 91, 94, 97, 98, 108,
 114, 119, 126, 129, 149, 155, 162,
 164-167, 169, 192, 202, 205, 214,
 242, 251, 260, 266, 269, 276, 279,
 297, 302, 309, 326, 334, 337, 350,
 355
INSTRUMENT, VOLTAGE 48, 49, 54, 63,
 89, 103, 127, 168, 176, 177, 199,
 282, 328
INSTRUMENTS, MISC. 121, 141, 151, 217,
 228, 271
INSULATION 275, 292
INVERTER 80, 83, 87, 130, 135, 266,
 343
KEWAUNEE (PWR) 149, 150
LA SALLE 1 (BWR) 151-159, 163
LA SALLE 2 (BWR) 153, 156, 160-167
LACROSSE (BWR) 158, 169
LEAK 6, 18, 22, 33, 37, 38, 44, 45,
 60, 67, 70, 72, 77, 82, 112, 113,
 118, 122, 125, 138, 140, 141, 144,
 147, 156, 157, 184, 187, 194, 196,
 198, 209, 228, 231, 234, 235, 246,
 256-258, 268, 270, 287, 289, 293-295,
 323, 330, 339, 345, 346
LEAK DETECTION 15, 16, 30, 31, 124,
 126, 142, 144, 147, 165, 166, 189,
 191, 240, 241, 244, 249, 255, 263-
 267, 307, 351, 359
LICENSED OPERATOR 20, 26, 34, 40, 73,
 76, 84, 86, 87, 89, 99, 110, 203,
 204, 276, 304, 306, 316, 348, 350
LIGHTNING 103
LOW 6-9, 11-13, 17, 19, 27, 29, 32,
 33, 39, 41, 71, 72, 75, 92, 99-102,
 106, 113, 116, 124, 126, 140, 141,
 156, 171, 182, 186, 198, 200, 201,
 204, 208, 221, 227-230, 251-253, 257,
 260, 276, 278, 279, 284, 287, 295,
 297, 304, 311, 313-315, 317, 318,
 322, 323, 325, 330, 333, 344, 348,
 349, 351, 352, 355, 356, 359
LPCI 13
LPCI/SSF 13
LUBRICATION 2, 19, 67, 100, 114, 129,
 192, 251, 279, 355
MAIN COOLING SYSTEM 6, 7, 11, 18, 22,
 51, 61, 62, 71, 75, 79, 85, 98-102,
 112, 137, 142, 145, 171, 180, 185,
 192, 195-198, 200, 207, 208, 210,
 221, 222, 227-230, 236, 242, 243,
 246, 251, 252, 258, 260, 263, 268,
 270, 271, 276, 278, 284, 289, 290,
 294, 300, 314, 315, 317, 318, 322-
 324, 339, 348, 349, 354, 355
MAIN COOLING SYSTEM/SSF 18, 71
MAIN COOLING SYSTEM/TSP 6, 18, 22,
 112, 196, 200, 208, 221, 227, 229,
 246, 251, 290, 315
MAINE YANKEE (PWR) 170-172
MAINTENANCE AND REPAIR 2, 6, 8, 12,
 13, 18, 22, 31, 32, 39, 41, 44, 50,
 54, 56, 61, 62, 64, 65, 71, 74, 83,
 91, 93, 96, 97, 100, 105-109, 113,
 114, 117, 118, 121, 124, 128-130,
 134, 138, 140-143, 145, 147, 149,
 151, 154, 156-159, 162, 163, 165,
 166, 168-172, 174, 176, 177, 182,
 186, 189, 190, 192-194, 196, 200,
 202, 205, 211, 213-215, 219, 222,
 226, 228-231, 234, 235, 237, 244,
 247, 251, 258, 260, 263, 266, 269,
 280, 282-284, 286-289, 295, 302, 304,
 307, 311, 312, 318, 319, 321-323,
 325, 327-331, 333, 335, 341, 343,
 345, 351, 352, 354, 355, 357
MAINTENANCE ERROR - SEE FAILURE,
MAINTENANCE ERROR
MATERIAL 60, 292

KEYWORD INDEX

- MATERIAL & EQUIP. HANDLING SYSTEM 23, 303, 312
 MCGUIRE 1 (PWR) 173-178
 MCGUIRE 2 (PWR) 174, 177-180
 MILLSTONE 2 (PWR) 181-185
 MODIFICATION 93
 MONITOR 65, 121, 141, 151, 271, 281
 MONITORING PROGRAM, ENVIRONMENTAL 219
 MONITORING SYSTEM, RADIATION 36, 78, 93, 119, 253, 254, 259, 262, 299, 301, 326, 334, 338, 352
 MONTICELLO (BWR) 186-195
 MOTORS 48, 49, 75, 100, 134, 142, 202, 292, 318, 322, 332
 NEUTRON 13, 21, 148, 160, 173, 179, 211, 226, 287, 298, 321, 327
 NOISE 249, 253-255, 259, 264, 265, 326, 338
 NONLICENSED OPERATOR 29, 48, 78, 259, 313
 NORTH ANNA 1 (PWR) 196, 197
 NOZZLE 207
 NRC-AE 294
 OCONEE 1 (PWR) 198
 OCONEE 3 (PWR) 199, 200
 OFF SITE 75, 89, 128, 136, 168, 177, 221, 318
 ON SITE 42, 48, 49, 54, 59, 63, 66, 84, 86, 95, 97, 103, 106, 127-129, 131, 134, 136, 162, 164, 175-178, 192, 199, 202, 213, 219, 242, 251, 256, 269, 275, 280, 282-286, 288, 291, 292, 296, 316-318, 322, 324, 328, 329, 332, 333, 341, 343, 347, 351-353, 360
 OPERATION 3, 7-13, 16-20, 22, 25, 27-32, 35-37, 39, 40, 44-46, 48-63, 65, 66, 68-76, 78-81, 91-98, 100-109, 111, 113, 121, 123, 124, 140-142, 147, 149, 150, 152, 155, 156, 163, 168, 169, 171-175, 178, 181, 185-191, 196, 198-202, 205, 215, 217-219, 221-223, 225, 228-232, 234, 244, 245, 249-260, 264-274, 276-281, 283-285, 287-289, 300, 309-311, 313, 314, 316-318, 320-322, 325, 339, 340, 348, 349, 351-359
 OPERATOR ACTION 2-5, 7, 10-12, 14, 21, 27, 32, 33, 35, 36, 46, 53, 55, 57, 58, 61, 62, 66, 68, 72, 76, 77, 79, 80, 82, 83, 88, 101, 104, 107, 111, 115, 116, 119, 122, 125, 128-130, 132, 134, 135, 138-140, 143, 150, 152, 153, 155, 157-160, 162, 165, 166, 168, 170, 173-176, 178-180, 182, 183, 185, 190, 191, 197-199, 201, 206-208, 212, 214, 216, 218-220, 223-225, 229, 231-233, 235, 236, 238, 245, 252, 261, 264, 266, 267, 271-275, 277, 279, 281, 282, 284, 288, 290-299, 303-305, 308, 309, 311, 317, 319, 322, 323, 328, 330, 332-337, OPERATOR ACTION 340, 342, 344, 345, 347, 348, 352, 353, 357, 358, 360
 OPERATOR ERROR - SEE FAILURE, OPERATOR ERROR; LICENSED OPERATOR; NONLICENSED OPERATOR
 OSCILLATION 61, 62
 OXIDATION 123, 145, 157, 195, 210, 323
 PEACH BOTTOM 2 (BWR) 201, 202
 PEACH BOTTOM 3 (BWR) 203-205
 PENETRATION 77, 82, 147, 257, 321
 PENETRATION, PIPE 82, 147
 PERSONNEL EXPOSURE, RADIATION 256
 PH EFFECT - SEE EFFECT, PH
 PIPE FAILURE - SEE FAILURE, PIPE; PIPES AND PIPE FITTINGS
 PIPES AND PIPE FITTINGS 9, 17, 19, 32, 37, 44, 53, 124, 194, 195, 210, 231, 233, 279, 286, 287, 289, 293, 294, 310, 312, 323, 339, 345
 PNEUMATIC SYSTEM 11, 22, 50, 68, 120, 156, 287, 289, 300, 348, 349
 PNEUMATIC SYSTEM/TSF 22, 156
 POINT BEACH 1 (PWR) 206, 207
 POISON, SOLUBLE 6, 72, 198, 250, 267, 286, 311
 POWER DISTRIBUTION 100, 149, 171, 247, 283
 PRAIRIE ISLAND 1 (PWR) 208
 PRECIPITATION 286, 311
 PRESSURE DROP 322, 325
 PRESSURE PULSE 156
 PRESSURE RELIEF 11, 18, 22, 38, 43, 64, 98, 137, 142, 144, 145, 236, 268, 271, 300
 PRESSURE VESSELS 11, 13, 45, 74, 108, 110, 155, 156, 167, 203, 204, 287, 325, 330, 333, 345
 PRESSURE, EXTERNAL 6, 9, 11, 19, 22, 29, 32, 34, 37, 38, 41, 45, 71, 73, 75, 99, 113, 116, 140, 156, 171, 180, 200, 221, 228, 230, 236, 251, 256, 257, 279, 287, 325, 333, 344, 359
 PRESSURE, INTERNAL 6, 9, 11, 19, 22, 29, 32, 34, 37, 38, 41, 45, 71, 73, 75, 99, 113, 116, 140, 156, 171, 180, 200, 221, 228, 230, 236, 251, 256, 257, 279, 287, 322, 325, 333, 344, 359
 PRESSURIZER 99, 171, 180, 197, 207, 236, 251, 258, 268
 PRESSURIZER/TSF 180
 PROCEDURES AND MANUALS 3-5, 11, 26, 33, 34, 40, 48, 53, 55, 58, 68, 72, 73, 77-79, 82, 88, 104, 105, 125, 130, 134, 140, 170, 173, 175, 178, 179, 197, 203, 204, 214, 216, 218-220, 223-225, 236, 242, 264, 271, 277, 279, 281, 288, 292, 298, 299, 303, 306, 309, 319, 328, 333-337, 340, 348, 349
 PROCESS MONITORING 4, 5, 32, 35, 57, 58, 61, 62, 71, 79-81, 85, 91, 128,

KEYWORD INDEX

- PROCESS MONITORING 131, 180, 185, 200,
 211, 214, 222, 243, 247, 248, 288,
 320, 323, 330, 331, 333, 355
 PROCESS MONITORING/TSF 79
 PROPERTY, CHEMICAL 213
 PROPERTY, MECHANICAL 193
 PUMPS 9, 11, 24, 39, 44, 48, 49, 55,
 56, 60, 66, 70, 75, 76, 85, 92, 100,
 101, 105, 106, 109, 116, 119, 126,
 128, 133, 134, 141, 156, 170, 171,
 175, 176, 196, 204, 205, 221, 228,
 230, 236, 253, 256, 260, 279, 285,
 302, 308, 310, 312, 313, 317-319,
 322, 324, 325, 348, 351, 354, 355
 PWR REACTOR - SEE REACTOR, PWR
 QUAD CITIES 1 (BWR) 209
 QUAD CITIES 2 (BWR) 210-214
 RADIATION MONITORS 15, 36, 78, 93,
 100, 103, 119, 124, 191, 240, 241,
 244, 249, 253-255, 259, 262-266, 283,
 284, 299, 301, 326, 338, 351, 352
 RADIATION PROTECTION PERSONNEL 24,
 225, 272
 RADIOACTIVITY RELEASE 78, 112, 246,
 256, 262
 RANCHO SECO (PWR) 215-225
 RATE 110, 203, 290
 RCIC 37, 39, 107, 123, 155, 156, 325
 RCIC/TSF 37, 39, 107, 123, 155, 156,
 325
 REACTOR 11, 13, 45, 110, 156, 203,
 204, 325, 333
 REACTOR CONTROL 23, 26, 47, 100, 149,
 171, 247, 283
 REACTOR CONTROL/TSF 100
 REACTOR POWER 23, 26, 47, 93
 REACTOR PROTECTION SYSTEM 4, 5, 32,
 35, 61, 62, 71, 80, 81, 85, 91, 128,
 131, 180, 185, 200, 211, 214, 243,
 247, 248, 288, 320, 323, 330, 333,
 355
 REACTOR PROTECTION SYSTEM/SSF 32, 71,
 80, 91, 128, 211
 REACTOR PROTECTION SYSTEM/TSF 248
 REACTOR SHUTDOWN 4, 6, 7, 11, 13, 19-
 22, 26, 32, 34, 35, 40, 45, 50, 59,
 60, 71, 73, 75, 76, 80, 81, 96, 100-
 103, 148, 152, 155, 156, 158-161,
 168, 171, 180, 185, 198, 200, 205,
 208, 211, 212, 214, 221, 227-230,
 247, 248, 251, 252, 260, 269, 270,
 276, 278, 279, 283, 284, 287-289,
 300, 311, 314-318, 322, 323, 325,
 327, 330, 333, 339, 343, 345, 348-
 350, 353-355, 360
 REACTOR STARTUP 4-6, 26, 34, 47, 99,
 110, 119, 120, 125, 126, 140, 154,
 170, 183, 203, 208, 209, 227, 246,
 286, 315, 323, 327
 REACTOR STARTUP EXPERIENCE 21, 24,
 160, 161, 331
 REACTOR, BWR 8-18, 22-50, 74-76, 90-
 REACTOR, BWR 98, 104-110, 116-146,
 151-169, 186-195, 201-205, 209-214,
 293-302, 324-338
 REACTOR, FWR 1-7, 19-21, 51-73, 77-89,
 99-103, 111-115, 147-150, 170-185,
 196-200, 206-208, 215-292, 303-323,
 339-360
 RECOMBINERS 332, 341
 RECORDERS 78, 142, 331, 335
 REFUELING 23, 27, 29, 33, 41-43, 77,
 90, 139, 145, 153, 158, 159, 162,
 163, 207, 210-212, 295, 341
 RELAYS 21, 31, 41, 48-50, 54, 63, 65,
 66, 76, 83, 89, 91, 103, 106, 127,
 129, 153, 168, 176-178, 189, 199,
 202, 205, 237, 240, 280, 282, 285,
 287, 288, 304, 318, 322, 328, 334,
 337, 342
 RESPONSE TIME 2, 3, 14, 21, 29, 36,
 40, 41, 53-55, 63, 68, 72, 73, 79,
 84, 89, 111, 123, 125, 129, 135, 138-
 140, 152, 168, 170, 173, 175, 178,
 179, 185, 189, 197, 201, 204, 212,
 220, 221, 224, 229, 235, 237, 247,
 251, 264, 267, 272, 273, 276, 277,
 279, 281, 288, 290, 291, 299, 301,
 304, 308, 309, 313, 318, 319, 322,
 328, 334, 336, 337, 340, 344, 352,
 354
 REVIEW 5, 33, 77, 79, 104, 105, 140,
 173, 178, 179, 203, 216, 218-220,
 223-225, 242, 271, 281, 292, 299,
 303, 306, 319, 340, 348, 349
 RHR 9, 24, 44, 46, 48, 49, 53, 85,
 104, 106, 114, 115, 117, 128, 131,
 132, 136, 144, 186, 195, 202, 210,
 292, 302, 308, 329, 344
 RHR/SSF 44, 53, 106, 117, 186, 202,
 308
 RHR/TSF 44, 115, 128, 131, 302, 308,
 344
 ROBINSON 2 (PWR) 226
 SALEM 1 (PWR) 227-233
 SALEM 2 (PWR) 234-237
 SAMPLING 57, 225, 274
 SAN ONOPRE 1 (PWR) 238, 239
 SAN ONOPRE 2 (PWR) 240-245
 SAN ONOPRE 3 (PWR) 246-248
 SCRAM, REAL 4, 6, 7, 11, 19-21, 26,
 32, 34, 45, 50, 59, 60, 73, 75, 76,
 80, 81, 100-103, 152, 155, 156, 168,
 171, 180, 200, 205, 208, 214, 221,
 227-230, 247, 248, 251, 252, 260,
 269, 270, 276, 278, 279, 283, 284,
 287, 289, 300, 314-318, 322, 323,
 325, 333, 348-350, 353-355, 360
 SCRAM, SPURIOUS 13, 35, 40, 71, 148,
 158-161, 211, 212, 288, 330, 343
 SEAL 3, 18, 22, 60, 67, 156, 196, 221,
 256, 268, 287, 345
 SENSORS, FLOW 46, 71, 143, 189, 200,
 218, 276, 302, 304, 323

KEYWORD INDEX

- SENSORS, LEVEL 13, 38, 55, 73, 74,
 108, 126, 167, 182, 228, 267, 297,
 307, 325, 330, 331
 SENSORS, PRESSURE 11, 19, 25, 28, 30,
 44, 94, 98, 102, 129, 155, 169, 180,
 242, 319, 355
 SENSORS, TEMPERATURE 16, 17, 61, 62,
 117, 142, 165, 166, 185, 202, 243,
 285, 297
 SEQUOYAH 1 (PWR) 249-263
 SEQUOYAH 2 (PWR) 257, 264-267
 SERVICE WATER SYSTEM 33, 44, 48, 49,
 105, 106, 186, 231, 233, 234, 272,
 295, 299, 310, 346
 SERVICE WATER SYSTEM/SSF 44, 186, 295,
 299
 SERVICE WATER SYSTEM/TSP 33, 44, 272
 SERVOMECHANISM 1, 2, 96, 104, 105,
 114, 131, 202, 268
 SHOCK ABSORBER 90, 172, 358
 SHUTDOWN SYSTEM, SECONDARY 43, 72
 SMOKE 118, 122, 275, 281
 SOLENOID 32, 50, 147, 300
 SOLID STATE DEVICE 52, 65, 81, 83, 85,
 93, 100, 102, 181, 197, 266, 278,
 280, 309, 343
 SPENT FUEL POOL 299
 SPENT FUEL POOL/SSF 299
 ST. LUCIE 1 (PWR) 268
 ST. LUCIE 2 (PWR) 269-271
 STACK 225
 STEAM 221
 STEAM GENERATOR 6, 7, 51, 64, 85, 100-
 102, 171, 196, 208, 227-230, 242,
 251, 252, 260, 263, 270, 271, 276,
 278, 284, 289, 314, 317, 318, 322,
 323, 339, 348, 349, 354, 355
 STEAM GENERATOR/SSF 51
 STEEL 22, 231
 STEEL, STAINLESS 210, 233, 323, 339
 STORAGE CONTAINER 19, 29, 72, 100,
 221, 256, 267, 279, 355, 359
 STRUCTURE 3, 33, 45, 69, 75, 156, 165,
 166, 232, 257, 330, 352
 STRUCTURE/TSP 232
 SUBSYSTEM FAULT 13, 18, 27, 32, 40-42,
 44, 48, 49, 51, 53, 55, 56, 65, 66,
 71, 75, 80, 83-86, 89, 91, 102, 105,
 106, 117, 118, 120, 122, 125, 128,
 129, 135, 148, 150, 154, 170, 176,
 177, 186, 197, 202, 211, 212, 235,
 237, 239, 260, 282, 285, 289, 295,
 299, 304, 306, 308, 313, 314, 319,
 328, 336, 338, 342
 SUMMER 1 (PWR) 272-282
 SUPPORT STRUCTURE 3, 90, 120, 172,
 174, 257, 275, 358
 SURRY 1 (PWR) 283, 284
 SURRY 2 (PWR) 285-292
 SUSQUEHANNA 1 (BWR) 293-302
 SUSQUEHANNA 2 (BWR) 294, 296
 SYSTEM CAPACITY 6, 7, 11, 13, 100-102,
 SYSTEM CAPACITY 126, 156, 171, 182,
 204, 208, 221, 227-230, 232, 251,
 252, 260, 270, 276, 278, 284, 289,
 314, 317, 318, 322, 323, 325, 330,
 331, 348, 349, 354, 355
 TEMPERATURE 6, 8, 12, 17, 204, 208,
 227, 229, 295, 297, 311, 313, 315
 TEST INTERVAL 36, 138, 173, 178, 179,
 224, 225, 267, 271-273, 277, 299,
 301, 308, 309, 352
 TEST, SYSTEM OPERABILITY 2, 3, 10, 18-
 20, 22-25, 27, 28, 32, 36, 38, 39,
 43, 44, 46, 50, 52-57, 60, 62, 63,
 65, 67-70, 72, 74, 75, 84, 85, 90,
 91, 94, 97, 98, 102, 106-108, 111,
 118, 120, 122, 123, 125, 127, 133,
 137-139, 141, 144-146, 150, 157, 161,
 162, 164, 167, 170, 174, 175, 183-
 187, 189, 191, 195, 198, 201, 206,
 207, 209-211, 214, 217, 218, 233,
 234, 250, 256, 267, 268, 272-275,
 277, 280, 285, 291, 293, 297-301,
 305, 309, 310, 312, 313, 319, 332,
 334, 336, 337, 339, 341, 346, 351,
 352, 355, 358
 TESTING 5, 29, 33, 58, 77, 79, 88,
 104, 105, 138, 140, 155, 173, 175,
 178, 179, 183, 203, 216, 218-220,
 223-225, 242, 267, 271, 273, 274,
 277, 281, 292, 298, 299, 301, 303,
 306, 308, 309, 319, 334, 336, 337,
 340, 348-350, 352, 360
 THERMAL TRANSIENT 110, 203, 290
 THREE MILE ISLAND 2 (PWR) 303-308
 TORUS 144
 TOTAL SYSTEM FAULT 6, 8, 10-12, 15-18,
 20, 22, 23, 32, 33, 37-39, 41, 44,
 74, 75, 78, 79, 85, 87, 100, 101,
 103, 105-107, 112, 115, 120, 123,
 128, 129, 131, 134, 136, 143, 146,
 150, 153, 155, 156, 163, 165, 166,
 168, 169, 171, 176, 177, 180, 181,
 183, 188, 190, 191, 196, 200, 205,
 208, 221, 227, 229, 232, 239, 241,
 242, 245, 246, 248, 251, 252, 255-
 258, 260, 265, 272, 273, 284, 290,
 296, 302, 304, 308, 311, 314, 315,
 318, 322, 324, 325, 333, 335, 344,
 356
 TRAINING 76, 110, 271
 TRANSFORMERS 75, 86, 136, 149, 318,
 343
 TRANSIENT 13, 112, 246, 251
 TROJAN (PWR) 309, 310
 TUBING 8, 17, 45, 118, 122, 125, 196,
 234
 TUBING FAILURE - SEE FAILURE, TUBING
 TURBINE 19, 34, 45, 73, 101, 106, 107,
 116, 123, 152, 155, 205, 221, 227-
 229, 252, 260, 269, 270, 279, 289,
 318, 321, 322, 325, 348, 354
 TURBINE/TSP 205

KEYWORD INDEX

TURKEY POINT 3 (PWR) 311-321
TURKEY POINT 4 (PWR) 313, 322, 323
UPDATE 2, 3, 23, 38, 43, 46, 51-56,
61-67, 90-93, 98, 104, 116-129, 140,
141, 181, 210, 234, 266, 285, 293,
324, 351, 352
VALVE OPERATORS 1, 2, 14, 32, 50, 96,
104, 105, 114, 131, 145, 147, 202,
228, 236, 268, 271, 287, 289, 300,
348, 357
VALVE CHECK 70, 144, 157
VALVES 1-3, 6, 10-12, 14, 16, 18, 19,
22, 27, 29, 31-33, 37, 38, 40, 41,
43-45, 50, 55, 57, 59, 64, 67-73, 75,
79, 82, 95-97, 102, 104, 105, 113-
118, 123-125, 128, 131, 132, 136-138,
140, 141, 143-147, 152, 155, 157,
163, 165-167, 169, 176, 184, 186,
187, 193, 194, 198, 201, 202, 204,
205, 209, 224, 227, 228, 230, 235,
236, 240-242, 244, 243, 251-254, 256,
258, 259, 261-264, 266, 268, 270,
271, 276, 278, 279, 283, 284, 287,
283, 295, 300, 302, 303, 305, 306,
310, 312, 314, 330, 333, 334, 348,
349, 352, 356, 357
VENTILATION SYSTEM 8, 12, 14, 15, 17,
27, 41, 53, 65, 68, 84, 85, 87, 92,
95, 128, 133, 135, 136, 146, 147,
150, 151, 163, 165, 166, 169, 188,
190, 191, 193, 194, 215, 231, 234,
240, 241, 244, 245, 249, 253-259,
262-266, 271, 304, 306, 313, 326,
334, 335, 337, 338, 346
VENTILATION SYSTEM/SSF 27, 65, 84,
128, 135, 150, 304, 306, 338
VENTILATION SYSTEM/TSP 8, 12, 15, 17,
82, 128, 136, 146, 150, 153, 163,
188, 190, 191, 241, 245, 255, 257,
265, 304, 335
VERMONT YANKEE (BWR) 324, 325
VIBRATION 19, 35, 64, 73, 122, 153,
156, 170, 186, 205, 285, 289, 293,
327
WASTE MANAGEMENT 262
WASTE TREATMENT, GAS 93, 124, 256,
334, 341
WASTE TREATMENT, LIQUID 78, 256
WEAR 54, 63, 64, 105, 149, 157, 186
WEATHER, SEVERE 75
WELDS 195, 207, 210, 231
WPPSS 2 (BWR) 326-338
YANKEE ROWE (PWR) 339, 340
ZION 1 (PWR) 341-350, 356
ZION 2 (PWR) 341, 351-360

VENDOR CODE INDEX

ACF INDUSTRIES INC. 157
 AGASTAT RELAY CO. 129, 153, 189, 205
 AIR PRODUCTS EQUIP. COMPANY 332
 ALLIS CHALMERS 105, 106
 AMERACE CORP. 41
 AMERICAN STANDARD, HEAT TRANSFER DI 310
 AMERICAN WARMING & VENTILATING INC.
 165, 166
 AMPHENOL 160, 161
 ANCHOR/DARLING INDUSTRIES 22
 ANCHOR/DARLING VALVE CO. 10, 157
 ARMCO STEEL CORP. 60
 ASCO VALVES 147
 AUTOMATIC SPRINKLER CORPORATION 118
 AUTOMATIC VALVE COMPANY 32
 BABCOCK & WILCOX COMPANY 207
 BAILEY METER COMPANY 78, 200
 BARKSDALE COMPANY 44, 94
 BARTON INSTRUMENT CO., DIV OF ITT 74,
 167, 302, 319
 BECKMAN INSTRUMENTS, INC. 109
 BLACKSTONE CORPORATION 144
 BROWN & ROOT INC. 45
 BUFFALO ELECTRIC CO. 215
 BUSSMANN MFG (DIV OF MCGRAW-EDISON) 148
 BYRON JACKSON PUMPS, INC. 56
 CHICAGO BRIDGE AND IRON COMPANY 67, 77
 COMBINATION PUMP VALVE CO. 140
 COMBUSTION ENGINEERING, INC. 247
 COMSIP CUSTOM LINE CORP. 294
 COMSIP DELPHI INC. 121
 COPES-VULCAN, INC. 113, 283, 284
 CROSBY VALVE 113, 300
 CUTLER-HAMMER 202
 DARLING-ANCHOR 115
 DE LAVAL TURBINE, INC. 118, 120, 125
 DELTA SOUTHERN CO. 113
 DIONEX CORP 222
 DOW CHEMICAL COMPANY, THE 53
 DRAGON VALVE, INC. 258, 330
 DRAVO, INC. 210
 DRESSER INDUSTRIAL VALVE & INST DIV 11,
 64
 EBERLINE INSTRUMENT CORP. 301
 FIKE METAL PRODUCTS CORP. 38
 FISHER CONTROLS CO. 6, 113, 184, 186,
 187, 270
 FISHER FLOW CONTROL DIV (ROCKWELL 147
 FOXBORO CO., THE 182
 GENERAL ATOMIC CO. 249, 253-255, 259,
 264, 265, 299
 GENERAL ELECTRIC CO. 23, 41, 42, 50,
 54, 63, 65, 66, 91, 93, 95, 97, 106,
 119, 124, 127, 142, 154, 162, 164,
 192, 203, 304, 318, 322, 324, 327, 334
 GENERAL ELECTRIC CORP. (NUCLEAR ENG 13,
 18, 158, 159
 GENERAL MOTORS 129, 328, 336
 GLESNER INDUSTRIAL SUPPLY 325
 GOULDS PUMPS INC. 9
 HAGAN CONTROLS 228, 229
 HANCOCK CO. 228
 HILLS-MCCANNA COMPANY 14
 IBM CORP. 181
 INGERSOL-RAWD CO. 100, 123
 ITE IMPERIAL CORPORATION 285
 ITT GRINNELL 358
 ITT-BARTON 108
 JAMES BURY CORP. 295
 KAMAN SCIENCES CORP. 326, 338
 KEROTEST MANUFACTURING CORP. 357
 LEEDS & NORTHRUP CO. 141
 LIMITORQUE CORP. 1, 2, 96, 105, 114,
 287
 LONERGAN, J.E., CO. 144
 M D A SCIENTIFIC, INC. 190, 193
 MAGNETROL, INC. 297
 MASONEILAN INTERNATIONAL, INC. 184,
 228, 230
 MCGRAW EDISON CO., POWER SYSTEMS DI 341
 MERCROID CORP. 19, 98
 MONSANTO RESEARCH CORP. 51
 MOORE INDUSTRIES 46
 MOTOROLA 81, 217
 NAMCO CONTROLS 214
 NASH ENGINEERING COMPANY, THE 33
 NELSON ELEC MFG (SUB GEN SIGNAL) 297
 NUCLEAR MEASUREMENTS CORP. 244
 PACIFIC SCIENTIFIC COMPANY 90
 PACIFIC VALVES, INC. 144
 PANALARM COMPANY 16
 POTTER & BRUMFIELD 31, 351, 352
 POWELL, WILLIAM COMPANY 143
 POWER-MATE 171
 PRATT, HENRY COMPANY 146
 PULLMAN PWR PROD CORP 233
 RAYMOND CONTROLS 352
 RILEY COMPANY, THE - PANALARM DIVI 165,
 166
 ROCHESTER INSTRUMENT SYSTEMS, INC. 61,
 62
 ROCKWELL-INTERNATIONAL 70, 144
 ROSEMOUNT, INC. 30, 143, 218, 323, 325
 SCHUTTE AND KOERING COMPANY 18
 SPRAY ENGINEERING COMPANY 295
 STATIC-O-RING 25, 28
 TARGET ROCK CORP. 137, 145
 TECHNOLOGY FOR ENERGY CORP. 296
 TELEDYNE PHILBRUCK NEXUS 92
 TEMP FLEX DIV. ASSOCIATED PIPING 156
 TERRY STEAM TURBINE COMPANY 107
 THERMON MANUFACTURING 286
 THOMAS PUMP COMPANY INC. 351
 UNITED ELECTRIC CONTROLS COMPANY 355
 VELAN VALVE CORP. 82, 114, 268
 VITRO ENGINEERING DIVISION 52, 65
 WALWORTH COMPANY 37, 138, 144
 WEATHER MEASURE CORP. 219
 WEED INSTRUMENT COMPANY, INC. 185
 WESTINGHOUSE ELEC CORP.-NUCLEAR ENR
 206, 345
 WESTINGHOUSE ELECTRIC CORP. 71, 72,
 100, 102, 149, 196, 226, 234, 269,
 278, 283, 284, 287, 289, 321, 329, 332

NRC FORM 335 (11-81)		U.S. NUCLEAR REGULATORY COMMISSION BIBLIOGRAPHIC DATA SHEET		1. REPORT NUMBER (Assigned by DDC) NUREG/CR-2000, Vol. 3, No. 5 ORNL/NSIC-200	
4. TITLE AND SUBTITLE (Add Volume No., if appropriate) Licensee Event Report (LER) Compilation for Month of May 1984			2. (Leave blank)		
7. AUTHOR(S) Prepared by Oak Ridge National Laboratory			3. RECIPIENT'S ACCESSION NO.		
9. PERFORMING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code) Oak Ridge National Laboratory Nuclear Operations Analysis Center Oak Ridge, TN 37831			5. DATE REPORT COMPLETED MONTH YEAR June 1984		
12. SPONSORING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code) Office for Analysis and Evaluation of Operational Data U.S. Nuclear Regulatory Commission Washington, DC 20555			DATE REPORT ISSUED MONTH YEAR June 1984		
			6. (Leave blank)		
			7. (Leave blank)		
13. TYPE OF REPORT Monthly Report			10. PROJECT/TASK/WORK UNIT NO.		
			11. FIN NO. Fin A9135		
15. SUPPLEMENTARY NOTES			14. (Leave blank)		
16. ABSTRACT (200 words or less) This monthly report contains Licensee Event Report (LER) operational information that was processed into the LER data file of the Nuclear Safety Information Center (NSIC) during the one month period identified on the cover of this document. The LERs, from which this information is derived, are submitted to the Nuclear Regulatory Commission (NRC) by nuclear power plant licensees in accordance with federal regulations. Procedures for LER reporting are described in detail in NRC Regulatory Guide 1.16 and NUREG-0161, Instructions for Preparation of Data Entry Sheets for Licensee Event Reports. The LER summaries in this report are arranged alphabetically by facility name and then chronologically by event date for each facility. Component, system, keywords, and component vendor indexes follow the summaries. The components, systems, and vendors are those identified by the utility when the LER form is initiated, the keywords are assigned by the computer using correlation tables from the Sequence Coding and Search System.					
17. KEY WORDS AND DOCUMENT ANALYSIS Licensee Event Report			17a. DESCRIPTORS		
17b. IDENTIFIERS OPEN ENDED TERMS					
18. AVAILABILITY STATEMENT Unlimited			19. SECURITY CLASS (This report) Unclassified		21. NO. OF PAGES
			20. SECURITY CLASS (This page) Unclassified		22. PRICE \$

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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