
Licensee Event Report (LER) Compilation

For month of July 1985

Oak Ridge National Laboratory

Prepared for
U.S. Nuclear Regulatory
Commission

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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 revisions to those events occurring prior to 1984 are described in NRC Regulatory Guide 1.16 and NUREG-1061, *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 direct to

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CONTENTS

	<u>Page</u>
Licensee Event Reports.....	1
Component Index.....	107
System Index.....	110
Keyword Index.....	113
Vendor Code Index.....	122

[1] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 85-003
 CONTAINMENT AIRLOCK SURVEILLANCE NOT PERFORMED.
 EVENT DATE: 020185 REPORT DATE: 031185 NSSS: CE TYPE: PWR
 VENDOR: WOOLEY COMPANY

(NSIC 193725) DURING A REVIEW OF PROCEDURAL ACTIVITIES USED TO DETERMINE COMPLIANCE WITH TECH SPEC SURVEILLANCE REQUIREMENTS IT WAS DETERMINED THAT TECH SPEC 4.6.1.3.C SURVEILLANCE REQUIREMENT HAD NOT BEEN MET. THIS REQUIREMENT TESTS THE CAPABILITY OF MECHANICAL INTERLOCKS ON THE CONTAINMENT BLDG AIRLOCKS TO ALLOW OPENING OF ONLY 1 DOOR AT A TIME. THIS 6 MONTH SURVEILLANCE IS APPLICABLE TO BOTH THE PERSONNEL AIRLOCK AND EMERGENCY AIRLOCK. THE LAST SURVEILLANCE ON 2C-4 DOOR INTERLOCK HAD BEEN PERFORMED APPROX 18 MONTHS PREVIOUSLY. NO DOCUMENTED COMPLIANCE FOR PERFORMANCE OF THE SURVEILLANCE COULD BE LOCATED FOR 2C-2. THE APPROPRIATE TEST PROCEDURE WAS REVISED TO INCLUDE A FUNCTIONAL CHECK OF BOTH DOOR INTERLOCKS AND THE DOOR INTERLOCKS WERE PROMPTLY TESTED. THE 2C-4 DOOR INTERLOCK WAS VERIFIED OPERABLE. HOWEVER, THE 2C-2 INTERLOCK MECHANISM WAS FOUND TO BE MISSING A REQUIRED PART; THEREFORE, THE FUNCTIONAL TEST COULD NOT BE PERFORMED. IN ACCORDANCE WITH TECH SPEC 3.6.1.3 ACTION STATEMENT, THE 2C-2 AIRLOCK DOOR WAS VERIFIED OPERABLE AND LOCKED CLOSED UNDER THE ADMINISTRATIVE CONTROL OF THE UNIT SHIFT SUPERVISOR. THE INTERLOCK MECHANISM FOR 2C-2 IS TO BE REPAIRED DURING THE UPCOMING UNIT 2 REFUELING OUTAGE. THIS DEFICIENCY APPEARS TO BE AN ISOLATED EVENT BASED ON THE RESULTS OF A COMPREHENSIVE REVIEW OF TECH SPEC SURVEILLANCES WHICH HAS RECENTLY BEEN CONDUCTED.

[2] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 85-004
 REACTOR TRIP DUE TO TURBINE TRIP CAUSED BY LOSS OF GENERATOR EXCITATION.
 EVENT DATE: 020485 REPORT DATE: 030685 NSSS: CE TYPE: PWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193726) ON 2-4-85 AT 2234 HRS, AN AUTOMATIC REACTOR TRIP OCCURRED WHILE IN MODE 1. A LOSS OF MAIN GENERATOR FIELD EXCITATION CAUSED A TURBINE GENERATOR TRIP RESULTING IN A HIGH RCS PRESSURE REACTOR TRIP. EMERGENCY FEEDWATER AUTOMATICALLY INITIATED DUE TO NORMAL POST TRIP SG VOLUME 'SHRINK'; MANUAL CONTROL WAS TAKEN TO MAINTAIN THE DESIRED SG LEVELS. THE STEAM DUMP AND BYPASS CONTROL SYSTEM FAILED TO CONTROL STEAM PRESSURE IN AUTOMATIC; MANUAL CONTROL WAS TAKEN TO MAINTAIN THE DESIRED STEAM PRESSURE. A LOOSE CONNECTOR PROBLEM IN THE SDBCS MASTER CONTROLLER WAS CORRECTED AND THE SDBCS WAS RETURNED TO AUTOMATIC. INVESTIGATION INTO THE CAUSE OF THE LOSS OF EXCITATION REVEALED THAT A PILOT EXCITER BRUSH HAD LODGED BETWEEN THE BRUSH GUIDE AND BRUSH SPRING ARM. THIS CAUSED ARCING IN THE SLIP RING AREAS AND RESULTED IN A LOSS OF EXCITATION CONTROL. THE ROOT CAUSE WAS DETERMINED TO BE THAT THE BRUSH WAS TOO SHORT DUE TO WEAR. THE SLIP RINGS WERE MACHINED AND REINSTALLED AND THE EXCITER BRUSHES WERE REPLACED. BRUSH INSPECTION HAS BEEN INCREASED TO ONCE PER 14 DAYS AND BRUSH REPLACEMENT CRITERIA HAVE BEEN ADDED TO THE INSPECTION. TRAINING REGARDING COMMUTATOR PREVENTATIVE MAINTENANCE HAS BEEN PRESENTED TO THE ELECTRICAL MAINTENANCE PERSONNEL.

[3] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 85-005
 REACTOR TRIP DUE TO OUT OF RANGE AXIAL SHAPE INDEX.
 EVENT DATE: 020785 REPORT DATE: 030885 NSSS: CE TYPE: PWR

(NSIC 193727) ON 2-7-85, AT 0551 HRS, AN AUTOMATIC REACTOR TRIP OCCURRED DURING A PLANT STARTUP WHILE IN MODE 1 AT 7% POWER. A CORE PROTECTION CALCULATOR (CPC) DETERMINED AXIAL SHAPE INDEX (ASI), UTILIZING EXCORE NUCLEAR INSTRUMENTATION, EXCEEDED THE CPC ANALYZED ASI RANGE RESULTING IN A CPC AUXILIARY TRIP ON LOW DNBR/HIGH LPD. NO POST-TRIP OPERATIONAL DIFFICULTIES WERE NOTED. PLANT STARTUP PROCEDURES WERE PREVIOUSLY MODIFIED TO INCORPORATE CONTROL ELEMENT ASSEMBLY POSITION RECOMMENDATIONS AFTER A SIMILAR REACTOR TRIP REPORTED IN LER 50-368-84-027. AT THE TIME OF THIS EVENT, THE CEA'S WERE NOT AT THE RECOMMENDED

POSITIONS. OPERATIONS PERSONNEL WERE UTILIZING CEA'S FOR PROMPT REACTOR CONTROL IN RESPONSE TO PLACING THE TURBINE ON LINE JUST PRIOR TO THE TRIP. THE PROCEDURE HAS BEEN FURTHER MODIFIED TO REQUIRE THAT STARTUP CEA POSITIONS BE ESTABLISHED PRIOR TO REACHING 5% POWER. NO DIFFICULTIES WERE NOTED DURING THE SUBSEQUENT STARTUP.

[4] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 85-006
FIRE DOOR FOUND OPEN.
EVENT DATE: 022185 REPORT DATE: 032285 NSSS: CE TYPE: PWR

(NSIC 193728) ON 2-21-85, A FIRE WATCH WAS REQUESTED TO BE POSTED AT FIRE DOOR #206, A WATER-TIGHT DOOR TO THE 'B' HIGH PRESSURE SAFETY INJECTION PUMP ROOM, SO THAT THE DOOR COULD BE OPENED FOR PAINTING AND LABELING AS A FIRE DOOR; THE FIRE WATCH FOUND THE DOOR OPEN. THE DOOR WAS PAINTED AND LABELED AFTER WHICH THE DOOR WAS CLOSED. IT IS BELIEVED THE INDIVIDUAL WHO LEFT THE DOOR OPEN DID NOT REALIZE THE DOOR WAS A FIRE DOOR SINCE IT LACKED PROPER FIRE DOOR LABELING IN ACCORDANCE WITH THE NEW FIRE BARRIER AND PENETRATION MARKING PROGRAM. AP&L IS EXPEDITING EFFORTS TO COMPLETE THE FIRE DOOR LABELING PROGRAM IN ORDER TO ELIMINATE CONFUSION AND PREVENT RECURRENCE.

[5] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 85-007
FIRE DOOR NOT FUNCTIONAL AS FIRE BARRIER.
EVENT DATE: 031185 REPORT DATE: 040985 NSSS: CE TYPE: PWR

(NSIC 193912) ON 3-11-85 WHILE IN MODE 1, A FIRE DOOR SURVEILLANCE REVEALED THAT FIRE DOOR 448 DID NOT MEET INSPECTION ACCEPTANCE CRITERIA. THE ABILITY OF THE ASSEMBLY TO PERFORM AS A FIRE BARRIER WAS AFFECTED; SCREWS IN THE HINGES WERE LOOSE OR MISSING, THE DOOR CLOSING DEVICE WAS NOT OPERATING PROPERLY RESULTING IN FAILURE OF THE DOOR TO LATCH WHEN RELEASED FROM THE FULL OPEN POSITION AND AN EXCESSIVE GAP EXISTED BETWEEN THE DOOR AND FRAME. FD-448 IS THE DOOR TO THE RADIOCHEMISTRY LAB WHICH IS A HIGH USE AREA; THE HINGE AND DOOR CLOSING MECHANISM LATCHING DEFICIENCIES WERE RELATED TO THIS HIGH USAGE. THE HINGES AND DOOR CLOSING MECHANISM WERE REPAIRED; ADDITIONALLY, THE DOOR LATCH WAS REPLACED. THE DOOR FRAME WAS ADJUSTED TO PROVIDE PROPER GAP BETWEEN THE DOOR AND FRAME. THE FIRE DOOR SURVEILLANCE IS CONTINUING. IF OTHER REPORTABLE FIRE DOOR DISCREPANCIES ARE DISCOVERED DURING THIS SURVEILLANCE, THEY WILL BE REPORTED ON A REV TO THIS LER. SIMILAR OCCURRENCES RELATED TO DEFICIENT, HIGH USE FIRE DOORS HAVE BEEN REPORTED IN LERS (50-368) 84-029 AND 83-045. INCREASES IN THE FREQUENCY OF FIRE DOOR INSPECTIONS FOR HIGH USE DOORS HAVE BEEN IMPLEMENTED TO IMPROVE IDENTIFICATION OF MAINTENANCE REQUIREMENTS BEFORE FAILURES OCCUR.

[6] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 85-008
BLOCKOUT IN FIRE BARRIER WALL NOT SEALED PROPERLY (APPENDIX R).
EVENT DATE: 031885 REPORT DATE: 041985 NSSS: CE TYPE: PWR

(NSIC 193913) ON 3-18-85 WITH THE UNIT IN REFUELING SHUTDOWN, AN INSPECTION ASSOCIATED WITH A 10 CFR 50, APPENDIX R, FIRE BARRIER UPGRADE DESIGN CHANGE REVEALED A DEGRADED PENETRATION FIRE BARRIER 'BLOCKOUT'. A BLOCKOUT IS A DESIGN OPENING IN A CONCRETE WALL WHICH HAS NO LOAD BEARING FUNCTION AND WHICH CAN BE LEFT OPEN DURING CONSTRUCTION ACTIVITIES AND SEALED AFTER ACCESS IS NO LONGER REQUIRED. THE BLOCKOUT, LOCATED IN THE FIRE BARRIER WALL BETWEEN AN ELECTRICAL PENETRATION ROOM AND DG ROOM, CONTAINED A GAP OF 1 INCH BY 8 INCHES. A FIRE WATCH WAS ESTABLISHED PER THE REQUIREMENTS OF TECH SPEC 3.7.11 AND THE VOID WAS SUBSEQUENTLY FILLED WITH GROUT TO PROVIDE A COMPLETE SEAL. FIRE DETECTION INSTRUMENTATION WITH CONTROL ROOM ALARM AND AUTOMATIC SUPPRESSION EQUIPMENT EXISTED ON BOTH SIDES OF THE FIRE BARRIER WALL. THE GAP IS BELIEVED TO HAVE EXISTED SINCE INITIAL GROUT SEALING OF THE BLOCKOUT. SIMILAR OCCURRENCE OF DEGRADED FIRE BARRIER WALLS WERE REPORTED IN LER 50-368/83-045.

[7] ARNOLD
HPCI TURBINE REVERSING CHAMBER PROBLEMS.
EVENT DATE: 022185 REPORT DATE: 050685
VENDOR: TERRY STEAM TURBINE COMPANY

DOCKET 50-331 LER 85-007
NSSS: GE TYPE: BWR

(NSIC 193969) DURING DISASSEMBLY OF THE HPCI TURBINE FOR OVERHAUL AND INSPECTION ON 2-21-85, WHILE IN A REFUEL OUTAGE, DAMAGE AND MISSING PARTS WERE NOTED IN SEVERAL OF THE 10 STEAM REVERSING CHAMBERS. THREE CHAMBERS HAD CRACKS, 1 WITH A SMALL PIECE MISSING, AND A 4TH HAD A LINEAR INDICATION. SEVERAL MOUNTING BOLTS WERE MISSING AND SEVERAL BOLT LOCKING TABS WERE MISSING OR FOUND CRACKED AND/OR ERODED. CRACKING OF THE REVERSING CHAMBERS HAS BEEN DISCOVERED IN THE HPCI TURBINE DURING PREVIOUS REFUELING OUTAGES. BETWEEN EACH OUTAGE NO HPCI SYSTEM OPERABILITY DEGRADATION HAS BEEN NOTED DUE TO REVERSING CHAMBER PROBLEMS. PLANT OPERATING EXPERIENCE, AND THE TURBINE MANUFACTURER, INDICATES THESE PROBLEMS DO NOT AFFECT THE ABILITY OF THE HPCI SYSTEM TO PERFORM ITS DESIGN FUNCTION. REVERSING CHAMBERS ARE BEING INSPECTED PRIOR TO INSTALLATION, AND A NEW LOCKING TAB DESIGN WILL BE INSTALLED. THE TURBINE WILL BE INTERNALLY INSPECTED DURING THE NEXT REFUEL OUTAGE. THIS LER IS BEING SUBMITTED TO DOCUMENT CONTINUING EFFORTS TO RESOLVE PROBLEMS WITH HPCI TURBINE REVERSING CHAMBERS.

[8] ARNOLD
INDICATION OF WELD DEFECTS IN RECIRCULATION PIPING.
EVENT DATE: 031085 REPORT DATE: 040985
VENDOR: SOUTHWEST GALVENIZING

DOCKET 50-331 LER 85-010
NSSS: GE TYPE: BWR

(NSIC 193852) DURING THE CYCLE 8 REFUEL OUTAGE, THE DUANE ARNOLD ENERGY CENTER IS INSPECTING RECIRCULATION SYSTEM PRIMARY PIPING WELDS. THE PROCESS INVOLVED ULTRASONIC TESTING OF 107 PRIMARY WELDS FOLLOWED BY INDUCTION HEAT STRESS IMPROVEMENT. THE WELDS ARE THEN REINSPECTED VISUALLY AND WITH ULTRASONICS. ON 3-10-85 DUANE ARNOLD ENERGY CENTER PERSONNEL WERE NOTIFIED BY THE CONTRACTED INSPECTORS THAT THEIR EVALUATION OF THE INITIAL TEST RESULTS FOR A WELD ON THE UPPER END OF THE 'D' RISER OF 'B' LOOP OF RECIRCULATION PIPING HAD TWO AXIALLY ORIENTED INDICATIONS CONNECTED BY A CIRCUMFERENTIALLY ORIENTED INDICATION OF MAXIMUM LENGTH OF 7/8 INCH. THE MAXIMUM THROUGH-WALL DEPTH WAS ESTIMATED TO BE APPROX 60% AND 13% RESPECTIVELY FOR THE AXIAL AND CIRCUMFERENTIAL INDICATIONS. INITIAL INSPECTIONS ALSO IDENTIFIED AN INDICATION OF PROBLEMS AT THE LOWER END OF THE 'D' RISER. AFTER IHST TREATMENT, SEVERAL OTHER WELDS, PREDOMINATELY THOSE NEAR THE TOP OF THE RECIRCULATION PIPING RISERS, HAVE EXHIBITED INDICATIONS THAT ARE NOW MORE READILY DETECTABLE AS A RESULT OF THE HEAT STRESS IMPROVEMENT PROCESS. TWO WELDS WERE VISUALLY DETECTED TO BE WEEPING FOLLOWING IHST TREATMENT. THIS REPORT WILL BE UPDATED WITH A SUPPLEMENTAL REPORT THAT WILL DOCUMENT THE FULL EXTENT OF THE PROBLEM AND THE REPAIR WORK THAT IS DONE.

[9] ARNOLD
MAINTENANCE WORKERS INADVERTENTLY TRIP 8 CIRCUIT BREAKERS.
EVENT DATE: 031185 REPORT DATE: 041085

DOCKET 50-331 LER 85-008
NSSS: GE TYPE: BWR

(NSIC 193850) ON 3-11-85, WITH THE REACTOR SHUTDOWN AND DEFUELED FOR A REFUELING OUTAGE, 8 CIRCUIT BREAKERS ON THE 'B' INSTRUMENT AC DISTRIBUTION PANEL WERE INADVERTENTLY BUMPED TO THE OFF POSITION WHILE WORKERS WERE REPLACING THE PANEL COVER. AS A RESULT, SEVERAL ALARMS AND SYSTEM DOWNSCALE TRIPS WERE INITIATED; MOST NOTABLY, THE 'B' STANDBY GAS TREATMENT SYSTEM AND A GROUP III ISOLATION WERE AUTO-INITIATED ON DOWNSCALE RADIATION MONITOR TRIPS. UNDER THE DIRECTION OF LICENSED OPERATORS THE TRIPPED CIRCUIT BREAKERS WERE RESET AND THE AFFECTED ALARMS AND SYSTEMS WERE RETURNED TO NORMAL STATUS WITHOUT FURTHER INCIDENT.

[10] ARNOLD DOCKET 50-331 LER 85-009
SPURIOUS RPS TRIP DUE TO RECIRCULATION PIPING MAINTENANCE.
EVENT DATE: 031585 REPORT DATE: 041485 NSSS: GE TYPE: BWR

(INSC 193851) THE RPS WAS ACTUATED AT 1739 AND 1741 HRS ON 3-15-85 BY INTERMEDIATE RANGE MONITOR HIGH FLUX UPSCALE TRIPS ON IRM CHANNELS 'A' AND 'B'. THE REACTOR MODE SWITCH WAS IN REFUEL WITH ALL FUEL REMOVED FROM THE CORE. CONTROL RODS WERE FULLY WITHDRAWN PRIOR TO THE EVENT. THE DRIVE AND SCRAM WATER TO EACH CONTROL ROD DRIVE WAS VALVED OUT AS IS NORMAL PRACTICE WHEN THE REACTOR IS DEFUELED. THEREFORE, NO CONTROL ROD MOVEMENT OCCURRED EVEN THOUGH THE RPS LOGIC WAS ACTUATED. THE SIGNALS WERE RECOGNIZED AS SPURIOUS AND WERE THE RESULT OF INDUCTION HEATING STRESS IMPROVEMENT WORK BEING PERFORMED ON THE RECIRCULATION PIPING. THE HIGH CURRENT PASSING THROUGH THE IHSI POWER CABLES DURING HEATING, IN CONJUNCTION WITH ROUTING OF THE POWER CABLES IN THE VICINITY OF THE IRM SIGNAL CABLES, WAS SUFFICIENT TO INDUCE A VOLTAGE SIGNAL IN THE IRM SIGNAL CABLES. ONE IRM CHANNEL WAS BYPASSED FOR THE DURATION OF THE IHSI RUN. THE IRM AND RPS TRIPS WERE RESET AFTER THE SPURIOUS SIGNALS STOPPED. AS THIS EVENT WAS CAUSED BY A ONE-TIME WORK ACTIVITY IN THE DRYWELL WHILE THE PLANT WAS SHUTDOWN, NO FURTHER CORRECTIVE ACTION IS PLANNED.

[11] ARNOLD DOCKET 50-331 LER 85-011
STEAM LINE HIGH RADIATION RPS TRIP OCCURS DUE TO RADIOGRAPHY TESTING.
EVENT DATE: 032185 REPORT DATE: 041985 NSSS: GE TYPE: BWR

(NSIC 193770) AT 2024 HRS ON 3-21-85 WHILE THE REACTOR WAS SHUT DOWN AND DEFUELED FOR A REFUELING OUTAGE, A FULL RPS TRIP SIGNAL AND CONTAINMENT ISOLATION GROUP I (MSIV) ISOLATION SIGNAL WERE RECEIVED FROM THE MAIN STEAM LINE RADIATION MONITORS. CONTROL RODS HAD BEEN FULLY WITHDRAWN FOLLOWING DEFUELING. DRIVE AND SCRAM WATER TO EACH CONTROL ROD DRIVE HAD BEEN VALVED OUT. ALL AFFECTED ISOLATION VALVES HAD BEEN DE-ENERGIZED AND TAGGED OUT IN THEIR ISOLATION POSITIONS. THERE WAS THEREFORE NO CONTROL ROD OR VALVE MOTION EVEN THOUGH THE ASSOCIATED LOGIC CIRCUITS WERE ACTUATED. A RADIOGRAPHY SOURCE WAS THE SOURCE OF THE RADIATION SIGNAL WHICH TRIPPED THE MONITORS. AT 2108 HRS, A SECOND SIGNAL WAS RECEIVED RESULTING FROM RADIOGRAPHY OPERATIONS WHICH REPEATED THE TRIP.

[12] BEAVER VALLEY 1 DOCKET 50-334 LER 85-002
REACTOR COOLANT PUMP SEAL SUPPLY ISOLATION VALVE LEAKS.
EVENT DATE: 012485 REPORT DATE: 022285 NSSS: WE TYPE: PWR
VENDOR: ROCKWELL-INTERNATIONAL

(INSIC 193771) ON 1-24-85 A HIGH SEAL INJECTION FLOW INDICATION WAS RECEIVED ON THE 1A RCP. THE CONTAINMENT SEAL ISOLATION VALVE WAS CLOSED TO VERIFY THAT NO INSTRUMENTATION PROBLEMS WERE EVIDENT. OPERATIONS PERSONNEL THEN OBSERVED THE TEMPERATURE OF THE LOWER RADIAL BEARING ON THE 1A RCP TRENDING UPWARD FROM 125 F TO 145 F. A HIGH CONTAINMENT SUMP LEVEL ALARM WAS RECEIVED. DUE TO THE INCREASING LEAK INDICATIONS WHICH WERE NONCONSERVATIVE WITH RESPECT TO TECH SPEC 3.4.6.2, WHICH LIMITS RCS LEAKAGE, A PLANT SHUTDOWN WAS COMMENCED. OPERATIONS PERSONNEL WERE ALSO PREPARING FOR A CONTAINMENT ENTRY TO DETERMINE THE LOCATION OF THE LEAK. AN UNUSUAL EVENT WAS DECLARED DUE TO THE EXCESSIVE RCS LEAKAGE. AN INVESTIGATION REVEALED THAT THE PACKING FOLLOWER ON THE 1A RCP SEAL SUPPLY ISOLATION VALVE BROKE AND THE PACKING HAD BLOWN OUT OF THE VALVE. THE VALVE WAS OBSERVED TO BE LEAKING AT A RATE OF APPROX 5 GPM. THE VALVE WAS BACK-SEATED AND THE LEAKAGE WAS TERMINATED. THE VALVE WAS DISASSEMBLED, THE PACKING REPLACED AND THE PACKING FOLLOWER WAS REPLACED WITH A SPLIT FOLLOWER. THE VALVE WAS RESASSEMBLED AND TESTED UNDER NORMAL SEAL INJECTION PRESSURE. NO LEAKAGE WAS NOTED DURING THIS TEST. THE VALVE WAS THEN RETURNED TO SERVICE.

[13] BEAVER VALLEY 1 DOCKET 50-334 LER 85-004
 AUXILIARY FEEDWATER PUMP SPURIOUSLY AUTO-STARTS.
 EVENT DATE: 020685 REPORT DATE: 030785 NSSS: WE TYPE: PWR

(NSIC 193772) ON 2-6-85 AT 1406 HRS THE 'B' MOTOR DRIVEN AUX FEEDWATER PUMP AUTO-STARTED WITHOUT A VALID ACTUATION SIGNAL. THE OPERATOR VERIFIED THAT THE ACTUATION WAS SPURIOUS, STOPPED THE PUMP, AND RETURNED IT TO STANDBY. AT 1407 THE PUMP AGAIN AUTO-STARTED. THE OPERATOR AGAIN VERIFIED THAT VALID STARTING CONDITIONS WERE NOT PRESENT, STOPPED THE PUMP, AND RETURNED IT TO STANDBY. NO FURTHER AUTO-START SIGNALS WERE RECEIVED. A THOROUGH INVESTIGATION WAS UNDERTAKEN WHICH CONSIDERED THE PUMP STARTING CIRCUITRY, THE 2 MAINTENANCE SURVEILLANCE PROCEDURES WHICH WERE IN PROGRESS AT THE TIME OF THE EVENT, AND THE EXISTING PLANT CONDITIONS. NO PREVIOUS SIMILAR INCIDENT HAD OCCURRED WITH EITHER THE 'A' OR 'B' PUMPS. BOTH THE SURVEILLANCE PROCEDURES HAVE BEEN PERFORMED BEFORE WITHOUT CAUSING ANY SIMILAR EVENT. A TECHNICAL REVIEW REVEALED NO REASON FOR EITHER OF THESE PROCEDURES TO CAUSE A PUMP AUTO-START. COMPARING ACTUAL PLANT CONDITIONS TO AUX FEEDPUMP STARTING CIRCUIT LOGIC SHOWED THAT NO VALID SIGNAL FOR A AUTO-START HAD EXISTED. IT WAS DETERMINED THAT THE AUTO-STARTS WERE DUE TO SPURIOUS RELAY ACTUATION. NO INDICATION OF RELAY MALFUNCTION EXISTS.

[14] BEAVER VALLEY 1 DOCKET 50-334 LER 85-005
 FAILURE TO PERFORM PORV ISOLATION VALVE LIMIT SWITCH CALIBRATION.
 EVENT DATE: 020885 REPORT DATE: 030885 NSSS: WE TYPE: PWR

(NSIC 193718) DURING A REVIEW OF THE MAINTENANCE PLANNING SYSTEM, A DISCREPANCY WAS NOTED IN THE SCHEDULING OF MAINTENANCE SURVEILLANCE PROCEDURE 6.67, "PORV ISOLATION VALVE LIMIT SWITCH CALIBRATION," IN THAT IT HAD NEVER BEEN SCHEDULED. A REVIEW OF MSP HISTORY FILES SHOWED THAT MSP 6.67 WAS WRITTEN AND APPROVED IN JUN 1982, AND WAS DERIVED FROM MSP 6.64, "PORV/PORV ISOLATION VALVE LIMIT SWITCH CALIBRATION." MSP 6.64 CALIBRATED THE LIMIT SWITCHES IN MAY, 1982. THE LIMIT SWITCHES SHOULD HAVE BEEN CALIBRATED VIA MSP 6.67 IN SEPT, 1983, BUT WERE NOT. IN 11-84, ALL 3 VALVE OPERATORS WERE REPLACED WITH NEW OPERATORS. THE INSTALLATION PROCEDURE INCLUDED THE CALIBRATION OF THE LIMIT SWITCHES. TECH SPEC 3.3.7 REQUIRES THE CALIBRATION TO BE PERFORMED EVERY 18 MONTHS. MSP 6.67 WAS NOT ENTERED INTO THE MAINTENANCE PLANNING SYSTEM IN JUN, 1982, DUE TO A MISCOMMUNICATION BETWEEN THE PROCEDURES GROUP AND THE PLANNING & SCHEDULING GROUP. IN THE FUTURE, PLANNING & SCHEDULING WILL PERFORM A DOCUMENTED REVIEW OF THE MAINTENANCE PLANNING SYSTEM AGAINST THE MSP INDEX ON A SEMI-ANNUAL BASIS. THERE WERE NO SAFETY IMPLICATIONS SINCE THE PORV'S WERE NOT CHALLENGED DURING 1983 OR 1984, AND SINCE THE ISOLATION VALVE STROKE TIMES WERE MONITORED THROUGHOUT THIS PERIOD AND NO DEGRADATION IN VALVE OPERATION WAS IDENTIFIED.

[15] BEAVER VALLEY 1 DOCKET 50-334 LER 85-006
 TURBINE TRIP/REACTOR TRIP ON HIGH SG LEVEL.
 EVENT DATE: 022185 REPORT DATE: 032285 NSSS: WE TYPE: PWR

(NSIC 193773) DURING A STARTUP FOLLOWING AN OUTAGE FOR THE REPAIR OF CONDENSER TUBE LEAKS, THE PLANT WAS AT 17% POWER AND INCREASING. PERSONNEL ERROR IN THE OPERATION OF THE MAIN FEEDWATER REGULATING VALVES, COMBINED WITH SLUGGISH RESPONSE OF THE BYPASS FEEDWATER REGULATING VALVES AND CONCURRENT CONDENSER STEAM DUMP OPERATION LED TO A SG SWELL WHICH CAUSED A TURBINE TRIP/REACTOR TRIP. TO AID IN THE PREVENTION OF SIMILAR INCIDENTS, SPECIFIC GUIDANCE ON THE OPERATION OF AND THE TRANSFER OF THE MAIN FEEDWATER REGULATING VALVES FROM MANUAL TO AUTOMATIC CONTROL WILL BE DEVELOPED AND INCORPORATED INTO THE APPROPRIATE PROCEDURES. A DESIGN CHANGE TO ENHANCE THE RESPONSE OF THE BYPASS FEEDWATER REGULATING VALVES IS IN PROGRESS. ADDITIONALLY, MINOR ADJUSTMENTS WERE MADE TO THE CONDENSER STEAM DUMP CONTROLLER TO PROVIDE SMOOTHER DUMP VALVE OPERATION.

[16] BIG ROCK POINT DOCKET 50-155 LER 81-016 REV 1
 UPDATE ON POTENTIAL CONTAINMENT PRESSURIZATION AFTER ACCIDENT.
 EVENT DATE: 081381 REPORT DATE: 043085 NSSS: GE TYPE: BWR

(NSIC 193943) THE CONTAINMENT VENTILATION ISOLATION VALVES WERE CLOSED FROM 6-15 TO 6-18-81 TO CONDUCT MAINTENANCE AND TESTING OF THE VALVES IN THE VENTILATION SYSTEM. ON 6-18-81 AN INTERNAL CONTAINMENT PRESSURE OF .5 PSIG WAS NOTED. THE CAUSE WAS SUBSEQUENTLY DETERMINED TO BE THE USE AND LEAKAGE OF AIR FROM THE INSTRUMENT AIR AND/OR SERVICE AIR SYSTEM. THE MAXIMUM CREDIBLE ACCIDENT (MCA) DESCRIBED IN CHAPTER 13 OF THE FINAL HAZARD SUMMARY REPORT POSTULATES THAT CONTAINMENT PRESSURE WILL RETURN TO ATMOSPHERIC FOLLOWING COOLING OF THE CONDENSIBLES IN THE CONTAINMENT ABOUT 4 DAYS AFTER SUCH AN EVENT. THE RADIOLOGICAL CONSEQUENCES OF THE MCA ARE BASED ON THIS CONDITION AND DO NOT CONSIDER THE POSSIBLE REPRESSURIZATION OF CONTAINMENT. CONTAINMENT DESIGN IS RATED AT 27 PSIG AND ASSUMING NO GROSS FAILURE OF AIR SYSTEM COMPONENTS IN CONTAINMENT, IT APPEARS THAT CONSIDERABLE TIME WOULD ELAPSE BEFORE SIGNIFICANT REPRESSURIZATION COULD OCCUR. THE RADIOLOGICAL CONSEQUENCES OF SUCH A POSTULATED EVENT HAVE BEEN DETERMINED TO BE WITHIN 10 CFR 100 GUIDELINES. OPERATING PROCEDURES HAVE BEEN MODIFIED TO REQUIRE THAT INSTRUMENT AND SERVICE AIR BE ISOLATED SHOULD CONTAINMENT PRESSURE APPROACH 10 PSIG.

[17] BIG ROCK POINT DOCKET 50-155 LER 84-003 REV 2
 UPDATE ON UNMONITORED LIQUID RELEASE TO SOIL.
 EVENT DATE: 053084 REPORT DATE: 101984 NSSS: GE TYPE: BWR

(NSIC 194002) SAMPLES TAKEN OF WATER LEAKAGE INTO THE BELOW GRADE WALL OF THE RADWASTE PUMP ROOM INDICATED PRESENCE OF TRITIUM AND IODINE-131 ON 5-30-84. THE TRITIUM ACTIVITY CLOSELY MATCHED THAT OF THE MAIN CONDENSATE BUT THE IODINE-131 CONCENTRATION WAS ABOUT 0.15 MPC WHEREAS THE CONCENTRATION OF IODINE-131 IN THE CONDENSATE SYSTEM AT THE TIME WAS ABOUT 52 MPC. THE PLANT, WHICH HAD BEEN OPERATING AT 58 MWEG WAS SHUT DOWN ON 5-30-84 TO INVESTIGATE THE LEAKAGE. A LEAK IN A 2 INCH DIAMETER ALUMINUM UNDERGROUND PIPE WHICH CARRIES WATER FROM THE DEMINERALIZED WATER SUPPLY TO THE MAIN CONDENSATE STORAGE TANK WAS THE CAUSE. AS A RESULT OF THE LEAKAGE, RADIOACTIVE LIQUID WAS RELEASED TO ON-SITE SOIL. THE TOTAL QUANTITY OF RADIOACTIVE MATERIAL LEAKED TO THE SOIL (INCLUDING THAT WHICH HAS BEEN REMOVED) IS ESTIMATED AT LESS THAN 5 MCI. THE RADIONUCLIDES INCLUDED IN THIS TOTAL ARE COBALT-60, MANGANESE-54, CESIUM-134 AND CESIUM-137. AN INVESTIGATION BY CONSUMERS POWER CO. REVEALS THAT THE RELEASE WAS NOT IN EXCESS OF THE LIMITS DEFINED IN 10 CFR 20.106 (RADIOACTIVITY IN EFFLUENTS TO UNRESTRICTED AREAS). BASED ON THIS INVESTIGATION, WE BELIEVE NO FURTHER ACTION IS NECESSARY AS A RESULT OF THE LEAK.

[18] BIG ROCK POINT DOCKET 50-155 LER 84-011 REV 1
 UPDATE ON LOSS OF CONTAINMENT INTEGRITY THROUGH THE PERSONNEL AIR LOCK.
 EVENT DATE: 073184 REPORT DATE: 103084 NSSS: GE TYPE: BWR
 VENDOR: CHICAGO BRIDGE AND IRON COMPANY

(NSIC 193689) ON 7-31-84, 1 OF 2 LEVER ARMS CONTROLLING THE MECHANICAL INTERLOCK ON THE CONTAINMENT SPHERE PERSONNEL AIR LOCK WAS INOPERABLE DUE TO A BOLT SHEARING IN THE INTERIOR LEVER ARM PIVOT. THIS DEFEATED THE MECHANICAL INTERLOCK ON THE INTERIOR DOOR. SIMULTANEOUS USE OF THE AIR LOCK BY 2 PERSONNEL RESULTED IN THE OPENING OF THE EXTERIOR DOOR AT THE SAME TIME THE INTERIOR DOOR WAS OPEN. CONTAINMENT INTEGRITY WAS LOST FOR APPROX 30 SECS. THE BOLT ON THE LEVER ARM WAS IMMEDIATELY REPAIRED. AN EVALUATION WILL BE MADE OF THE FAILED PART TO DETERMINE IF DESIGN CHANGES OR REVISIONS TO PROCEDURES ARE APPROPRIATE TO PREVENT RECURRENCE.

[19] BIG ROCK POINT DOCKET 50-155 LER 85-003
 ELECTRICAL NOISE CAUSES UPSCALE/DOWNSCALE REACTOR TRIP.
 EVENT DATE: 041485 REPORT DATE: 042485 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.
 RAYCHEM CORP.

(NSIC 193875) WITH THE PLANT SHUTDOWN, PICOAMMETERS WERE DOWNSCALE DUE TO LOW NEUTRON LEVEL. SPURIOUS NOISE CAUSED CHANNEL #3 TO GO UPSCALE AND COMBINED WITH THE DOWNSCALE CONDITION OF CHANNEL #2 COMPLETED THE TRIP ACTUATION. NO MAINTENANCE OR OPERATIONAL ACTIVITIES WERE ASSOCIATED WITH THE EVENT. NO CONTROL ROD DRIVE MOVEMENT OCCURRED. THE CAUSE OF THE TRIP IS ATTRIBUTED TO SUSCEPTIBILITY OF THE PICOAMMETERS TO ELECTRICAL NOISE AT LOW NEUTRON FLUX LEVELS. REFERENCE LERS 84-004, 84-006, 84-008, 85-001.

[20] BIG ROCK POINT DOCKET 50-155 LER 85-004
 SPURIOUS REACTOR TRIP ON UPSCALE/DOWNSCALE.
 EVENT DATE: 052585 REPORT DATE: 060585 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 194010) WITH THE PLANT SHUTDOWN, CHANNEL 1, PICOAMMETER WAS REMOVED FROM SERVICE FOR REPAIRS, WHICH NECESSITATES THAT A TRIP SIGNAL BE MANUALLY INITIATED INTO THAT CHANNEL. SUBSEQUENTLY, ELECTRICAL NOISE CAUSED A SPURIOUS DOWNSCALE TRIP TO OCCUR ON CHANNEL 3, COMPLETING THE LOGIC FOR THE REACTOR TRIP. NO CONTROL ROD MOVEMENT OCCURRED. THE CAUSE OF THE TRIP IS ATTRIBUTED TO SUSCEPTIBILITY OF THE NEUTRON INSTRUMENTATION TO ELECTRICAL NOISE AT LOW NEUTRON FLUX LEVELS. SIMILAR EVENTS - 155/84-004, 155/84-006, 155/84-008, AND 155/85-001.

[21] BROWNS FERRY 1 DOCKET 50-259 LER 82-005 REV 2
 UPDATE ON LOSS OF LUBRICATION FROM MG COUPLING.
 EVENT DATE: 010982 REPORT DATE: 042685 NSSS: GE TYPE: BWR
 VENDOR: WALDRON COUPLINGS-MACHINERY DIV OF MIDLAND

(NSIC 193997) DURING NORMAL OPERATION, 1 EN REACTOR MOTOR-OPERATED VALVE (RMOV) BOARD (LPCI) MOTOR-GENERATOR (MG) SET WAS REMOVED FROM SERVICE DUE TO LOSS OF LUBRICATION ON GENERATOR COUPLING. (TECH SPEC 3.9.B.13) THE REMAINING 480V RMOV BOARD MG SETS AND THEIR ASSOCIATED LOADS REMAINED OPERABLE AND 1 EN RMOV BOARD MG SET WAS RETURNED TO SERVICE WITHIN LCO TIME LIMIT. PREVIOUS SIMILAR EVENTS: BPRO-50-259/81-093, 81-081, 81-070; 296/81-011, 81-069. INADEQUATE LUBRICATION DUE TO CHANGE OF CONSISTENCY OF LUBRICANT (DRYING OUT) AND LOSS OF LUBRICANT. THE WALDRON 2 1/2 INCH COUPLING WAS REPACKED WITH NEW GREASE AFTER REMOVING DRIED OUT GREASE. A REVISED INSPECTION AND RELUBRICATION SCHEDULE WILL BE IMPLEMENTED TO IMPROVE THE PERFORMANCE OF THESE COUPLINGS.

[22] BROWNS FERRY 1 DOCKET 50-259 LER 83-023 REV 2
 UPDATE ON RECIRCULATION PIPING INDICATIONS.
 EVENT DATE: 051383 REPORT DATE: 010885 NSSS: GE TYPE: BWR
 VENDOR: KELLOGG, M.W. CO., THE

(NSIC 193743) DURING A REFUEL OUTAGE, WHILE PERFORMING INSPECTIONS REQUIRED BY IE BULLETIN 83-02 ON RECIRCULATION PIPING, CRACK-LIKE INDICATIONS WERE DETECTED AND CONFIRMED BY ULTRASONIC INSPECTION ON WELD KR-1-37 (TECH SPEC 3.6.G). THERE ARE NO REDUNDANT SYSTEMS. TWO CRACK INDICATIONS, WHICH APPEAR TO BE INTERGRANULAR STRESS CORROSION CRACKING, WERE FOUND ON WELD KR-1-37. THIS WELD WILL BE REPAIRED BEFORE STARTUP. THE CORRECTIVE MEASURES WERE SUBMITTED IN THE 90 DAY REPORT. SEE MEMO FROM L.M. MILLS TO J.P. O'REILLEY DATED 5-22-84. IN ADDITION, PREVIOUS INSPECTIONS HAVE FOUND 33 WELDS IN THE RECIRCULATION SYSTEM AND 4 WELDS IN RHR WITH CRACK INDICATIONS.

[23] BROWNS FERRY 1 DOCKET 50-259 LER 84-021 REV 2
UPDATE ON FAILURE TO MEET DESIGN BASIS FOR CABLE SEPARATION (APPENDIX R).
EVENT DATE: 050584 REPORT DATE: 083184 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
BROWNS FERRY 3 (BWR)

(INSC 193698) BROWNS FERRY'S FSAR SECTIONS 10.11 AND 8.9, AND THE BROWNS FERRY FIRE RECOVERY PLAN REQUIRE THE CABLES FOR THE RELIEF VALVES ASSIGNED TO THE AUTOMATIC DEPRESSURIZATION SYSTEM TO BE SEPARATED FROM THE CABLES FOR NONAUTOMATIC DEPRESSURIZATION SYSTEM RELIEF VALVES, AND THAT THE CABLES FOR THE HPCI SYSTEM BE SEPARATED FROM THE CABLES FOR THE AUTOMATIC DEPRESSURIZATION SYSTEM. DUE TO DESIGN ERRORS DURING THE RECOVERY MODIFICATION AFTER THE 1975 BROWNS FERRY FIRE, THIS SEPARATION WAS NOT FULLY ACHIEVED. DURING A LATER MODIFICATION, THE SEPARATION WHICH HAD BEEN ACHIEVED WAS DEGRADED. THIS ERROR WAS FOUND BY TVA'S ENGINEERING DESIGN GROUP DURING THE 10 CFR 50, APPENDIX R EVALUATION AND WAS REPORTED BY A NONCONFORMANCE REPORT. IMMEDIATE CORRECTIVE ACTION WAS TO PLACE FIRE WATCHES IN THE AREAS OF INADEQUATE SEPARATION, PLACE INTO EFFECT ADMINISTRATIVE CONTROLS REGARDING RELIEF VALVE OPERABILITY, PERFORM AN INTERIM MODIFICATION TO UNIT 2, AND ISSUE CHANGES TO OPERATING INSTRUCTIONS REGARDING A FIRE IN THE AFFECTED AREAS. DESIGN CHANGE REQUEST P-3004 HAS BEEN INITIATED TO SEPARATE THE HPCI AND AUTOMATIC DEPRESSURIZATION SYSTEM DIV 1 CABLES. ALSO, SAFETY RELIEF VALVE CONTROL AND POWER CABLES WILL BE SEPARATED TO MEET APPENDIX R REQUIREMENTS AND TO ASSURE THAT 4 SAFETY RELIEF VALVES ARE AVAILABLE FOR A REACTOR BLDG FIRE.

[24] BROWNS FERRY 1 DOCKET 50-259 LER 84-025 REV 1
UPDATE ON INADEQUATE ISOLATION OF BUILDING HEAT SYSTEM BETWEEN REACTOR AND
TURBINE BUILDING.
EVENT DATE: 061584 REPORT DATE: 041085 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)

(NSIC 194006) A REVIEW OF THE BLDG HEAT SYSTEM BY ENGINEERING DESIGN DURING THE INFO BULLETIN 79-14 INSPECTION DETERMINED THAT THE ISOLATION, BETWEEN THE TURBINE AND REACTOR BLDG HEAT SYSTEM LINES WERE INADEQUATE. THE FAILURE TO FOLLOW DESIGN CRITERIA AS SPECIFIED IN BROWNS FERRY NUCLEAR FINAL SAFETY ANALYSIS REPORT AND INADEQUATE DESIGN REVIEW BY THE REVIEWER WAS THE MAIN PROBLEM. A SAFETY EVALUATION OF SECONDARY CONTAINMENT CAPABILITY WAS PERFORMED IMMEDIATELY. AN EVALUATION OF THE CALCULATED INLEAKAGE RATE, BASED ON THE LATEST PERFORMANCE OF THE SURVEILLANCE INSTRUCTION, CONCLUDED THAT A COMPROMISE OF SECONDARY CONTAINMENT DOES NOT EXIST. SURVEILLANCE INSTRUCTION 4.7.C, SECONDARY CONTAINMENT CAPABILITY, WAS REVISED TO INCLUDE ALLOWANCES IN THE FLOW TESTS FOR THE OPENINGS IN THE 6 BLDG HEATING LINE PENETRATIONS.

[25] BROWNS FERRY 1 DOCKET 50-259 LER 85-008
MANUAL SCRAM DUE TO LEAKING VALVE BONNETS.
EVENT DATE: 031585 REPORT DATE: 041685 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 ZION 1 (PWR)

(NSIC 193880) ON 3-15-85, IT WAS DISCOVERED THAT THE HPCI AND THE RCIC TURBINE EXHAUST VALVES, THE HPCI TURBINE EXHAUST DRAIN VALVE, AND THE RCIC TURBINE CONDENSER VACUUM PUMP DISCHARGE VALVE HAD FLANGED BONNETS THAT WERE NOT BEING LOCAL LEAK TESTED. FROM MAR 17-19, 1985, HCV-73-23 AND HCV-71-14 WERE LEAK CHECKED ON ALL 3 UNITS. BOTH VALVES FAILED ON UNIT 1, BOTH PASSED ON UNIT 2, AND 71-14 FAILED ON UNIT 3. UNIT 1 WAS MANUALLY SCRAMMED ON 3-19-85, AT 0127 TO MEET THE REQUIREMENTS OF TECH SPEC 4.7.A.2.H. HCV-71-32 AND HCV-73-24 HAD A SINGLE GASKETED BONNET DESIGN THAT WAS NOT LEAK CHECKABLE. THESE VALVES, ON ALL UNITS, ARE BEING MODIFIED TO A LEAK CHECKABLE DOUBLE GASKETED BONNET DESIGN. 3

OF 6 VALVES WERE FOUND TO HAVE MISSING SPRINGS. SURVEILLANCE INSTRUCTION 4.7.A.2.G.2 WAS REVISED TO INCLUDE BONNET LEAK TEST FOR THESE 4 VALVES. ALL 4 VALVES ON A UNIT WILL PASS A LOCAL BONNET LEAK TEST PRIOR TO THAT UNIT'S RESTART.

[26] BROWNS FERRY 1 DOCKET 50-259 LER 85-007
UNMONITORED STACK GAS RELEASE.
EVENT DATE: 031885 REPORT DATE: 041685 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)

(NSIC 193842) A HANDSWITCH USED FOR PURGING THE PLANT STACK RADIATION MONITOR WAS INADVERTENTLY LEFT IN THE ON POSITION. OPERATIONS PERSONNEL IMMEDIATELY TURNED THE SWITCH OFF UPON DISCOVERY. RECORDINGS REVEALED THAT THE MONITOR WAS OUT-OF-SERVICE FOR APPROX 2 HRS. DURING THIS TIME THE POTENTIAL EXISTED FOR AN UNMONITORED RELEASE OF RADIOACTIVE EFFLUENTS TO THE ENVIRONMENT. FURTHER EVALUATION CONCLUDED THAT NO ABNORMAL RELEASE OF GASES OCCURRED, AND THAT NO SAFETY LIMITS WERE EXCEEDED. PERSONNEL ERROR WAS THE ROOT CAUSE OF THIS EVENT. THE RESPONSIBLE INDIVIDUAL WAS STRONGLY REPRIMANDED BY THE RESPONSIBLE SECTION MANAGEMENT, AND TRAINING WAS ADMINISTERED TO OTHERS PERFORMING SIMILAR DUTIES.

[27] BROWNS FERRY 1 DOCKET 50-259 LER 85-009
DESIGN ERROR IN PRIMARY CONTAINMENT ISOLATION SYSTEM LOGIC.
EVENT DATE: 032285 REPORT DATE: 041985 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)

(NSIC 193843) DURING A REVIEW OF THE PRIMARY CONTAINMENT ISOLATION SYSTEM CIRCUIT, IT WAS DETERMINED THAT IF THE MODE BYPASS HANDSWITCHES WERE LEFT IN THE BYPASS POSITION AND THE REACTOR MODE SWITCH WAS MOVED OUT OF THE RUN MODE, THE AUTOMATIC START OF THE STANDBY GAS TREATMENT SYSTEM, CONTROL ROOM EMERGENCY VENTILATION, AND PRIMARY CONTAINMENT SYSTEM GROUP 6 ISOLATION WOULD NOT FUNCTION. THIS CONDITION WAS CAUSED BY A TVA DESIGN CHANGE WHICH RESULTED IN A DEFICIENCY IN THE LOGIC CIRCUIT. ADMINISTRATIVE CONTROLS ON OPERATION ARE IN EFFECT, AND A MODIFICATION WILL BE APPROVED TO CORRECT THE DEFICIENCY PRIOR TO RESTART OF THE RESPECTIVE UNITS.

[28] BROWNS FERRY 1 DOCKET 50-259 LER 85-010
DISCONTINUANCE OF CAM HOURLY SAMPLING DUE TO PERSONNEL ERROR.
EVENT DATE: 040385 REPORT DATE: 050385 NSSS: GE TYPE: BWR

(NSIC 193749) DURING ROUTINE ACTIVITIES, THE LICENSED REACTOR OPERATOR OBSERVED A CAM-1-90-250 UPSCALE ALARM AND, AFTER VERIFICATION THAT THE ALARM WAS ERRONEOUS, DECLARED THE CAM INOPERABLE AT 1330. HOURLY SAMPLES WERE TAKEN UNTIL 2000 WHEN THE MAINTENANCE PERSONNEL RELAYED TO THE CHEMICAL ANALYST THAT THE AS FOUND ON THE CAM HAD 2 OF 3 CHANNELS WORKING PROPERLY. THE CHEMICAL ANALYST, THROUGH PERSONNEL ERROR, FAILED TO CONTINUE HOURLY SAMPLES ON THE INOPERABLE CHANNEL UNTIL THE CAM WAS RETURNED TO SERVICE AT 2358. THE SAMPLES TAKEN AND THE RETURN-TO-SERVICE READINGS ALL INDICATED NO ABNORMAL RELEASES TO THE ENVIRONMENT.

[29] BROWNS FERRY 1 DOCKET 50-259 LER 85-012
DESIGN ERROR IN STANDBY GAS TREATMENT CABLE ROUTING.
EVENT DATE: 040885 REPORT DATE: 043085 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)

(NSIC 193750) A DESIGN DRAWING ERROR ALLOWED STANDBY GAS TREATMENT SYSTEM DIVISIONAL CABLES TO BE ROUTED THROUGH FIRE STOP/PRESSURE SEALS USING SPARE

CABLES THAT HAVE BEEN DESIGNATED FOR USE BY NONSAFETY-RELATED CIRCUITS ONLY. COINCIDENT TO THIS EVENT A JUNCTION BOX WAS DETERMINED TO BE SEISMICALLY UNQUALIFIED. THE SGTS TRAIN A WAS SUBSEQUENTLY DECLARED INOPERABLE AND COMPENSATORY MEASURES WERE TAKEN. THE JUNCTION BOX WAS REMOUNTED TO MEET SEISMIC CRITERIA. DESIGN PERSONNEL INVOLVED WITH CABLE AND CONDUIT WILL BE WARNED TO COMPLY WITH THE APPLICABLE NRC COMMITMENTS ON CABLE ROUTING AND A REVISION TO A COMMITMENT IS BEING INVESTIGATED. PREVIOUS EVENT - 259/84-021.

[30] BROWNS FERRY 1 DOCKET 50-259 LER 85-011
CONTROL RELAY FAILURE CAUSES CONTAINMENT ISOLATION.
EVENT DATE: 041185 REPORT DATE: 051085 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)
VENDOR: GENERAL ELECTRIC CO.
 MCGRAW EDISON CO., POWER SYSTEMS DIV

(NSIC 193795) UNIT 1 WAS IN COLD SHUTDOWN, UNIT 2 WAS IN A REFUELING OUTAGE, AND UNIT 3 WAS IN COLD SHUTDOWN. ON 4-11-85, ELECTRICAL COIL IN RELAY 16AK72 FAILED RESULTING IN A CONTROL CIRCUIT FUSE TO BLOW. THE EVENT INITIATED A CONTROL ROOM ANNUNCIATION WHEN UNIT 2 REACTOR BLDG VENTILATION ISOLATION OCCURRED. THE COIL FAILURE RESULTED IN HYDROGEN OXYGEN ANALYZER B TO ISOLATE, DRYWELL DETECTION OUTBOARD VALVES PCV-90-255 AND PCV-90-257A TO CLOSE, AND CONTROL ROOM EMERGENCY VENTILATION SYSTEM TO INITIATE. THE BLOWN FUSE RESULTED IN PARTIAL INITIATION OF SECONDARY CONTAINMENT ISOLATION DIVISION II, I.E. INITIATION OF REACTOR ZONE ISOLATION, REFUELING ZONE ISOLATION AND STANDBY GAS TREATMENT SYSTEM INITIATION. THE SAFETY SYSTEMS PERFORMED AS DESIGNED. THE FAILED RELAY COIL WAS REPLACED AND A NEW FUSE INSTALLED. THE CIRCUIT WAS RETURNED TO NORMAL AND THE ANNUNCIATION ALARM WAS RESET. THERE ARE 1300 CR120A RELAYS INSTALLED AT BROWNS FERRY AND LESS THAN 0.4% PER YR FAIL. SINCE THE FAILURE RATE IS SO LOW, THESE FAILURES ARE CONSIDERED RANDOM AND NO RECURRENCE CONTROL IS REQUIRED. PREVIOUS LERS - 259/80-34, 81-63, 82-48, 82-57, 84-23; 260/79-18, 81-17, 82-25; AND 296/80-09.

[31] BROWNS FERRY 1 DOCKET 50-259 LER 85-014
UNQUALIFIED DIESEL GENERATOR AND SHUTDOWN BOARD BATTERY RACKS.
EVENT DATE: 041985 REPORT DATE: 051485 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)

(NSIC 193961) ON 4-19-85, THE PRELIMINARY RESULTS OF AN ENGINEERING EVALUATION BEING PERFORMED BECAUSE THE NUMBER 1, 2, AND 3 250 V BATTERY RACKS, THE 48 V A AND B ANNUNCIATOR BATTERY RACKS, THE 48 V TELEPHONE BATTERY RACK, THE 24 V NEUTRON MONITORING BATTERY RACK, THE UNIT 1 AND 2 DG A, B, C, AND D BATTERY RACKS, AND THE UNIT 3 DG A, B, C, AND D BATTERY RACKS WERE NOT INSTALLED PER DESIGN DRAWINGS CONCLUDED THAT THE DG BATTERY RACKS WERE NOT SEISMICALLY QUALIFIED. THE REMAINING BATTERY RACKS WERE ACCEPTABLE AS THEY WERE INSTALLED. ON 5-1-85, ANOTHER ENGINEERING EVALUATION DETERMINED THE INSTALLATION DISCREPANCY IN THE 3EB SHUTDOWN BOARD BATTERY RACK MADE IT UNQUALIFIED IN A SEISMIC EVENT. THE DG RACKS WERE UPGRADED ON APR 20 AND 21 TO MEET SEISMIC REQUIREMENTS. ON APR 22 THE 3EB SHUTDOWN BOARD BATTERY RACK WAS MODIFIED TO MEET SEISMIC REQUIREMENTS. THE REMAINING BATTERY RACK DRAWINGS ARE BEING REVISED TO REFLECT THE INSTALLED CONFIGURATION.

[32] BROWNS FERRY 1 DOCKET 50-259 LER 85-015
INOPERABLE RESIDUAL HEAT REMOVAL VALVE DUE TO SHEARED GEAR TEETH.
EVENT DATE: 050185 REPORT DATE: 052485 NSSS: GE TYPE: BWR
VENDOR: LIMITORQUE CORP.

(NSIC 193962) AN OPERATOR WAS ATTEMPTING TO ADJUST REACTOR COOLING FLOW BY

THROTTLING RHR LOOP II PUMP DISCHARGE VALVE WHEN HE OBSERVED NO INDICATION OF VALVE MOVEMENT. THE VALVE WAS BEING OPERATED TO MAKE A ROUTINE FLOW ADJUSTMENT. THE VALVE WAS ISOLATED, AND THE VALVE OPERATOR (LIMITORQUE) WAS DISASSEMBLED FOR INSPECTION. UPON DISASSEMBLY, IT WAS DETERMINED THAT THE INTERMEDIATE GEAR ASSEMBLY SPLINE TEETH HAD SHEARED. THE VALVE OPERATOR MAINTENANCE WAS COMPLETED, REQUIRED SURVEILLANCE INSTRUCTIONS REQUIRED TO DEMONSTRATE OPERABILITY WERE SUCCESSFULLY PERFORMED, AND THE VALVE WAS RETURNED TO SERVICE 5-5-85.

[33] BROWNS FERRY 2 DOCKET 50-260 LER 82-028 REV 4
UPDATE ON SIMULTANEOUSLY OPEN EQUIPMENT AIR LOCK DOORS.
EVENT DATE: 092182 REPORT DATE: 120584 NSSS: GE TYPE: BWR

(NSIC 193998) DURING A REFUELING OUTAGE, THE TURBINE TO REACTOR BLDG DOORS (NO. 237 AND 238) WERE OPENED SIMULTANEOUSLY, BREACHING SECONDARY CONTAINMENT. (TECH SPEC 3.7.C). THESE DOORS CONNECT THE UNIT 2 REACTOR ZONE WITH THE TURBINE BAY. ALL REQUIRED SAFETY SYSTEMS WERE AVAILABLE AND OPERABLE. THE FOLGER ADAMS INTERLOCK SYSTEM FAILED BECAUSE OF LOOSE DOOR LATCH SCREWS AND ELECTRICAL LIMIT SWITCHES THAT WERE OUT OF ADJUSTMENT. THE DOORS WERE CLOSED AND REPAIRED. PROCEDURES WERE REVISED. MODIFIED DESIGN WAS SUCCESSFULLY FIELD TESTED. IMPLEMENTATION OF THE MODIFIED DESIGN IS SCHEDULED FOR THE UNIT 1 CYCLE 6 OUTAGE. THIS IS ALSO A FOLLOWUP REPORT TO LER BFRO-50-259/83-008. PREVIOUS SIMILAR EVENTS: 259/82-063, 81-008, 81-050, 83-008, AND 260/80-045, 81-024, 81-025, 81-032, 81-038, AND 77-015.

[34] BROWNS FERRY 2 DOCKET 50-260 LER 83-074 REV 3
UPDATE ON HPCI RUPTURE DIAPHRAGM FAILURES.
EVENT DATE: 111083 REPORT DATE: 020485 NSSS: GE TYPE: BWR
VENDOR: FIKE METAL PRODUCTS CORP.

(NSIC 193874) 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 7 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.

[35] BROWNS FERRY 3 DOCKET 50-296 LER 83-004 REV 1
UPDATE ON RHR HEAT EXCHANGER LEAK TO ENVIRONMENT.
EVENT DATE: 011683 REPORT DATE: 110284 NSSS: GE TYPE: BWR
VENDOR: PERPEX, INC.

(NSIC 194001) WITH UNIT 3 IN MAINTENANCE OUTAGE, THE RHR 3D HEAT EXCHANGER LEAKED REACTOR COOLANT INTO THE RHR SERVICE WATER, WHICH DISCHARGES TO WHEELER RESERVOIR. THE ACTIVITY LEVEL OF THE DISCHARGED WATER WAS IN EXCESS OF TECH SPEC 3.8.A.1 LIMITS. REDUNDANT SAFETY SYSTEMS WERE INITIATED AND AVAILABLE. RHR 3D HEAT EXCHANGER WAS ISOLATED. INVESTIGATION DISCLOSED 12 DENTED TUBES IN THE HEAT EXCHANGER, WITH ONE DENTED TUBE LEAKING. ALL 12 DENTED TUBES WERE PLUGGED. LEAKAGE WAS THROUGH A CIRCUMFERENTIALLY ORIENTED CRACK. MECHANICAL DAMAGE TO THE TUBE WAS NOTED IN THE LOCATION OF THE CRACK. THIS MECHANICAL DAMAGE APPEARS TO HAVE CAUSED THE FAILURE. 'BITE' MARKS ON EITHER SIDE OF THE CRACK ARE ADDITIONAL EVIDENCE OF MECHANICAL DAMAGE. SEVERAL METALLOGRAPHIC CROSS SECTIONS OF THE CRACK DID NOT REVEAL ANY EVIDENCE OF CORROSION ASSISTANCE TO THE FAILURE. IT IS MOST LIKELY THAT THIS TUBE WAS INSTALLED IN THE HEAT EXCHANGER IN A DAMAGED CONDITION.

[36] BROWNS FERRY 3 DOCKET 50-296 LER 84-006 REV 4
UPDATE ON JET PUMP INSTRUMENT NOZZLE CRACKS.
EVENT DATE: 051784 REPORT DATE: 111684 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
VENDOR: ISHIKAWAJIMA HARIMA INC. (IHI-JAPAN)

(NSIC 193699) BASED ON INFO RECEIVED FROM THE PUBLICATION "INSIDE NRC", THE TVA INSPECTED 10 WELDS ON THE JET PUMP INSTRUMENT NOZZLES. OF THESE, 2 WELDS WERE DETERMINED TO NEED REPAIR. THESE TWO 4-INCH REDUCER SAFE-END WELDS HAD AXIAL INDICATIONS VISIBLE FROM THE OUTSIDE. THESE 2 WELDS ARE SUSPECTED TO BE A PRODUCT OF INTERGRANULAR STRESS CORROSION CRACKING DUE TO THE SAFE ENDS BEING MODERATELY SENSITIZED. THESE WELDS WILL BE REPAIRED BY THE WELD OVERLAY PROCEDURE TO BE COMPLETED PRIOR TO UNIT STARTUP. TVA HAS AN INSPECTION PLAN WHICH IS CARRIED OUT DURING REFUELING OUTAGES FOR IDENTIFYING DEFECTIVE WELDS. INSPECTION OF UNIT 2 JET PUMP INSTRUMENT NOZZLES REVEALED 2 AREAS OF INTERGRANULAR STRESS CORROSION CRACKING. FIRST AREA, WELD JP-2-1A, HAD 2 PINHOLE INDICATIONS THAT WERE 100% THROUGH WALL. THE OTHER AREA, WELD JP-2-1B, HAD 6 AXIAL INTERMITTENT INDICATIONS THAT WERE NOT THROUGH WALL. THESE AREAS WILL BE REPAIRED AND REINSPECTED PRIOR TO UNIT RESTART. A CONTRIBUTING FACTOR IN THIS ISSUE MAY BE THAT UNITS 2 AND 3 WERE PROCURED FROM ISHIKAWAJIMA-HARIMA HEAVY INDUSTRY CO. LTD., A JAPANESE VENDOR, WHILE UNIT 1 WAS BOUGHT FROM COULTER STEEL AND FORGING CO. THE CERTIFIED MATERIAL TEST REPORTS FROM THE UNITS 2 AND 3 VESSEL PENETRATIONS SHOW A HIGHER CARBON CONTENT THAN THOSE OF UNIT 1; THUS ALSO POINTING TO MORE SUSCEPTIBILITY FOR SENSITIZATION AREAS. SIMILAR LERS - 259/83-023, 260/82-040 AND 296/79-019.

[37] BROWNS FERRY 3 DOCKET 50-296 LER 84-013 REV 2
UPDATE ON IMPROPER INSTALLATION OF HPCI AND RHR VALVES LIMITORQUE MOTOR PINION
GEARS.
EVENT DATE: 112284 REPORT DATE: 041085 NSSS: GE TYPE: BWR
VENDOR: CRANE VALVE CO.
 LIMITORQUE CORP.

(NSIC 194008) DURING STARTUP AFTER CYCLE 5 REFUELING OUTAGE, THE HPCI OUTBOARD STEAM SUPPLY ISOLATION VALVE WOULD NOT OPEN. THIS MADE THE HPCI SYSTEM INOPERABLE. ALL TECH SPEC REQUIREMENTS FOR REDUNDANT SYSTEMS WERE MET. THE VALVE WOULD NOT OPEN DUE TO THE MOTOR PINION GEAR BEING INSTALLED BACKWARDS DURING PREVIOUS MAINTENANCE WORK. WHEN THE GEAR WAS INSTALLED BACKWARDS, FULL ENGAGEMENT OF MATING GEARS WAS NOT MAINTAINED. THIS CAUSED ADDITIONAL LOADING OF THE OUTER PORTION OF THE MOTOR PINION GEAR TEETH WHICH IN TURN CAUSED SOME OF THE TEETH TO BREAK WHICH ALLOWED THE MOTOR TO SPIN WITHOUT ENGAGING THE LIMITORQUE OPERATOR. ALSO, THE CABLE FROM THE POWER SUPPLY TO MOTOR SHUNT FIELD WAS FOUND TO BE OPEN. THE OPEN CABLE CAUSED HPCI VALVE FCV-73-3 TO OPERATE IN APPROX 8 SECS (TOO FAST). THE VALVE MOTOR PINION AND MATING WORM SHAFT GEARS WERE REPLACED IN THE PROPER DIRECTION. A RANDOM SAMPLE OF SIMILAR VALVES WAS INSPECTED. DURING SURVEILLANCE ON RHR VALVE 3PCV-74-12 (LOOPI), IT WAS DETERMINED THAT THE VALVE WOULD NOT OPERATE. THE MOTOR PINION GEAR WAS FOUND TO BE INSTALLED BACKWARDS. THE MOTOR PINION GEAR SETSCREW WAS ALSO FOUND TO BE LOOSE WHICH ALLOWED SUFFICIENT CLEARANCE BETWEEN MOTOR PINION AND MATING WORM SHAFT CLUTCH GEAR TO COMPLETELY DISENGAGE WITH EACH OTHER. SIMILAR EVENTS - 259/79-035, 260/80-002, AND 296/84-014.

[38] BROWNS FERRY 3 DOCKET 50-296 LER 85-003
INOPERABILITY OF BOTH HPCI AND RCIC.
EVENT DATE: 011185 REPORT DATE: 020885 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 1 (BWR)
VENDOR: LIMITORQUE CORP.

(NSIC 193709) DURING THE SCHEDULED SURVEILLANCE TEST OF THE HPCI SYSTEM, THE TIME

TO REACH RATED FLOW WAS MEASURED TO BE 10 SECS LONGER THAN THE 25 SECS SPECIFIED BY THE SURVEILLANCE INSTRUCTION. THE HPCI SYSTEM WAS, SUBSEQUENTLY, DECLARED INOPERABLE. FOLLOWING MAINTENANCE ON THE HPCI STEAM ISOLATION VALVE THE LIMIT SWITCH WHICH STARTS THE HPCI AUX OIL PUMP WAS SET INCORRECTLY. A DRAWING DISCREPANCY CAUSED THE CRAFTSMEN TO SET THE SWITCH TO START THE AUX OIL PUMP WHEN THE VALVE REACHED THE FULL OPEN POSITION RATHER THAN WHEN THE VALVE STARTED TO OPEN. THIS INCREASED THE TIME REQUIRED FOR THE HPCI SYSTEM TO ACHIEVE RATED FLOW. THE SAME PROBLEM WAS NOTED ON UNIT 1. FOLLOWING HPCI INOPERABILITY, THE RCIC SYSTEM WAS TESTED AND FAILED ITS ACCEPTANCE CRITERIA TOO. RCIC TURBINE TRIP CAPABILITY IS DEMONSTRATED BY TRIPPING THE THROTTLE VALVE WHICH ISOLATES THE STEAM SUPPLY TO THE RCIC TURBINE. AFTER THIS VALVE WAS TRIPPED, THE LIMITORQUE OPERATOR WOULD NOT REOPEN THE VALVE. THE FAILURE OF THE OPERATOR WAS CAUSED BY A WORN BRASS WORM GEAR. AN ORDERLY SHUTDOWN WAS BEGUN WHILE MAINTENANCE ACTIVITIES WERE INITIATED TO RETURN THE HPCI AND RCIC SYSTEMS TO SERVICE. REPAIRS TO THE HPCI AND RCIC SYSTEMS WERE COMPLETED WITHIN THE ALLOTTED TIME PERIOD, AND THE SHUTDOWN WAS DISCONTINUED.

[39] BROWNS FERRY 3 DOCKET 50-296 LER 85-010
MAINTENANCE ERROR CAUSES CONTAINMENT ISOLATION.
EVENT DATE: 042185 REPORT DATE: 051785 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 1 (BWR)
 BROWNS FERRY 2 (BWR)

(NSIC 193965) DURING PLACEMENT OF AN EQUIPMENT HOLD ORDER, AN ELECTRICAL SHORT WAS CAUSED WHEN THE FUSE THAT WAS BEING REMOVED SHORTED AGAINST THE ADJACENT FUSE CLIP. THE ELECTRICAL SHORT RESULTED IN AN INADVERTENT INITIATION OF SEVERAL SYSTEMS ASSOCIATED WITH A GROUP VI (VENTILATION) PRIMARY CONTAINMENT ISOLATION SIGNAL. THE AVAILABILITY OF AFFECTED SAFETY SYSTEMS TO PERFORM REQUIRED FUNCTIONS WAS NOT REDUCED BY THIS EVENT. AFTER VERIFYING THAT INITIATION OF THE SAFETY SYSTEMS WERE A RESULT OF THE SHORT CAUSED DURING FUSE REMOVAL, ALL AFFECTED SAFETY SYSTEMS WERE RETURNED TO STANDBY READINESS BY OPERATIONS PERSONNEL. PREVIOUS EVENTS - 259/84-023 AND 260/82-025.

[40] BRUNSWICK 1 DOCKET 50-325 LER 81-014 REV 1
UPDATE ON HIGH SUPPRESSION POOL LEVEL FROM HPCI LEAKAGE.
EVENT DATE: 012081 REPORT DATE: 030485 NSSS: GE TYPE: BWR
VENDOR: LIMITORQUE CORP.

(NSIC 193992) FOLLOWING A UNIT 1 SCRAM RECOVERY, ROUTINE SURVEILLANCE REVEALED THE PRESSURE SUPPRESSION POOL LEVEL EXCEEDED THE HIGH LEVEL SPECIFICATION. DUE TO A FAILED VALVE MOTOR, THE HPCI SYSTEM MINIMUM FLOW VALVE, E41-F012, DID NOT FULLY CLOSE FOLLOWING SYSTEM OPERATION. THIS ALLOWED WATER FROM THE HPCI KEEPFILL SYSTEM TO DISCHARGE INTO THE SUPPRESSION POOL. THE VALVE WAS MANUALLY CLOSED AND LEVEL WAS RETURNED TO WITHIN SPECS. TECH SPECS 3.6.2.1, 6.9.1.9B. THE F012 VALVE MOTOR, LIMITORQUE CORP. TYPE SMB, WAS REPLACED AND THE VALVE WAS RETURNED TO SERVICE. MAINTAINING THE AMOUNT OF LEAKAGE FROM F012 WITHIN THE CRITERIA OF THE CURRENT PLANT ISI PROGRAM WILL HELP PREVENT FUTURE SIMILAR EVENTS.

[41] BRUNSWICK 1 DOCKET 50-325 LER 82-125 REV 1
UPDATE ON SPURIOUS DIESEL GENERATOR SHUTDOWN.
EVENT DATE: 122282 REPORT DATE: 110584 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)
VENDOR: NORDBERG

(NSIC 193946) DURING A UNIT 2 REACTOR SCRAM RECOVERY, FOLLOWING AN AUTOMATIC START OF ALL 4 DG'S, DG NO. 2 TRIPPED AND AUTOMATICALLY LOCKED OUT ON LOW LUBE OIL PRESSURE RENDERING THE DIESEL UNAVAILABLE FOR AUTOMATIC OPERATION. AT THE TIME OF THIS EVENT, UNIT 1 WAS IN A REFUELING OUTAGE. TECH SPECS 3.8.1.1,

6.9.1.9B APPLY. AIR IN THE SENSING LINE OF THE DIESEL LUBE OIL PRESSURE SWITCH DG-PS-6534-2, MODEL NO. FS-1316-HSC, PREVENTED THE INSTRUMENT FROM ACTUATING IN LESS THAN 30 SECONDS WHICH ALLOWED THE DIESEL LOW LUBE OIL PRESSURE START TIME RELAY (STR) TO TIME OUT AND TRIP THE DIESEL AS DESIGNED. THE AIR WAS REMOVED FROM THE SENSING LINE AND THE DIESEL WAS SATISFACTORILY START TIME TESTED. NO FURTHER ACTION REGARDING THIS EVENT IS PLANNED.

[42] BRUNSWICK 1 DOCKET 50-325 LER 85-009
 REACTOR BUILDING ROOF VENTILATION MONITOR INOPERABLE.
 EVENT DATE: 021585 REPORT DATE: 031485 NSSS: GE TYPE: BWR
 VENDOR: BETA CORP.

(NSIC 193897) ON 2-15-85, REQUIRED MONTHLY CHANNEL FUNCTIONAL TESTING OF THE UNIT 1 REACTOR BLDG ROOF VENTILATION MONITOR, 1-CAC-AQH-1264, REVEALED THE ANNUNCIATOR CARD FOR THE MONITOR RX BLDG VENT DOWN-INOP CONTROL ROOM ALARM WAS NOT INSTALLED, THEREBY RENDERING THE MONITOR INOPERABLE AS DEFINED BY TECH SPEC 3.3.5.9. CONSEQUENTLY, REQUIRED GRAB SAMPLING DUE TO INOPERABILITY OF THE MONITOR HAD NOT BEEN PERFORMED. THE ANNUNCIATOR CARD WAS IMMEDIATELY REINSTALLED AND THE SUBJECT TESTING WAS SATISFACTORILY COMPLETED. DOCUMENTATION REFLECTING WHEN THE ANNUNCIATOR POINT CARD WAS REMOVED COULD NOT BE LOCATED. PRIOR TO THE EVENT DISCOVERY, THE SUBJECT TESTING HAD BEEN SATISFACTORILY COMPLETED ON 1-17-85 WHICH CONFIRMED THE ANNUNCIATOR POINT CARD WAS INSTALLED AT THAT TIME. THE INVOLVED CONTROL ROOM ALARM ANNUNCIATOR HAS NO SECONDARY FUNCTION. ROUTINE SURVEILLANCE OF THE MONITOR INDICATORS AND RECORDERS IS PERFORMED ONCE PER 8 HRS. DURING THE TIME FRAME OF THE MONITOR'S INOPERABILITY, NO PROBLEMS WERE NOTED. A COMPARISON OF DISABLED UNITS 1 & 2 CONTROL ROOM ANNUNCIATORS WITH THE PLANT JUMPER/WIRE REMOVAL PROCEDURE LOG DID NOT REVEAL ADDITIONAL DISABLED ANNUNCIATIONS WHICH WERE NOT PROPERLY DOCUMENTED. BY 3-31-85, APPROPRIATE PERSONNEL WILL BE INSTRUCTED CONCERNING THIS EVENT AND THE IMPORTANCE OF PROCEDURAL COMPLIANCE.

[43] BRUNSWICK 1 DOCKET 50-325 LER 85-010
 INADEQUATE TESTING OF REACTOR BUILDING VENTILATION EXHAUST RADIATION MONITORS.
 EVENT DATE: 031885 REPORT DATE: 041685 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 193898) ON 3-18-85 AT 2325, THE UNITS 1 & 2 REACTOR BLDGS' VENTILATION EXHAUST RADIATION MONITORS, 1(2)-D12-RM-N010A & B, WERE DECLARED INOPERABLE PER TECH SPECS TABLE 4.3.2-1 FOLLOWING A DETERMINATION THAT THEIR MONTHLY OPERABILITY TEST, PERIODIC TEST PT-04.1.1, DID NOT ADEQUATELY PERFORM A FUNCTIONAL TEST OF THEIR RADIATION HIGH TRIP SETPOINT. UNIT 1 WAS OPERATING AT AT 70%; UNIT 2 WAS IN COLD SHUTDOWN. THE PT DID NOT FUNCTIONALLY VERIFY THAT THE ELECTRICAL CONTACTS OF THE HIGH RADIATION TRIP RELAY, K2, OPEN ON A TEST INPUT HIGH RADIATION SIGNAL. OPENING OF THE K2 CONTACTS DEENERGIZES THE K82 RELAY TO INITIATE A PRIMARY CONTAINMENT GROUP 6 ISOLATION, AUTOMATIC ISOLATION OF THE REACTOR BLDG VENTILATION SYSTEM, AND AUTOMATIC STARTING OF THE REACTOR BLDG STANDBY GAS TREATMENT SYSTEM. THE PT PLACED THE MONITOR MODE SWITCH TO THE 'TRIP TEST' POSITION WHICH CAUSED ELECTRICAL CONTACTS IN SERIES WITH THE K2 CONTACTS TO OPEN AND DEENERGIZE THE K82 RELAY. WHEN A TEST INPUT SIGNAL WAS APPLIED TO THE K2 RELAY LOGIC CIRCUITRY, THE K82 RELAY WAS ALREADY DEENERGIZED DUE TO THE PRIOR POSITIONING OF THE MODE SWITCH. THEREFORE, THE INSTRUMENT CHANNEL TRIP FUNCTION, WHICH IS TO DEENERGIZE THE K82 RELAY, WAS NOT ADEQUATELY VERIFIED. SIMILAR LERS INCLUDE: 325-84-015 AND 325-85-005. PROPER OPERATION OF THE MONITORS' K2 RELAY CONTACTS WAS VERIFIED ON 3-19-85 ON BOTH UNITS AND THE MONITORS WERE RETURNED TO SERVICE.

[44] BRUNSWICK 1 DOCKET 50-325 LER 85-011
 MAINTENANCE WORK CAUSES INADVERTENT REACTOR PROTECTION SYSTEM ACTUATION.
 EVENT DATE: 033085 REPORT DATE: 042685 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193801) ON 3-30-85 AT 1714 A FULL TRIP OF BOTH UNIT 1 RPS CHANNELS, A AND B, AND A PRIMARY CONTAINMENT GROUP I ISOLATION OCCURRED. THE UNIT WAS IN A REFUEL/MAINTENANCE OUTAGE. REMOVAL OF THE DETECTORS OF THE MAIN STEAM LINE RADIATION MONITORS, 1-D12-RM-K603A, B, C, AND D, GE CO. PART NO. 238X660G3, WAS IN PROGRESS TO FACILITATE ACCESS TO THE UNIT MSIV PIT. AN AUTOMATIC TRIP OF RPS CHANNEL A CIRCUITRY OCCURRED DURING WORK TO REMOVE THE K603A DETECTOR. THE K603A DETECTOR IS IN CLOSE PROXIMITY OF THE K603D DETECTOR. A NOISE SPIKE WAS INDUCED INTO THE CIRCUITRY OF THE K603D DETECTOR DURING THE WORK INVOLVING THE K603A DETECTOR. THE NOISE SPIKE CAUSED THE K603D MONITOR TO TRIP THE RPS CHANNEL B CIRCUITRY, THEREBY RESULTING IN A SIMULTANEOUS TRIP OF BOTH RPS CHANNELS. THE INCURRED RPS TRIP AND GROUP I WERE RESET. THE AUTOMATIC TRIPS OF THE K603A AND D MONITORS ARE ATTRIBUTED TO SENSITIVITY OF THE MONITOR CIRCUITRY TO CROSS TALK, SIGNAL NOISE, AND SPIKING DURING WORK WITH, OR IN THE IMMEDIATE VICINITY OF, THE MONITOR DETECTORS OR THEIR SIGNAL CABLES. BY 11-5-85, AN APPROPRIATE PROCEDURE WILL BE DEVELOPED AND IMPLEMENTED TO REDUCE THE PROBABILITY OF FUTURE SIMILAR OCCURRENCES. SIGNS WILL BE APPROPRIATELY POSTED ON BOTH UNITS TO ENSURE PERSONNEL WORKING IN THE VICINITY OF THE DETECTORS ARE AWARE OF THEIR SENSITIVITY.

[45] BRUNSWICK 1 DOCKET 50-325 LER 85-015
 NINE ESF ACTUATIONS OF CONTROL BUILDING HVAC SYSTEMS.
 EVENT DATE: 040385 REPORT DATE: 050285 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 193802) ON 4-3, 5, 9, 10, 11, 17, AND 30, 1985, SIX AUTOMATIC INITIATIONS AND 3 MANUAL ISOLATIONS OF THE UNITS 1 AND 2 COMMON CONTROL BLDG HEATING VENTILATING AIR CONDITIONING (CB HVAC) SYSTEM OCCURRED. IN EACH CASE, NORMAL SYSTEM LINEUP WAS REESTABLISHED AFTER VERIFICATION THAT ALARM CONDITIONS DID NOT EXIST. CB HVAC INITIATIONS START THE UNITS' SELECTED CONTROL BLDG EMERGENCY AIR FILTRATION (CBEAF) COMMON TRAIN, 2A OR 2B, WITH THE OTHER TRAIN IN STANDBY. CB HVAC MANUAL ISOLATIONS ARE CARRIED OUT PER PLANT STANDING INSTRUCTIONS DUE TO A CHLORINE ISOLATION DESIGN DEFICIENCY AS IDENTIFIED IN LER 1-84-33. ON 4-3 AND -5, 1985, THE UNITS WERE IN COLD SHUTDOWN. ON 4-9, 10, 11, 17, AND 30, 1985, UNIT 1 WAS IN COLD SHUTDOWN AND UNIT 2 WAS IN POWER OPERATION. THE CBEAF STARTS RESULTED FROM SPURIOUS UNIT 2 CABLE SPREAD ROOM FIRE ALARMS. A LEAKING VENTILATION DUCT UNION CAUSED AIR TURBULENCE TO SPURIOUSLY ACTUATE A ROOM FIRE DETECTOR. THE LEAK WILL BE APPROPRIATELY REPAIRED. THE CB HVAC ISOLATIONS WERE PERFORMED IN RESPONSE TO CHLORINATION BLDG CHLORINE ALARMS. IN EACH CASE, APPROPRIATE CHLORINE LEAK HUNTS FOUND NO EVIDENCE OF CHLORINE LEAKS. CB HVAC AUTOMATIC STARTS AND ISOLATIONS PLACE THE SYSTEM INTO ITS MOST CONSERVATIVE CONDITION.

[46] BRUNSWICK 2 DOCKET 50-324 LER 83-063 REV 1
 UPDATE ON SUPPRESSION POOL VENT EXHAUST VALVE FAILS TO CLOSE.
 EVENT DATE: 062483 REPORT DATE: 021985 NSSS: GE TYPE: BWR
 VENDOR: LIMITORQUE CORP.
 VELAN VALVE CORP.

(NSIC 193745) DURING A REACTOR STARTUP, WHILE SECURING FROM VENTILATION PURGING OF THE DRYWELL/SUPPRESSION POOL ATMOSPHERE, IT WAS DISCOVERED THAT 2-CAC-V22, THE 2-INCH SUPPRESSION POOL VENTILATION EXHAUST PCIV, WOULD NOT FULLY CLOSE USING THE VALVE MOTOR OPERATOR. THE VALVE WAS THEN MANUALLY CLOSED AND THE POWER SUPPLY TO THE VALVE MOTOR OPERATOR WAS DEACTIVATED. TECH SPECS 3.6.3, 6.9.1.9B. VALVE V22, VELAN VALVE CORP., AND ITS RESPECTIVE MOTOR OPERATOR, LIMITORQUE CORP. TYPE SMB, WERE DISASSEMBLED AND INSPECTED. NO PROBLEMS WERE FOUND WHICH COULD BE

(NSIC 193896) ON 2-15-85 AT 2300 THE UNIT 2 HPCI SYSTEM WAS DECLARED INOPERABLE FOLLOWING OPERABILITY TESTING WHICH REVEALED THE HPCI PUMP DISCHARGE VALVE, E41-F006, WOULD NOT OPEN. A UNIT SHUTDOWN WAS COMMENCED IN ACCORDANCE WITH TECH SPEC 3.0.3 AFTER DETERMINATION THAT THE UNIT LOW PRESSURE COOLANT INJECTION LOOP B WAS INOPERABLE. WITHIN 5 HRS, OPERABILITY OF THE LPCI LOOP WAS REESTABLISHED AND REACTOR SHUTDOWN WAS TERMINATED AT APPROX 10% REACTOR POWER. AN ASCENSION TO FULL REACTOR POWER WAS THEN COMMENCED. SUBSEQUENT TROUBLESHOOTING AND TESTING OF THE HPCI SYSTEM REVEALED ADDITIONAL PROBLEMS WITH THE FOLLOWING HPCI TURBINE COMPONENTS: SPEED INDICATOR E41-C002-4; ELECTRONIC SPEED CONTROLLER; STEAM SUPPLY STOP AND CONTROL VALVES, E41-V8 AND V9; AND THE OVERSPEED TRIP DEVICE. THE REFERENCED HPCI PROBLEMS WERE RESOLVED THROUGH APPROPRIATE REPAIR, REPLACEMENT OR ENGINEERING EVALUATION. THE HPCI SYSTEM WAS RETURNED TO SERVICE WITHIN 13 DAYS FOLLOWING THE SATISFACTORY PERFORMANCE OF SYSTEM OPERABILITY TESTING.

(NSIC 193768) ON 4-9-85 AT 0335 THE UNIT 2 RWCU SYSTEM INLET PRIMARY CONTAINMENT INBOARD AND OUTBOARD ISOLATION VALVES, 2-G31-F001 AND F004, AUTOMATICALLY CLOSED DUE TO A PRIMARY CONTAINMENT GROUP 3 ISOLATION SIGNAL. THE UNIT 2 CONTROL OPERATOR BECAME AWARE OF THIS EVENT THROUGH APPROPRIATE CONTROL ROOM ALARM ANNUNCIATION OF AN RWCU SYSTEM LEAK HI-HI CONDITION. RWCU FILTER/DEMINERALIZER A REJECT FLOW LINE TO THE UNIT MAIN CONDENSER WAS BEING SECURED TO PREPARE FOR ESTABLISHING RWCU SYSTEM RETURN FLOW TO THE REACTOR. THE ISOLATION SIGNAL IS ATTRIBUTED TO FILTER/DEMINERALIZER A REJECT FLOW OSCILLATIONS WHICH ARE BELIEVED TO HAVE RESULTED FROM A WELD LEAK ON THE LOW SIDE SENSING LEG OF THE FILTER/DEMINERALIZER A OUTLET PRESSURE BREAKDOWN ORIFICE, 2-G31-Z002-FE-86. THE FLOW OSCILLATIONS OCCURRED WITH SUFFICIENT MAGNITUDE TO ACTUATE THE RWCU SYSTEM DIFFERENTIAL FLOW SWITCH 2-G31-FDS-N603 1A OR 1B, THEREBY RESULTING IN THE ISOLATION SIGNAL. THE SUBJECT WELD LEAK WAS REPAIRED AND THE RWCU SYSTEM WAS RETURNED TO SERVICE.

(NSIC 193870) FROM 1-17-85 - 3-13-85, CO(2) FIRE PROTECTION SYSTEM VALVE ALIGNMENT WAS NOT VERIFIED PER TECH SPECS. THIS WAS BECAUSE THE SURVEILLANCE COORDINATOR ERRONEOUSLY BELIEVED THAT THE ACTIONS BEING TAKEN FOR A FAILED PORTION OF THE CO(2) SYSTEM COVERED ALL PORTIONS OF THE SYSTEM. HE HAS BEEN INSTRUCTED TO CHECK FAILED SURVEILLANCES AGAINST THE ACTIONS BEING TAKEN TO MEET THE TECH SPEC ACTION REQUIREMENTS TO DETERMINE IF PORTIONS OF SURVEILLANCES MUST CONTINUE TO BE PERFORMED.

[50] BYRON 1 DOCKET 50-454 LER 85-026
CONTAINMENT ATMOSPHERIC RADIATION MONITOR INOPERABLE.
EVENT DATE: 022885 REPORT DATE: 032985 NSSS: WE TYPE: PWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 193785) RADIATION MONITOR 1PR11J (CONTAINMENT ATMOSPHERE RADIATION MONITOR) WAS INADVERTENTLY LEFT ISOLATED FROM CONTAINMENT ATMOSPHERE AFTER MAINTENANCE ACTIVITY ON VALVE 1PR001B. THIS ERROR CAUSED THE PLANT TO BE IN VIOLATION OF TECH SPECS FOR 72 HRS. INLEAKAGE AT THE RADIATION MONITOR CAUSED THE 1PR11J TO APPEAR TO BE OPERATING NORMALLY AT THE RM-11 CONSOLE IN THE MAIN CONTROL ROOM. THE LEAKAGE WAS REPAIRED, 1PR034 OPENED AND THE RADIATION MONITOR RETURNED TO SERVICE. ADMINISTRATIVE CONTROLS ARE BEING IMPLEMENTED TO ENSURE SYSTEM INTEGRITY/PROPER RESTORATION OF THE SYSTEM AFTER MAINTENANCE ACTIVITIES ARE COMPLETED.

[51] BYRON 1 DOCKET 50-454 LER 85-025
MISSED SURVEILLANCE FOR REACTOR START-UP.
EVENT DATE: 030185 REPORT DATE: 032585 NSSS: WE TYPE: PWR

(NSIC 193733) THE EMERGENCY TRIP HEADER LOW PRESSURE REACTOR TRIP SURVEILLANCE WAS NOT PERFORMED WITHIN THE REQUIRED INTERVAL PRIOR TO REACTOR STARTUP. UPON DISCOVERY OF ITS OMMISSION THE SURVEILLANCE WAS SUCCESSFULLY PERFORMED PRIOR TO ENTERING MODE 1. ALTHOUGH THE SURVEILLANCE HAD BEEN PREVIOUSLY IDENTIFIED AS APPLICABLE 'PRIOR TO REACTOR STARTUP,' THE INPUT FOR THE SURVEILLANCE SCHEDULE PROGRAM FROM THE OPERATIONS DEPARTMENT FAILED TO LIST MODE 2 AS AN APPLICABLE MODE. THIS RESULTED IN THE SURVEILLANCE NOT BEING LISTED ON THE MODE 2 NONROUTINE SURVEILLANCE LISTING. THE SCHEDULING PROGRAM DATA FOR THIS SURVEILLANCE HAS BEEN REVISED TO INCLUDE IT ON THE MODE 2 NONROUTINE SURVEILLANCE LISTING AND THE LISTING HAS BEEN VERIFIED TO INCLUDE ALL SURVEILLANCES WITH A 'PRIOR TO REACTOR STARTUP' FREQUENCY. PRIOR OCCURRENCES OF AN INCOMPLETE SURVEILLANCE REQUIRED FOR CHANGING MODE WERE REPORTED IN LER'S 84-041 AND 85-018.

[52] BYRON 1 DOCKET 50-454 LER 85-028
REACTOR TRIP DURING TURBINE VALVE SURVEILLANCE.
EVENT DATE: 030485 REPORT DATE: 040185 NSSS: WE TYPE: PWR

(NSIC 193786) DURING A SURVEILLANCE OF THE MAIN TURBINE THROTTLE AND GOVERNOR VALVES, IT WAS NECESSARY TO MANUALLY TRIP THE TURBINE. IN ORDER TO AVOID A REACTOR TRIP DUE TO THE TURBINE TRIP, THE SHIFT ENGINEER DIRECTED THE NSO TO DECREASE REACTOR POWER TO LESS THAN 10% PRIOR TO THE MANUAL TURBINE TRIP. WHEN THE TURBINE WAS TRIPPED THE P-10 PERMISSIVE WAS SATISFIED BECAUSE REACTOR POWER WAS LESS THAN 10%, BUT THE P-13 PERMISSIVE WHICH MONITORS THE TURBINE IMPULSE PRESSURE WAS NOT AND THE REACTOR TRIPPED. BOTH PERMISSIVES MUST BE SATISFIED IN ORDER TO BRING IN THE P-7 PERMISSIVE AND PREVENT A REACTOR TRIP UPON TURBINE TRIP. TO PREVENT THE RECURRENCE OF THIS EVENT, THE TRAINING DEPARTMENT WILL EMPHASIZE THAT TURBINE POWER AS MEASURED BY THE IMPULSE PRESSURE MAY VARY FROM THE GENERATOR MW OUTPUT DEPENDING ON THE SECONDARY SIDE OPERATING CONFIGURATION.

[53] BYRON 1 DOCKET 50-454 LER 85-031
REACTOR TRIP DUE TO SG LOW LEVEL.
EVENT DATE: 030885 REPORT DATE: 040185 NSSS: WE TYPE: PWR

(NSIC 193931) ON 3-8-85 AT 1004 CST, WESTINGHOUSE REPRESENTATIVES BEGAN TROUBLESHOOTING THE LUBE OIL SYSTEM FOR 1B FEED PUMP TURBINE. WHILE PERFORMING A ROUTINE OIL PUMP SWAPPING MANEUVER, THE FEEDWATER PUMP TRIPPED. AN ATTEMPT WAS MADE TO START THE START-UP FEEDWATER PUMP, BUT IT FAILED TO START. AUX FEEDWATER WAS MANUALLY INITIATED TO TRY AND MAINTAIN SG LEVEL. EVEN THOUGH TURBINE AND REACTOR POWER LEVELS WERE REDUCED, A REACTOR TRIP OCCURRED DUE TO 1B SG LO-2.

[54] BYRON 1 DOCKET 50-454 LER 85-027
FAILURE OF MSIV TO CLOSE ON ISOLATION SIGNAL.
EVENT DATE: 031485 REPORT DATE: 032985 NSSS: WE TYPE: PWR
VENDOR: ANCHOR/DARLING VALVE CO.

[55] BYRON 1 DOCKET 50-454 LER 85-033
MISSED SAMPLE ANALYSES ON AUX BLDG VENT STACK MONITORS.
EVENT DATE: 031485 REPORT DATE: 040185 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: BYRON 2 (PWR)

[56] BYRON 1 DOCKET 50-454 LER 85-034
INADVERTENT MANUAL SAFETY INJECTION.
EVENT DATE: 031885 REPORT DATE: 040185 NSSS: WE TYPE: PWR

(INSC 193734) AT 2253 WHILE PERFORMING THE MSIV OPERABILITY TEST, THE UNIT OPERATOR ACCIDENTALLY ACTUATED THE MANUAL SAFETY INJECTION HANDSWITCH INSTEAD OF THE MANUAL MAIN STEAM ISOLATION HANDSWITCH. THE PLANT WAS IN COLD SHUTDOWN PRIOR TO THE EVENT AND ALL SAFETY SYSTEMS RESPONDED AS DESIGNED. THE PLANT WAS PROMPTLY RETURNED TO ITS ORIGINAL CONDITION WITHIN SEVERAL MINS. AS A RESULT OF THIS EVENT, ALL OPERATORS HAVE BEEN REMINDED VIA A DAILY ORDER MEMO TO DOUBLE CHECK ANY SWITCH IF THEIR HANDS EVER LEAVE THE SWITCH PRIOR TO ACTUATION. FURTHER IF THE SWITCH IS RELATED TO REACTOR PROTECTION AND/OR ESF'S AND THE ACTUATION IS NONEMERGENCY, THEN INDEPENDENT VERIFICATION MUST BE OBTAINED BEFORE ACTUATION.

[57] BYRON 1 DOCKET 50-454 LER 85-040
FAILURE TO MEET LCO ACTION REQUIREMENT.
EVENT DATE: 031985 REPORT DATE: 041885 NSSS: WE TYPE: PWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 193932) A TECH SPEC LCO ACTION STATEMENT WAS NOT ENTERED WHEN REQUIRED. DUE TO MAINTENANCE, 1 OF 2 REQUIRED TRAIN A MAIN CONTROL ROOM VENTILATION SYSTEM PROCESS RADIATION MONITORS WAS NOT AVAILABLE. TECH SPEC ACTION STATEMENT REQUIRES THAT THE MAIN CONTROL ROOM VENTILATION SYSTEM BE PLACED IN MAKEUP WITHIN 1 HR OF MONITOR INOPERABILITY. HOWEVER, THE APPLICABLE ACTION STATEMENT FOR THE CONTROL ROOM VENTILATION SYSTEM WAS NOT ENTERED WITHIN THE REQUIRED TIME LIMIT. THE SHIFT CONTROL ROOM ENGINEER INVOLVED WAS CAUTIONED ON THE IMPORTANCE OF CHECKING APPLICABLE TECH SPEC REQUIREMENTS.

[58] BYRON 1 DOCKET 50-454 LER 85-043
FIRE WATCHES PREVENTED DUE TO AUX BLDG ACCESS RESTRICTIONS.
EVENT DATE: 041085 REPORT DATE: 042585 NSSS: WE TYPE: PWR

(NSIC 194033) ON 4-10-85 WHILE IN MODE 1 AT 30% POWER, FIRE WATCHES IN THE AUX BLDG WERE SUSPENDED FOR A PERIOD OF 3 HRS DUE TO A PRECAUTIONARY EVACUATION OF THE AUX BLDG, LEVEL 346'. THE EVACUATION WAS DECLARED DUE TO ALARA CONCERNS FOLLOWING THE RUPTURE OF THE OA BORIC ACID EVAPORATOR RUPTURE DISK. UPON COMPLETION OF SURVEYS BY HEALTH PHYSICS PERSONNEL, ACCESS THROUGH THE AUX BLDG AND NORMAL FIRE WATCHES WERE RESUMED.

[59] BYRON 1 DOCKET 50-454 LER 85-041
CONTROL ROOM VENTILATION ACTUATED TO THE MAKEUP MODE.
EVENT DATE: 041285 REPORT DATE: 050785 NSSS: WE TYPE: PWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 193933) WHILE PERFORMING A LAMP CHECK ON RADIATION MONITOR OPR33J (MAIN CONTROL ROOM OUTSIDE AIR INTAKE 'B'), A TECHNICAL STAFF ENGINEER ACCIDENTALLY DEPRESSED THE OPR33J FLOW CONTROL PUSHBUTTON WHICH SHUT OFF THE MONITOR'S SAMPLE PUMP. THIS ACTION RESULTED IN AN AUTOMATIC REALIGNMENT OF THE TRAIN B MAIN CONTROL ROOM VENTILATION SYSTEM TO THE MAKEUP MODE; AN ESF ACTUATION. THIS EVENT HAS BEEN DISCUSSED WITH THE RESPONSIBLE INDIVIDUAL IN ORDER TO PREVENT RECURRENCE.

[60] BYRON 1 DOCKET 50-454 LER 85-047
EXCESSIVE UNIDENTIFIED RCS LEAKAGE.
EVENT DATE: 041785 REPORT DATE: 050885 NSSS: WE TYPE: PWR

(NSIC 194034) THE UNIT 1 RCS UNIDENTIFIED LEAKAGE EXCEEDED THE MAXIMUM ALLOWED VALUE OF 1.0 GPM. THE EXCESSIVE RCS UNIDENTIFIED LEAKAGE WAS DUE TO LEAKAGE IN ONE OR MORE DIAPHRAGM VALVES IN THE CVCS LETDOWN FLOWPATH. THE EXCESS LETDOWN FLOWPATH WAS PLACED INTO OPERATION AND THE LETDOWN FLOWPATH WAS REMOVED FROM OPERATION AND ISOLATED. AFTER THE FLOWPATH WAS CHANGED THE RCS UNIDENTIFIED LEAKAGE WAS WITHIN THE NORMAL OPERATING RANGE. THE DIAPHRAGM VALVES IN QUESTION WERE TIGHTENED DOWN AND THIS ELIMINATED THE LEAKAGE.

[61] CALLAWAY 1 DOCKET 50-483 LER 85-005
LOSS OF FIELD TO MAIN GENERATOR CAUSED SCRAM AND ESF ACTUATION.
EVENT DATE: 013185 REPORT DATE: 022685 NS55: WE TYPE: PWR

(NSIC 193735) ON 1-31-85 AT 0635 CST A GENERATOR TRIP OCCURRED DUE TO A LOSS OF FIELD TO THE MAIN GENERATOR. THE GENERATOR TRIP CAUSED A TURBINE TRIP AND, AS A RESULT OF THE UNIT BEING ABOVE THE P-9 SETPOINT, A REACTOR TRIP OCCURRED. ALSO INITIATED WERE A FEEDWATER ISOLATION SIGNAL, AN AUX FEEDWATER ACTUATION SIGNAL.

(NSIC 194036) ON 2-8-85 TECH SPEC FIRE DOOR 14031 WAS OPENED TO ALLOW EXTRA COOLING OF THE MOTOR GENERATOR SETS ROOM. IN ACCORDANCE WITH TECH SPEC 3.7.11, OPERATORS VERIFIED THE OPERABILITY OF FIRE DETECTORS ON 1 SIDE OF THE PENETRATION AND ALSO ENSURED THAT AN HOURLY FIRE WATCH WAS IN EFFECT. THE PLANT WAS IN MODE 1 AT 100% POWER WHEN FIRE DOOR 14031 WAS OPENED. ON 2-10-85 IT WAS DETERMINED THAT WITH FIRE DOOR 14031 OPEN THE HALON SUPPLY TO THE MG SETS ROOM WOULD NOT BE ABLE TO MAINTAIN THE PROPER CONCENTRATION IF CALLED UPON AND WAS THEREFORE INOPERABLE. WITH THE HALON SYSTEM INOPERABLE TECH SPEC 3.7.10.3 REQUIRES A CONTINUOUS FIRE WATCH WITH BACKUP FIRE SUPPRESSION WITHIN 1 HR. A CONTINUOUS FIRE WATCH WITH BACKUP FIRE SUPPRESSION WAS THEN ESTABLISHED AND MAINTAINED UNTIL FIRE DOOR 14031 WAS CLOSED. THIS EVENT WAS INITIALLY DETERMINED NONREPORTABLE BASED ON AN INTERPRETATION THAT ACTION STATEMENTS ARE NOT CASCADING. TECH SPEC 3.7.10.3 WOULD THEREFORE NOT APPLY BECAUSE THE FIRE DETECTION SYSTEM WAS CAPABLE OF DETECTING A FIRE, AND WOULD PROMPT OPERATOR ACTION. HOWEVER, DISCUSSIONS WITH THE RESIDENT INSPECTOR ON 4-4-85 HAVE CONCLUDED THAT TECH SPEC 3.7.10.3 DID APPLY AND A CONTINUOUS FIRE WATCH SHOULD HAVE BEEN ESTABLISHED WHEN FIRE DOOR 14031 WAS OPENED. THEREFORE, THIS EVENT IS BEING REPORTED PURSUANT TO 10 CFR 50.73(A)(2)(I).

(NSIC 193790) ON 2-15-85 AT 1500 CST TRAIN 'A' OF THE CONTROL ROOM EMERGENCY VENTILATION SYSTEM WAS DECLARED INOPERABLE DUE TO THE ABSENCE OF A FLOW RESTRICTING ORIFICE BELIEVED BY HVAC TECHNICIANS TO BE REQUIRED. INSPECTION OF TRAIN 'B' REVEALED THE PLATE ALSO NOT INSTALLED AND TECH SPEC ACTION 3.0.3 WAS CONSERVATIVELY ENTERED AT 1645 DUE TO BOTH TRAINS BEING DECLARED INOPERABLE. AN ORIFICE PLATE WAS FABRICATED AND INSTALLED IN TRAIN 'A', THE TRAIN BALANCED TO MEET TECH SPEC LIMITS AND RETURNED TO SERVICE AT 1830. TRAIN 'B' WAS CHECKED IN ITS AS FOUND CONDITION AND FOUND TO BE WITHIN THE TECH SPEC LIMITS. INVESTIGATION SHOWED THAT THE ORIFICE PLATE WAS ORIGINALLY INSTALLED IN TRAIN 'A' ONLY DURING THE PREOP FLOW BALANCE WHEN THE FAN SPEED FOR THAT TRAIN WAS INCREASED DUE TO VIBRATION PROBLEMS. THE INCREASED FLOW WITHOUT THE ORIFICE, WHILE HIGHER THAN THE TECH SPEC LIMITS, WAS EVALUATED AND FOUND TO MAINTAIN CONTROL ROOM DOSE TO LESS THAN GENERAL DESIGN CRITERIA 19 LIMITS.

[64] CALLAWAY 1 DOCKET 50-483 LER 85-010
LOSS OF INSTRUMENT POWER BUS CAUSES PARTIAL LOSS OF FEEDWATER FLOW.
EVENT DATE: 022185 REPORT DATE: 032585 NSSS: WE TYPE: PWR
VENDOR: SOLID STATE CONTROLS, INC.

(INSC 193736) ON 2-21-85 A REACTOR TRIP, FEEDWATER ISOLATION, AUX FEEDWATER ACTUATION, AND SG BLOWDOWN ISOLATION OCCURRED WITH THE PLANT IN MODE 1 AT 100% POWER. THESE ESF'S ACTUATED AS A RESULT OF LOW SG LEVELS AND PERFORMED AS DESIGNED. THE LOW SG LEVELS OCCURRED WHEN A NONSAFETY-RELATED 120V AC INSTRUMENT BUS WAS DE-ENERGIZED DUE TO A FAULTY TRANSFORMER. THE DE-ENERGIZATION OF THE BUS CAUSED POWER TO BE LOST TO A FEEDWATER CONTROL PANEL WHICH IN TURN STOPPED THE MAIN FEEDWATER PUMP POWERED BY THAT PANEL. THE LOSS OF THE MFP RESULTED IN THE LOW SG LEVELS WHICH ACTUATED THE ESF SYSTEMS. THE OPERATORS RECOVERED FROM THE TRIP VIA PLANT PROCEDURES AND STABILIZED PLANT CONDITIONS. THE FAULTY TRANSFORMER WAS REPLACED AND IS TO BE SENT TO THE VENDOR FOR A FAILURE ANALYSIS. NO FURTHER CORRECTIVE ACTION IS DEEMED NECESSARY UNLESS PROVEN OTHERWISE BY THE VENDOR EVALUATION. THERE WAS NO DAMAGE TO PLANT EQUIPMENT OR RELEASE OF RADIOACTIVITY AS A RESULT OF THIS INCIDENT. THE REQUIRED SAFETY SYSTEMS PERFORMED AS DESIGNED.

[65] CALLAWAY 1 DOCKET 50-483 LER 85-012
STARTUP PROBLEMS CAUSE HIGH STEAM GENERATOR LEVEL.
EVENT DATE: 022285 REPORT DATE: 032585 NSSS: WE TYPE: PWR

(NSIC 193791) ON 2-22-85 AT 2128 CST A TURBINE TRIP, FWIS, SGBIS, AND APAS WERE RECEIVED AS A RESULT OF A HI-HI LEVEL SIGNAL ON SG 'D.' AT THE TIME OF THE EVENT THE PLANT WAS IN MODE 1 AT 7% POWER WITH FEEDWATER BEING CONTROLLED MANUALLY. DURING NORMAL PLANT STARTUP, THE TURBINE GENERATOR WAS BEING ROLLED UNLOADED. THE STEAM FLOW/FEEDWATER FLOW RECORDER, AE-FR-540, FOR SG 'D' HAD NOT BEEN OPERATING PROPERLY, MAKING THE TRENDING OF LEVEL IN SG 'D' DIFFICULT. AT 2128 FEEDWATER FLOW WAS INCREASED, BASED ON INDICATIONS FROM AE-FR-540, AND THE LEVEL IN SG 'D' SWELLED PAST THE HI-HI LEVEL SETPOINT RESULTING IN THE TURBINE TRIP AND ESP ACTUATIONS. ALSO, FEEDWATER WAS NOT BEING PREHEATED DUE TO PROBLEMS WITH THE AUX BOILER, AND WAS ENTERING THE SG'S AT A TEMPERATURE OF APPROX 115 F, AS OPPOSED TO A NORMAL TEMPERATURE OF APPROX 300 F. THIS LOWER TEMPERATURE COMPOUNDED THE SHRINK AND SWELL EFFECTS IN THE SG'S DURING THE STEAM DEMAND TRANSIENT.

[66] CALLAWAY 1 DOCKET 50-483 LER 85-013
MINI PURGE COMMENCED WITH CONTAINMENT ATMOSPHERE MONITORS IN BYPASS.
EVENT DATE: 022685 REPORT DATE: 032885 NSSS: WE TYPE: PWR

(NSIC 193937) THE CONTAINMENT PURGE RADIATION MONITORING SYSTEM IS DESIGNED WITH A PRIMARY AND A BACKUP SYSTEM. CONTAINMENT ATMOSPHERE MONITORS SERVE AS THE BACKUP SYSTEM WITH THEIR PRIMARY FUNCTION BEING RCS LEAKAGE DETECTION. TECH SPECS REQUIRE THAT CONTAINMENT PURGE VALVES BE MAINTAINED CLOSED WITH THE CONTAINMENT ATMOSPHERE MONITORS INOPERABLE. DUE TO PERSONNEL ERROR FROM INADEQUATE PROCEDURAL GUIDANCE, A MINI PURGE WAS COMMENCED WITH THE CONTAINMENT ATMOSPHERE MONITORS IN BYPASS. ALTHOUGH TECH SPECS WERE VIOLATED, THE CONTAINMENT EXHAUST WAS MONITORED AND ISOLATION PROTECTION PROVIDED BY THE CONTAINMENT PURGE ISOLATION SYSTEM. THE MINI PURGE WAS TERMINATED IMMEDIATELY WHEN THE REACTOR OPERATOR REALIZED THAT THE BACKUP MONITORS WERE IN BYPASS. THE PROCEDURE FOR PLACING THE MINI PURGE SYSTEM IN SERVICE WAS REVISED BY A TEMPORARY CHANGE NOTICE TO ENSURE THAT THE BACKUP MONITORS ARE OPERABLE DURING A MINI PURGE. ADDITIONAL PROCEDURE REVISIONS TO PERMANENTLY INCORPORATE THIS REQUIREMENT WILL BE ISSUED BY 4-15-85. NO ABNORMAL RADIOACTIVE RELEASES OCCURRED AS A RESULT OF THIS INCIDENT AND, THE CONTAINMENT PURGE MONITORS WERE OPERABLE.

[67] CALLAWAY 1 DOCKET 50-483 LER 85-014
INADVERTENT CONTROL ROOM VENTILATION ISOLATION.
EVENT DATE: 022785 REPORT DATE: 032885 NSSS: WE TYPE: PWR

(NSIC 193737) ON 2-27-85, A CONTROL ROOM VENTILATION ISOLATION SIGNAL OCCURRED.

AT THE TIME OF THE CRVIS THE ALARM PRINTER SHOWED A 'LOSS OF SAMPLE FLOW' FOR CONTROL ROOM RADIATION MONITOR GK-RE-05. I&C PERSONNEL WERE CONTACTED TO DETERMINE THE CAUSE OF THE 'LOSS OF SAMPLE FLOW' ALARM FOR GK-RE-05. GK-RE-05 WAS FOUND TO BE FUNCTIONING PROPERLY AND WAS NOT THE APPARENT CAUSE OF THE CRVIS. FURTHER INVESTIGATION FAILED TO REVEAL THE CAUSE OF THIS CRVIS. THIS INCIDENT IS CONSIDERED AN ISOLATED CASE FOR WHICH NO FURTHER CORRECTIVE ACTION IS REQUIRED.

[68] CALLAWAY 1 DOCKET 50-483 LER 85-015
FAILURE TO COLLECT TRITIUM SAMPLE.
EVENT DATE: 022885 REPORT DATE: 032885 NSSS: WE TYPE: PWR

(NSIC 193738) TECH SPECS REQUIRE MONTHLY SAMPLING AND ANALYSIS OF GASEOUS EFFLUENTS FROM THE UNIT VENT TO DETERMINE THAT THE DOSE RATE AT AND BEYOND THE SITE BOUNDARY IS LESS THAN THE SPECIFIED TECH SPEC LIMIT. ON 2-28-85 IT WAS DISCOVERED THAT THE MONTHLY TRITIUM SAMPLING TO BE PERFORMED BY 2-25-85 HAD BEEN MISSED. THE REQUIRED SAMPLE WAS COLLECTED, ANALYZED IMMEDIATELY, AND FOUND TO BE WITHIN THE TECH SPEC LIMIT. TO PREVENT RECURRENCE, THE TRACKING SYSTEM FOR TECH SPEC SURVEILLANCE REQUIREMENTS WAS MODIFIED TO MORE SPECIFICALLY STATE THE SAMPLING TO BE DONE. THE MISSED SAMPLE HAD NO DETRIMENTAL EFFECTS ON THE CONTROL OF RADIOACTIVE EFFLUENTS.

[69] CALLAWAY 1 DOCKET 50-483 LER 85-016
SPURIOUS LOW PRESSURIZER PRESSURE SIGNAL CAUSES REACTOR TRIP.
EVENT DATE: 030385 REPORT DATE: 040285 NSSS: WE TYPE: PWR

(NSIC 193938) ON 3-3-85 AT 1647 CST A REACTOR TRIP OCCURRED ON LOW PRESSURIZER PRESSURE. A FEEDWATER ISOLATION SIGNAL AND AUX FEEDWATER ACTUATION SIGNAL WERE ALSO RECEIVED. ALL SAFETY SYSTEMS RESPONDED AS DESIGNED WITH THE PLANT IN MODE 1 OPERATING AT 100% POWER AT THE TIME OF THE EVENT. TECHNICIANS HAD COMPLETED A CALIBRATION CHECK ON PRESSURIZER PRESSURE TRANSMITTER BB-PT-457, WHICH SHARES A COMMON SENSING LINE WITH PRESSURE TRANSMITTER BB-PT-458. WHILE OPENING THE ISOLATION VALVE TO RETURN BB-PT-457 TO SERVICE, A PRESSURE SURGE ACROSS THE ISOLATION VALVE FOR BB-PT-457 CAUSED BB-PT-458 TO SPIKE LOW, SATISFYING THE LOW PRESSURIZER PRESSURE REACTOR TRIP LOGIC. ALTHOUGH THE MAGNITUDE OF THE SPIKE INDUCED BY VALVING WAS INSUFFICIENT TO CAUSE THE TRIP, AMPLIFICATION BY THE RATE COMPENSATION ON PRESSURE SIGNAL RESULTED IN REACHING THE TRIP SETPOINT. TECHNICIANS HAD NOT DEVIATED FROM PROCEDURE AND PERFORMED ALL STEPS APPROPRIATELY. SIMILAR LERS 84-035 AND 84-040. HOWEVER, THE CAUSE OF THESE EVENTS WERE A RESULT OF PROCEDURAL DEFICIENCIES COMBINED WITH PERSONNEL ERRORS AND ARE NOT ATTRIBUTED TO BE THE CAUSE FOR THE EVENT REPORTED IN THIS LER.

[70] CALLAWAY 1 DOCKET 50-483 LER 85-018
INADVERTENT DIESEL GENERATOR START.
EVENT DATE: 032985 REPORT DATE: 042985 NSSS: WE TYPE: PWR

(NSIC 193939) ON 3-29-85 DG 'B' WAS INADVERTENTLY STARTED DURING SURVEILLANCE TESTING OF THE LOAD SHEDDER AND EMERGENCY LOAD SEQUENCER. THE DG START IS CONSIDERED AN UNPLANNED ESP ACTUATION AND IS THEREFORE BEING REPORTED IN ACCORDANCE WITH 10 CFR 50.73(A)(2)(IV). DURING THE PERFORMANCE OF THE SURVEILLANCE AN I&C TECHNICIAN INADVERTENTLY DEPRESSED AN INCORRECT PUSHBUTTON, THUS SIMULATING AN UNDERVOLTAGE CONDITION ON A SAFETY-RELATED BUS AND STARTING THE DG. AFTER DETERMINING THE CAUSE OF THE START, THE DG WAS SECURED AND RESTORED TO ITS NORMAL STANDBY LINEUP. TO PREVENT RECURRENCE OF THIS INCIDENT, THE TECHNICIAN WAS CAUTIONED TO BE MORE CAREFUL AND ATTENTIVE DURING THE PERFORMANCE OF SURVEILLANCES. ALSO, NAMEPLATES ARE BEING INSTALLED ON THE LSELS CABINETS TO CLEARLY IDENTIFY THE TEST PUSHBUTTONS AND LAMPS. NO FURTHER CORRECTIVE ACTION IS DEEMED NECESSARY.

[71] CALVERT CLIFFS 1 DOCKET 50-317 LER 85-003
 MSSV SETPOINTS OUT OF TOLERANCE.
 EVENT DATE: 040685 REPORT DATE: 050385 NSSS: CE TYPE: PWR
 VENDOR: DRESSER INDUSTRIAL VALVE & INST DIV

(NSIC 193893) ON 4-6-85, THE PLANT WAS SHUTDOWN IN MODE 3 IN PREPARATION FOR A REFUELING OUTAGE. THE REACTOR COOLANT TEMPERATURE WAS LOWERED TO APPROX 500 F. A SURVEILLANCE TEST PROCEDURE (STP) WAS PERFORMED TO CHECK AND ADJUST AS NECESSARY THE MAIN STEAM SAFETY VALVE (MSSV) SETPOINTS. SEVEN OF THE 16 MSSV'S WERE FOUND TO BE OUT OF TOLERANCE AS SPECIFIED BY TECH SPEC 3/4.7.1.1. THE MSSV'S WERE RESET PRIOR TO COMPLETION OF THE TEST. AT THE CONCLUSION OF THE TESTING, THE PLANT WAS PLACED INTO COLD SHUTDOWN IN PREPARATION FOR REFUELING. TO PREVENT RECURRENCE OF THIS EVENT THE MSSV'S HAVE BEEN PLACED ON A PREVENTIVE MAINTENANCE SCHEDULE TO OVERHAUL 8 MSSV'S EACH REFUELING OUTAGE.

[72] CALVERT CLIFFS 1 DOCKET 50-317 LER 85-004
 ESF ACTUATION DURING SURVEILLANCE TESTING.
 EVENT DATE: 040685 REPORT DATE: 050285 NSSS: CE TYPE: PWR

(NSIC 193966) AN INADVERTENT ESF ACTUATION OCCURRED DURING SURVEILLANCE TESTING WHILE THE UNIT WAS IN MODE 4. THE PRESSURIZER PRESSURE SIGNALS WHICH INITIATE A SAFETY INJECTION ACTUATION SIGNAL WERE BLOCKED IN ACCORDANCE WITH THE PLANT COOLDOWN PROCEDURE. THE INADVERTENT ACTUATION OCCURRED WHILE ATTEMPTING TO REMOVE THE BLOCK SIGNAL FOR PRESSURIZER PRESSURE SO THAT SURVEILLANCE TESTING COULD BE PERFORMED ON THE MOTOR-OPERATED SAFETY INJECTION TANK OUTLET VALVES. THERE WAS NO INJECTION OF WATER FROM THE EMERGENCY CORE COOLING SYSTEM INTO THE RCS.

[73] CALVERT CLIFFS 1 DOCKET 50-317 LER 85-005
 INADVERTENT INITIATION OF STEAM GENERATOR ISOLATION.
 EVENT DATE: 040685 REPORT DATE: 042985 NSSS: CE TYPE: PWR

(NSIC 193967) AT 0400 A PLANT COOLDOWN FROM 532 F TO 500 F WAS COMMENCED. THE COOLDOWN PROGRESSED NORMALLY UNTIL APPROX 0512, WHEN A SG ISOLATION SIGNAL BLOCK PERMITTED ALARM WAS RECEIVED. AT THIS TIME THE OPERATOR REALIZED THE KEYS NECESSARY TO BLOCK THE SGIS WERE NOT IN THEIR RESPECTIVE KEY OPERATED HANDSWITCHES. BEFORE THE OPERATOR COULD GET THE NECESSARY KEYS INSERTED AND EFFECT A BLOCK OF THE SGIS, A SGIS SIGNAL WAS INITIATED. TO PREVENT RECURRENCE OF THIS INCIDENT THE PLANT COOLDOWN PROCEDURE WILL BE MODIFIED TO MAKE INSERTING THE BLOCK KEYS AN INITIAL ACTION STEP OF THE PLANT COOLDOWN PROCEDURE.

[74] CATAWBA 1 DOCKET 50-413 LER 85-007
 AUTO START OF DIESEL GENERATORS DURING TROUBLESHOOTING OF GENERATOR BREAKER.
 EVENT DATE: 012285 REPORT DATE: 022185 NSSS: WE TYPE: PWR

(NSIC 193731) ON 1-22-85, AT 1405:35 HRS, DGS 1A AND 1B STARTED ON A BLACKOUT SIGNAL (UNDervOLTAGE ON THE 4160V ESSENTIAL SWITCHGEAR). DURING THE TROUBLESHOOTING OF GENERATOR POWER CIRCUIT BREAKER 1B, A ZONE B LOCKOUT INITIATED INADVERTENTLY, CAUSING B TRAIN INCOMING FEEDERS ON ALL 6900V SWITCHGEAR TO TRIP, AND ALL 4 TIE BREAKERS TO CLOSE. PRESENT DESIGN ALLOWS AN INSTANTANEOUS UNDervOLTAGE CONDITION TO BE DETECTED ON THE ESSENTIAL BUSES BEFORE THE TIE BREAKER CLOSURES TO RESTORE NORMAL VOLTAGE. THEREFORE, THIS INCIDENT IS CLASSIFIED AS A DESIGN DEFICIENCY. AUTOMATIC CLOSURE OF THE TIE BREAKERS IMMEDIATELY RESTORED NORMAL VOLTAGE TO THE ESSENTIAL BUSES, AND LOAD SHEDDING DID NOT OCCUR. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(IV), AND 10 CFR 50.72(B)(2)(II).

[75] CATAWBA 1 DOCKET 50-413 LER 85-008
 REACTOR TRIP DUE TO STEAM GENERATOR LOW-LOW LEVEL.
 EVENT DATE: 012385 REPORT DATE: 022285 NSSS: WE TYPE: PWR
 VENDOR: DRESSER INDUSTRIAL VALVE & INST DIV

(NSIC 193732) ON 1-23-85, AT 1448 HRS, THE UNIT 1 REACTOR AUTOMATICALLY TRIPPED DUE TO A SG D LOW-LOW LEVEL. AUX STEAM FLOW TO MAIN FEEDWATER PUMP 1A TURBINE WAS DECREASED DUE TO THE MALFUNCTION TO PRESSURE TRANSMITTER OASPT5030. THE AS HEADER HAS 2 AUTOMATIC PRESSURE CONTROL VALVES, 1AS36 AND 1AS40, WHICH MAINTAIN A PORTION OF THE AS SYSTEM AT 65 PSIA. THESE VALVES ARE CONTROLLED BY PRESSURE TRANSMITTER OASPT5030 WHICH MONITORS HEADER PRESSURE. FAILURE OF THE TRANSMITTER PREVENTED THE PRESSURE CONTROL VALVES 1AS36 AND 1AS40 FROM MAINTAINING (AS) STEAM HEADER PRESSURE BELOW 65 PSIG. THIS CAUSED PRESSURE RELIEF VALVE 1AS43 TO OPEN. THE SUBSTANTIAL LOSS OF STEAM THROUGH THE HEADER AND RELIEF VALVE RESULTED IN A LOSS OF STEAM FLOW TO FEED PUMP 1A. THIS DECREASED FEEDWATER FLOW WHICH RESULTED IN A SG LOW-LOW LEVEL. THEREFORE, THIS INCIDENT IS CLASSIFIED AS A COMPONENT MALFUNCTION. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(IV) AND 10 CFR 50.72(B)(2)(II).

[76] CATAWBA 1 DOCKET 50-413 LER 85-015
 SEVERAL VALVE MOTOR BREAKERS NOT 'LOCKED OFF'.
 EVENT DATE: 030285 REPORT DATE: 040185 NSSS: WE TYPE: PWR

(NSIC 193783) ON 3-2-85, AT 1600 HRS, CERTAIN SAFETY INJECTION AND AUX FEEDWATER VALVE MOTOR BREAKERS WERE DISCOVERED TO BE NOT LOCKED IN THE 'OFF' POSITION AS REQUIRED BY TECH SPEC 4.5.1.1.1.C AND 4.7.1.2.1.A.5. THIS WAS DISCOVERED DURING THE PERFORMANCE OF APW PUMP HEAD AND VALVE VERIFICATION PERIODIC TEST. AT 1635 HRS, THE APPLICABLE VALVE MOTOR BREAKERS WERE LOCKED IN THE 'OFF' POSITION. CATAWBA UNIT 1 WAS IN MODE 3 AT THE TIME THIS INCIDENT WAS DISCOVERED. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I)(C). THE COMPUTER PROGRAM USED FOR IMPLEMENTING TAGOUT REMOVAL AND RESTORATION RECORD SHEETS DID NOT HAVE THE CAPABILITY TO SHOW TAGGED POSITIONS AS 'LOCKED OFF'. THEREFORE, THE PERSONNEL PERFORMING THE TAGOUT WORK WERE NOT AWARE OF THE 'LOCKED OFF' REQUIREMENT. HOWEVER, WHEN THE PERSONNEL COMPLETED THE TAGOUT WORK, THEY DID NOT COMPLETELY READ THE APPLICABLE PROCEDURE STEPS AND SIGNED OFF THE STEPS VERIFYING THAT THE BREAKERS WERE 'LOCKED OFF'. THEREFORE THIS INCIDENT IS CLASSIFIED AS AN ADMINISTRATIVE DEFICIENCY AND ALSO AS A PERSONNEL ERROR.

[77] CATAWBA 1 DOCKET 50-413 LER 85-016
 INCORRECT CALIBRATION OF THE POWER RANGE TRIP SETPOINTS.
 EVENT DATE: 030285 REPORT DATE: 040385 NSSS: WE TYPE: PWR

(NSIC 193784) ON 3-2-85, THREE POWER RANGE HIGH OVERPOWER TRIP CIRCUITS ON UNIT 1 WERE CALIBRATED TO 109% REACTOR POWER. SINCE UNIT 1 WAS IN MODE 1 AT 30% REACTOR POWER FOR POWER ESCALATION TESTING, THESE SETPOINTS SHOULD NOT HAVE EXCEEDED 50% POWER, AS GIVEN IN NRC REG GUIDE 1.68 AND THE CATAWBA FSAR. THIS INCIDENT WAS DISCOVERED ON 3-4-85, AT 0800 HRS, DURING A REVIEW OF THE TEST DATA. ONCE DISCOVERED, WORK REQUESTS WERE ISSUED TO RE-CALIBRATE THE 2 CIRCUITS. THIS INCIDENT IS CLASSIFIED AS A PERSONNEL ERROR. THE TECHNICIANS INVOLVED DID NOT PROPERLY FOLLOW A STEP IN THE CALIBRATION PROCEDURE. THIS INCIDENT IS BEING REPORTED AS A VOLUNTARY LER.

[78] CATAWBA 1 DOCKET 50-413 LER 85-017
 AUTO-START OF THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP.
 EVENT DATE: 030685 REPORT DATE: 040585 NSSS: WE TYPE: PWR

(NSIC 193926) ON 3-6-85, THE TURBINE-DRIVEN AUX FEEDWATER PUMP (CA PUMP #1) AUTOMATICALLY STARTED. UNIT 1 WAS IN MODE 1 AT 30% POWER. PRIOR TO THE PUMP

START PERSONNEL WERE REALIGNING THE CONDENSATE SYSTEM IN ORDER TO PRESSURIZE CONDENSATE POLISHING DEMINERALIZER 1B. SUCTION TO THE BOOSTER PUMPS WAS LOST CAUSING THEM TO TRIP. THE SG LEVEL STARTED TO DECREASE BUT WAS QUICKLY RESTORED TO NORMAL. DURING THIS TRANSIENT CA PUMP #1 AUTOMATICALLY STARTED. THE CAUSE OF THIS INCIDENT HAS NOT YET BEEN DETERMINED. A FOLLOW-UP REPORT WILL BE SUBMITTED ON OR ABOUT 5-1-85. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(IV) AND 50.72(B)(2)(II).

[79] CATAWBA 1 DOCKET 50-413 LER 85-020
REACTOR TRIP CAUSED BY A LOOSE POWER RANGE DETECTOR CABLE.
EVENT DATE: 031485 REPORT DATE: 041285 NSSS: WE TYPE: PWR
VENDOR: AMPHENOL

(NSIC 193927) ON 3-14-85 AT 0214:47 HRS, A UNIT 1 REACTOR TRIP OCCURRED DUE TO A POWER RANGE HIGH FLUX RATE SIGNAL. POWER RANGE CHANNEL N-41 WAS REMOVED FROM SERVICE TO HAVE THE FULL POWER CURRENTS RESET PER WORK REQUEST. WHILE WORKING ON THIS CHANNEL, A TECHNICIAN NOTICED THAT THE REAR CABINET DOOR CONTAINING CHANNEL N-44 WAS OPEN. HE THEN PROCEEDED TO CLOSE THE DOOR. WHEN HE CLOSED THE DOOR, THE DOOR PRESSED AGAINST DETECTOR CABLE AND CAUSED THE CABLE TO PULL LOOSE FROM ITS CONNECTOR. THE DETECTOR SIGNAL WENT TO ZERO CAUSING THE HIGH FLUX RATE BISTABLE FOR THAT CHANNEL TO TRIP. CHANNEL N-41 WAS IN TEST AT THE TIME. WITH BOTH CHANNELS IN THE TRIP STATE, THE 2 OUT OF 4 LOGIC WAS SATISFIED TO CAUSE A HIGH NEGATIVE FLUX RATE REACTOR TRIP SIGNAL.

[80] CONNECTICUT YANKEE DOCKET 50-213 LER 85-005
FAILURE OF AUTOMATIC INITIATION OF AUXILIARY FEEDWATER.
EVENT DATE: 110284 REPORT DATE: 040185 NSSS: WE TYPE: PWR

(NSIC 193835) A TEST OF THE AUTOMATIC INITIATION OF THE AUX FEEDWATER SYSTEM WAS PERFORMED ON 11-2-84 WHILE IN MODE 3. THE PLANT WAS COMPLETING REFUELING AND HAD NOT YET ACHIEVED CRITICALITY. DURING THE TEST, IT WAS DISCOVERED THAT THE AIR OPERATED SG FEEDWATER BYPASS VALVES IN LOOPS 1 AND 4 DID NOT OPEN AUTOMATICALLY. AS A RESULT, AUX FEEDWATER COULD NOT FLOW TO SG'S IN LOOPS 1 AND 4 WITHOUT OPERATOR ACTION. THESE AIR OPERATED BYPASS VALVES DID NOT OPEN BECAUSE THE SOLENOIDS WHICH CONTROL AIR PRESSURE TO THE VALVE DIAPHRAGM WERE STUCK AND DID NOT AUTOMATICALLY VENT THE CONTROL AIR ON RECEIPT OF THE AUTO-INITIATION SIGNAL. INSPECTION OF THE SOLENOIDS WAS PERFORMED, BUT SINCE THEY OPERATED PROPERLY IN ALL SUBSEQUENT TESTS, WE HAVE NOT YET DETERMINED THE EXACT REASON FOR THEIR MALFUNCTION. THE SOLENOIDS AND SYSTEM WERE RETESTED, PERFORMED ACCEPTABLY, AND DECLARED OPERATIONAL FOR CONTINUED USE. FURTHER ACTION PLANNED INCLUDES ADDITIONAL TESTING OF THE SOLENOIDS.

[81] CONNECTICUT YANKEE DOCKET 50-213 LER 85-006
FEEDWATER PIPE RUPTURE.
EVENT DATE: 031685 REPORT DATE: 041285 NSSS: WE TYPE: PWR

(NSIC 193876) ON 3-16-85, THE PLANT WAS OPERATING IN MODE 1 AT 100% POWER. AT 2005 HRS, A STEAM LEAK WAS DISCOVERED. THE REACTOR AND TURBINE WERE MANUALLY TRIPPED AT 2010 HRS DUE TO THE POSSIBILITY OF GROUNDING THE SG FEED PUMP MOTOR(S) AND/OR HEATER DRAIN PUMP MOTOR(S) AND THE EXACT LOCATION OF THE LEAK WAS NOT KNOWN. AFTER TRIPPING THE PLANT, 1 SG FEED PUMP WAS SHUT DOWN AND THE AUX SG FEED PUMPS WERE STARTED TO ENSURE THEIR AVAILABILITY. CONDENSER VACUUM WAS LOST DUE TO AIR LEAKING THROUGH THE TURBINE SEALS. THE ATMOSPHERIC STEAM DUMP WAS THEN USED TO CONTROL PRIMARY SIDE PRESSURE AND TEMPERATURE. AUTOMATIC INITIATION OF AUX FEEDWATER FLOW OCCURRED AT 2013 HRS DUE TO LOW LEVEL IN 2 SG'S. THE CAUSE OF THIS EVENT WAS A PIPE RUPTURE IMMEDIATELY DOWNSTREAM OF THE 1B FEEDWATER HEATER NORMAL LEVEL CONTROL VALVE. THE ERODED SECTION OF PIPE WAS REPLACED. SECTIONS OF PIPE SIMILAR TO THE PIPE THAT RUPTURED WILL BE INCLUDED IN THE PLANT

PROGRAM FOR MONITORING PIPE ELBOWS FOR EROSION IN THE MAIN STEAM AND FEEDWATER SYSTEMS.

[82] COOK 1 DOCKET 50-315 LER 85-005
 INCORRECT IODINE SAMPLE MEDIUM.
 EVENT DATE: 020585 REPORT DATE: 030785 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 193764) ON 2-5-85 AT 1500 HRS WITH UNIT 1 IN MODE 1 AND UNIT 2 IN MODE 1 AT 100% POWER, IT WAS DISCOVERED THAT THE SAMPLE MEDIUM DESIGNATED IN TECH SPEC 3.11.2.1 TABLE 4.11-2 WAS NOT USED. THE TABLE STIPULATES THE USE OF CHARCOAL SAMPLES TO OBTAIN IODINE DATA FOR THE VENT STACK, CONDENSER EVACUATION SYSTEM AND GLAND EXHAUST SYSTEM. CONTRARY TO TABLE 4.11-2, THE PLANT HAS BEEN USING SILVER ZEOLITE CARTRIDGES FOR IODINE COLLECTION/ANALYSIS SINCE 6-82. THE IODINE COLLECTION MEDIUM WAS CHANGED BACK TO A CHARCOAL CARTRIDGE ON 2-5-85. THIS REPORT IS BEING SUBMITTED DUE TO A DEVIATION FROM THE LITERAL INTERPRETATION OF TECH SPECS. THE CAUSE OF THIS DEVIATION IS PERSONNEL ERROR. PLANT PERSONNEL ASSUMED THAT THE TERMINOLOGY CHARCOAL SAMPLE WAS A GENERIC TITLE FOR ANY TYPE IODINE ADSORBER/MEDIUM. THE SILVER ZEOLITE CARTRIDGE ALLOWS FOR A MORE ACCURATE DETERMINATION OF IODINE RELEASES DUE TO LESS NOBLE GAS ADSORPTION. TO PREVENT RECURRENCE THE CHARCOAL CARTRIDGE WILL CONTINUE TO BE USED UNTIL A TECH SPEC CHANGE CAN BE MADE TO ALLOW FOR THE USE OF THE MORE ACCURATE SILVER ZEOLITE CARTRIDGE.

[83] COOK 1 DOCKET 50-315 LER 85-007
 CONTROL ROOM EMERGENCY VENTILATION SYSTEM DOES NOT MEET SPECS.
 EVENT DATE: 022285 REPORT DATE: 032585 NSSS: WE TYPE: PWR

(NSIC 193714) ON 2-22, AT 11:05 AM IT WAS DETERMINED THAT THE CONTROL ROOM PRESSURE COULD NOT BE MAINTAINED AT +1/16 INCHES WATER GAUGE (WG) RELATIVE TO THE OUTSIDE ATMOSPHERE AS REQUIRED BY TECH SPEC SURVEILLANCE REQUIREMENT 4.7.5.1.E.3. A CONTROLLED SHUTDOWN WAS INITIATED AT 12:00 PM PER TECH SPEC 3.0.3. THE CONTROL ROOM FLOW RATE WAS THEN INCREASED, THE +1/16 INCHES WG OBTAINED, AND FULL POWER OPERATION RESUMED. AN ANALYSIS WAS PERFORMED TO DETERMINE THE POTENTIAL RADIOLOGICAL CONSEQUENCES OF OPERATION AT THE HIGHER FLOW RATES. THE CONSEQUENCES WERE EVALUATED AND BELIEVED TO BE WITHIN APPLICABLE REGULATORY LIMITS. BALANCING OF THE CONTROL ROOM VENTILATION SYSTEM WAS CONDUCTED ON 3-9 AND 3-10, 1985. DURING THIS BALANCING, THE SYSTEM EXCEEDED PREESTABLISHED ACCEPTANCE CRITERIA, AND ALTHOUGH A TECH SPEC WAS NOT VIOLATED, IT WAS DECIDED TO BEGIN A PLANT SHUTDOWN. THE FLOW RATES WERE SATISFACTORILY ADJUSTED AND BALANCED BY 0630 HRS ON 3-10, AT WHICH TIME THE SHUTDOWN WAS TERMINATED AND THE UNIT RETURNED TO POWER. TO PREVENT RECURRENCE, MODIFICATIONS ARE BEING DEVELOPED TO IMPROVE THE OPERABILITY OF THE CONTROL ROOM HVAC SYSTEM. IN ADDITION, A TECH SPEC CHANGE REQUEST WILL BE SUBMITTED WHICH SHOULD MORE CONCISELY REFLECT THE REQUIREMENTS IN BOTH THE PRESSURIZATION AND RECIRCULATION MODES.

[84] COOK 1 DOCKET 50-315 LER 85-010
 DOSE EQUIVALENT IODINE-131 IN REACTOR COOLANT EXCEEDED TWICE.
 EVENT DATE: 040685 REPORT DATE: 050385 NSSS: WE TYPE: PWR

(NSIC 194018) THROUGH REEVALUATION OF REPORTING REQUIREMENTS, THIS SPECIAL REPORT IS BEING SUBMITTED. TECH SPEC 3.4.8 LIMITS DOSE EQUIVALENT IODINE-131 (DOSEQ-I-131) TO LESS THAN 1.0 MICRO CURIES PER GRAM. ON 2 OCCASIONS THE REACTOR COOLANT EXCEEDED THIS LIMIT. ON BOTH OCCASIONS ALL OTHER ACTION ITEMS WERE COMPLIED WITH. ON 1-12-85 AT 0031 HRS FOLLOWING A CONTROLLED SHUTDOWN OF THE UNIT 1 REACTOR THE DOSEQ-I-131 SPIKED TO A LEVEL OF 1.52 MICRO CURIES PER GRAM. THE IODINE LEVEL REMAINED IN EXCESS OF THE TECH SPEC LIMIT FOR 15 HRS AND 39 MINS. ON 4-6-85 AT 0400 HRS, FOLLOWING A CONTROLLED SHUTDOWN OF THE UNIT 1

REACTOR, THE DOSEQ-I-131 SPIKED TO A LEVEL OF 4.48 MICRO CURIES PER GRAM. THE IODINE LEVEL REMAINED IN EXCESS OF THE TECH SPEC LIMIT FOR 19 HRS. IN AN ATTEMPT TO PREVENT RECURRENCE, FUEL SIPPING WILL BE PERFORMED DURING THE 1985 REFUELING OUTAGE IN AN EFFORT TO LOCATE AND REPLACE THE LEAKING FUEL ASSEMBLIES. PREVIOUS OCCURRENCES - 315/76-052, 315/76-059, AND 315/78-026.

[85] COOK 2 DOCKET 50-316 LER 85-007
ISOLATION VALVE STEMS CRACK IN RESISTANCE TEMPERATURE LOOPS.
EVENT DATE: 122884 REPORT DATE: 032085 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: COOK 1 (PWR)
VENDOR: EDWARDS VALVES DIV

(NSIC 193715) THIS IS BEING SUBMITTED DUE TO THE SIMILARITY BETWEEN THE FOLLOWING EVENTS AND THOSE DESCRIBED IN IE INFO NOTICE 84-48 AND 84-48, SUPPLEMENT 1. WITH UNIT 2 RCS IN MODE 5 ON 12-28-84, NON-DESTRUCTIVE EXAMINATIONS REVEALED THAT 7 VALVES HAD BREAKAGE OR CRACK INDICATIONS IN THE AREA OF DISC ATTACHMENT. THE SUBJECT VALVES ARE ALL 2-INCH ROCKWELL-EDWARD GLOBE VALVES AND SERVE AS ISOLATIONS FOR REACTOR COOLANT LOOP RESISTANCE TEMPERATURE DETECTOR MANIFOLDS. ALL OF THE IDENTIFIED VALVES WERE REPLACED WITH 2-INCH CONVAL GLOBE VALVES. ON 1-16-85, WITH UNIT 1 RCS IN MODE 5, NON-DESTRUCTIVE EXAMINATIONS REVEALED A TOTAL OF 11 2-INCH ROCKWELL-EDWARD GLOBE VALVES WITH STEM INDICATIONS SIMILAR TO THOSE FOUND IN THE UNIT 2 INSPECTIONS. ALL OF THE IDENTIFIED VALVES WERE REPLACED WITH CONVAL OR KEROTEST 2-INCH GLOBE VALVES. THE VALVE REPLACEMENTS ARE A CONTINUATION OF A PROGRAM BEGUN IN 1979 FOR REPLACEMENT OF ROCKWELL-EDWARD VALVES IN THE UNIT 1 AND UNIT 2 RTD MANIFOLDS.

[86] COOK 2 DOCKET 50-316 LER 85-004
DISCOVERY OF RTD CONNECTOR NOT MEETING ENVIRONMENTAL QUALIFICATION REQUIREMENTS.
EVENT DATE: 012585 REPORT DATE: 022685 NSSS: WE TYPE: PWR
VENDOR: RDF CORP.

(NSIC 193891) THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.49. ON 1-25-85, AT 1510 HRS, THE PLANT WAS ADVISED THAT THE CONNECTION ON THE RTD MONITORING RCS LOOP 2 COLD LEG TEMPERATURE WAS NOT ENVIRONMENTALLY QUALIFIED. THE RTD IN QUESTION, MANUFACTURED BY THE RDF CORPORATION, WAS INSTALLED ON 11-20-84, AS A REPLACEMENT FOR THE THEN-INSTALLED RTD WHICH WAS OF ROSEMOUNT MANUFACTURE. THIS IS THE ONLY ACTIVE INSTALLATION OF A RDF MANUFACTURED RTD BEING UTILIZED FOR RCS TEMPERATURE MONITORING IN UNIT 2. AT 0925 HRS ON 1-26-85, A UNIT 2 TRIP OCCURRED DUE TO AN UNRELATED COMPONENT FAILURE. BEFORE THE UNIT WAS RESTARTED, THE UNQUALIFIED RTD WAS REMOVED FROM SERVICE AND REPLACED WITH AN ENVIRONMENTALLY QUALIFIED SPARE (MANUFACTURED BY ROSEMOUNT). DESIGN CHANGE RFC-DC-12-2839 WHICH PROVIDES INSTRUCTIONS NECESSARY TO UPGRADE INSTALLED RDF MANUFACTURED RTD'S TO MEET ENVIRONMENTAL QUALIFICATIONS HAS BEEN APPROVED. THIS DESIGN CHANGE WILL BE IMPLEMENTED ON THE UNIT 2 INSTALLED RDF RTD AT THE NEXT OPPORTUNITY.

[87] COOK 2 DOCKET 50-316 LER 85-009
MISSED VENT STACK SAMPLE.
EVENT DATE: 032785 REPORT DATE: 042585 NSSS: WE TYPE: PWR

(NSIC 194019) ON 3-27-85 AT 1430 HRS WITH THE REACTOR IN MODE 1 AT 100% POWER THE MONTHLY VENT STACK COMPOSITE SAMPLE WAS LOST. TECH SPEC 4.11.2.1.2 TABLE 4.11.2 REQUIRES THE ANALYSIS OF A MONTHLY AUX BLDG VENT STACK COMPOSITE FOR ALPHA AND A QUARTERLY COMPOSITE FOR STRONTIUM-89 AND STRONTIUM-90. THE MONTHLY SAMPLE WAS LOST AND THE QUARTERLY SAMPLE WILL NOT BE REPRESENTATIVE DUE TO THE MISSING SAMPLE. THE VENT STACK PARTICULATE FILTERS FOR MAR 1985 WERE PLACED IN A BREAKER CONTAINING FUMING NITRIC ACID. TO AID IN DISSOLVING THE FILTERS FOR ISOTOPIC EXTRACTION THE MIXTURE WAS STIRRED. DURING THE STIRRING THE GLASS BREAKER WAS

BROKEN, SPILLING THE CONTENTS. DUE TO THE DANGEROUS NATURE OF THE SOLVENT, SAFETY MEASURES FOR THE LAB TECHNICIAN TOOK PRECEDENCE OVER THE CONSERVATION OF THE SAMPLE. TO PREVENT RECURRENCE PLANT CHEMICAL LAB PERSONNEL HAVE BEEN COUNSELED IN PROPER HANDLING TECHNIQUES WHEN USING BREAKABLE EQUIPMENT, DANGEROUS CHEMICALS AND IRRETRIEVABLE TECH SPEC SAMPLES.

[88] COOK 2 DOCKET 50-316 LER 85-010
MISSED FIRE WATCH INSPECTION.
EVENT DATE: 032785 REPORT DATE: 042685 NSSS: WE TYPE: PWR

(NSIC 193892) ON 3-27-85, AT 2341 HRS A FIRE WATCH FAILED TO INSPECT THE 4KV AB BUS ROOM AS REQUIRED BY TECH SPEC 3.7.9.3. THE ROOM WAS NOT INSPECTED DUE TO PERSONNEL ERROR. THE FIRE WATCH FOUND THE ACCESS DOOR NO. 348 (IEEE, COMPONENT FUNCTION - DR) LOCKED AND DID NOT ATTEMPT TO GAIN ACCESS. THE AREA WAS ENTERED, AND THE REQUIRED INSPECTION COMPLETED AT 0100 HRS ON 3-28-85. THE FIRE DETECTION SYSTEM INSIDE THE AREA WAS OPERABLE AT ALL TIMES. PREVENTIVE ACTION CONSISTED OF REINSTRUCTING THE FIRE WATCH IN HIS RESPONSIBILITY TO ENTER ALL AREAS ASSIGNED AS PART OF HIS FIRE WATCH DUTIES.

[89] COOPER DOCKET 50-298 LER 85-002
STANDBY GAS TREATMENT SYSTEM DESIGN DEFICIENCIES.
EVENT DATE: 032685 REPORT DATE: 042585 NSSS: GE TYPE: BWR

(NSIC 193847) DURING PLANT SHUTDOWN CONDITIONS AN INDEPENDENT ENGINEERING FIRM PERFORMED A REVIEW OF THE STANDBY GAS TREATMENT SYSTEM DESIGN, OPERATING PROCEDURES, AND SURVEILLANCE PROCEDURES TO DETERMINE IF THERE WERE ANY MODIFICATIONS REQUIRED TO ENSURE COMPLIANCE WITH REG GUIDE 1.52 AND ANSI N509. THERE ARE 3 DEFICIENCIES WHICH COULD POSSIBLY PREVENT THE SYSTEM FROM PERFORMING ITS INTENDED FUNCTION: 1. EXPANSION SLEEVES AT THE SGTS FAN DISCHARGES AND IN THE CROSSOVER LINE BETWEEN THE 2 SGTS TRAINS DO NOT HAVE SUFFICIENT SLACK IN THE SLEEVES AND POTENTIALLY WOULD NOT PROVIDE FOR SUFFICIENT MOVEMENT CAPABILITY IN A SEISMIC EVENT. THIS COULD RESULT IN A FAILURE OF THE SUBJECT SLEEVES. 2. THE CROSSOVER DUCT BETWEEN THE 2 SGTS TRAINS IS UNRESTRAINED IN ONE DIRECTION. UNRESTRICTED MOVEMENT DURING A SEISMIC EVENT COULD POTENTIALLY RESULT IN A FAILURE OF THE CROSSOVER DUCT WORK. THE SGTS HOUSING DRAINS ARE TIED INTO A COMMON DRAIN HEADER AND THERE ARE NO VALVES OR LOOP SEALS IN THE HOUSING DRAIN LINES. THIS PIPING ARRANGEMENT COULD PERMIT A SMALL AMOUNT OF PROCESS FLOW TO BYPASS THE FILTER AND ADSORBER BANKS. IT WAS ALSO DETERMINED THAT THE GAS RESIDENCE TIME IN THE CARBON ADSORBERS IS 0.19 SECS WHICH IS LESS THAN THE 0.25 SECS RECOMMENDED BY REG GUIDE 1.52.

[90] CRYSTAL RIVER 3 DOCKET 50-302 LER 85-001
AUXILIARY BUILDING EXHAUST FANS OUT OF SERVICE FOR MAINTENANCE.
EVENT DATE: 021285 REPORT DATE: 032285 NSSS: BW TYPE: PWR

(NSIC 193710) ON 2-12-85, THE AUX BLDG EXHAUST FANS WERE TAKEN OUT OF SERVICE IN ORDER TO PERFORM MODIFICATIONS TO THE VENTILATION SYSTEM DAMPERS. TECH SPEC 3.7.8.1 REQUIRES 2 INDEPENDENT PAIRS OF EXHAUST FANS BE OPERABLE. WITH BOTH PAIRS OF EXHAUST FANS OUT OF SERVICE, THE LIMITING CONDITION AS SPECIFIED IN TECH SPEC 3.7.8.1 WAS NOT MET AND TECH SPEC 3.0.3 WAS ENTERED. THE EXHAUST FANS PROVIDE A NEGATIVE PRESSURE WITHIN THE AUX BLDG RELATIVE TO AREAS OUTSIDE THE BLDG. THIS ASSURES ALL LEAKAGE OF AIR WILL BE INTO THE BLDG AND ALL DISCHARGES WILL BE FILTERED AND MONITORED THROUGH THE EXHAUST FILTER AND FAN SYSTEM. FOR THE CONTROLLED EVOLUTION REPORTED HERE, THE SUPPLY AND EXHAUST FANS WERE SECURED, LEAVING UNPRESSURIZED RELEASE THROUGH BLDG OPENINGS AS THE ONLY RELEASE PATH. THIS EVOLUTION IS NON-REPORTABLE SINCE TECH SPEC 3.0.3 WAS ENTERED VOLUNTARILY FOR MAINTENANCE PURPOSES AND EXITED PRIOR TO BEING REQUIRED TO PLACE THE PLANT IN

HOT STANDBY. A VOLUNTARY REPORT IS BEING SUBMITTED TO DOCUMENT THE USE OF TECH SPEC 3.0.3 FOR MAINTENANCE ACTIVITIES.

[91] CRYSTAL RIVER 3 DOCKET 50-302 LER 85-002
 AUTO START OF EMERGENCY DIESEL GENERATOR DUE TO AIR FILTER LEAK.
 EVENT DATE: 022285 REPORT DATE: 032285 NSSS: BW TYPE: PWR
 VENDOR: NORGREN

(NSIC 193760) ON 2-22-85, THE 'B' EMERGENCY DIESEL AIR START PRESSURE LOW ALARM WAS ACTIVATED. INVESTIGATION REVEALED THAT A DRAIN PETCOCK ON FILTER EGFL-4 HAD FAILED. LOSS OF AIR AT THE PETCOCK FITTING CAUSED A DROP IN PRESSURE ON THE OPERATOR FOR THE AIR START VALVE EGV-59 CAUSING THE VALVE TO OPEN. THIS SUPPLIED STARTING AIR TO EGDG-1B AND THE ENGINE STARTED. THE DRAIN PETCOCK IS INSTALLED IN THE FILTER BODY WITH A PLASTIC BUSHING. THIS PLASTIC BUSHING FAILED DUE TO A COMBINATION OF PRESSURE, HEAT, VIBRATION, AND OVER TORQUING. THE FILTER IS RATED 250 PSIG WHICH IS THE NOMINAL PRESSURE OF THE EMERGENCY DIESEL STARTING AIR SYSTEM. THE EMERGENCY DG SUCCESSFULLY STARTED WHEN THE FILTER FAILED. STARTING AIR PRESSURE, HOWEVER, WAS BLED DOWN TO A POINT WHERE THE DIESEL COULD NOT BE RESTARTED IF STOPPED. CONSEQUENTLY, THE DIESEL WAS KEPT RUNNING UNTIL THE AIR START SYSTEM WAS REPAIRED. ALL 4 AIR START SOLENOID AIR FILTERS WILL BE REPLACED WITH FILTERS RATED FOR A HIGHER PRESSURE. TWO PREVIOUS FAILURES OF THE DRAIN PETCOCKS ON THE AIR START SOLENOID AIR FILTERS HAVE OCCURRED AT CR-3 AND WERE REPORTED ON LER 84-015.

[92] DAVIS-BESSE 1 DOCKET 50-346 LER 85-004
 CONTAINMENT ISOLATION VALVE EXCEEDS STROKE TIME LIMIT.
 EVENT DATE: 022085 REPORT DATE: 032285 NSSS: BW TYPE: PWR
 VENDOR: ASCO VALVES

(NSIC 193775) CONTAINMENT ISOLATION VALVE (QUENCH TANK OUTLET ISOLATION) RC229A EXCEEDED THE LIMIT OF 10 SECS PER TECH SPEC TABLE 3.6-2 WHEN ITS CLOSING STROKE TIME MEASURED 10.48 SECS. THE REQUIRED ACTION STATEMENT OF ISOLATING THE PENETRATION WITHIN 4 HRS WAS NOT MET WHEN THE OPERATORS PERFORMING AND REVIEWING ST 5099.08, MISCELLANEOUS VALVES QUARTERLY TEST, DID NOT NOTICE THE STROKE TIME LIMIT WAS EXCEEDED. THE DESIGNATED REVIEWER FOR THE TEST INFORMED THE OPERATIONS SUPERVISOR ON 2-20-85 THAT THE LIMIT WAS EXCEEDED. THE ACTION STATEMENT OF TECH SPEC 3.6.3.1 WAS ENTERED, AND THE CONTAINMENT PENETRATION WAS ISOLATED USING MANUAL VALVE RC79. THE VALVE RC229A WAS REPAIRED ON 2-21-85, AND WAS SUCCESSFULLY RETESTED. THIS REMOVED THE PLANT FROM THE ACTION STATEMENT AT 1300 HRS ON 2-21-85.

[93] DIABLO CANYON 1 DOCKET 50-275 LER 85-012
 REACTOR TRIP DUE TO INADVERTENT SHORT OF 115V VITAL POWER SUPPLY.
 EVENT DATE: 032185 REPORT DATE: 041985 NSSS: WE TYPE: PWR

(NSIC 193883) AT 1651 PST, 3-21-85, WITH UNIT 1 IN MODE 1 (POWER OPERATION), AUTOMATIC REACTOR AND TURBINE TRIPS OCCURRED. ALL AUTOMATIC EQUIPMENT FUNCTIONED AS DESIGNED. IN ACCORDANCE WITH PROCEDURES, THE PLANT WAS STABILIZED IN MODE 3 (HOT STANDBY). THIS EVENT OCCURRED WHEN TECHNICIANS INADVERTENTLY SHORTED THE 115V VITAL POWER SUPPLY WHILE TESTING 1 OF THE 2 REFUELING WATER STORAGE TANK (RWST) LEVEL CHANNELS (921) (JG), WHICH HAD BEEN MODIFIED IN ACCORDANCE WITH REG GUIDE 1.97. THE SHORT CAUSED A RELAY (ED)(94), WHICH INDICATES REACTOR COOLANT PUMP BREAKER POSITION, IN THE SOLID STATE PROTECTION RACKS TO MOMENTARILY DROP OUT. THIS RESULTED IN THE REACTOR TRIP FOLLOWED BY A TURBINE TRIP. THE UNIT WAS RETURNED TO POWER IN ACCORDANCE WITH PROCEDURES. TO PREVENT RECURRENCE, APPROPRIATE PERSONNEL WERE INSTRUCTED ON THE CAUSE OF THE EVENT AND THE NEED FOR CARE WHILE WORKING NEAR ENERGIZED EQUIPMENT.

[94] DRESDEN 2 DOCKET 50-237 LER 83-026 REV 1
 UPDATE ON REPEATED MAIN STEAM LINE SNUBBER FAILURES.
 EVENT DATE: 041283 REPORT DATE: 100384 NSSS: GE TYPE: BWR
 VENDOR: PACIFIC SCIENTIFIC COMPANY

(NSIC 193949) DURING THE UNIT 2 REFUELING OUTAGE, SNUBBER 52 WAS REPLACED WITH AN INSTRUMENTED MECHANICAL SNUBBER TO INVESTIGATE PREVIOUS 5 SNUBBER FAILURES. SNUBBER 52 (S/N 6991) HAD PREVIOUSLY PASSED ITS FUNCTIONAL TEST. FOUR ADDITIONAL SNUBBERS WERE SATISFACTORILY TESTED TO VERIFY THAT THIS WAS AN ISOLATED INCIDENT. SAFETY SIGNIFICANCE IS MINIMAL BECAUSE NDE PERFORMED ON 'D' MAIN STEAM LINE REVEALED NO ABNORMALITIES IN THE HIGH STRESS WELD AREAS. SIMILAR EVENT REPORTED BY R.O. 83-12/01T ON DOCKET 50-237. 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.

[95] DRESDEN 2 DOCKET 50-237 LER 83-040 REV 1
 UPDATE ON MSIV CONTROL CIRCUIT SHORT CIRCUIT.
 EVENT DATE: 050783 REPORT DATE: 020485 NSSS: GE TYPE: BWR

(NSIC 193873) WHILE PERFORMING MSIV 10% CLOSURE TEST PROCEDURE DOS 250-1, THE NSO RECEIVED A HALF-SCRAM SIGNAL ON THE 'A' RPS CHANNEL. DURING TEST OF 2D MSIV THE FUSE FOR RELAY 590-102 HAD BLOWN AND WHEN REPLACED, THE NEW FUSE ALSO BLEW. CAUTION CARDS WERE PLACED TO ALERT PERSONNEL TO THE POTENTIAL PROBLEM AND WILL REMAIN UNTIL THE SITUATION IS CORRECTED. MSIV CLOSURE WOULD STILL PROVIDE PROPER SCRAM SIGNALS. THE CAUSE OF THIS OCCURRENCE WAS A SHORTED CABLE. THIS CABLE WAS REPLACED FROM THE DRYWELL PENETRATION TO THE INBOARD MSIV FUNCTION BOX. THE VALVE WAS TESTED SATISFACTORILY AND RETURNED TO SERVICE. THESE ACTIONS WERE ACCOMPLISHED DURING THE UNIT REFUEL OUTAGE.

[96] DRESDEN 2 DOCKET 50-237 LER 83-063 REV 1
 UPDATE ON MSIV DUAL POSITION INDICATION.
 EVENT DATE: 083083 REPORT DATE: 020485 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193741) DURING NORMAL OPERATION AND WHILE PERFORMING MSIV 10% CLOSURE TEST PROCEDURE DOS 250-1, A DOUBLE INDICATION OCCURRED ON MSIV 2-203-1B WHEN THE TEST BUTTON WAS RELEASED. THIS LIMIT SWITCH HAS NO EFFECT ON RPS ACTUATION - CLOSURE WILL STILL PROVIDE PROPER SCRAM SIGNALS. THIS EVENT WAS THE FIRST OCCURRENCE OF THIS TYPE. THE UPPER LIMIT SWITCH WAS OUT OF ADJUSTMENT THROUGH NORMAL WEAR. AFTER PROPER ADJUSTMENTS WERE COMPLETED, THE VALVE WAS TESTED AND FUNCTIONED CORRECTLY, AND RETURNED TO SERVICE. THIS SUPPLEMENTAL REPORT DOCUMENTS ACTIONS TAKEN WHILE THE UNIT WAS SHUTDOWN FOR REFUELING.

[97] DRESDEN 2 DOCKET 50-237 LER 84-004 REV 1
 UPDATE ON CORE SPRAY VALVE FAILURE TO CLOSE.
 EVENT DATE: 022284 REPORT DATE: 092484 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193690) 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 'B' CORE SPRAY LOOP AND ALL OTHER ECCS SYSTEMS WERE OPERABLE. PREVIOUS OCCURRENCE REPORTED BY RO 83-69/03L-0 ON DOCKET 50-237. THE CAUSE WAS A FAULTY AUX BREAKER CONTACT IN THE VALVE CONTROL CIRCUITRY. BOTH AUX CONTACTS ON THE BREAKER WERE REPLACED AND DOS 1400-2 WAS PERFORMED TO VERIFY VALVE OPERABILITY. AN INVESTIGATION OF THE FAULTY CONTACT WAS CONDUCTED BY THE MANUFACTURER. THEIR REPLY WAS THAT THE CONTACT GUIDES NEED LUBRICATION. A REVISION TO DMP 7300-5 (INSPECTION OF 480V BREAKERS AND

(NSIC 193691) A FIRE BARRIER INSPECTION OF THE AUX ELECTRIC EQUIPMENT ROOM, UNIT 2 DG ROOM, UNIT 3 DG ROOM AND UNIT 2/3 DG ROOM WAS CONDUCTED TO ENSURE THAT ALL FIRE WALL PENETRATIONS WERE SEALED. THIS INSPECTION SHOWED THAT SEVERAL MECHANICAL PENETRATIONS WERE NOT SEALED. PER TECH SPECS, A FIRE WATCH WAS ESTABLISHED WITHIN 1 HR OF DISCOVERY. ALL OF THE PENETRATIONS WERE SEALED WITH CERAFIBER AND VIMASCO. SIMILAR EVENT - 237/84-064.

(NSIC 193692) WITH THE UNIT IN REFUEL AND INSERVICE INSPECTION IN PROGRESS, REJECTABLE INDICATIONS WERE DETECTED IN SEVERAL WELDS. ALL OF THE WELDS IDENTIFIED AS HAVING REJECTABLE INDICATIONS WERE LOCATED IN THE RWC SYSTEM. ALL BUT 1 INDICATION WAS LOCATED DOWNSTREAM OF THE INBOARD PRIMARY SYSTEM ISOLATION VALVE. REPAIRS TO THE WELDS WILL BE MADE UTILIZING WELD OVERLAY TECHNIQUES OR PIPE REPLACEMENT. REPAIRS WILL BE COMPLETED PRIOR TO RETURNING THE UNIT TO SERVICE. THE LAST OCCURRENCE OF THIS TYPE WAS REPORTED UNDER LER 83-39 ON DOCKET 50-249.

(NSIC 194003) DURING A UNIT 2 REFUELING OUTAGE AND NORMAL UNIT 3 POWER OPERATION, AS PLANT PERSONNEL WERE EXITING THE REACTOR BLDG THROUGH THE UNIT 2 INTERLOCK DOORS, SECONDARY CONTAINMENT WAS MOMENTARILY BROKEN WHEN THE TURBINE BLDG INTERLOCK DOOR OPENED BEFORE THE REACTOR BLDG INTERLOCK DOOR FULLY CLOSED. THE TURBINE BLDG DOOR WAS IMMEDIATELY CLOSED BY PERSONNEL IN THE INTERLOCK. AN INVESTIGATION INTO THE PROBLEM DID NOT REVEAL ANY PROBLEM WITH THE ELECTRICAL CONTROLS FOR THE DOORS BECAUSE BOTH DOORS WERE FUNCTIONING PROPERLY IMMEDIATELY AFTER THE INCIDENT AND THIS EVENT COULD NOT BE REPEATED. BOTH UNIT 2 AND 3 WERE AFFECTED, SINCE THEY HAVE A COMMON SECONDARY CONTAINMENT. BECAUSE OF A SUBSEQUENT EVENT REPORTED BY LER 85-002 ON DOCKET 50-237, MODIFICATIONS M12-2-85-9 AND M12-3-85-9 HAVE BEEN INITIATED IN ORDER TO INSTALL TIME DELAYS THAT WILL REQUIRE 1 DOOR TO BE CLOSED FOR APPROX 2 SECS BEFORE THE OTHER DOOR CAN BE OPENED.

(NSIC 193693) DURING THE UNIT REFUELING OUTAGE, WHILE PERFORMING DTS 1600-1 (LLRT OF PRIMARY CONTAINMENT VALVES), THE TORUS TO CONDENSER DRAIN VALVE A02-1599-61 LEAKED 121 SCFH. THE TOTAL AS FOUND THROUGH LEAKAGE FOR TYPE 'B' AND 'C' TESTING AT THE TIME OF THE VALVE FAILURE EXCEEDED THE TECH SPECS LIMIT OF 493.116 SCFH.

SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE OTHER IN-LINE ISOLATION VALVE, A02-1599-62, SHOWED NO LEAKAGE AND WAS CAPABLE OF ISOLATING THE LINE. PREVIOUS OCCURRENCE OF A FAILURE OF TYPE 'B' AND 'C' LEAK TESTING WAS REPORTED BY R.O. 84-19 ON DOCKET 50-249. CAUSE OF THE EVENT WAS A MISALIGNED STEM. THE VALVE STEM WAS ADJUSTED AND THE VALVE WAS RETESTED AND SHOWED LEAKAGE WELL UNDER THE STATION'S PROCEDURAL LIMITS OF 31 SCFH FOR THROUGH LEAKAGE. OTHER PRIMARY CONTAINMENT ISOLATION VALVES WHICH EXCEEDED THE STATION'S LIMITS WERE REPAIRED AND TESTED TO BRING THE TOTAL AS LEFT THROUGH LEAKAGE FOR TYPE 'B' AND 'C' TESTING TO 367.98 SCFH; BELOW THE TECH SPECS LIMIT OF 493.116 SCFH.

[102] DRESDEN 2 DOCKET 50-237 LER 84-025 REV 1
 UPDATE ON MAIN FEED BREAKER FAILURE.
 EVENT DATE: 122084 REPORT DATE: 022185 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193694) DURING RELAY SURVEILLANCE TEST WHILE IN REFUEL MODE, THE 4KV MAIN FEED BREAKER 152-2430 ON BUS 24-1 FAILED TO TRIP OPEN. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE UNIT WAS IN A REFUELING OUTAGE AND THE REDUNDANT BREAKER ON BUS 23-1 DID NOT EXHIBIT ANY PROBLEMS DURING THE RELAY SURVEILLANCE TESTS. A SUBSEQUENT FAILURE TO TRIP OCCURRED WHEN OPERATIONAL ANALYSIS DEPARTMENT PERSONNEL TRIED TO TRIP THE BREAKER WITH THE LOCAL CONTROL SWITCH. HOWEVER, THE BREAKER DID TRIP MECHANICALLY WHEN THE LOCAL TRIP BUTTON WAS DEPRESSED. THE CAUSE OF FAILURE WAS ATTRIBUTED TO DIRTY AUX BREAKER CONTACTS IN THE TRIP CONTROL LOGIC. THE CONTACTS WERE CLEANED AND THE BREAKER RETURNED TO SERVICE AFTER SUCCESSFUL TESTING.

[103] DRESDEN 2 DOCKET 50-237 LER 85-014
 TESTING CAUSES REACTOR SCRAM DURING SHUTDOWN.
 EVENT DATE: 031585 REPORT DATE: 041185 NSSS: GE TYPE: BWR

(NSIC 193877) DURING REACTOR REFUELING WITH THE MODE SWITCH IN SHUTDOWN, FUNCTIONAL TEST FOR MODIFICATION M12-2-83-40 WAS PERFORMED. BECAUSE THE REACTOR WAS DEPRESSURIZED AND THE MAIN STEAM ISOLATION VALVES CLOSED, ALL 4 BYPASS CIRCUIT RELAYS WILL DE-ENERGIZE AND LOSE CONTINUITY UNLESS THE RELAY CONTACTS ARE JUMPERED WHEN SWITCHING A SAFETY CHANNEL TO ITS NORMAL FEED FROM ITS RESERVE. PER THE FUNCTIONAL TEST PROCEDURE, THE RPS WAS SWITCHED FROM RESERVE TO NORMAL POWER, RESULTING IN THE FULL SCRAM. THE FULL SCRAM OCCURRED BECAUSE THE 590-111D SCRAM DISCHARGE VOLUME HIGH WATER LEVEL RELAY WAS JUMPERED INSTEAD OF THE 590-112D CONDENSER LOW VACUUM AND MAIN STEAM LINE VALVE CLOSURE BYPASS RELAY. THIS EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE SINCE THE REACTOR WAS IN SHUTDOWN AND ALL SAFETY SYSTEMS FUNCTIONED AS DESIGNED. THE LAST OCCURRENCE OF A MISPLACED JUMPER WAS REPORTED BY DVR 12-3-74-81.

[104] DRESDEN 2 DOCKET 50-237 LER 85-015
 SETPOINT DRIFT OF 3 MAIN STEAM LINE LOW PRESSURE ISOLATION SWITCHES.
 EVENT DATE: 032585 REPORT DATE: 042285 NSSS: GE TYPE: BWR
 VENDOR: BARKSDALE COMPANY

(NSIC 193837) WHILE THE UNIT WAS IN AN EXTENDED REFUELING OUTAGE, MAIN STEAM LINE LOW PRESSURE ISOLATION SWITCH CALIBRATION TEST WAS PERFORMED AND PRESSURE SWITCHES 2-261-30A, 2-261-30C AND 2-261-30D TRIPPED AT 852 PSIG, 848 PSIG, AND 845 PSIG RESPECTIVELY. COMPENSATING FOR A 5 PSIG HEAD CORRECTION, THE TRIP POINT SHOULD BE GREATER THAN OR EQUAL TO 855 PSIG PER TECH SPEC TABLE 3.2.1. THE EVENT WAS ATTRIBUTED TO INSTRUMENT SETPOINT DRIFT. THE MSL LOW PRESSURE SWITCHES WERE IMMEDIATELY RECALIBRATED TO THE GREATER THAN OR EQUAL TO 855 PSIG SETPOINT AND WERE TESTED SEVERAL TIMES. THE PRESSURE SWITCHES CORRECTLY TRIPPED AT THE PRESCRIBED PRESSURE. THE FUNCTION OF THE SWITCHES IS TO PREVENT A LOSS OF INVENTORY IN THE EVENT OF AN EHC PRESSURE REGULATOR MALFUNCTION WHICH WOULD CAUSE

THE TURBINE CONTROL VALVES AND/OR BYPASS VALVES TO FULLY OPEN. THE GROUP I ISOLATION WOULD HAVE OCCURRED AT 852 PSIG ACCORDING TO THE 4 PRESSURE SWITCHES' LOGIC. LAST PREVIOUS OCCURRENCE WAS REPORTED BY RO 85-01 ON DOCKET 50-237.

[105] DRESDEN 2 DOCKET 50-237 LER 85-016
 DRYWELL SUMPS PUMPED LATE.
 EVENT DATE: 041185 REPORT DATE: 050785 NSSS: GE TYPE: BWR

(NSIC 193878) DURING STARTUP FOLLOWING THE UNIT 2 EOC 9 REFUELING OUTAGE, THE 0000 HR PUMPDOWN OF THE DRYWELL FLOOR AND EQUIPMENT SUMPS WAS NOT PERFORMED. THE OPERATOR REALIZED THE PUMPS HAD NOT BEEN RUN AND IMMEDIATELY PUMPED THEM AT 0105. IN ADDITION, THE COMPUTER SELECT TIME INTERVAL ALARM THAT SOUNDS TO REMIND THE OPERATOR THAT THE SUMPS NEED TO BE PUMPED, DID NOT ALARM BECAUSE IT HAD NOT BEEN RE-INITIALIZED AFTER AN EARLIER PROCESS COMPUTER SHUTDOWN. THE EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE BECAUSE BOTH THE DRYWELL FLOOR DRAIN LEAKAGE AND EQUIPMENT DRAIN LEAKAGE WAS 0 GPM WHEN THE PUMPS WERE RUN. THE OPERATOR WAS BRIEFED AS TO THE IMPORTANCE OF PUMPING THE SUMPS AT THE PROPER TIME. PROCESS SYSTEMS ENGINEERING HAS NOW IMPLEMENTED A PROCESS COMPUTER PROGRAM TO ENSURE THAT THE OPERATOR SELECTED COMPUTER ALARM IS NOT CLEARED UPON RE-INITIALIZATION OF THE COMPUTER. LAST REPORTED OCCURRENCE WAS 84-015 ON DOCKET 50-237.

[106] DRESDEN 2 DOCKET 50-237 LER 85-017
 FAILURE TO TAKE REACTOR WATER SAMPLES.
 EVENT DATE: 041385 REPORT DATE: 050985 NSSS: GE TYPE: BWR

(NSIC 193879) DURING UNIT 2 STARTUP AT 0045, 4-13-85, REACTOR WATER SAMPLES WERE NOT TAKEN UNTIL 0830. ACCORDING TO TECH SPEC 4.6.C.2, REACTOR WATER SAMPLES SHALL BE TAKEN EVERY 4 HRS AND ANALYZED FOR CONDUCTIVITY AND CHLORIDE CONCENTRATION DURING STARTUPS AND AT STEAMING RATES OF LESS THAN 100,000 POUNDS PER HR. AS SPECIFIED BY DRESDEN GENERAL PROCEDURE 1-S2 (MINIMUM STARTUP CHECKLIST), THE OPERATOR NOTIFIED THE RADIATION PROTECTION FOREMAN THAT THE UNIT WOULD BE PLACED IN THE STARTUP MODE; HOWEVER, THE RAD FOREMAN THOUGHT THAT HE WOULD BE RECEIVING A SECOND NOTIFICATION INFORMING HIM OF EXACTLY WHEN TO TAKE SAMPLES. BOTH THE OPERATOR AND THE RAD FOREMAN WERE BRIEFED AS TO THE IMPORTANCE OF PROVIDING AND FOLLOWING EXPLICIT INSTRUCTIONS WHEN FOLLOWING DRESDEN UNIT STARTUP PROCEDURES. THE EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE BECAUSE THE CHLORIDE CONCENTRATION OF THE REACTOR WATER WAS LESS THAN 0.02 PPM AT 1000 ON 4-12-85 AND 0830 ON 4-13-85. ALSO, THE REACTOR WATER CONDUCTIVITY LEVEL WAS IN ITS PROPER NORMAL RANGE INDICATING GOOD WATER QUALITY. THE LAST PREVIOUS OCCURRENCE WAS REPORTED BY RO 83-032 ON DOCKET 50-237.

[107] DRESDEN 2 DOCKET 50-237 LER 85-019
 TESTING ERROR CAUSES DIESEL GENERATOR AUTO START.
 EVENT DATE: 041985 REPORT DATE: 051785 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 3 (BWR)

(NSIC 193956) DURING NORMAL PLANT OPERATION, THE 2/3 DG AUTOMATICALLY STARTED WITH NO INDICATION OF BUS UNDERVOLTAGE, REACTOR LOW LOW WATER LEVEL, OR DRYWELL HIGH PRESSURE. THE ONLY SURVEILLANCE BEING CONDUCTED AT THE TIME OF THE EVENT WAS DIS 1500-1, REACTOR LOW PRESSURE ECCS PERMISSIVE, WHICH FUNCTIONALLY TESTS REACTOR LOW PRESSURE SENSORS PS 3-263-52A AND B. RELAYS WHICH REQUIRE VERIFICATION OF OPERATION DURING THE SURVEILLANCE ARE LOCATED IN THE SAME CABINET (903-32) AS THE AUTO START RELAY 1430-108A. AT THE TIME OF THE EVENT, IT WAS BELIEVED THAT DURING THE COURSE OF PERFORMING THE SURVEILLANCE THE 108A RELAY WAS ACCIDENTALLY BUMPED CAUSING THE 2/3 DG TO AUTO START. INDIVIDUALS INVOLVED IN THE TEST STATED THAT THEY WERE UNAWARE OF JARRING THE RELAY. THEREFORE, AN ATTEMPT WAS MADE TO DUPLICATE THE EVENT. SINCE DIS 1500-1 FUNCTIONALLY TESTS PRESSURE SENSORS 3-263-52A AND B, WHICH ENERGIZE THE 107A RELAY, THE SURVEILLANCE

WAS DUPLICATED BY MANUALLY OPERATING THE 107A RELAY. HOWEVER, THE 108A RELAY DID NOT OPERATE AND THE 2/3 DG DID NOT AUTO START AS BEFORE. SINCE THE TEST INDICATED THAT NO DESIGN DIFFERENCES EXISTED AND BASED ON A PREVIOUS EVENT, THE ONLY CONCLUSION THAT CAN BE REACHED WAS THAT THE RELAY WAS UNKNOWNLY JARRED. LER 85-008 REPORTED THAT THE 2/3 DG AUTOMATICALLY STARTED PREVIOUSLY ON 3-11-85 WHEN A SUBSTATION CONSTRUCTION CREW WAS DRILLING A HOLE IN THE AUTO START RELAY CABINET, VIBRATING THE AUTO START.

[108] DRESDEN 2 DOCKET 50-237 LER 85-020
HPCI ISOLATION VALVE FAILS TO CLOSE.
EVENT DATE: 042485 REPORT DATE: 052185 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 193957) DURING NORMAL UNIT OPERATION, WHILE PERFORMING HPCI STEAM LINE HIGH FLOW ISOLATION SURVEILLANCE (DIS 2300-1) THE HPCI 2301-4 VALVE FAILED TO CLOSE. THE 2301-4 AND 5 VALVES ARE THE INBOARD AND OUTBOARD PRIMARY CONTAINMENT ISOLATION VALVES OF THE HPCI STEAM SUPPLY SUBSYSTEM. THESE VALVES ARE DESIGNED TO CLOSE AFTER HIGH HPCI STEAM FLOW IS DETECTED FOR 6 SECS PLUS OR MINUS 3 SECS, THEREBY PROVIDING LINE BREAK PROTECTION. PER TECH SPECS 3.7.D.2 AND 4.7.D.2 THE 2301-5 VALVE WAS CLOSED AND HPCI DECLARED INOPERABLE. UPON INVESTIGATION INTO THIS EVENT ELECTRICAL MAINTENANCE FOUND DIRTY BREAKER AUX CONTACTS; THE AUX CONTACTS WERE CLEANED AND THE HPCI SYSTEM WAS DECLARED OPERABLE ON 4-24-85 AT 1425. LATER, PER THE REQUEST OF THE MAINTENANCE STAFF THE AUX CONTACTS WERE REPLACED AND THE VALVE WAS SUCCESSFULLY CYCLED 3 TIMES AT 1720 ON 4-24-85. THE CHANNEL 'A' PORTION OF DIS 2300-1 WAS COMPLETED ON 4-24-85. THIS EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE SINCE ALL OTHER SAFETY SYSTEMS WERE OPERABLE AT THE TIME OF THIS EVENT. THE ELECTRICAL MAINTENANCE DEPARTMENT CLEANS AND OVERHAULS SAFETY RELATED MOTOR CONTROL CENTERS ON A ROTATING BASIS EACH REFUELING OUTAGE. PREVIOUS SIMILAR EVENT REPORTED BY RO 60-40 ON DOCKET 50-249.

[109] DRESDEN 2 DOCKET 50-237 LER 85-022
HIGH TEMPERATURE AND LOW PRESSURE IN MAIN CONDENSER CAUSE MANUAL REACTOR SCRAM.
EVENT DATE: 050285 REPORT DATE: 051785 NSSS: GE TYPE: BWR

(NSIC 194013) DURING NORMAL UNIT OPERATION, A HYDROGEN AND OXYGEN RECOMBINATION OCCURRED UPSTREAM OF THE OFFGAS RECOMBINER. DURING EFFORTS TO RESTORE THE OFFGAS SYSTEM TO NORMAL, CONDENSER VACUUM BEGAN TO DECREASE. BECAUSE OF AN ONGOING PROBLEM WITH THE MOISTURE SEPARATOR EMERGENCY SPILL VALVE THE HOTWELL TEMPERATURE WAS GREATER THAN NORMAL FOR THE OPERATING CONDITIONS. AS HOTWELL TEMPERATURE INCREASED IT WAS DECIDED TO SCRAM THE UNIT RATHER THAN EXPOSE THE CONDENSATE DEMINERALIZERS TO THE HIGH TEMPERATURE. THE ELECTRICAL LOADS WERE TRANSFERRED TO THE RESERVE AUX TRANSFORMER, THE RECIRCULATION PUMPS WERE RUN DOWN TO MINIMUM SPEED AND THE UNIT WAS MANUALLY SCRAMMED. THE SAFETY SIGNIFICANCE OF THIS EVENT WAS MINIMAL AS THE EVENT WAS A CONTROLLED EVOLUTION DESIGNED TO PROTECT SECONDARY EQUIPMENT. DURING THE SCRAM ALL SYSTEMS PERFORMED AS DESIGNED. THIS IS THE FIRST REPORTABLE OCCURRENCE OF A MANUAL SCRAM AT DRESDEN.

[110] DRESDEN 2 DOCKET 50-237 LER 85-021
RADIO INTERFERENCE CAUSES SPURIOUS IRM TRIPS AND 2 REACTOR SCRAMS.
EVENT DATE: 050385 REPORT DATE: 052885 NSSS: GE TYPE: BWR

(NSIC 193958) WHILE THE UNIT WAS IN THE SHUTDOWN MODE, A REACTOR SCRAM OCCURRED FROM INTERMEDIATE RANGE MONITORS (IRM) 13 AND 15 HI-HI CONDITION. IMMEDIATELY AFTER RESETTING THE INITIAL SCRAM, A SECOND SCRAM OCCURRED. SAFETY SIGNIFICANCE WAS MINIMAL SINCE ALL PROTECTIVE SYSTEMS OPERATED AS DESIGNED. THE CAUSE OF THE EVENT IS ATTRIBUTED TO SPURIOUS RADIO REPEATER SIGNALS ENTERING INTO THE SRM/IRM PRE-AMPLIFIER CABINET. THE CABINET WAS OPEN WHILE AN INSTRUMENT MECHANIC WAS PERFORMING WORK IN SRM 21 UNDER WORK REQUEST #43640. THE RADIO REPEATER IS

LOCATED IN THE LINE OF SIGHT OF THE SRM/IRM PRE-AMPLIFIER'S CABINET. IF A RADIO IS KEYED WHILE THE CABINET DOOR IS OPEN, SPURIOUS SIGNALS CAN ENTER INTO THE CABINET AND CAUSE ERRONEOUS HI-HI ALARMS, RESULTING IN A REACTOR SCRAM. BOTH SCRAMS HAVE BEEN ATTRIBUTED TO THIS CAUSE. THE LAST OCCURRENCE OF THIS TYPE WAS REPORTED BY LER 84-02 ON DOCKET 50-249.

[111] DRESDEN 3 DOCKET 50-249 LER 83-023 REV 1
 UPDATE ON IMPROPER LUBRICATION OF CIRCUIT BREAKERS.
 EVENT DATE: 061583 REPORT DATE: 092484 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193952) WHILE PERFORMING THE LPCI SYSTEM VALVE OPERABILITY TEST, DOS 1500-1, BECAUSE UNIT 3 DG WAS INOPERABLE, CONTAINMENT SPRAY VALVE 1501-28A FAILED TO OPEN (TECH SPEC 6.6.B.1.B). AN UNUSUAL EVENT WAS DECLARED AND UNIT SHUTDOWN WAS INITIATED. THE EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE SINCE THE REDUNDANT CONTAINMENT SPRAY SYSTEM WAS OPERABLE. LAST OCCURRENCE WAS REPORTED BY R.O. 83-06/01T-0 ON DOCKET 50-249. THE EVENT WAS CAUSED BY A FAULTY AUX CONTACT IN THE VALVE CIRCUITRY. THE CONTACT (CR 105X) WAS SENT TO THE MANUFACTURER FOR INVESTIGATION. THEIR REPLY WAS THE CONTACT GUIDES NEED LUBRICATION. A REVISION TO DMP 7300-5 (INSPECTION OF 480V BREAKERS AND CONTACTORS) HAS BEEN INITIATED TO INCLUDE LUBRICATION OF CONTACT PLUNGER GUIDES. THE CONTACT WAS REPLACED AND DOS 1500-1 WAS PERFORMED TO VERIFY OPERABILITY.

[112] DRESDEN 3 DOCKET 50-249 LER 83-029 REV 1
 UPDATE ON REACTOR LEVEL SWITCH FAILURE.
 EVENT DATE: 072683 REPORT DATE: 092584 NSSS: GE TYPE: BWR
 VENDOR: YARWAY CORP.

(NSIC 193953) WHILE PERFORMING THE CONTAINMENT SPRAY INTERLOCKS, REACTOR WATER LEVEL SURVEILLANCE DIS 1500-3, REACTOR WATER LEVEL SENSOR SITS 3-263-73A REQUIRED AN INITIAL DELTA-P LOADING OF 260 INCHES OF WATER TO MOVE THE INDICATOR FROM THE NORMALLY FULL UPSCALE POSITION EXCEEDING THE 257 INCHES OF WATER TECH SPEC TRIP LIMIT. THE EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE SINCE CONTAINMENT SPRAY INITIATION WOULD HAVE BEEN PERMITTED. THIS IS THE FIRST OCCURRENCE OF THIS TYPE. THE EVENT WAS INVESTIGATED BY STATION PERSONNEL AND A MANUFACTURER'S REPRESENTATIVE. THE CAUSE OF THE EVENT WAS DETERMINED TO BE A WORN SWITCH DIAPHRAGM AND A WORN FULCRUM BAR. THESE PARTS WERE REPLACED UNDER WR #29943 AND THE SWITCH TESTED SATISFACTORILY. NO FURTHER ACTION DEEMED NECESSARY.

[113] DRESDEN 3 DOCKET 50-249 LER 84-012 REV 2
 UPDATE ON REACTOR SCRAM FOLLOWING LATE IRM INSERTION.
 EVENT DATE: 082384 REPORT DATE: 032185 NSSS: GE TYPE: BWR

(NSIC 194005) DURING A MANUAL POWER REDUCTION, THE UNIT OPERATOR FAILED TO INSERT THE IRM'S IN A TIMELY MANNER. WHEN THE IRM'S WERE INSERTED, THE UNIT SCRAMMED ON IRM HIGH-HIGH WITH COMPANION APRM DOWNSCALE. SAFETY SIGNIFICANCE WAS MINIMAL, AS THE RPS WORKED AS DESIGNED. THIS WAS THE FIRST REPORTABLE OCCURRENCE OF THIS TYPE AT DRESDEN STATION. THE SCRAM WAS THE RESULT OF ENTERING THE SHUTDOWN PROCEDURE, AT THE POINT THAT OPERATOR BELIEVED REPRESENTED THE UNIT STATUS, RATHER THAN AT THE BEGINNING. BECAUSE OF THIS, THE IRM'S HAD NOT BEEN INSERTED WHEN THEY WERE NEEDED, AND A SCRAM ENSUED. IN ORDER TO PREVENT FUTURE OCCURRENCES OF THIS TYPE, THE NEED TO PERFORM PROCEDURES FROM BEGINNING TO END WILL BE IMPRESSED UPON OPERATING DEPARTMENT PERSONNEL DURING 6 WEEK OPERATOR TRAINING.

[114] DRESDEN 3 DOCKET 50-249 LER 84-016 REV 1
 UPDATE ON TWO REACTOR SCRAMS ON LOW CONDENSER VACUUM.
 EVENT DATE: 101484 REPORT DATE: 012385 NSSS: GE TYPE: BWR
 VENDOR: CRANE HOIST ENGINEERING & MFG CO.
 PRATT, HENRY COMPANY

(NSIC 193696) WHILE PERFORMING DOP 4400-8, CIRCULATING WATER FLOW REVERSAL, THE REACTOR SCRAMMED DUE TO LOW CONDENSER VACUUM. LOW CONDENSER VACUUM WAS CAUSED BY THE 3-4402-A VALVE NOT OPENING COMPLETELY WHILE PERFORMING THE TEST. AN ATTEMPT WAS MADE TO REVERSE FLOW BUT THE LOW CONDENSER VACUUM REACTOR SCRAM ACTUATED BEFORE THIS COULD BE ACCOMPLISHED. LATER IT WAS NOTICED THAT THE TURBINE HAD LOW STEAM SEAL HEADER PRESSURE DUE TO THE STEAM SEAL FEED VALVE NOT OPENING. TO PROTECT AGAINST TURBINE DAMAGE THE TURBINE VACUUM BREAKER WAS OPENED CAUSING A SECOND REACTOR SCRAM ON LOW CONDENSER VACUUM. THE STEM FOR THE 3-4402-A VALVE WAS LUBRICATED AND THE VALVE WAS CYCLED 6 TIMES. THE AMPS ON THIS VALVE INITIALLY WAS 10 AMPS AND THE FINAL READING WAS 6 AMPS. THE S-1 FEED VALVE MANUAL LEVER WAS FOUND ENGAGED AND WAS MANUALLY DISENGAGED TO ALLOW THE S-1 VALVE TO OPERATE NORMALLY. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE REACTOR SCRAM FUNCTION PERFORMED AS INTENDED. THIS IS THE FIRST OCCURRENCE OF THIS TYPE AT DRESDEN.

[115] DRESDEN 3 DOCKET 50-249 LER 85-008
 DIESEL GENERATOR AUTO START DUE TO CONSTRUCTION WORK.
 EVENT DATE: 031185 REPORT DATE: 040885 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 2 (BWR)

(NSIC 193838) DURING NORMAL UNIT OPERATION, THE 2/3 DG AUTOMATICALLY STARTED WITH NO ACTUATION SIGNAL PRESENT. AT THE TIME OF THIS EVENT A SUBSTATION CONSTRUCTION CREW WAS DRILLING A HOLE AND INSTALLING FITTINGS ON THE RELAY CABINET FOR THE 2/3 DG ON BUS 23-1. THIS WORK WAS BEING PERFORMED AS A PART OF MODIFICATION NUMBER 12-2/3-82-21. THIS EVENT WAS CAUSED BY VIBRATION TO THE AUTO START RELAY (ASR 2/3-2) WHICH OCCURRED DURING THE MODIFICATION WORK. THE SHIFT CONTROL ROOM ENGINEER WAS AWARE THAT THIS WORK COULD CAUSE AN AUTO-START. HOWEVER, BECAUSE OF THE MINIMAL SAFETY SIGNIFICANCE OF SUCH AN EVENT, HE AUTHORIZED THE WORK TO COMMENCE. FOLLOWING THE AUTO-START THE ENGINE WAS LOADED AND OPERATED FOR 88 MINS. THIS WAS THE FIRST OCCURRENCE OF THIS NATURE AT DRESDEN.

[116] DRESDEN 3 DOCKET 50-249 LER 85-011
 CONTAMINATED EQUIPMENT HANDLING CAUSES VENTILATION ISOLATION AND SBGT AUTO-START.
 EVENT DATE: 041685 REPORT DATE: 050685 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 2 (BWR)

(NSIC 193794) UNIT 3 WAS AT STEADY POWER ON 4-16-85 WHEN A HIGH RADIATION SIGNAL FROM THE REFUELING FLOOR RADIATION MONITORS CAUSED A UNIT 3 REACTOR BLDG VENTILATION SYSTEM TRIP AND ISOLATION WITH 'B' STANDBY GAS TREATMENT SYSTEM AUTOMATICALLY STARTING. THE UNIT 2 REACTOR BLDG VENTILATION SYSTEM WAS IMMEDIATELY TRIPPED AND ISOLATED PER DOA 902(3)-3C-16. THIS EVENT WAS CAUSED BY THE FUEL HANDLERS REMOVING MACHINERY FROM THE FUEL POOL. THIS CAUSED DOSE LEVELS TO REACH 130 MR ON THE REFUELING FLOOR. THE MACHINERY WAS WASHED AND DOSE LEVELS WENT BELOW THE 100 MR LIMIT IN APPROX 5 MINS. FUEL HANDLERS WORKING IN THE AREA WERE WEARING PROPER DOSIMETRY AND THE DOSE THEY RECEIVED WAS MINIMAL. THIS EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE SINCE ALL SYSTEMS FUNCTIONED AS REQUIRED BY DRESDEN TECH SPEC 3.7.B.1. THIS IS THE FIRST REPORTABLE OCCURRENCE OF THIS TYPE.

[117] DRESDEN 3 DOCKET 50-249 LER 85-010
 INSTRUMENT RACK VIBRATION CAUSES SPURIOUS SCRAM.
 EVENT DATE: 042785 REPORT DATE: 052385 NSSS: GE TYPE: BWR

(NSIC 193959) WHILE THE UNIT WAS IN THE SHUTDOWN MODE, A FULL REACTOR SCRAM WAS INITIATED FROM LOW WATER LEVEL WITH SUBSEQUENT GROUP II AND III ISOLATIONS. COMPUTER PRINTOUT INDICATED THAT THE SCRAM WAS CAUSED BY LOW WATER LEVEL RELAYS 590-105C & D WHICH ARE DE-ENERGIZED BY LOW WATER LEVEL SENSORS 263-58A & B UPON EXCEEDING THEIR SETPOINT OF PLUS 8 INCHES. HOWEVER, THE LOGS, CHARTS, AND COMPUTER PRINTOUT VERIFIED THE LEVEL AS NORMAL, 35 INCHES. THE LEVEL SENSOR'S CALIBRATION WAS CHECKED AND VERIFIED CORRECT. DURING THE INVESTIGATION, IT WAS FOUND THAT 15 MINS PRIOR TO THE SCRAM THE SHUTDOWN COOLING SYSTEM WAS VALVED IN AND COOLING WATER FLOW WAS BEING ADJUSTED. PAST TESTING HAS SHOWN THAT SLIGHT VIBRATIONS NEAR THE LEVEL SENSOR'S RACK MAY CAUSE A SPURIOUS SCRAM. IF SHUTDOWN COOLING IS NOT FILLED OR VENTED PROPERLY, THEN WATER HAMMER COULD OCCUR IN THE RECCW LINE TO SDC AND VIBRATE THE 2203-6 RACK. THEREFORE, IT IS POSSIBLE THAT SHUTDOWN COOLING WAS IMPROPERLY FILLED AND VENTED THUS CAUSING VIBRATION OF THE 2203-6 RACK WHICH GENERATED THE REACTOR SCRAM. A REVIEW OF THE UNIT NSO'S LOG BOOK AND PERSONNEL INTERVIEWS SHOW THAT THE SDC SYSTEM WAS FILLED AND VENTED PRIOR TO SYSTEM STARTUP. SINCE IT CANNOT BE DETERMINED IF THE SHUTDOWN COOLING SYSTEM WAS FILLED AND VENTED PROPERLY, THE EXACT CAUSE OF THE EVENT REMAINS UNKNOWN.

[118] DRESDEN 3 DOCKET 50-249 LER 85-012
CONTAINMENT ISOLATION FEEDWATER CHECK VALVE LEAKS.
EVENT DATE: 042985 REPORT DATE: 052185 NSSS: GE TYPE: BWR
VENDOR: CRANE COMPANY

(NSIC 193960) DURING THE UNIT 3 SHORT OUTAGE, WHILE PERFORMING DTS 1600-1 (LOCAL LEAK RATE TESTING OF PRIMARY CONTAINMENT), FEEDWATER CHECK VALVE 3-220-62A WAS OBSERVED TO LEAK 587.04 SCFH. THIS LEAKAGE, ADDED TO THE PREVIOUS 'AS LEFT' LEAKAGE FROM THE 1983-84 UNIT 3 REFUEL OUTAGE, RESULTS IN A TOTAL LEAKAGE OF 812.74 SCFH. THIS EXCEEDS THE TECH SPECS LIMIT FOR TYPE B AND C LEAK RATE TESTING WHICH IS 493.116 SCFH. AN INSPECTION OF THE VALVE SHOWED THAT THE PRESSURE SEAL RING WAS WORN. THIS SEAL RING WAS REPLACED AND AN 'AS LEFT' LLRT WAS PERFORMED. THIS TEST RESULTED IN A LEAKAGE WHICH BROUGHT THE TOTAL TYPE B AND C LEAKAGE TO BELOW TECH SPEC LIMITS. A PREVIOUS OCCURRENCE OF A FAILURE OF TYPE B AND C LEAK TESTING WAS REPORTED BY REPORTABLE OCCURRENCE 84-23 ON DOCKET 50-237. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE CALCULATED 'THROUGH LEAKAGE' FOR THE PRIMARY CONTAINMENT WAS ALWAYS WELL BELOW THE TECH SPECS LIMITS.

[119] FARLEY 1 DOCKET 50-348 LER 85-003
INADVERTENT LOAD SHED OF 4160V BUS.
EVENT DATE: 041385 REPORT DATE: 051385 NSSS: WE TYPE: PWR

(NSIC 194024) AT 1427 ON 4-13-85, DURING A REFUELING OUTAGE, AN INADVERTENT ACTUATION OF ESF EQUIPMENT OCCURRED WHILE TESTING. THE LOAD SHED FEATURE OF 4160V BUS 1F WAS ACTUATED WHICH RESULTED IN THE DE-ENERGIZATION OF ALL MAJOR LOADS SUPPLIED BY THIS BUS. ALL EQUIPMENT FUNCTIONED AS DESIGNED. TESTING PER FNP-1-STP-40.1 (B1F AND B1H SEQUENCER LOAD SHEDDING CIRCUIT TEST) HAD BEEN COMPLETED AND AN ELECTRICIAN WAS RECONNECTING LEADS THAT HAD BEEN DISCONNECTED FOR THE TEST. THE ELECTRICIAN ACCIDENTLY ALLOWED THE TOOL HE WAS WORKING WITH TO CAUSE A SHORT CIRCUIT. THIS ACTUATED A RELAY AND INITIATED THE LOAD SHED. TO REDUCE THE PROBABILITY OF THE RECURRENCE OF AN EVENT OF THIS TYPE, THE PROCEDURE WAS REVISED TO REQUIRE THE USE OF TOOLS WHICH ARE SUFFICIENTLY INSULATED TO PREVENT CAUSING SHORT CIRCUITS.

[120] FARLEY 1 DOCKET 50-348 LER 85-006
STEAM GENERATOR TUBE PLUGGING.
EVENT DATE: 042385 REPORT DATE: 050285 NSSS: WE TYPE: PWR

(NSIC 194025) THE FOLLOWING SG TUBE PLUGGING REPORT IS SUBMITTED IN ACCORDANCE

WITH TECH SPEC 4.4.6.5.A. ONE TUBE IN THE 1C SG HAS BEEN PLUGGED DURING THE UNIT 1 CYCLE VI-VII REFUELING OUTAGE. IT WAS DETERMINED THAT THE TUBE EXCEEDED THE PLUGGABLE LIMIT BASED ON EDDY CURRENT TESTING RESULTS. THE PLUGGING WAS PERFORMED ON 4-23-85. NO TUBES IN THE 1A SG REQUIRED PLUGGING. TESTING IN THE 1B SG HAS BEEN DEFERRED DUE TO OTHER WORK IN PROGRESS. A SUBSEQUENT TUBE PLUGGING REPORT WILL BE SUBMITTED IF ANY TUBES IN THE 1B SG REQUIRE PLUGGING. THE COMPLETE RESULTS OF THE SG TUBE INSERVICE INSPECTION WILL BE REPORTED IN ACCORDANCE WITH TECH SPEC 4.4.6.5.B.

[121] FARLEY 2 DOCKET 50-364 LER 85-007
FIRE WATCH ESTABLISHED INCORRECTLY.
EVENT DATE: 030185 REPORT DATE: 032785 NSSS: WE TYPE: PWR

(NSIC 193724) AT 2330 ON 3-1-85, WHILE REVIEWING LCO FORMS DURING SHIFT TURNOVER, IT WAS DISCOVERED THAT FIRE WATCH REQUIREMENTS HAD BEEN DETERMINED INCORRECTLY FOR AN INOPERABLE FIRE BARRIER. TECH SPEC 3.7.12 REQUIRES THAT EITHER A CONTINUOUS FIRE WATCH BE ESTABLISHED OR THE OPERABILITY OF FIRE DETECTORS ON AT LEAST ONE SIDE OF THE NONFUNCTIONAL FIRE BARRIER MUST BE VERIFIED AND AN HOURLY FIRE WATCH PATROL ESTABLISHED. HOURLY FIRE WATCH PATROLS HAD BEEN ESTABLISHED ON 2-27-85 FOR AN INOPERABLE FIRE BARRIER. HOWEVER, FIRE PROTECTION SYSTEM 2A-48 WHICH COVERS BOTH SIDES OF THE NONFUNCTIONAL FIRE BARRIER WAS MADE INOPERABLE ON 2-22-85 TO ADD AN ADDITIONAL SMOKE DETECTOR. AT THE TIME THE HOURLY FIRE WATCHES WERE ESTABLISHED, SYSTEM 2A-48 WAS STILL INOPERABLE. UPON DISCOVERY, CONTINUOUS FIRE WATCHES WERE ESTABLISHED IMMEDIATELY AND MAINTAINED UNTIL NO LONGER REQUIRED. THIS EVENT WAS CAUSED BY PERSONNEL ERROR IN THAT THE SHIFT FOREMAN WHO INITIATED THE LCO FAILED TO CHECK THE STATUS OF THE FIRE PROTECTION SYSTEM PRIOR TO INITIATING FIRE WATCH REQUIREMENTS. FURTHER, OTHER SHIFT FOREMEN FAILED TO ENSURE REQUIRED ACTIONS WERE PERFORMED WHILE THE LCO WAS IN EFFECT. THE INDIVIDUALS INVOLVED HAVE BEEN COUNSELED.

[122] FERMI 2 DOCKET 50-341 LER 85-001
LOSS OF DIVISION I OFFSITE POWER RESULTS IN REACTOR SCRAM.
EVENT DATE: 032885 REPORT DATE: 042685 NSSS: GE TYPE: BWR

(NSIC 193853) AT 2345 HRS ON 3-28-85 WHILE INITIAL FUEL LOADING WAS IN PROGRESS, BREAKER POSITION D ON BUS #11 AUTOMATICALLY OPENED INTERRUPTING THE 13.8 KV FEED TO SYSTEM SERVICE TRANSFORMER #64 WHICH SUPPLIES POWER TO DIV I. RPS DIV I POWER WAS LOST WHICH RESULTED IN A FULL SCRAM BECAUSE THE NEUTRON MONITORING INSTRUMENTATION RPS SHORTING LINKS WERE REMOVED. EMERGENCY DG #12 STARTED AUTOMATICALLY TO SUPPLY POWER TO DIV I. AFTER OFFSITE POWER WAS RESTORED TO DIV I USING TIE BREAKERS, EDG #12 WAS UNLOADED AND SECURED. SUBSEQUENT TROUBLESHOOTING DID NOT REVEAL THE CAUSE OF THE PROBLEM. A SIMILAR EVENT OCCURRED ON 3-31-85 AFTER THE TRANSFORMER WAS REENERGIZED (SEE LER 341/85-002.) INVESTIGATIONS CONDUCTED FOLLOWING THE SECOND OCCURRENCE REVEALED THAT WATER HAD ENTERED THE SWITCHGEAR CABINET HOUSING BREAKER POSITION A6 AND CAUSED A GROUND FAULT AT THE A6 BREAKER WHICH IS AN ALTERNATE FEED TO TRANSFORMER #64. A HEAVY RAINSTORM WITH STRONG WINDS PRECEDED EACH OCCURRENCE. IT WAS CONCLUDED THAT THE FIRST EVENT WAS CAUSED BY A GROUND FAULT AT THE SAME LOCATION.

[123] FERMI 2 DOCKET 50-341 LER 85-002
LOSS OF DIVISION I OFFSITE POWER CAUSES ESF ACTUATION.
EVENT DATE: 033185 REPORT DATE: 042685 NSSS: GE TYPE: BWR

(NSIC 193854) AT 0645 ON 3-31-85, WHILE IN OPERATIONAL CONDITION 5 WITH NO CORE ALTERATIONS IN PROGRESS, BREAKER D ON BUS #11 AUTOMATICALLY OPENED. THIS INTERRUPTED POWER TO SYSTEM SERVICE TRANSFORMER #64 WHICH SUPPLIES POWER TO DIV I. THE RWCU ISOLATED AND POWER WAS LOST TO THE REACTOR BLDG HVAC, CONTROL CENTER HVAC AND DIV I OF THE RPS MOTOR GENERATOR SET BECAUSE THE DIV I EMERGENCY DG'S

WERE UNAVAILABLE. TIE BREAKERS WERE USED TO RESTORE POWER FROM DIV II. HVAC SYSTEMS AND ISOLATIONS WERE RESET. THE CAUSE OF THE EVENT WAS DETERMINED TO BE A GROUND FAULT AT THE A6 BREAKER CAUSED BY WATER ENTERING THE SWITCHGEAR CABINET THROUGH A DEFECTIVE SEAL. THE DUCT LEAK WAS REPAIRED WITH A TEMPORARY SEAL. MORE PERMANENT CORRECTIVE REPAIRS WILL BE MADE IN A FUTURE DIV I OUTAGE. SIMILAR EVENT - 341/85-001.

[124] FERMI 2 DOCKET 50-341 LER 85-004
FIRE WATCH NOT ESTABLISHED AFTER FLOOR PLUG REMOVED.
EVENT DATE: 040285 REPORT DATE: 050685 NSSS: GE TYPE: BWR

(NSIC 193804) ON 4-2-85, AT ABOUT 1330 HRS A FLOOR PLUG WAS REMOVED WHICH IS PART OF A FIRE RATED ASSEMBLY AND CARBON DIOXIDE SUPPRESSION SYSTEM BOUNDARY. THE FLOOR PLUG HAD BEEN REMOVED TO ALLOW THE TRANSPORT OF EQUIPMENT BETWEEN THE 3RD AND 4TH FLOORS OF THE AUX BLDG. CONTRARY TO PLANT TECH SPECS, A FIRE WATCH WAS NOT ESTABLISHED WITHIN 1 HR. THIS CONDITION EXISTED UNTIL 1540 HRS ON 4-4-85, AT WHICH TIME THE FLOOR PLUG WAS SECURED. DURING THE EVENT, THE PLANT WAS IN OPERATIONAL CONDITION 5 WITH CORE ALTERATIONS IN PROGRESS FOR INITIAL FUEL LOAD. THERE WERE NO SIGNIFICANT OPERATIONAL OCCURRENCES AS A RESULT OF THE EVENT.

[125] PERMI 2 DOCKET 50-341 LER 85-003
IRM SCRAM WHILE RESTORING 24V DC BATTERY CHARGER.
EVENT DATE: 040385 REPORT DATE: 050385 NSSS: GE TYPE: BWR
VENDOR: C & D BATTERIES, DIV OF ELTRA CORP.

(NSIC 193803) ON 4-2-85, AT 2300 HRS, A CALIBRATION OF THE DIV II 48/24V DC BATTERY CHARGER B-1 WAS INITIATED. THIS CHARGER/BATTERY SUPPLIES DC POWER TO SOURCE RANGE AND INTERMEDIATE RANGE NEUTRON MONITORS. AFTER PERFORMING A PORTION OF THE CALIBRATION, THE TECHNICIAN OBSERVED THE CHARGER WAS PRODUCING NO OUTPUT CURRENT. AT ABOUT 0300 HRS ON 4-3-85, THE TECHNICIAN NOTIFIED THE NUCLEAR SHIFT SUPERVISOR OF THE MALFUNCTION. A NON-LICENSED OPERATOR WAS SENT TO INVESTIGATE THE PROBLEM AND ERRONEOUSLY REPORTED TO THE NUCLEAR SHIFT SUPERVISOR THAT THE PROBLEM INVOLVED THE SPARE CHARGER. THE NUCLEAR SHIFT SUPERVISOR PREPARED A WORK ORDER TO TROUBLESHOOT THE CHARGER. AT 1110 HRS ON 4-3, THE NEUTRON MONITORING INSTRUMENTATION BEGAN TO DRIFT. CORE ALTERATIONS WERE SUSPENDED AND PERSONNEL WERE SENT TO INVESTIGATE THE B-1 BATTERY CHARGER. THE OPERATOR INVESTIGATING THE CHARGER MALFUNCTION TAPPED THE HIGH VOLTAGE SHUTDOWN RELAY WHICH CAUSED THE CHARGER TO BEGIN FUNCTIONING. A SCRAM FROM THE NEUTRON MONITORING INSTRUMENTATION FOLLOWED. SUBSEQUENT TESTING FAILED TO IDENTIFY THE CAUSE OF THE CHARGER MALFUNCTION. THE PERSONNEL INVOLVED WERE COUNSELED CONCERNING THE NEED FOR ACCURATE COMMUNICATION AND ALARM RESPONSE.

[126] FERMI 2 DOCKET 50-341 LER 85-005
INADVERTENT RPS ACTUATION DUE TO INSTRUMENT VALVING ERROR.
EVENT DATE: 040885 REPORT DATE: 050885 NSSS: GE TYPE: BWR

(NSIC 194023) ON 4-8-85 AT 1626 HRS, A FULL SCRAM SIGNAL WAS GENERATED WHILE RESTORING A REACTOR VESSEL WATER LEVEL INSTRUMENT TO SERVICE FOLLOWING CALIBRATION. THE PLANT WAS IN OPERATIONAL CONDITION 5 WITH ALL CONTROL RODS INSERTED AND NO CORE ALTERATIONS IN PROGRESS. THE SCRAM WAS CAUSED BY AN ERRONEOUS REACTOR VESSEL WATER LEVEL SIGNAL RESULTING FROM A PRESSURE TRANSIENT INDUCED BY INCORRECT VALVING TECHNIQUE. (ISOLATION VALVE WAS OPENED SO QUICKLY CAUSING A PRESSURE TRANSIENT IN THE REFERENCE LEG.) THE TECHNICIANS WILL BE TRAINED ON A MOCKUP OF THE TRANSMITTER AND VALVE ARRANGEMENT IN THE CORRECT TECHNIQUE FOR PLACING IN SERVICE INSTRUMENTS SHARING A COMMON REFERENCE LEG.

[127] FITZPATRICK DOCKET 50-333 LER 85-003
 REDUNDANT EMERGENCY DIESEL GENERATOR SYSTEMS INOPERABLE.
 EVENT DATE: 020785 REPORT DATE: 030785 NSSS: GE TYPE: BWR
 VENDOR: BRUCE GM DIESEL, INC.
 GENERAL ELECTRIC CO.

(NSIC 193970) DURING NORMAL OPERATION ON 2-5-85, EDG A & C AND EMERGENCY SERVICE WATER (ESW) PUMP A WERE DECLARED INOPERABLE WHEN THE ESW PUMP TRIPPED DURING STARTUP FOR ROUTINE SURVEILLANCE AS REQUIRED BY TECH SPECS 4.11.D.1. THIS INITIATED A 7 DAY LCO WHICH REQUIRED TESTING OF EDG B & D AND ESW PUMP B. A SERIES OF PROBLEMS WITH ESW PUMP A PHASE OVERCURRENT TRIP DEVICES AND CALIBRATION OF THE TRIP DEVICES WERE ENCOUNTERED. ON 2-7-85 WHILE EDG A & C AND ESW PUMP A WERE STILL CONSIDERED INOPERABLE, A PROBLEM WITH THE ENGINE START RELAY FOR EDG D WAS ENCOUNTERED. THIS PROBLEM RESULTED IN THE REDUNDANT EDG AND ESW SYSTEM BEING DECLARED INOPERABLE AND RESULTED IN INITIATION OF A 24 HRS LCO. APPROX 2 HRS AFTER THE 24 LCO WAS INITIATED, IT WAS TERMINATED BY DECLARING ESW PUMP A (AND EDG A & C) OPERABLE. TROUBLESHOOTING AND REPAIR EFFORTS ASSOCIATED WITH EDG D ENGINE START RELAYS DID NOT REVEAL THE PRECISE CAUSE OF THE PROBLEM AND THE PROBLEM COULD NOT BE DUPLICATED. WITH RESPECT TO THE PROBLEMS ASSOCIATED WITH ESW PUMP A, SOME PROCEDURAL PROBLEMS ASSOCIATED WITH CALIBRATION OF CIRCUIT BREAKER OVERCURRENT TRIP DEVICES WERE NOTED AND CORRECTED IN ADDITION TO REPLACEMENT OF OVERCURRENT TRIP DEVICES. ALL OF THE SYSTEMS WERE RETURNED TO OPERABLE STATUS WITHIN THE TIME ALLOWED BY TECH SPECS.

[128] FITZPATRICK DOCKET 50-333 LER 85-013
 MAIN STEAM SAFETY/RELIEF VALVES FOUND OUT OF TOLERANCE DURING TESTING.
 EVENT DATE: 041885 REPORT DATE: 051685 NSSS: GE TYPE: BWR
 VENDOR: TARGET ROCK CORP.

(NSIC 193900) DURING A MAINTENANCE OUTAGE IN 10-84 TWO TARGET ROCK SAFETY/RELIEF PILOT VALVES WERE REMOVED FROM SERVICE DUE TO PILOT SEAT LEAKAGE. THEY WERE REPLACED WITH SPARE PILOT ASSEMBLIES. IN 3-85, THESE 2 PILOTS WERE SENT TO WYLE LABS, WITH OUR NORMAL OUTAGE SHIPMENT, FOR TESTING AND OVERHAUL. BOTH PILOTS WERE FOUND TO HAVE SETPOINTS OUTSIDE THE ALLOWABLE TOLERANCES PER TECH SPEC 2.2.B AND 4.6.E.1. MANUAL AND ADS FUNCTIONS ARE NOT AFFECTED BY SETPOINT DRIFT, THIS EVENT DID NOT REPRESENT A SERIOUS DEGRADATION. BOTH PILOTS WILL BE OVERHAULED AND TESTED TO THE LATEST DESIGN CRITERIA PRIOR TO INSTALLATION.

[129] FT. ST. VRAIN DOCKET 50-267 LER 85-002
 COMPRESSOR ROTOR BOLT FAILS.
 EVENT DATE: 021585 REPORT DATE: 031585 NSSS: GA TYPE: HTGR

(NSIC 194044) CAUSE - STRESS CORROSION CRACKING. ONE OF TWENTY-FOUR BOLTS WHICH SECURE THE BEARING ASSEMBLY OF THE COMPRESSOR ROTOR TO THE "A" HELIUM CIRCULATOR UNIT (C-2102) FAILED WHILE BEING REASSEMBLED FOLLOWING REFURBISHMENT. THE BOLT FAILURE WAS DETERMINED TO HAVE RESULTED FROM STRESS CORROSION CRACKING. PRELIMINARY CHEMICAL ANALYSIS INDICATED A HIGH LEVEL OF CHLORIDE AND SULPHATE PRESENT ON THE BOLTS. EVALUATIONS INTO THE SOURCE OF CHLORIDE IN THE FORT ST. VRAIN PRIMARY CIRCUIT, AND THE EFFECTS ON METALLIC COMPONENTS EXPOSED TO PRIMARY COOLANT ARE UNDERWAY.

[130] FT. ST. VRAIN DOCKET 50-267 LER 85-003
 DG TIE BREAKERS FAIL TO CLOSE.
 EVENT DATE: 030485 REPORT DATE: 040485 NSSS: GA TYPE: HTGR

(NSIC 194054) CAUSE - CELL IN STATION BATTERY. THE SEMI-ANNUAL "LOSS OF OUTSIDE POWER AND TURBINE TRIP" SURVEILLANCE WAS INITIATED BY STATION PERSONNEL. AS A RESULT OF SPECIAL TEST CONDITIONS SIMULATING THE FAILURE OF ONE GENERATOR SET TO

START AND LOAD AND SEVERAL ADDITIONAL UNEXPECTED EQUIPMENT FAILURES, NEITHER GENERATOR SET CLOSED AUTOMATICALLY ONTO ITS RESPECTIVE 480 VAC BUS. THIS EVENT WAS PREVIOUSLY REPORTED AS LICENSEE EVENT REPORT 84-014. PLANT ELECTRICIANS DETERMINED THAT CELL 14 OF STATION BATTERY 1A HAD A VERY HIGH RESISTANCE AND COULD NOT CARRY A LOAD. THE CAUSE FOR THE INITIAL FAILURE OF CELL 14 (HIGH RESISTANCE) IS NOT KNOWN.

[131] FT. ST. VRAIN DOCKET 50-267 LER 85-005
LIQUID EFFLUENT RELEASE RATE EXCEEDS LIMIT.
EVENT DATE: 031685 REPORT DATE: 041585 NSSS: GA TYPE: HTGR

(NSIC 194041) CAUSE - IMPROPER PLACEMENT OF FLOW ELEMENT. WITH THE REACTOR SHUTDOWN AND DEPRESSURIZED, IT WAS DETERMINED THAT THE 24 HOUR AVERAGE EFFLUENT DISCHARGE FLOW RATE FROM THE REACTOR BUILDING SUMP FOR MARCH 15, 1985 WAS 10.1 GPM. THIS VALUE IS IN EXCESS OF THE 10 GPM LIMIT SPECIFIED IN ELCO 8.1.3 FOR EFFLUENT RELEASES IN THE AUTOMATIC MODE. THE DISCHARGE FLOW RATE WAS IMMEDIATELY REDUCED TO A VALUE BELOW 10 GPM TO COMPLY WITH THE REQUIREMENTS OF THE ELCO. THE CALCULATED DISCHARGE FLOW RATE OF 11.4 GPM IS ELEVATED ABOVE THE ACTUAL VALUE DUE TO THE FACT THAT FLOW ELEMENT FE-7216 IS LOCATED UPSTREAM OF THE POINT WHERE LIQUID IS DIVERTED TO THE CONTINUOUS SAMPLING SYSTEM. THEREFORE, FIQ-7216 INDICATE RECYCLE FLOW QUANTITIES IN ADDITION TO THE ACTUAL DISCHARGED QUANTITY.

[132] FT. ST. VRAIN DOCKET 50-267 LER 85-004
RADIONUCLIDE CONCENTRATION IN COOLING TOWER BLOWDOWN LINE EXCEEDS LIMIT.
EVENT DATE: 031785 REPORT DATE: 041685 NSSS: GA TYPE: HTGR

(NSIC 194042) CAUSE - MONITOR TANK VALVE LEAK. OPERATIONS PERSONNEL BEGAN PREPARATIONS FOR RELEASING THE MONITOR TANK CONTENTS TO THE COOLING TOWER BLOWDOWN LINE. AS PART OF THESE PREPARATIONS, THE MONITOR TANK CONTENTS WERE STARTED ON RECIRCULATION THROUGH RT-6212 AND RT-6213 WITH CIRCULATION THROUGH THE RADIATION MONITORS STILL IN PROGRESS, OPERATORS DISCOVERED THE LEVEL OF LIQUID WASTE IN THE MONITOR TANK HAD FALLEN. ANALYSIS OF SAMPLES COLLECTED FROM THE LIQUID WASTE TRANSFER PUMP DISCHARGE SHOWED THE CONCENTRATION OF RADIONUCLIDES PRESENT IN THE LIQUID EFFLUENT TO REQUIRE A COOLING TOWER BLOWDOWN DILUTION FACTOR OF APPROXIMATELY 276, IN ORDER TO MAINTAIN THE RELEASE WITHIN MPC LIMITS. GIVEN THE TOTAL QUANTITY OF LIQUID THAT WAS UNINTENTIONALLY RELEASED, APPROXIMATELY 900 GALLONS, AND THE TIME PERIOD RECIRCULATION THROUGH THE RADIATION MONITORS OCCURRED, APPROXIMATELY EIGHT HOURS, IT IS CONCLUDED THAT V-6241 WAS LEAKING AT A RATE OF APPROXIMATELY 1.9 GPM. V-6241 WAS REMOVED AND INSPECTED FOR ABNORMAL WEAR OR OTHER DEFICIENCIES. SEDIMENT ACCUMULATION IN THE VALVE SEAT AND ADJACENT LINE WAS REMOVED AND THE LINE CLEANED. AFTER DETERMINING THE VALVE INTERNALS OF V-6241 TO BE IN GOOD CONDITION, THEY WERE REINSTALLED INTO THE VALVE BODY.

[133] FT. ST. VRAIN DOCKET 50-267 LER 85-006
FIVE BARRIER SEAL INSPECTIONS MISSED.
EVENT DATE: 031985 REPORT DATE: 041785 NSSS: GA TYPE: HTGR

(NSIC 194043) CAUSE - INADEQUATE PROCEDURES. DURING THE TIME PERIOD FROM DECEMBER 21, 1983 THROUGH MAY 2, 1984, THERE WERE FIVE CONTROLLED WORK PROCEDURES (CWPS) IN WHICH MAINTENANCE WORK DISTURBED FIRE RETARDANT MATERIAL IN FIRE BARRIER PENETRATION SEALS. THESE CWPS DID NOT REQUIRE, NOR ENSURE, THAT THE SURVEILLANCE TEST SR 5.10.4B-X, "FIRE BARRIER PENETRATION SEALS POST MAINTENANCE INSPECTION" BE PERFORMED IMMEDIATELY FOLLOWING COMPLETION OF MAINTENANCE, AS REQUIRED BY THE TECH SPECS. THE SURVEILLANCE TEST, SR 10.4A-A, "FIRE PENETRATION SEALS ANNUAL INSPECTION," WHICH INCORPORATES SR 5.10.4B-X, WAS COMPLETED ON MAY 25, 1984, FOLLOWING DISCOVERY OF THIS DISCREPANCY. THIS EVENT IS BEING REPORTED PER 10 CFR 50.73(A)(2)(I)(B). THE PROCEDURES GOVERNING THE WRITING AND IMPLEMENTATION OF

CWPS (ADMINISTRATIVE PROCEDURE G-9, "CONTROLLED WORK PROCEDURES" AND THE CWP MANUAL) HAVE BEEN MODIFIED TO INCLUDE REQUIREMENTS FOR SURVEILLANCES TO BE INCLUDED IN THE PITR AND TO BE SIGNED OFF BY THE CWP WORK COORDINATOR.

[134] GINNA DOCKET 50-244 LER 85-003
 INOPERABLE FIRE DETECTION SYSTEM.
 EVENT DATE: 030985 REPORT DATE: 040585 NSSS: WE TYPE: PWR

(NSIC 193748) ON 3-9-85 AT 0655 HRS FIRE DETECTION AND AUTO PRE-ACTION SUPPRESSION SYSTEM S-15 "INTERMEDIATE BLDG BASEMENT EAST CABLE TRAYS" WAS REQUESTED TO BE REMOVED FROM SERVICE. AT 1430 HRS OF THAT SAME DAY, DURING PERIODIC SURVEILLANCE TEST, IT WAS DISCOVERED THAT S-15 WAS IN SERVICE AND S-05 "CABLE TUNNEL SMOKE DETECTION SYSTEM AUTO DELUGE" INSTEAD HAD BEEN INADVERTENTLY REMOVED FROM SERVICE. THIS RESULTED IN A VIOLATION OF TECH SPEC 3.14.1.1 WHICH REQUIRES WITHIN AN HR A FIREWATCH PATROL TO INSPECT THE ZONE WITH THE INOPERABLE INSTRUMENTS AT LEAST ONCE PER HR.

[135] GRAND GULF 1 DOCKET 50-416 LER 85-011
 AUDIT SHOWS HALON STORAGE TANK PRESSURE LOW TWICE.
 EVENT DATE: 101083 REPORT DATE: 032685 NSSS: GE TYPE: BWR

(NSIC 193928) ON 2-26-85, A QA AUDIT REVEALED 2 OCCASIONS WHERE HALON TANK PRESSURES WERE INCORRECTLY DETERMINED TO BE WITHIN ACCEPTANCE CRITERIA DURING HALON TANK PRESSURE CHECKS. THIS RESULTED IN TECH SPEC MINIMUM TANK PRESSURE REQUIREMENTS NOT BEING MET. SURVEILLANCES WERE PERFORMED ON 11-10-84 FOR HALON PANEL P914 AND ON 10-10-83 FOR HALON PANEL P910. THE HALON TANK WEIGHTS WERE WITHIN TECH SPEC LIMITS. SINCE THE TANK PRESSURE VARIES WITH TEMPERATURE, A TEMPERATURE CORRECTION CHART IS USED TO DETERMINE THE PRESSURE ACCEPTANCE CRITERIA FOR THE TEMPERATURE OBSERVED DURING THE SURVEILLANCE. THE MECHANICS THAT PERFORMED THE SURVEILLANCE HAD DIFFICULTY UNDERSTANDING AND USING THE TEMPERATURE CORRECTION CHART DUE TO AMBIGUITY IN THE PROCEDURE.

[136] GRAND GULF 1 DOCKET 50-416 LER 85-012
 SPURIOUS HIGH ROOM TEMPERATURE SIGNAL CAUSES SHUTDOWN COOLING ISOLATION.
 EVENT DATE: 030685 REPORT DATE: 040585 NSSS: GE TYPE: BWR
 VENDOR: RILEY COMPANY, THE - PANALARM DIVISION

(NSIC 193929) AT 1300 ON 3-6-85 A SPURIOUS TRIP SIGNAL FROM AN RHR EQUIPMENT ROOM HIGH DIFFERENTIAL TEMPERATURE SWITCH ISOLATED SHUTDOWN COOLING VALVE E12-F009. SHUTDOWN COOLING LOOPS A AND B SHARE A COMMON SUCTION LINE INCLUDING INBOARD AND OUTBOARD CONTAINMENT ISOLATION VALVES. EITHER VALVE MAY BE ACTUATED BY A LEAK DETECTION SINGLE CHANNEL TRIP SIGNAL. ISOLATION OF EITHER VALVE CAUSES A LOSS OF SHUTDOWN COOLING. AN OPERATOR RESET THE TRIP AND VERIFIED THE AREA TEMPERATURE TO BE NORMAL. SHUTDOWN COOLING LOOP A WAS RESTORED TO OPERATION AT 1305. AN INVESTIGATION FAILED TO DETERMINE THE CAUSE OF THE SPURIOUS SIGNAL. THE SWITCH IS A RILEY PANALARM DIVISION MODEL 86 VTFF-1641. A SIMILAR EVENT OCCURRED ON 2-7-85 WHEN A DIFFERENT INSTRUMENT ISOLATED THE RCIC SYSTEM ON A RHR EQUIPMENT ROOM HIGH DIFFERENTIAL TEMPERATURE.

[137] GRAND GULF 1 DOCKET 50-416 LER 85-015
 PERSONNEL ERROR CAUSES INADVERTENT RCIC ISOLATION.
 EVENT DATE: 040485 REPORT DATE: 050385 NSSS: GE TYPE: BWR

(NSIC 193834) ON 4-4-85, THE RCIC SYSTEM WAS INADVERTENTLY ISOLATED DURING A MONTHLY FUNCTIONAL TEST. A MISUNDERSTANDING BETWEEN THE OPERATOR AND TECHNICIANS LED THE OPERATOR TO RETURN A SWITCH TO 'NORMAL' WHILE TEST EQUIPMENT REMAINED CONNECTED TO THE CIRCUIT. THE CONFIGURATION OF THE TEST EQUIPMENT WAS SUCH THAT,

WITH THE SWITCH IN NORMAL, THE CIRCUITRY INITIATED AN RCIC ISOLATION. THE RCIC ISOLATION LOGIC ALLOWS AN ISOLATION BY A SINGLE CHANNEL TRIP SIGNAL.

[138] GRAND GULF 1 DOCKET 50-416 LER 85-017
EMERGENCY FILTRATION SYSTEM CHARCOAL ADSORBER NOT TESTED.
EVENT DATE: 041285 REPORT DATE: 051385 NSSS: GE TYPE: BWR

(NSIC 193989) ON 4-12-85, OPERATIONS PERSONNEL DISCOVERED THAT A CHARCOAL ADSORBER SAMPLE FOR TRAIN A OF THE CONTROL ROOM EMERGENCY FILTRATION SYSTEM HAD NOT BEEN REMOVED AND ANALYZED AS REQUIRED BY TECH SPEC 4.7.2.C. THIS IS REQUIRED AFTER EVERY 720 HRS OF OPERATION. THE ANALYSIS WAS PERFORMED AND THE RESULTS CONFIRMED THAT THE FILTERS WERE FUNCTIONAL. THE SYSTEM CUMULATIVE OPERATING TIME IS LOGGED DAILY BY OPERATIONS ON A SURVEILLANCE PROCEDURE DATA SHEET. IN 8-84, THE RESPONSIBILITY FOR THIS SURVEILLANCE WAS TRANSFERRED FROM THE HEALTH PHYSICS DEPARTMENT TO THE MAINTENANCE DEPARTMENT. THE DAILY LOG DATA SHEET WAS NOT REVISED TO REQUIRE THE NOTIFICATION OF A DIFFERENT DEPARTMENT WHEN THE SURVEILLANCE WAS DUE. PROCEDURES ARE BEING REVISED TO PRECLUDE RECURRENCE.

[139] GRAND GULF 1 DOCKET 50-416 LER 85-018
TESTING ERROR CAUSES REACTOR SCRAM.
EVENT DATE: 041485 REPORT DATE: 051485 NSSS: GE TYPE: BWR

(NSIC 193930) THE REACTOR SCRAMMED ON HIGH LEVEL WHEN THE REACTOR RECIRCULATION PUMPS TRANSFERRED TO THE LOW FREQUENCY MOTOR GENERATOR (LFMGS). THE RESULTANT POWER REDUCTION CAUSED AN INCREASE IN VESSEL LEVEL BECAUSE FEEDWATER CONTROL WAS IN MANUAL. THE SCRAM WAS A DIRECT RESULT OF THE PERFORMANCE OF CALIBRATION PROCEDURE, 'FEEDWATER CONTROL SYSTEM MAIN STEAM LINE FLOW CALIBRATION.' THIS PROCEDURE HAD ONLY BEEN PERFORMED WHILE SHUTDOWN PRIOR TO THIS EVENT. THE PROCEDURE WAS BEING PERFORMED AS A PREREQUISITE TO A POWER ASCENSION TEST. PRIOR TO PERFORMANCE, THE PROCEDURE WAS REVIEWED FOR ADEQUACY FOR PERFORMANCE WHILE AT POWER. IT WAS DETERMINED THAT A CHANGE WAS NECESSARY TO PREVENT LEVEL FLUCTUATION. THE CHANGE WAS MADE BY A TEMPORARY CHANGE NOTICE AND THE PROCEDURE WAS RUN. AN ERROR STILL EXISTED IN THE PROCEDURE WHICH RESULTED IN THE TRANSFER OF THE RECIRCULATION PUMPS TO SLOW SPEED.

[140] HATCH 1 DOCKET 50-321 LER 81-035 REV 1
UPDATE ON INADEQUATE DIESEL GENERATOR COOLING WATER.
EVENT DATE: 042681 REPORT DATE: 102584 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: HATCH 2 (BWR)

(NSIC 193944) ON 4-26-81, WITH UNIT 1 SHUTDOWN AND UNIT 2 OPERATING AT 99% POWER, 1B DG SURVEILLANCE REVEALED THAT THE STANDBY SERVICE WATER SYSTEM WOULD NOT DELIVER RATED FLOW. PLANT SERVICE WATER COULD NOT BE SUPPLIED TO 1B DG WITHIN 8 HRS DUE TO A VALVE MALFUNCTION; THUS, 1B DG WAS DECLARED INOPERABLE. THIS IS NOT A REPETITIVE OCCURRENCE. THE CAUSE OF THE INABILITY TO LINE UP PLANT SERVICE WATER TO 1B DG WAS DUE TO THE STANDBY SERVICE WATER TO UNIT 1 DIV 1 SERVICE WATER ISOLATION VALVE NOT OPENING (STRIPPED GEAR IN THE VALVE OPERATOR). THE INVESTIGATION REVEALED THE STANDBY SERVICE WATER SYSTEM DID DELIVER RATED FLOW TO THE 1B DG. HOWEVER, THE INSTRUMENTATION IN USE TO MEASURE FLOW DID NOT INDICATE PUMP FLOW ACCURATELY AT THE DISCHARGE OF THE HEAT EXCHANGER.

[141] HATCH 1 DOCKET 50-321 LER 82-070 REV 1
UPDATE ON INOPERABLE RCIC DUE TO AIR IN INSTRUMENT LINE.
EVENT DATE: 080582 REPORT DATE: 122684 NSSS: GE TYPE: BWR
VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 193945) ON 8-5-82, WITH UNIT 1 AT 2382 MWT, THE PERFORMANCE OF THE 'RCIC

PUMP OPERABILITY' PROCEDURE DISCLOSED THE FAILURE OF THE MINIMUM FLOW BYPASS VALVE. A 24-HOUR LCO WAS INITIATED PER TECH SPEC TABLE 3.2-3. ON 8-20-82, THE VALVE FAILED AGAIN WHILE ATTEMPTING THIS PROCEDURE. TECH SPEC 3.5.E.3 APPLIES SINCE HPCI WAS OUT FOR MAINTENANCE. THE FLOW SWITCH, BARTON MODEL 289-A IS REQUIRED TO OPEN THE MINIMUM FLOW VALVE AT LESS THAN OR EQUAL TO 40 GPM RCIC DISCHARGE FLOW, AND CLOSE THE VALVE AT GREATER THAN OR EQUAL TO 80 GPM. HOWEVER, THE MINIMUM FLOW VALVE WAS FOUND TO BE CYCLING BACK AND FORTH BETWEEN THE OPEN AND CLOSE POSITIONS DURING RCIC PUMP OPERATION WITH 400 GPM DISCHARGE FLOW. THE CAUSE OF THESE EVENTS WAS AIR IN THE RCIC DISCHARGE FLOW SWITCH SENSING LINES. THE CAUSE OF THE AIR IN THE FLOW SWITCH SENSING LINES IS UNKNOWN. A REVIEW OF THE FLOW SWITCH SENSING LINES ROUTING DESIGN WAS PERFORMED AND NO PROBLEMS WERE IDENTIFIED.

[142] HATCH 1 DOCKET 50-321 LER 85-010
 REACTOR SCRAMS AND ENGINEERED SAFETY FEATURE ACTUATION.
 EVENT DATE: 011685 REPORT DATE: 021485 NSSS: GE TYPE: BWR

(NSIC 193717) ON 1-16-85, AT 0955 CST, WITH THE REACTOR MODE SWITCH IN THE RUN POSITION AND REACTOR POWER AT 1496 MWT (61% POWER), UNIT 1 RECEIVED A REACTOR SCRAM ON A REACTOR VESSEL LOW WATER LEVEL SIGNAL. THIS EVENT WAS THE RESULT OF A VITAL AC POWER SUPPLY TRIP, WHICH CAUSED BOTH 'A' AND 'B' REACTOR FEEDPUMPS TO RUNBACK. CONSEQUENTLY, A LOW WATER LEVEL CONDITION RESULTED. AT 1102 CST, WHILE PLANT PERSONNEL WERE LOWERING REACTOR PRESSURE, THE REACTOR VESSEL WATER LEVEL INCREASED TO THE HIGH LEVEL SETPOINT AND THE REACTOR FEEDPUMPS TRIPPED. BEFORE PLANT PERSONNEL COULD RESET THE FEEDPUMPS, WITH REACTOR POWER AT 0 MWT, THE REACTOR LEVEL DROPPED TO THE LOW LEVEL SETPOINT. THIS CAUSED AN ACTUATION OF THE RPS LOGIC AND A GROUP 2 ISOLATION. PLANT PERSONNEL RESTORED THE REACTOR LEVEL TO NORMAL VIA THE 'A' REACTOR FEEDPUMP AND THE BOOSTER PUMPS AS THE VESSEL CONTINUED TO DEPRESSURIZE. THESE ARE NON-REPETITIVE EVENTS; HOWEVER, THE LAST REACTOR SCRAM IS REFERENCED IN LER 50-321/1985-03.

[143] HATCH 1 DOCKET 50-321 LER 85-004
 SBTG SYSTEM DAMPER ACTUATORS SET UP IMPROPERLY.
 EVENT DATE: 013085 REPORT DATE: 022685 NSSS: GE TYPE: BWR

(NSIC 193765) ON 1-30-85 AT 1230 CST WITH THE REACTOR MODE SWITCH IN THE RUN POSITION, ENGINEERING PERSONNEL DETERMINED THAT THE CONTROL CIRCUIT LOGIC FOR T41-F032A AND B WOULD CAUSE THEM TO FAIL CLOSED ON A LOSS OF ELECTRICAL POWER. THE PSAR STIPULATES ONLY THAT SBTG SYSTEM VALVES FAIL OPEN ON LOSS OF AIR TO THE ACTUATORS AND T41-F032A AND B MET THIS REQUIREMENT. T41-F040A AND B WERE CHECKED AND FOUND TO CLOSE ON LOSS OF ELECTRICAL POWER ALSO. THEIR ACTUATORS HOWEVER, WERE SET UP TO FAIL CLOSED ON A LOSS OF AIR. THIS CONFLICTS WITH THE PSAR PARAGRAPH 5.3.3.3. THE ACTUATORS OF T41-F040A AND B WERE REVERSED TO ALLOW THEM TO FAIL OPEN ON A LOSS OF AIR AND A DCR WAS IMPLEMENTED TO CHANGE THE CONTROL CIRCUIT LOGIC OF T41-F032A AND B AND T41-F040A AND B TO ALLOW THEM TO FAIL OPEN ON A LOSS OF ELECTRICAL POWER. THE VALVES WERE SATISFACTORILY FUNCTIONALLY TESTED AND DECLARED OPERABLE ON 2-8-85.

[144] HATCH 1 DOCKET 50-321 LER 85-015
 INCORRECT WIRING ON SECONDARY CONTAINMENT ISOLATION DAMPER.
 EVENT DATE: 032185 REPORT DATE: 041985 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: HATCH 2 (BWR)

(NSIC 193849) ON 3-21-85 AT 1530 WITH THE REACTOR MODE SWITCH IN THE SHUTDOWN POSITION, CONTRACT PERSONNEL IN THE PROCESS OF PERFORMING A FUNCTIONAL TEST DISCOVERED THAT THE ISOLATION LOGIC FOR THE REACTOR BLDG SUPPLY FAN DISCHARGE INBOARD ISOLATION DAMPER WAS WIRED INCORRECTLY. PLANT ENGINEERING PERSONNEL DETERMINED THAT WIRES HAD BEEN IMPROPERLY CONNECTED BOTH AT THE DAMPER AND AT THE

PANEL WHICH PREVENTED THE DAMPER FROM CLOSING AUTOMATICALLY UPON RECEIPT OF AN ISOLATION SIGNAL. PLANT PERSONNEL CORRECTED THE WIRING DEFICIENCIES ASSOCIATED WITH T41-F011A, SUCCESSFULLY FUNCTIONALLY TESTED THE DAMPER AND RETURNED IT TO SERVICE ON 3-21-85 AT APPROX 2030 CST.

[145] HATCH 1 DOCKET 50-321 LER 85-012
 MAINTENANCE WORK CAUSES RWCU ISOLATION.
 EVENT DATE: 032485 REPORT DATE: 041985 NSSS: GE TYPE: BWR

(NSIC 193848) ON 3-24-85 AT APPROX 1800 CST WITH THE UNIT IN RUN AT 2075 MWT OPERATIONS PERSONNEL WERE IN THE PROCESS OF BACKWASHING, PRECOATING, AND PLACING THE 'A' RWCU DEMINERALIZER BACK INTO SERVICE PER THE 'REACTOR WATER CLEANUP DEMINERALIZER' PROCEDURE. TO DO THIS, THE OPERATIONS PERSONNEL WERE USING WATER FROM THE 'B' RWCU DEMINERALIZER LOOP TO BACKWASH THE 'A' POST STRAINER RESIN TRAP. PERSONNEL WERE INSIDE THE RWCU ROOM POSITIONING MANUAL VALVES PER HNP-1-1326 TO START THE BACKWASHING PROCESS. THIS ACTIVITY CAUSED A RWCU DIFFERENTIAL FLOW OF GREATER THAN 65 GPM FOR 45 SECS RESULTING IN A LEAK DETECTION ISOLATION SIGNAL WHICH CLOSED THE RWCU PRIMARY CONTAINMENT ISOLATION VALVES. THE CAUSE OF THIS EVENT WAS ATTRIBUTED TO A TIME LAG BETWEEN THE TIME OPERATIONS PERSONNEL DRESSED OUT, ENTERED THE RWCU ROOM, OPENED THE MANUAL ISOLATION VALVES, AND THEN EXITED THE RWCU ROOM TO TAKE CONTROL OF RWCU FLOW. CORRECTIVE ACTION IS TO REPLACE THE MANUAL ISOLATION VALVES WITH AIR-OPERATED ISOLATION VALVES TO ELIMINATE THE TIME LAG WHICH CAUSED THIS EVENT. THE REPLACEMENT OF THE MANUAL ISOLATION VALVES IS PRESENTLY SCHEDULED FOR THE NEXT UNIT 1 REFUELING OUTAGE.

[146] HATCH 1 DOCKET 50-321 LER 85-019
 RWCU PUMP SEALS AND VENT VALVES LEAK.
 EVENT DATE: 040385 REPORT DATE: 050285 NSSS: GE TYPE: BWR

(NSIC 193766) AT 1035 CST ON 4-3-85, OPERATIONS PERSONNEL RECEIVED THE FOLLOWING ANNUNCIATION: "AMBIENT TEMPERATURE HIGH." PLANT PERSONNEL DETERMINED THAT THE RWCU PUMP SUCTION OUTBOARD PRIMARY CONTAINMENT ISOLATION VALVE HAD ISOLATED ON HIGH AMBIENT TEMPERATURE IN THE "1B" RWCU PUMP ROOM. THE HIGH AMBIENT TEMPERATURE WAS CAUSED BY A LEAKING SHAFT SEAL ON THE "1B" RWCU PUMP (1G31-C001B). AT 1230 CST ON 4-5-85, OPERATIONS PERSONNEL RECEIVED A "AMBIENT TEMPERATURE HIGH" ALARM. PLANT PERSONNEL DETERMINED THAT THE RWCU PUMP SUCTION INBOARD PRIMARY CONTAINMENT ISOLATION VALVE HAD ISOLATED ON HIGH AMBIENT TEMPERATURE IN THE "1A" RWCU PUMP ROOM. FURTHER INVESTIGATION FAILED TO DETERMINE THE CAUSE OF THE HIGH AMBIENT TEMPERATURE IN THE "1A" RWCU PUMP ROOM. AT 2325 CST ON 4-5-85 OPERATIONS PERSONNEL AGAIN RECEIVED A "AMBIENT TEMPERATURE HIGH" ALARM FOR 1A RWCU PUMP ROOM. THE RWCU PUMP SUCTION INBOARD PRIMARY CONTAINMENT ISOLATION VALVE HAD ISOLATED AGAIN. THE HIGH AMBIENT PUMP ROOM TEMPERATURE WAS CAUSED BY LEAKING VENT VALVES FOR THE "1A" RWCU PUMP. TEMPERATURE SWITCH 1G31-N600C, WHICH RESPONDS TO AMBIENT TEMPERATURE INSIDE THE "1A" RWCU PUMP ROOM, WAS FOUND TO HAVE A TRIP SETPOINT OF 129.9 DEGREES F. THE NORMAL SETPOINT FOR 1G31-N600C IS 130 DEGREES F (PLUS OR MINUS 10 DEGREES F). SIMILAR EVENTS: 50-321/84-010 ON 8-20-84; 50-366/84-007 ON 9-8-84; 50-366/84-031 ON 10-31-84.

[147] HATCH 2 DOCKET 50-366 LER 81-093 REV 1
 UPDATE ON PRESSURE SWITCH SETPOINT DRIFT.
 EVENT DATE: 091881 REPORT DATE: 122684 NSSS: GE TYPE: BWR
 VENDOR: BARKSDALE COMPANY

(NSIC 193993) WITH THE PLANT IN STEADY STATE OPERATION AT 2170 MWT AND WHILE PERFORMING NORMAL SURVEILLANCE PER THE 'MAIN STEAM LINE PRESSURE INSTRUMENT FUNCTIONAL TEST AND CALIBRATION' PROCEDURE (HNP-2-3105), PRESSURE SWITCH 2B21-N015D WAS FOUND TO ACTUATE AT 5 PSIG LOWER THAN THE TECH SPEC LIMIT OF

GREATER THAN OR EQUAL TO 825 PSIG. THE REDUNDANT SWITCHES WERE OPERABLE. THIS IS A REPETITIVE EVENT AS LAST REPORTED ON REPORTABLE OCCURRENCE REPORT NO. 50-366/79-093. THE CAUSE OF THE OCCURRENCE WAS SETPOINT DRIFT. THE PRESSURE SWITCH WAS RECALIBRATED AND TESTED SUCCESSFULLY PER THE 'BARKSDALE PRESSURE SWITCH CALIBRATION' PROCEDURE (HNP-2-5279) AND RETURNED TO SERVICE. A GENERIC REVIEW REVEALED THAT THIS TYPE OF SWITCH (BARKSDALE) WERE SUBJECT TO DRIFT. CHANGES IN THE ENVIRONMENTAL CONDITIONS AFFECT THE SETPOINT AND ARE THE MAIN CAUSE OF DRIFT PROBLEMS.

[148] HATCH 2 DOCKET 50-366 LER 81-096 REV 1
 UPDATE ON CORRODED HPCI EXHAUST PRESSURE SWITCH.
 EVENT DATE: 092981 REPORT DATE: 010485 NSSS: GE TYPE: BWR
 VENDOR: BARKSDALE COMPANY

(NSIC 193994) DURING REACTOR STEADY STATE OPERATION, PERSONNEL PERFORMING HNP-2-3309, HPCI TURBINE EXHAUST DIAPHRAGM PRESSURE SWITCH FUNCTIONAL TEST AND CALIBRATION, FOUND 2E41-N012D OUT OF TOLERANCE. THE SWITCH ACTUATED AT 12.7 PSIG. TECH SPEC TABLE 3.3.2-2 REQUIRED ACTUATION AT LESS THAN OR EQUAL TO 10 PSIG. THE REDUNDANT CHANNELS WERE OPERABLE. THIS REPETITIVE EVENT WAS LAST REPORTED ON LER 50-366/81-073. THE CAUSE OF THIS EVENT HAS BEEN ATTRIBUTED TO THE SWITCH AND ITS MECHANISMS BEING CORRODED. THE SWITCH WAS REPLACED. THE CORROSION PROBLEM CAN BE ATTRIBUTED TO THE ENVIRONMENT IN WHICH THE SWITCH IS MOUNTED. THE HPCI TURBINE EXHAUST DIAPHRAGM PRESSURE SWITCHES (2E41-N012 A-D) HAVE BEEN REPLACED BY THE ANALOG TRANSMITTER TRIP SYSTEM (ATTS) INSTRUMENTATION.

[149] HATCH 2 DOCKET 50-366 LER 81-102 REV 2
 UPDATE ON HYDROGEN/OXYGEN ANALYZER PUMP FAILURE.
 EVENT DATE: 102681 REPORT DATE: 011285 NSSS: GE TYPE: BWR

(NSIC 193995) WHILE THE PLANT WAS AT STEADY STATE POWER OF 2420 MWT, 2P33-P001B, PRIMARY CONTAINMENT HYDROGEN/OXYGEN ANALYZER, DUE TO ERRATIC OPERATION WAS DECLARED INOPERABLE. TECH SPECS SECTION 3.3.6.4 ACTION A REQUIRES 2 OPERABLE CHANNELS. REDUNDANT CHANNEL 2P33-P001A WAS OPERABLE. PLANT OPERATION WAS PUT IN A 30 DAY LCO CONDITION AS A RESULT OF THIS EVENT. THIS IS A REPETITIVE EVENT AS LAST REPORTED IN 366/81-065. THE CAUSE OF THIS EVENT WAS COMPONENT FAILURE. AFTER AN INVESTIGATION, THE ANALYZER'S VALVE BODY, VALVE DISC, AND VALVE BODY 'O' RINGS WERE REPLACED. THE ANALYZER WAS THEN CALIBRATED PER THE 'HYDROGEN AND OXYGEN ANALYZER F.T. & C.' PROCEDURE (HNP-2-3882) AND SATISFACTORILY RETURNED TO SERVICE ON 11-18-81.

[150] HATCH 2 DOCKET 50-366 LER 82-140 REV 1
 UPDATE ON AIR IN RHR DISCHARGE LINE.
 EVENT DATE: 120882 REPORT DATE: 062084 NSSS: GE TYPE: BWR

(NSIC 193999) DURING PERFORMANCE OF A ROUTINE PANEL SURVEILLANCE, IT WAS DISCOVERED THAT 'A' LOOP RHR DISCHARGE PRESSURE WAS ZERO; INVESTIGATION SHOWED THAT THE LOOP WAS NOT FILLED WITH WATER AS REQUIRED BY TECH SPECS 3/4.5.3.2. THE REDUNDANT 'B' LOOP OF RHR REMAINED OPERABLE DURING THIS EVENT. THE CAUSE OF THIS EVENT IS UNKNOWN. INITIALLY, A CHECK VALVE WAS SUSPECTED OF BEING THE CAUSE OF THIS EVENT. HOWEVER, AN INSPECTION OF THE CHECK VALVE REVEALED NO PROBLEM. THE RHR LINE WAS FILLED AND VENTED IN APPROX 1 HR AFTER THE EVENT WAS DETECTED. CONSEQUENTLY, RHR'S 'A' LOOP WAS RETURNED TO SERVICE ON 12-08-82.

[151] HATCH 2 DOCKET 50-366 LER 84-030 REV 2
 UPDATE ON FAILURE TO TEST MAIN STEAM TUNNEL AND RPV INSTRUMENTS.
 EVENT DATE: 111584 REPORT DATE: 041285 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: HATCH 1 (BWR)

(NSIC 193701) ON 11-15-84, THE PLANT'S SURVEILLANCE COORDINATOR DETERMINED THAT THE MONTHLY CHANNEL FUNCTIONAL TEST HAD NOT BEEN PERFORMED ON THE MAIN STEAM LINE INSTRUMENTATION FOR SEPT. AND OCT. THIS MONTHLY TEST IS REQUIRED BY TECH SPECS TABLE 4.3.2-1, ITEM D., AS WELL AS THE "MAIN STEAM LINE TUNNEL TEMPERATURE INSTRUMENT FT&C" PROCEDURE (HNP-2-3107). THIS TEST WAS PREVIOUSLY REQUIRED EVERY 18 MONTHS; HOWEVER, TECH SPECS AMENDMENT 39 CHANGED THE 18 MONTH INTERVAL TO A 30 DAY INTERVAL. THE PLANT'S SURVEILLANCE COORDINATOR DID NOT ADJUST THE SURVEILLANCE FREQUENCY; CONSEQUENTLY, THIS EVENT IS THE RESULT OF PERSONNEL ERROR. ON 11-29-84 (2ND EVENT), DURING A QA AUDIT PLANT PERSONNEL DETERMINED THAT REACTOR VESSEL PRESSURE INSTRUMENTATION AND REACTOR VESSEL SHROUD WATER LEVEL INSTRUMENTATION WERE NOT RECEIVING MONTHLY CHANNEL CHECKS AND QUARTERLY CHANNEL CALIBRATIONS PER TECH SPECS TABLE 4.3.6.4-1, ITEM 1 AND 4.3.6.4-1, ITEM 2, RESPECTIVELY. PROCEDURES HAD NOT BEEN CHANGED TO COMPLY WITH AMENDMENT 39 OF TECH SPECS. ON 3-13-85 (3RD EVENT), IT WAS DETERMINED THAT THE "PRIMARY CONTAINMENT HYDROGEN RECOMBINER FUNCTIONAL TEST (HEATUP TO 1200 F) SURVEILLANCE PROCEDURE DID NOT MEET THE ACCEPTANCE CRITERIA OF TECH SPECS SECTION 4.6.6.2.B.4. PROCEDURE HAD BEEN REVISED INCORRECTLY.

[152] HATCH 2 DOCKET 50-366 LER 85-009
INADVERTENT RCIC ISOLATION.
EVENT DATE: 031985 REPORT DATE: 041885 NSSS: GE TYPE: BWR

(NSIC 193723) AT 0755 CST ON 3-19-85, WITH THE PLANT OPERATING AT 2436 MWT (100% POWER), OPERATIONS PERSONNEL DETERMINED THAT THE RCIC STEAM SUPPLY PRIMARY CONTAINMENT INBOARD ISOLATION VALVE HAD CLOSED. FOLLOWING AN INVESTIGATION, PLANT PERSONNEL DETERMINED THAT 2E51-F007 CLOSED BECAUSE A PLANT EMPLOYEE INADVERTENTLY BUMPED RELAY 2E51-K34 DURING THE COURSE OF HIS EXAMINATION OF THE INTERNALS OF CONTROL ROOM PANEL 2H11-P623. AT 0805 ON 3-19-85, OPERATING PERSONNEL RESET THE VALVE'S ISOLATION LOGIC, AND RETURNED THE ISOLATION VALVE TO ITS NORMALLY OPEN POSITION; THIS RESTORED RCIC TO AN OPERABLE STATUS. THIS EVENT IS THE RESULT OF PERSONNEL ERROR, AND IS REPORTABLE PER 10CFR50.73(A)(2)(IV) BECAUSE AN UNPLAINED ACTUATION OF AN ESP OCCURRED.

[153] HATCH 2 DOCKET 50-366 LER 85-005
BATTERY TEST PROCEDURE CONTAINS ACCEPTANCE CRITERIA THAT DO NOT SATISFY TECH SPECS.
EVENT DATE: 032985 REPORT DATE: 042685 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: HATCH 1 (BWR)

(NSIC 193860) ON 3-29-85, WITH THE REACTOR MODE SWITCH IN THE RUN POSITION PLANT PERSONNEL DETERMINED THAT THE 'BATTERY PILOT CELL SURVEILLANCE INDIVIDUAL BATTERY ELECTROLYTE LEVEL CHECK' PROCEDURE WAS INADEQUATE IN MEETING THE ACCEPTANCE CRITERIA REQUIRED BY UNIT 2 TECH SPECS SECTION 4.8.1.1.3.A FOR THE BATTERIES FOR THE '1B/2B' DG. SINCE THE '1B/2B' DG CAN SERVE EITHER UNIT 1 OR UNIT 2, AND IT HAS ONLY ONE SET OF BATTERIES, BOTH UNIT 1 AND UNIT 2 TECH SPECS REQUIRE SURVEILLANCE ON THE SAME SET OF BATTERIES. HOWEVER, THE SURVEILLANCE REQUIREMENTS ARE SLIGHTLY DIFFERENT. THE SURVEILLANCE WAS BEING ADEQUATELY PERFORMED TO MEET THE REQUIREMENTS OF UNIT 1 TECH SPECS SECTION 4.9.A.2.B. HNP-1-3751-M IS PRESENTLY BEING REVISED TO ADEQUATELY MEET THE (MORE STRENGENT) REQUIREMENTS OF UNIT 2 TECH SPECS SECTION 4.8.1.1.3.A. UNTIL THE PROCEDURE IS REVISED, THE PERSONNEL PERFORMING THE TEST WILL ENSURE THAT THE BATTERIES FOR THE '1B/2B' DG MEET THE ACCEPTANCE CRITERIA OF UNIT 2 TECH SPECS SECTION 4.8.1.1.3.A.

[154] HATCH 2 DOCKET 50-366 LER 85-011
COMMUNICATION ERROR CAUSES ERRONEOUS MSL RADIATION MONITOR SETPOINT.
EVENT DATE: 040195 REPORT DATE: 050185 NSSS: GE TYPE: BWR

(NSIC 193813) ON 4-1-85 AT 1030 CST, WITH THE UNIT IN STEADY-STATE OPERATION AT

APPROX 2415 MWT (99% POWER). THE 'B' MAIN STEAM LINE MONITOR HIGH TRIP SETPOINT WAS INADVERTENTLY SET AT 3.2 TIMES FULL POWER BACKGROUND DURING PERFORMANCE OF THE 'MAIN STEAM LINE MONITOR FT&C' PROCEDURE. ITEM 6 OF TECH SPECS TABLE 2.2.1-1 REQUIRES THAT THIS SETPOINT BE LESS THAN OR EQUAL TO 3 TIMES FULL POWER BACKGROUND. ON 4-16-85 PLANT PERSONNEL IDENTIFIED THIS EVENT DURING THE INVESTIGATION OF THE SETPOINT FOR THE 'C' MSL MONITOR BEING FOUND OUT OF PROCEDURAL TOLERANCE. THE 'B' MSL MONITOR WAS SET OUTSIDE OF TECH SPECS REQUIREMENT DUE TO A COMMUNICATION ERROR BETWEEN I&C PERSONNEL AND HP PERSONNEL. WHEN THE I&C PERSONNEL PERFORM HNP-2-3005, THEY MUST OBTAIN THE CURRENT SETPOINT FOR THE MSL MONITORS FROM THE HP PERSONNEL IN THE COUNTING ROOM. WHEN THE I&C PERSONNEL OBTAINED THE MSL MONITOR SETPOINTS FROM HP PERSONNEL A COMMUNICATION ERROR TOOK PLACE, AND THE SETPOINTS FOR THE 'B' AND 'C' MONITORS WERE REVERSED. THIS RESULTED IN THE SETPOINT FOR THE 'B' MSL MONITOR BEING SET AT 3.2 TIMES FULL POWER BACKGROUND AND THE SETPOINT FOR THE 'C' MSL BEING SET AT 1.8 TIMES FULL POWER BACKGROUND (I.E., A CONSERVATIVE SETPOINT). THE 'A' AND 'D' MSL MONITORS WERE SET CORRECTLY.

[155] HATCH 2 DOCKET 50-366 LER 85-010
 NINE VALVES FAIL TO PASS LOCAL LEAK RATE TEST.
 EVENT DATE: 040985 REPORT DATE: 050385 NSSS: GE TYPE: BWR
 VENDOR: ATWOOD & MORRILL CO., INC.
 FISHER CONTROLS CO.
 POWELL, WILLIAM COMPANY, THE
 ROCKWELL MANUFACTURING COMPANY
 WALWORTH COMPANY
 YARWAY CORP.

(NSIC 193812) DURING PERFORMANCE OF THE 'PRIMARY CONTAINMENT PERIODIC TYPE B AND TYPE C LEAKAGE TESTS' PROCEDURE AS REQUIRED BY TECH SPECS SECTION 4.6.1.2.D, PLANT PERSONNEL DETERMINED THAT 9 ISOLATION VALVES IN THE RHR, FEEDWATER, SERVICE AIR, AND COMBUSTIBLE GAS CONTROL SYSTEMS WERE LEAKING IN EXCESS OF THE LIMITS SPECIFIED IN TECH SPECS SECTIONS 3.6.1.2.B AND C AND THE ASME SECTION XI CRITERIA SPECIFIED IN THE PROCEDURE. THESE ARE SIMILAR EVENTS AS LAST REPORTED ON LER 50-366/84-04. THE PREVIOUS CORRECTIVE ACTION TAKEN WAS SUFFICIENT AT THE TIME; HOWEVER, VALVE FAILURES OF THIS TYPE ARE RECURRENT. THESE VALVES WILL BE REPAIRED AND TESTED TO ENSURE THAT THEY MEET THE REQUIREMENTS OF TECH SPECS AND ASME SECTION XI PRIOR TO THE STARTUP OF THE UNIT. AN UPDATE REPORT WILL BE FILED WITHIN 30 DAYS AFTER UNIT STARTUP EXPLAINING THE CAUSES OF THESE EVENTS AND THE CORRECTIVE ACTIONS TAKEN.

[156] HATCH 2 DOCKET 50-366 LER 85-012
 MAIN STEAM LINE RADIATION DETECTOR FAILURES CAUSE ACTUATION OF RPS LOGIC.
 EVENT DATE: 040985 REPORT DATE: 050685 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193814) ON 4-9-85 AT 1200 CST WITH THE REACTOR MODE SWITCH IN THE REFUEL POSITION, AN UNPLANNED ACTUATION OF RPS OCCURRED (THE CONTROL RODS WERE ALREADY FULLY INSERTED WHEN THIS EVENT OCCURRED). AN INVESTIGATION REVEALED THAT MAIN STEAM LINE RADIATION DETECTOR 2D11-N006B (FEEDS RPS CHANNEL 'B') FAILED DUE TO ITS POWER CABLE BEING SATURATED WITH WATER, AND RESULTED IN A HALF SCRAM SIGNAL. WHILE PLANT PERSONNEL WERE INVESTIGATING THIS EVENT, WHAT APPEARED TO BE THE 'B' MAIN STEAM LINE RADIATION DETECTOR FAILED DUE TO ITS HIGH VOLTAGE CABLE COMING LOOSE FROM THE CABLE CONNECTOR CAUSING AN ELECTRICAL SHORT. SINCE THE 'C' DETECTOR WAS IMPROPERLY LABELED AS THE 'B' DETECTOR, THIS SHORTED CABLE RESULTED IN A HALF SCRAM SIGNAL FROM RPS CHANNEL 'A'. THE FAILURES OF BOTH DETECTORS RESULTED IN THE UNPLANNED ACTUATION OF RPS. THE FAILED CABLE FOR 2D11-N006B IS PRESENTLY BEING REPLACED. THE FAILED CONNECTOR FOR 2D11-N006C WAS REPLACED. UPON COMPLETION OF REPAIRS, AND PRIOR TO UNIT STARTUP, BOTH 2D11-N006B AND 2D11-N006C WILL BE FUNCTIONALLY TESTED SATISFACTORILY AND RETURNED TO SERVICE.

[157] HATCH 2 DOCKET 50-366 LER 85-013
 SPURIOUS SOURCE RANGE MONITOR SIGNALS CAUSE REACTOR SCRAM.
 EVENT DATE: 041185 REPORT DATE: 050285 NSSS: GE TYPE: BWR

(NSIC 193815) AT 1200 CST ON 4-11-85 WITH THE REACTOR IN COLD SHUTDOWN FOR REFUELING, OPERATION PERSONNEL RECEIVED THE FOLLOWING INDICATIONS: 'REACTOR AUTO SCRAM' AND 'REACTOR NEUTRON MONITORING SYSTEM'. FOLLOWING AN INVESTIGATION, PLANT PERSONNEL DETERMINED THAT A FULL RPS LOGIC ACTUATION HAD OCCURRED (NO SCRAM SINCE ALL CONTROL RODS WERE ALREADY FULLY INSERTED) BECAUSE OF A HI-HI SIGNAL FROM SOURCE RANGE MONITORS 2C51-K600A, 2C51-K600C, AND 2C51-K600D (COMPONENTS OF THE NEUTRON MONITORING SYSTEM). THE HI-HI SIGNAL FROM THE SRMS WAS CAUSED BY ELECTRICAL NOISE. PLANT PERSONNEL IMMEDIATELY RESET THE RPS LOGIC. THEY THEN CONFIRMED PROPER OPERATION OF THE SRMS PER THE 'SRM FLUX RESPONSE CHECK' PROCEDURE (HNP-2-9301).

[158] HATCH 2 DOCKET 50-366 LER 85-015
 REACTOR PROTECTION LOGIC ACTUATION DUE TO IRM NOISE.
 EVENT DATE: 041585 REPORT DATE: 051385 NSSS: GE TYPE: BWR

(NSIC 193976) ON 4-15-85 AT APPROX 1647 CST AND ON 4-19-85 AT APPROX 1600 CST WITH NO FUEL IN THE VESSEL AND WITH A PREPLANNED RPS LOGIC SIGNAL IN 1 CHANNEL, A SPURIOUS ACTUATION IN THE OTHER RPS CHANNEL OCCURRED, RESULTING IN A FULL RPS LOGIC ACTUATION (NO SCRAM SINCE ALL OF THE CONTROL RODS WERE ALREADY INSERTED). IN BOTH CASES, THE RPS TRIPS WERE RESET IMMEDIATELY. BOTH EVENTS WERE DUE TO SPURIOUS ELECTRICAL NOISE IN THE INTERMEDIATE RANGE MONITORS ON THE RPS CHANNEL NOT BEING TESTED. THIS IS A SIMILAR EVENT AS LAST REPORTED VIA LER 321/84-23. THIS EVENT IS A RECURRING ONE BECAUSE THERE IS NO EFFECTIVE METHOD OF PREVENTING SPURIOUS ELECTRICAL NOISE IN THE NEUTRON MONITORING SYSTEM DURING A REFUELING OUTAGE. THIS IS NOT A PROBLEM DURING OPERATION AND START-UP BECAUSE THE ELECTRICAL NOISE LEVEL IN THE IRMS IS NEGLIGIBLE.

[159] HATCH 2 DOCKET 50-366 LER 85-008
 RESTORATION OF FILTER DEMINERALIZER CAUSES RWCU ISOLATION.
 EVENT DATE: 042085 REPORT DATE: 052085 NSSS: GE TYPE: BWR

(NSIC 193975) ON 4-20-85 AT 1054 CST, WITH THE REACTOR MODE SWITCH IN THE REFUEL POSITION AND REACTOR POWER AT 0 MWT, THE RWCU OUTBOARD ISOLATION VALVE ISOLATED ON HIGH DIFFERENTIAL FLOW. THE HIGH DIFFERENTIAL FLOW, AND THE ISOLATION OF 2G31-P004 OCCURRED WHEN PLANT PERSONNEL WERE VALVING IN (I.E., RETURNING TO SERVICE AFTER THE COMPLETION OF BACKWASH AND PRECOAT) THE '2A' RWCU FILTER DEMINERALIZER. THE HIGH DIFFERENTIAL FLOW IS BELIEVED TO BE THE RESULT OF FLOW FLUCTUATION DURING THE VALVING IN OF THE '2A' FILTER DEMINERALIZER. THE 2G31-P004 WAS OPENED AT 1058 CST. '2A' RWCU FILTER DEMINERALIZER WAS RETURNED TO SERVICE AT 1235 CST ON 4-20-85. SIMILAR EVENTS INVOLVING ISOLATION OF RWCU PRIMARY CONTAINMENT ISOLATION VALVES ARE: 50-321/84-029, 85-001, 50-366/84-007, 010, 012, 019, AND 024 AND 85-003, AND 007.

[160] HATCH 2 DOCKET 50-366 LER 85-016
 FOUR MAIN STEAM SRVS OUT OF TOLERANCE.
 EVENT DATE: 042585 REPORT DATE: 052185 NSSS: GE TYPE: BWR
 VENDOR: TARGET ROCK CORP.

(NSIC 193977) WITH THE UNIT IN COLD SHUTDOWN FOR REFUELING, AND DURING PERFORMANCE OF WYLE LABS' TESTING OF MAIN STEAM SAFETY RELIEF VALVES (SRVS), 4 SRVS FAILED TO LIFT WITHIN THE PLUS OR MINUS 1% TOLERANCE RANGE REQUIRED BY TECH SPECS SECTION 3.4.2.1. THE TARGET ROCK MODEL 7567F SRVS USED ON UNIT 1 AND 2 ARE THE MOST ACCURATE AND RELIABLE SRVS AVAILABLE. HOWEVER, THEY ARE CERTIFIED ONLY TO A PLUS OR MINUS 3% TOLERANCE BY TARGET ROCK. THE CAUSE OF THESE VALVES'

FAILURE TO MEET THE PLUS OR MINUS 1% TOLERANCE ALLOWED BY TECH SPECS IS VALVE PILOT SETPOINT DRIFT. THE SRV PILOT ASSEMBLIES WERE SUBSEQUENTLY REFURBISHED, AND THE SRVS WERE SATISFACTORILY RETESTED. THE RETESTING RESULTS DEMONSTRATED THAT THE SRVS MET THE PLUS OR MINUS 1% TOLERANCE RANGE REQUIREMENT OF TECH SPECS SECTION 3.4.2.1. SIMILAR EVENTS - 321/84-024, 366/84-002 AND 321/83-105.

[161] INDIAN POINT 2 DOCKET 50-247 LER 84-013
 DEFICIENT FIRE DAMPERS (APPENDIX R).
 EVENT DATE: 092084 REPORT DATE: 102284 NSSS: WE TYPE: PWR

(NSIC 193954) AS A RESULT OF AN EVALUATION PERFORMED FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH THE 3 HR FIRE BARRIER REQUIREMENTS OF APPENDIX R TO 10 CFR 50, WE IDENTIFIED FIRE DAMPERS WHOSE UL RATING COULD NOT BE DOCUMENTED. SUBSEQUENT REVIEW REVEALED A TOTAL OF 23 DAMPERS IN THE CABLE SPREADING ROOM AND 480V SWITCHGEAR ROOM IN THAT CATEGORY. ALTHOUGH THE SPECIFICATION FOR PROCUREMENT AND INSTALLATION REQUIRED UL APPROVED 3 HR DAMPERS, THE INSTALLED DAMPERS DID NOT HAVE DOCUMENTATION OF COMPLIANCE WITH THE REQUIREMENTS OF THE SPECIFICATION. THE PLANT WAS AT COLD SHUTDOWN FOR A REFUELING-MAINTENANCE OUTAGE WHEN THE DAMPERS IN QUESTION WERE IDENTIFIED.

[162] INDIAN POINT 2 DOCKET 50-247 LER 84-021
 POTENTIALLY INOPERABLE SERVICE WATER PUMPS.
 EVENT DATE: 100284 REPORT DATE: 112884 NSSS: WE TYPE: PWR

(NSIC 194004) 10-2-84 DURING A SURVEILLANCE TEST OF THE SERVICE WATER PUMPS, IT WAS OBSERVED THAT THE CHECK VALVES ON THE DISCHARGE SIDE OF 2 SERVICE WATER PUMPS IN THE SAME HEADER WERE LEAKING. THIS SURVEILLANCE TEST TOOK PLACE WHEN THE PLANT WAS AT COLD SHUTDOWN FOR A REFUELING MAINTENANCE OUTAGE. LEAKAGE PAST THE CHECK VALVES WOULD ADVERSELY AFFECT THE HEADER FLOW RATE IF THE ASSOCIATED PUMP(S) WAS NOT IN OPERATION FOR ANY REASON. ALTHOUGH THE NET FLOW WAS NOT MEASURED AS PART OF THE SURVEILLANCE TEST, AND REPORTABILITY THUS COULD NOT BE DETERMINED, A DECISION WAS MADE ON 10-31-84 TO REPORT THE EVENT.

[163] INDIAN POINT 3 DOCKET 50-286 LER 85-003
 UNIT TRIP DUE TO REACTOR TRIP BREAKER OPENING.
 EVENT DATE: 031985 REPORT DATE: 041585 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 193884) AT 1314 HRS ON 3-19 REACTOR TRIP BREAKER OPENED, INITIATING A UNIT TRIP. ALL APPLICABLE PLANT PARAMETERS WERE AT NORMAL LEVELS AT THE TIME. EXTENSIVE TESTING WAS PERFORMED ON THE COILS AND RELAYS FOR BOTH REACTOR TRIP BREAKERS. NO IRREGULARITIES WERE FOUND. AFTER TESTING WAS COMPLETED, PREVENTIVE MAINTENANCE PROCEDURE 3-PM-A-ES-13 WAS PERFORMED WITH SATISFACTORY RESULTS. THE APPROPRIATE SECTIONS OF SURVEILLANCE TESTS 3PT-M13A AND 3PT-M13B WERE THEN PERFORMED TO VERIFY THE OPERABILITY OF BOTH BREAKERS. ALL EQUIPMENT ASSOCIATED WITH THE REACTOR TRIP OPERATED CORRECTLY. IT HAS BEEN POSTULATED THAT THE MANUAL TRIP LEVER FOR BREAKER RTB MAY HAVE BEEN INADVERTENTLY ACTUATED BY PERSONNEL WORKING IN THE AREA. THIS COULD NOT BE SUBSTANTIATED. NO SIMILAR EVENTS HAVE BEEN REPORTED.

[164] KEWAUNEE DOCKET 50-305 LER 85-007
 INADVERTENT SAFETY INJECTION SIGNAL DURING SURVEILLANCE TESTING.
 EVENT DATE: 022585 REPORT DATE: 032785 NSSS: WE TYPE: PWR

(NSIC 193763) AT 1601 ON 2-25-85, WHILE IN REFUELING SHUTDOWN CONDITION, A SURVEILLANCE PROCEDURE ON PRESSURIZER PRESSURE TRANSMITTERS WAS BEING CONDUCTED. DURING THIS PROCEDURE THE I&C TECHNICIAN PERFORMING THE CALIBRATION ASKED THAT

THE RED PRESSURIZER PRESSURE CHANNEL BE TRIPPED. FOLLOWING THIS, HE CALIBRATED THE WHITE CHANNEL. WITH ONE CHANNEL TRIPPED AND ANOTHER WITH AN ARTIFICIAL INPUT GREATER THAN 2000 PSIG, THE SI SIGNAL WAS RESET. THIS, COINCIDENT WITH SG PRESSURE LESS THAN 500 PSIG CAUSED A SAFETY INJECTION SIGNAL. PLANT OPERATING PROCEDURES WERE FOLLOWED TO RESTORE THE PLANT TO NORMAL REFUELING SHUTDOWN CONDITIONS. NO EQUIPMENT OR SYSTEM FAILURES CONTRIBUTED TO THIS EVENT. THIS EVENT RESULTED FROM THE I&C TECHNICIAN IN THE FIELD REQUESTING THE WRONG CHANNEL BE TRIPPED. THE SURVEILLANCE PROCEDURE IS BEING REVISED TO PREVENT REOCCURRENCE. THIS PROCEDURE IS ONLY CONDUCTED DURING REFUELING SHUTDOWN. THE PLANT EQUIPMENT LINEUP AT SHUTDOWN PREVENTED THIS EVENT FROM HAVING ANY SAFETY IMPLICATIONS.

[165] KEWAUNEE DOCKET 50-305 LER 85-010
SPURIOUS TRIP ON STEAM FLOW/FEED FLOW MISMATCH SIGNAL.
EVENT DATE: 040585 REPORT DATE: 050385 NSSS: WE TYPE: PWR

(NSIC 193889) ON 4-5-85, THE PLANT WAS IN THE HOT SHUTDOWN OPERATING MODE WITH THE REACTOR SUBCRITICAL, FOLLOWING A REFUELING OUTAGE. SHUTDOWN BANKS A & B AND CONTROL BANK C WERE FULLY WITHDRAWN IN PREPARATION FOR ROD DROP TESTING. A REACTOR TRIP OCCURRED DUE TO A STEAM FLOW (SF) GREATER THAN FEED FLOW (FF) SIGNAL COINCIDENT WITH A LO SG LEVEL SIGNAL. THE OPERATORS PERFORMED THE IMMEDIATE ACTIONS PRESCRIBED IN THE REACTOR TRIP PROCEDURE. INVESTIGATION REVEALED THAT 1 TRANSMITTER FOR FF AND 1 TRANSMITTER FOR SF WERE OUT OF CALIBRATION RESULTING IN A SF > FF TRIP SIGNAL BEING PRESENT. THE BALANCE OF PLANT OPERATOR ALLOWED THE LEVEL IN SG 1A TO DROP TO THE LOW LEVEL SETPOINT. BECAUSE THERE WAS A SF > FF SIGNAL PRESENT THIS COMPLETED THE COINCIDENCE, AND A REACTOR TRIP OCCURRED. THE FF AND SF INSTRUMENTS WERE RECALIBRATED PRIOR TO CONTINUING WITH ROD DROP TESTING. THE OPERATOR WAS REMINDED OF THE IMPORTANCE OF REACTOR TRIP SIGNALS EVEN WHEN THE PLANT IS SHUTDOWN. NO FURTHER CORRECTIVE ACTION IS PLANNED.

[166] LA SALLE 1 DOCKET 50-373 LER 84-051 REV 2
UPDATE ON SAFETY RELIEF VALVE LIFTING.
EVENT DATE: 082984 REPORT DATE: 020785 NSSS: GE TYPE: BWR
VENDOR: CROSBY VALVE & GAGE CO.

(NSIC 193702) ON 8-29-84 AT 1045, A UNIT 1 SRV LIFTED AND THEN RESEATED 3 TIMES FOR NO APPARENT REASON. THE CAUSE OF THIS EVENT IS THAT THE 'C' SOLENOID OF SRV S HAD BECOME GROUNDED IN SUCH A FASHION THAT IF A POSITIVE GROUND DEVELOPED ON THE DC BUSES, THE SOLENOID WOULD ENERGIZE AND THE VALVE WOULD OPEN. THE SRV WOULD THEN CLOSE WHEN THE GROUND CLEARED. AT THE TIME OF THIS EVENT, UNIT 1 WAS IN OPERATING CONDITION 1 AT 95% POWER. REACTOR STEAM FLOW DECREASED, BUT RETURNED TO NORMAL WHEN THE VALVE CLOSED. SAFE OPERATION OF THE PLANT WAS MAINTAINED AT ALL TIMES. THE GROUNDED SOLENOID WILL BE REPLACED, BY WORK REQUEST L40505, THE NEXT TIME UNIT 1 IS IN COLD SHUTDOWN. THE REMAINDER OF THE SRV SOLENOIDS WILL BE MEGGERED, BY LST 84-180, THE NEXT TIME UNIT 1 IS IN COLD SHUTDOWN.

[167] LA SALLE 1 DOCKET 50-373 LER 85-009
MISSED TECH SPEC SURVEILLANCES ON RHR AND HPCS INSTRUMENTS.
EVENT DATE: 012285 REPORT DATE: 021485 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: LA SALLE 2 (BWR)

(NSIC 193780) ON 1-22-85 PERMISSION TO CALIBRATE THE RHR/SHUTDOWN COOLING (SDC) SUCTION PRESSURE SWITCH WAS REQUESTED IN ORDER TO COMPLETE TESTING REQUIRED FOR A STATION WORK REQUEST. UPON INVESTIGATION BY THE SHIFT CONTROL ROOM ENGINEER, IT WAS DETERMINED THAT THERE WAS NO ASSIGNED CALIBRATION OR FUNCTIONAL TEST PROCEDURE AS REQUIRED BY TECH SPECS. THIS SWITCH IS REQUIRED TO MONITOR THE HIGH/LOW PRESSURE BOUNDARY OF THE SDC SUCTION HEADER FOR LEAKAGE. FURTHER INVESTIGATIONS FOUND THAT THE SETPOINT INFO ON THE INSTRUMENT DATA SHEET FOR THIS SWITCH ALLOWED SETPOINTS TO BE SET HIGHER THAN THE LCO REQUIREMENTS. BOTH UNITS

SDC SUCTION HEADER SWITCHES WERE FOUND NOT TO HAVE BEEN FUNCTIONALLY TESTED ON A MONTHLY FREQUENCY AND THE UNIT 2 SWITCH HAD EXCEEDED ITS 18 MONTH CALIBRATION FREQUENCY. THE MISSING REQUIREMENT WAS IMPROPERLY IDENTIFIED ON THE TECH SPEC SURVEILLANCE MATRIX. THE WRONG SWITCH WAS BEING TESTED TO MEET THE SHUTDOWN COOLING SUCTION HEADER PRESSURE SWITCH REQUIREMENT. THE INVESTIGATION FOUND THAT THE HPCS SYSTEM SUCTION HEADER PRESSURE SWITCH INSTRUMENT DATA SHEETS HAD SETPOINT DATA WHICH ALLOWED THE SUCTION TO BE LEFT HIGHER THAN THE LCO LIMIT. THE LAST TIME IT WAS CALIBRATED IT WAS LEFT AT 100.05 PSIG WHICH WAS .05 PSIG HIGHER THAN THE LCO LIMIT OF 100 PSIG. THE APPLICABLE PROCEDURES ARE BEING DRAFTED/REVISED TO CONFORM WITH THESE TECH SPEC REQUIREMENTS AND HAVE BEEN ADDED TO THE SURVEILLANCE PROGRAM.

[168] LA SALLE 1 DOCKET 50-373 LER 85-025
 DRYWELL VACUUM BREAKER CYCLED.
 EVENT DATE: 030485 REPORT DATE: 032585 NSSS: GE TYPE: BWR
 VENDOR: GPE CONTROLS

(NSIC 193978) ON 3-4-85 AT 0253 HRS WITH THE UNIT IN HOT SHUTDOWN, THE UNIT 1 DRYWELL VACUUM BREAKER, 1PC001C, CYCLED OPEN AND THEN CLOSED. THE RCIC SYSTEM HAD BEEN OPERATING FOR SEVERAL HOURS. THE EXHAUST STEAM FROM THE RCIC TURBINE CAUSED A TEMPERATURE/PRESSURE RISE IN THE SUPPRESSION POOL WHICH CAUSED THE VACUUM BREAKER TO OPEN. THE VACUUM BREAKER OPERATED AS REQUIRED TO NORMALIZE THE PRESSURE DIFFERENTIAL BETWEEN THE SUPPRESSION POOL AND THE DRYWELL.

[169] LA SALLE 1 DOCKET 50-373 LER 85-031
 DISCHARGE OF RADWASTE WITH INCORRECT ALARM SETPOINT.
 EVENT DATE: 031185 REPORT DATE: 042285 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193817) ON 3-11-85 AT 2025 THE RADWASTE DISCHARGE SYSTEM ISOLATED WHILE DISCHARGING TANK 2WF05T DUE TO HIGH RAD. ON 4-17-85 DURING A SUBSEQUENT REVIEW OF THE DISCHARGE PACKAGE, IT WAS OBSERVED THAT THE ACTUAL PROCESS RAD MONITOR HIGH-HIGH TRIP POINT EXCEEDED THE MAXIMUM ALLOWABLE HIGH-HIGH TRIP POINT, AS CALCULATED IN ACCORDANCE WITH LCP-140-7. THIS IS IN VIOLATION OF TECH SPEC 3.3.7.10. TANK 2WF05T WAS DISCHARGED WITHOUT REALIZING THAT THE ACTUAL RAD MONITORING HIGH-HIGH TRIP SETPOINT EXCEEDED THE MAXIMUM ALLOWABLE HIGH-HIGH TRIP SETPOINT BECAUSE THE ACTUAL VALUE WAS MISREAD FROM THE CHART RECORDER BY THE OPERATOR. AIR #373-200-85-00059 HAS BEEN WRITTEN TO TRACK ADDITIONAL TRAINING ON THE PROCEDURES FOR LIQUID RADWASTE DISCHARGES IN THE EQUIPMENT ATTENDANT CONTINUING TRAINING PROGRAM. IT IS BELIEVED THAT CRUD BUILD UP ON THE INSIDE SURFACES OF THE RADWASTE DISCHARGE LINE MAY HAVE LOOSENED AND MIXED WITH THE DISCHARGE, CAUSING THE SYSTEM TO ISOLATE ON HIGH RADIATION. SIMILAR EVENT - 373/84-006.

[170] LA SALLE 1 DOCKET 50-373 LER 85-026
 SHUTDOWN COOLING PRESSURE SWITCH FUNCTIONAL TEST MISSED.
 EVENT DATE: 031385 REPORT DATE: 032985 NSSS: GE TYPE: BWR

(NSIC 193861) THE SHUTDOWN COOLING SUCTION HEADER PRESSURE SWITCH WAS NOT FUNCTIONALLY TESTED WITHIN ALLOWABLE TIME LIMITS. THIS SURVEILLANCE HAD BEEN IDENTIFIED LAST MONTH AS NOT BEING DONE ON TIME DUE TO AN ERROR IN IDENTIFYING THE PROPER SWITCH TO MEET THE TECH SPEC REQUIREMENTS. IT WAS MISSED A SECOND TIME DUE TO NOT BEING ENTERED ON THE SURVEILLANCE PROGRAM IN A TIMELY MANNER. THE SWITCH WAS LAST FUNCTIONALLY TESTED AND CALIBRATED ON 1-22-85. ALTHOUGH NOT FORMALLY DOCUMENTED AS A SURVEILLANCE, THE FUNCTION OF THE SWITCH WAS VERIFIED BY SEVERAL VALID ALARMS WHICH WERE RECEIVED DURING THE PERIOD BETWEEN 1-22 AND 3-13. THIS ALARM IS THE ONLY FUNCTION PERFORMED BY THE SWITCH. ACTIONS ARE BEING TAKEN

TO ASSURE THAT NEWLY IDENTIFIED SURVEILLANCE REQUIREMENTS ARE PROMPTLY ADDED TO THE SURVEILLANCE PROGRAM. SIMILAR EVENTS - 373/85-009, 373/83-002, 373/82-108 AND 373/82-006.

[171] LA SALLE 1 DOCKET 50-373 LER 85-027
UNSECURED HIGH RADIATION AREA.
EVENT DATE: 031385 REPORT DATE: 040185 NSSS: GE TYPE: BWR

(NSIC 193862) AT 0740 ON 3-13-85 A RADIATION CHEMISTRY TECHNICIAN FOUND THE GATE WHICH SECURES THE RADWASTE FILTER AISLE HIGH RADIATION AREA, ON THE 710 ELEVATION OF THE RADWASTE BLDG, UNSECURED AND UNATTENDED. THIS IS CONTRARY TO TECH SPEC 6.1.1. THE RCT CLOSED THE GATE AND SECURED THE AREA. A RADWASTE FOREMAN ENTERED THE AREA AT 0300 ON 3-13-85 TO VERIFY NO LEAKS EXISTED FOLLOWING REINSTALLATION OF THE UNIT 1 WASTE FILTER. UPON EXIT THE FOREMAN LEFT THE GATE OPEN AND UNATTENDED. THE RADWASTE FOREMAN WAS COUNSELED ABOUT HIS RESPONSIBILITIES TO ADHERE TO PROCEDURES AND GOOD RADIOLOGICAL PRACTICES. THERE HAVE BEEN 8 OCCURRENCES OF A SIMILAR NATURE: 373/84-034, 373/85-004, 374/84-022, 373/85-016, 374/84-038, 373/85-020, 374/84-070, 373/85-021.

[172] LA SALLE 1 DOCKET 50-373 LER 85-029
REACTOR SCRAM DUE TO INSTRUMENT VALVING ERROR.
EVENT DATE: 032185 REPORT DATE: 041785 NSSS: GE TYPE: BWR
VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 193864) AT 1317 HRS ON 3-21-85, UNIT 1 SCRAMMED WHEN INSTRUMENT 1B21-N038A, LEVEL 3 ADS CONFIRMATORY LEVEL SWITCH, WAS INCORRECTLY VALVED INTO SERVICE. AT THE TIME OF THE EVENT, UNIT 1 WAS AT 99% POWER. THIS INSTRUMENT HAD BEEN TAKEN OUT-OF-SERVICE EARLIER FOR MODIFICATION. AFTER THE WORK WAS COMPLETED, AN EQUIPMENT OPERATOR, ELECTRICIAN, AND INSTRUMENT MECHANIC WERE DISPATCHED TO CLEAR THE OUT-OF-SERVICE AND RETURN THE INSTRUMENT TO SERVICE. A MISCOMMUNICATION BETWEEN THE INDIVIDUALS DIRECTLY INVOLVED LED TO THE INSTRUMENT BEING VALVED IN INCORRECTLY. THE INCIDENT CAUSED SEVERE PERTURBATIONS IN SEVERAL REACTOR WATER LEVEL INSTRUMENT SENSING LINES THUS CAUSING THE SCRAM. TRAINING IS TO BE CONDUCTED ON THIS EVENT TO INCREASE THE AWARENESS OF POTENTIAL SENSING LINE PERTURBATIONS WHEN RETURNING VALVES TO SERVICE. ADMINISTRATIVE CONTROLS HAVE BEEN STRENGTHENED TO CLARIFY THE RESPONSIBILITY FOR OPERATION OF ROOT VALVES AND INSTRUMENT RACK STOP VALVES. A PROCEDURE CHANGE TO THE OUT-OF-SERVICE PROCEDURE HAS BEEN INITIATED. SIMILAR EVENTS - 374/84-025, 374/85-012 AND 373/85-028.

[173] LA SALLE 1 DOCKET 50-373 LER 85-030
AMMONIA DETECTOR ACTUATES ON MOMENTARY POWER LOSS.
EVENT DATE: 032585 REPORT DATE: 041885 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: LA SALLE 2 (BWR)

(NSIC 193816) BOTH AMMONIA DETECTORS FOR THE 'A' TRAIN OF THE CONTROL ROOM/AUX ELECTRICAL EQUIPMENT ROOM HVAC SYSTEM ALARMED AND INITIATED ESF DAMPER ACTUATIONS WHEN A MOMENTARY LOSS OF POWER TO THE VC/VE SYSTEM OCCURRED. THIS EVENT OCCURRED AT 1327 HRS ON 3-25-85, WHILE UNIT 1 WAS IN HOT SHUTDOWN AND UNIT 2 WAS IN COLD SHUTDOWN. SINCE THE AMMONIA DETECTORS ARE DESIGNED TO ALARM AND SEAL IN THEIR ALARM FUNCTIONS ON LOSS OF POWER, THE ALARMS AND ESF ACTUATIONS PERSISTED EVEN THOUGH POWER WAS IMMEDIATELY RESTORED TO THE VC/VE SYSTEM. THE SYSTEM WAS MANUALLY RETURNED TO NORMAL LINE-UP AND THE ALARMS WERE RESET APPROX 3 HRS AFTER THE EVENT. INVESTIGATION INTO THE CAUSE OF THE POWER FAILURE DID NOT REVEAL ANY IRREGULARITY IN THE POWER SUPPLY EQUIPMENT FOR THE VC/VE SYSTEM.

[174] LA SALLE 1 DOCKET 50-373 LER 85-028
 INSTRUMENT TESTING ERRORS CAUSE 5 SRV OPENINGS AND REACTOR SCRAM.
 EVENT DATE: 032785 REPORT DATE: 040885 NSSS: GE TYPE: BWR

(NSIC 193863) ON 3-27-85 UNIT 1 WAS IN HOT SHUTDOWN WITH A REACTOR PRESSURE OF 500 PSIG. INSTALLATION OF ENVIRONMENTALLY QUALIFIED SWITCHES ON INSTRUMENT RACK 1H22-P026 HAD BEEN PERFORMED TO THE POINT WHERE A LEAK TEST OF THE AFFECTED INSTRUMENT LINES WAS REQUIRED. A TEST PUMP WAS CONNECTED TO THE 5 VALVE MANIFOLD FOR INSTRUMENT 1B21-N037AA, IN ORDER TO PRESSURIZE THE SENSING LINES OF 'D' REACTOR LEVEL AND PRESSURE INSTRUMENT RACK, 1H22-P026. THE INSTRUMENT ROOT VALVES FOR THE REMAINING INSTRUMENTS ON THIS RACK WERE CLOSED AND OUT OF SERVICE. DUE TO HAVING THE PRESSURE CONTROL VALVE ON THE DISCHARGE OF THE TEST PUMP MISPOSITIONED, THE TEST PRESSURE JUMPED TO 1120 PSIG WITHIN A FEW SECS. AT THIS POINT SAFETY RELIEF VALVES J AND S OPENED FOR 15, 24 AND 28 SECS, RESPECTIVELY. THIS RELIEF VALVE LIFT WAS UNKNOWN TO THE TEST PUMP OPERATORS. THE TEST PUMP WAS STOPPED, THE INSTRUMENT LINES WERE VENTED OFF, AND AFTER CLOSING DOWN ON THE PUMP DISCHARGE VALVE, ANOTHER ATTEMPT WAS MADE AT PERFORMING THE PRESSURE TEST. WHEN THE PRESSURE WAS INCREASED TO APPROX 1050 PSIG, SAFETY RELIEF VALVE 1B21-F013S OPENED 2 TIMES. THESE LIFTS WERE AGAIN UNKNOWN TO THE TEST PUMP OPERATORS. AT THE SAME TIME A REACTOR SCRAM OCCURRED DUE TO LOW VESSEL LEVEL AS A RESULT OF WATER INVENTORY LOSS DURING THE SAFETY RELIEF VALVE LIFTS.

[175] LA SALLE 1 DOCKET 50-373 LER 85-032
 INBOARD FEEDWATER CHECK VALVE LEAKS.
 EVENT DATE: 032885 REPORT DATE: 042485 NSSS: GE TYPE: BWR
 VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 193818) ON 3-28-85 WHILE UNIT 1 WAS IN HOT SHUTDOWN, AN LLRT WAS PERFORMED ON THE 'B' INBOARD FEEDWATER CHECK VALVE, 1B21-F010B. THE LEAKAGE WAS FOUND TO BE IN EXCESS OF TECH SPEC LIMITS. THE SOFT SEAT MATERIAL WAS FOUND TO BE DETERIORATED SLIGHTLY WHICH RESULTED IN A LESS THAN ADEQUATE SEALING SURFACE. IT IS BELIEVED, HOWEVER, THAT GROSS LEAKAGE FROM THE VESSEL WOULD HAVE BEEN PREVENTED IN THE EVENT OF A LINE BREAK. THE UNIT WAS BROUGHT TO COLD SHUTDOWN SO THAT MAINTENANCE WORK COULD BE PERFORMED. THE SOFT SEAT MATERIAL WAS REPLACED WITH A LIKE-FOR-LIKE SOFT SEAT. THE 'A' FEEDWATER CHECK VALVE WAS ALSO REPAIRED AT THIS TIME. AFTER THE WORK WAS COMPLETED, A SUCCESSFUL LLRT WAS PERFORMED. SIMILAR EVENTS 373/83-107, 373/83-146, 373/84-012, AND 373/84-064.

[176] LA SALLE 1 DOCKET 50-373 LER 85-034
 RHR ISOLATION VALVE CLOSES 4 TIMES.
 EVENT DATE: 033085 REPORT DATE: 042585 NSSS: GE TYPE: BWR

(NSIC 193820) ON 3-30-85, AT 0453 HRS, THE 1E12-F009, RHR SYSTEM SHUTDOWN COOLING INBOARD ISOLATION VALVE, ISOLATED FOR THE FIRST OF 4 TIMES. THIS FIRST ISOLATION OCCURRED WHEN THE 1E12-F006B, SHUTDOWN COOLING SUCTION TO 'B' RHR ISOLATION VALVE, HAS BEEN OPENED. THE SECOND ISOLATION OCCURRED AT 0530 HRS FOR NO APPARENT REASON. THE THIRD ISOLATION OCCURRED AT 0537 HRS. AT THIS TIME, THE 'B' RHR PUMP WAS IN THE PROCESS OF BEING STARTED. A HIGH SUCTION FLOW ISOLATION WAS RECEIVED, AS WAS A SHUTDOWN COOLING SUCTION HEADER HIGH PRESSURE ALARM. AT 0539 HRS, THE 'B' RHR PUMP WAS BEING STARTED AGAIN WHEN THE 1E12-F009 ISOLATED FOR THE 4TH TIME. AGAIN A SHUTDOWN COOLING SUCTION HEADER HIGH PRESSURE ALARM WAS RECEIVED. IT IS SUSPECTED THAT HIGH FLOW ISOLATIONS WERE RECEIVED ON EACH ISOLATION. NEW ENVIRONMENTALLY QUALIFIED PRESSURE SWITCHES HAD BEEN INSTALLED TO DETECT EXCESSIVE FLOW. THE OLD SWITCHES HAD PRESSURE SNUBBERS, WHILE THE NEW SWITCHES WERE INSTALLED WITHOUT SNUBBERS. THUS ANY SPURIOUS PRESSURE SPIKE WOULD CAUSE AN ISOLATION. PRESSURE SNUBBERS WERE INSTALLED PER FCR L-85-86. THE PROBLEM HAS NOT RECURRED.

[177] LA SALLE 1 DOCKET 50-373 LER 85-036
 SHUTDOWN COOLING SYSTEM ISOLATION ON SUCTION LINE HIGH FLOW.
 EVENT DATE: 040385 REPORT DATE: 050285 NSSS: GE TYPE: BWR

(NSIC 193822) ON 4-3-85, AT 1328 HRS WITH UNIT 1 IN COLD SHUTDOWN, THE OPERATING 1A RHR SHUTDOWN COOLING LOOP WAS SECURED TO FACILITATE THE RESTART OF THE 1A REACTOR RECIRCULATION PUMP. AT 1343 HRS, 1A RHR WAS RESTARTED AND THE 1E12-F009, RHR INBOARD SHUTDOWN COOLING SUCTION ISOLATION VALVE ISOLATED. A HIGH FLOW ISOLATION OCCURRED FROM DIFFERENTIAL PRESSURE SWITCH, 1E31-N012B. IT IS BELIEVED THAT THE HIGH FLOW ISOLATION WAS CAUSED BY A SPURIOUS PRESSURE SPIKE. PRESSURE SNUBBERS HAD BEEN INSTALLED DURING INITIAL CONSTRUCTION TO PRECLUDE THIS PROBLEM. THESE SNUBBERS WERE OMITTED FROM A RECENTLY INSTALLED ENVIRONMENTAL QUALIFICATION UPGRADE DUE TO FAILURE TO REFLECT THEM ON THE CONSTRUCTION DRAWINGS. PRESSURE SNUBBERS WERE INSTALLED BY 1530 HRS THE SAME DAY IN ACCORDANCE WITH FIELD CHANGE REQUEST L-85-86. PREVIOUS EVENTS 373/85-034 AND 374/84-062.

[178] LA SALLE 1 DOCKET 50-373 LER 85-035
 MAIN TURBINE HIGH VIBRATION TRIP CAUSES REACTOR SCRAM.
 EVENT DATE: 041185 REPORT DATE: 050285 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193821) AT 2231 HRS ON 4-11-85, UNIT 1 SCRAMMED WHEN THE MAIN TURBINE TRIPPED FROM A BEARING #11 HIGH VIBRATION SIGNAL. NO EMERGENCY CORE COOLING SYSTEMS ACTUATED AT THE TIME OF OR AFTER THE EVENT. ALL SYSTEMS PERFORMED SATISFACTORILY TO COMPLETE A SAFE SHUTDOWN OF UNIT 1. AFTER TROUBLESHOOTING THE MAIN TURBINE VIBRATION INSTRUMENTATION SYSTEM, A LOOSE CONNECTION WAS DISCOVERED AND REPAIRED. IT IS SPECULATED THAT A SLIGHT IMBALANCE IN THE #11 BEARING AREA AND THE #11 BEARING VIBRATION DETECTOR READING 1.5 MILS HIGH MAY HAVE CONTRIBUTED TO THE TURBINE TRIP. CURRENTLY THE MAIN TURBINE #11 BEARING VIBRATION DETECTOR HAS BEEN DISABLED SO AN ERRONEOUS VIBRATION SIGNAL FROM THE #11 BEARING VIBRATION DETECTOR CANNOT TRIP THE TURBINE. ALL OTHER BEARING VIBRATION DETECTORS FOR THE UNIT 1 MAIN TURBINE ARE OPERATIONAL. AN INDEPENDENT VIBRATION DETECTOR IS CURRENTLY MONITORING #11 BEARING VIBRATION. THE UNIT 1 MAIN TURBINE IS CURRENTLY OPERATING SATISFACTORILY WITH #11 BEARING VIBRATION AMPLITUDE AT 6.2 MILS. SRV E ACTUATED AND THEN RECLOSED AT THE TIME OF THIS OCCURRENCE. REACTOR LEVEL DROPPED TO 7 INCHES AND REACTOR PRESSURE DID NOT EXCEED 1040 PSIG AS SHOWN BY CONTROL ROOM INDICATION. SRV E NORMAL ACTUATION SET PRESSURE IS APPROX 1104 PSIG. SRV HAS PREVIOUSLY ACTUATED (LER 373/85-29) AT A PRESSURE LOWER THAN ITS SETPOINT OF 1104 PSIG.

[179] LA SALLE 1 DOCKET 50-373 LER 85-037
 DIVISION II ADS INOPERABLE DUE TO DESIGN AND TESTING ERRORS.
 EVENT DATE: 041785 REPORT DATE: 051085 NSSS: GE TYPE: BWR
 VENDOR: STATIC-O-RING

(NSIC 193914) ON 4-17-85 AT 1630 HRS WITH UNIT 1 AT 097% POWER, THE DIV II ADS LOW LOW LOW LEVEL PERMISSIVE DIFFERENTIAL PRESSURE SWITCHES WERE FOUND TO BE WIRED INCORRECTLY. A 7-DAY TIME CLOCK WAS ENTERED. SUBSEQUENT INTERPRETATION OF TECH SPECS RESULTED IN A GSEP ALERT AND INITIATION OF A 100 MW/HR SHUTDOWN IN ACCORDANCE WITH TECH SPEC 3.0.3. AT 2030 HRS THE 1B21-N037BA DIFFERENTIAL PRESSURE SWITCH WAS WIRED CORRECTLY, TESTED AND RETURNED TO SERVICE. AT 2040 HRS, CIRCUITRY ASSOCIATED WITH 1B21-N037DA WAS PLACED IN THE TRIPPED CONDITION AS REQUIRED BY TECH SPEC TABLE 3.3.3-1 ACTION 30. AT 2045 HRS THE GSEP 'ALERT' AND THE LOAD REDUCTION WAS TERMINATED AT 1000 MWE. THE EVENT WAS CAUSED BY A DIFFERENCE IN THE WIRING DIAGRAM AND THE SCHEMATIC DIAGRAM FOR THE DESIGN OF AN ENV QUALIFICATION MODIFICATION. THIS ERROR WAS NOT DETECTED DURING THE PERFORMANCE OF THE POST MAINTENANCE TEST PRIOR TO DECLARING THE EQUIPMENT OPERABLE. A REVIEW HAS BEEN PERFORMED TO VERIFY NO SIMILAR DISCREPANCIES EXIST

IN THE OTHER ENV QUALIFICATION MODIFICATIONPS. ARCHITECT ENGINEER AND MAINTENANCE PERSONNEL HAVE BEEN COUNSELED ON THE ERRORS.

[180] LA SALLE 1 DOCKET 50-373 LER 85-039
AMMONIA DETECTOR ACTUATES DUE TO SETPOINT DRIFT.
EVENT DATE: 041985 REPORT DATE: 051685 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193979) ON 0547 HRS ON 4-19-85 THE CONTROL ROOM RECEIVED AN ALARM FOR 'HIGH CHLORINE/AMMONIA CONCENTRATION' FOR THE 'B' TRAIN OF CONTROL ROOM/AUX ELECTRICAL EQUIPMENT ROOM HVAC (VC/VE) SYSTEM. THE ALARM RESULTED IN A SIGNAL TO OPERATE ESF DAMPERS TO ISOLATE THE 'B' VC/VE TRAIN FROM OUTSIDE AIR AND INITIATE RECIRCULATING AIRFLOW THROUGH CHARCOAL FILTERS. THE CAUSE FOR THE AMMONIA DETECTOR ACTUATION WAS THE AMMONIA DETECTOR BEING OUT-OF-CALIBRATION. THE AMMONIA DETECTOR WAS MANUFACTURED BY MDA SCIENTIFIC INCORPORATED AND IS MODEL NUMBER 7060-FAN. SINCE THE 'B' VC/VE TRAIN WAS NOT IN USE AND ALL ESF DAMPERS WERE IN THEIR CONSERVATIVE FAIL-SAFE POSITION, NO ESF ACTUATIONS TOOK PLACE. THE EVENT HAD NO IMPACT ON THE OPERATING 'A' VC/VE TRAIN.

[181] LA SALLE 2 DOCKET 50-374 LER 85-011
REACTOR WELL DRAIN VALVES LEAK.
EVENT DATE: 022685 REPORT DATE: 032685 NSSS: GE TYPE: BWR
VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 193915) ON 2-26-85 AT 1155 HRS WITH THE UNIT AT 99% POWER, THE 2FC086 AND 2FC115 REACTOR WELL DRAIN VALVES FAILED THEIR LOCAL LEAK RATE TEST (EXCEEDED 0.6 LA LEAKAGE RATE FOR WORST VALVE IN LINE). THE ACTIONS OF TECH SPEC 3.6.3 WERE TAKEN AS APPROPRIATE. THE UNIT IS IN A SURVEILLANCE/MAINTENANCE OUTAGE. A SUPPLEMENTAL REPORT WILL BE SUBMITTED AFTER COMPLETION OF THE OUTAGE TO DETAIL ALL FAILURES AND CORRECTIVE ACTIONS. (AIR 1-85-67046). OTHER TYPE C FAILURES - 373/83-146, 373/84-012 AND 373/84-064.

[182] LA SALLE 2 DOCKET 50-374 LER 85-009
REACTOR WATER CLEANUP DIFFERENTIAL FLOW ISOLATION WHEN REACTOR VESSEL HEAD VENT OPENED.
EVENT DATE: 030185 REPORT DATE: 030885 NSSS: GE TYPE: BWR

(NSIC 193980) ON 3-1-85, AT 0404 HRS WITH THE UNIT APPROACHING COLD SHUTDOWN, THE UNIT 2 RWCU ISOLATED ON HIGH DIFFERENTIAL FLOW. THERE WERE NO FLOWPATH CHANGES OR EQUIPMENT ROTATIONS IN PROGRESS AT THE TIME OF THE TRIP. APPROX 3 MINS PRIOR TO THE ISOLATION, THE RX HEAD VENTS TO THE GLAND SEAL LEAKOFF RESERVOIR WERE OPENED PER LGP-2-1, STEP F.64. THE PRIMARY REASON FOR THE RWCU DIFFERENTIAL FLOW ISOLATION MAY BE THE PRESSURE TRANSIENT CREATED BY OPENING THE RX VESSEL HEAD VENT VALVES. THESE PRESSURE TRANSIENTS ARE 'SEEN' AS DIFFERENTIAL FLOW TRANSIENTS BY THE RWCU FLOW MONITORING LOOP, RESULTING IN LARGE DIFFERENTIAL FLOW INDICATIONS. THE EXACT SAME INCIDENT OCCURRED FOR UNIT 2 ON 9-7-84, AND IS DISCUSSED IN LER 374/84-064. PREVIOUS NON-LEAKAGE RWCU DIFFERENTIAL FLOW ISOLATIONS HAVE OCCURRED ON UNIT 1 AND 2 AS DESCRIBED IN THE FOLLOWING LERS: 373/84-030, 84-033, 84-040, 84-055, 84-082, 85-003, 85-012, 374/84-029, 84-041, 84-044, 84-054, 84-057, 84-064, 84-073, 84-079, 84-089, AND 84-093. FOLLOWING THE ISOLATION, THE RWCU SYSTEM WAS INSPECTED FOR LEAKAGE, WITH NONE BEING FOUND. UPON CONFIRMATION OF SATISFACTORY SYSTEM STATUS, THE HIGH DIFFERENTIAL FLOW ISOLATION SIGNAL WAS RESET. AT 0429 THE SAME DAY THE UNIT 2 RWCU SYSTEM WAS SATISFACTORILY RESTARTED.

[183] LA SALLE 2 DOCKET 50-374 LER 85-013
 TESTING ERROR CAUSES ISOLATION OF SHUTDOWN COOLING.
 EVENT DATE: 032885 REPORT DATE: 042285 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193824) ON 3-28-85 WHILE PERFORMING LES-PC-05, A GROUP VI DIV 2 ISOLATION OCCURRED. AT THE TIME, THE UNIT HAD BEEN SHUT DOWN FOR 28 DAYS AND THE B RHR LOOP WAS IN THE SHUTDOWN COOLING MODE. THIS ISOLATION CLOSED THE 2E12-P009, SHUTDOWN COOLING INBOARD ISOLATION VALVE. THIS ISOLATION OCCURRED BECAUSE A LEAD WAS LIFTED PER LES-PC-05 WHICH DISCONNECTED POWER TO SEVERAL OTHER CONTROL CIRCUITS. ONE OF THESE HAS A RELAY WHICH CAUSED THE ISOLATION OF THE 2E12-P009. LES-PC-05 IS BEING REVISED TO PREVENT THIS EVENT FROM RECURRING.

[184] LA SALLE 2 DOCKET 50-374 LER 85-012
 TESTING ERROR CAUSES INADVERTENT RHR SHUTDOWN COOLING ISOLATION.
 EVENT DATE: 033185 REPORT DATE: 041885 NSSS: GE TYPE: BWR
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 193823) AT 1103 HRS ON 3-31-85 WITH LASALLE UNIT 2 IN COLD SHUTDOWN, A RHR SHUTDOWN COOLING ISOLATION OCCURRED DURING THE PERFORMANCE OF LIS-RH-10, 'LPCS/RHR INJECTION LINE INTEGRITY MONITOR CALIBRATION AND FUNCTIONAL TEST'. AN INSTRUMENT MAINTENANCE TECHNICIAN INTENDING TO ISOLATE INSTRUMENT 2E12-N029B PER LIS-RH-10 INCORRECTLY TRACED THE INSTRUMENT PIPING AND ISOLATED A SUPPLY LINE TO INSTRUMENT 2E31-N012B. 2E31-N012B SENSES DIFFERENTIAL PRESSURE CAUSED BY FLOW THROUGH THE RHR SHUTDOWN COOLING SUCTION PIPING. IT IS DESIGNED TO ACTUATE CN HIGH FLOW. WHEN THE SUPPLY LINE TO 2E31-N012B WAS ISOLATED IT SAW A HIGH DP AND ACTUATED. A PRIMARY CONTAINMENT ISOLATION SYSTEM GROUP 6, DIV 2, ISOLATION OCCURRED RESULTING IN THE LOSS OF RHR SHUTDOWN COOLING. THE INSTRUMENT MAINTENANCE TECHNICIAN PROMPTLY NOTIFIED THE UNIT OPERATOR OF THE VALVING ERROR AND AS A RESULT RHR SHUTDOWN COOLING WAS RETURNED TO OPERATION IN APPROX 4 MINS. THE INSTRUMENT MAINTENANCE DEPARTMENT WILL BE TRAINED ON THIS OCCURRENCE. THE NEED TO ELIMINATE PERSONNEL ERROR AND ATTENTION TO DETAIL WILL BE STRESSED. SIMILAR EVENTS: 374/84-025 AND 373/85-029.

[185] LA SALLE 2 DOCKET 50-374 LER 85-015
 RCS CONDUCTIVITY INDICATION INOPERABLE MORE THAN 31 DAYS.
 EVENT DATE: 040185 REPORT DATE: 042685 NSSS: GE TYPE: BWR

(NSIC 193826) ON 4-1-85 AT 1500 HRS THE UNIT 2 CONTROL ROOM CONDUCTIVITY INDICATION WAS INOPERATIVE FOR GREATER THAN 31 DAYS. THIS EXCEEDS THE TIME CLOCK AS STATED IN TECH SPEC 4.4.4.C. THE UNIT HAS BEEN IN COLD SHUTDOWN DURING THIS EVENT. THE RECORDER BECAME INOPERATIVE ON 3-1-85 AT 1500 HRS AND WAS REPAIRED ON 3-20-85. IN THE INTERIM THE INLET TO THE REACTOR WATER CLEANUP AND THE REACTOR RECIRCULATION INLET SAMPLE TAPS WHICH FEED THE RECORDER WERE TAKEN OUT OF SERVICE. ONE OF THESE 2 SAMPLE TAPS ARE USED TO COMPLY WITH THE SPECIFICATION. BOTH SYSTEMS WERE TAKEN OUT OF SERVICE TO HAVE OUTAGE WORK PERFORMED ON THEM. THE REACTOR RECIRCULATION TAP WAS RETURNED TO SERVICE ON 4-1-85 BUT THE FLOW IN THE RECIRCULATION LOOP WAS TOO LOW TO REESTABLISH FLOW AT THE SAMPLE PANEL. RAD CHEM CONTINUES TO SAMPLE AT THE RHR SAMPLE POINT ONCE EVERY 4 HRS FOR PH AND CONDUCTIVITY, AND ONCE EVERY 8 HRS FOR CHLORIDES, AND PERFORMS ROUTINE ANALYSIS FOR SILICA, TURBIDITY, BORON, AND DISSOLVED OXYGEN. FLOW WILL BE REESTABLISHED FOR CONTROL ROOM INDICATION WHEN IT IS POSSIBLE. THE RECORDER HAS BEEN REPAIRED AND CALIBRATED.

[186] LA SALLE 2 DOCKET 50-374 LER 85-014
 MODIFICATION WORK CAUSES SPURIOUS ISOLATION OF SHUTDOWN COOLING.
 EVENT DATE: 040985 REPORT DATE: 042585 NSSS: GE TYPE: BWR

(NSIC 193825) AT 0847 HRS ON 4-9-85, WITH LASALLE UNIT 2 IN COLD SHUTDOWN, A RHR SHUTDOWN COOLING ISOLATION OCCURRED DURING THE INSTALLATION OF ENVIRONMENTAL QUALIFICATION MODIFICATION M-1-2-84-117. TWO CONTROL ROOM ALARM PRINTERS WERE AVAILABLE AT THE TIME OF THE OCCURRENCE AND BOTH INDICATED THAT NO INSTRUMENTS DESIGNED TO SENSE ISOLATION CONDITIONS ACTUATED. THE ISOLATION OCCURRED DUE TO A MOMENTARY LOSS OF POWER TO RELAY 2B21H-K74. THE INSTALLATION OF A NEW RELAY 2B33-N018AX UNDER M-1-2-84-117 REQUIRED BREAKING THE CIRCUIT TO RELAY 2B21H-K74. TEMPORARY TRIP BYPASSES WERE NOT ADEQUATE ENOUGH TO ALLOW FOR THE INSTALLATION OF 2B33-N018AX. A WALKDOWN OF THE RHR SHUTDOWN COOLING LOOP REVEALED NO LEAKS OR SYSTEM PROBLEMS. RHR SHUTDOWN COOLING WAS RETURNED TO OPERATION AT 0912 HRS ON 4-9-85. WORK ON THE GROUP 6 DIV 1 ISOLATION LOGIC UNDER M-1-2-84-117 WAS COMPLETED ON 4-14-85.

[187] LA SALLE 2 DOCKET 50-374 LER 85-017
WIRING ERROR CAUSES RHR ISOLATION.
EVENT DATE: 041385 REPORT DATE: 050285 NSSS: GE TYPE: BWR
VENDOR: STATIC-O-RING

(NSIC 193827) WHILE RETURNING REACTOR PRESSURE SWITCHES 2B33-N018A AND B TO SERVICE, A GROUP 6 ISOLATION OCCURRED. THIS ISOLATION CLOSED THE RHR SHUTDOWN COOLING SUCTION INBOARD AND OUTBOARD ISOLATION VALVES ALONG WITH THE SHUTDOWN COOLING INJECTION VALVE. ISOLATION LOGIC HAD BEEN BYPASSED USING A JUMPER TO PREVENT ISOLATIONS DURING INSTALLATION OF ENVIRONMENTALLY QUALIFIED SWITCHES. DURING REMOVAL OF THE JUMPER, THE LOGIC WAS DROPPED OUT AND THE ISOLATION OCCURRED AS DESIGNED. TECHNICAL STAFF AND THE ELECTRICAL CONTRACTOR TRACED WIRING DIAGRAMS AGAINST THE FIELD INSTALLATION UNTIL THEY FOUND THE CAUSE OF THE ISOLATION. ONE SET OF CONTACTS FROM A PRESSURE SWITCH HAD BEEN INCORRECTLY WIRED TO AN OPEN TERMINAL. THIS DISCREPANCY WAS IMMEDIATELY CORRECTED AND THE SYSTEM RETURNED TO SERVICE. SIMILAR EVENTS: 374/85-014, AND 374/85-018.

[188] LA SALLE 2 DOCKET 50-374 LER 85-018
SHUTDOWN COOLING ISOLATION ON BLOWN FUSE.
EVENT DATE: 041385 REPORT DATE: 050285 NSSS: GE TYPE: BWR

(NSIC 193828) A LOOSE LUG WAS DISCOVERED DURING THE RETURN TO SERVICE OF AN OUTAGE THAT REPLACED NON-QUALIFIED INSTRUMENTS IN THE LOGIC TRAIN WITH ENVIRONMENTALLY QUALIFIED INSTRUMENTS. AFTER CLEARING THE OUTAGE, THE ELECTRICIAN RETURNED TO REPAIR THE LOOSE LUG. HE INADVERTENTLY GROUNDED THE LUG WHICH BLEW THE FUSE. THE BURNED OUT FUSE DE-ENERGIZED THE LOGIC WHICH CAUSED A DIV 1, GROUP 6 ISOLATION OF SHUTDOWN COOLING. ALL AUTOMATIC ACTIONS OCCURRED AS DESIGNED. THE SYSTEM WAS WALKED DOWN FOR LEAKS, FUSE REPLACED, LUG REPAIRED AND RESTARTED. THIS INCIDENT IS AN ISOLATED CASE OF A SPURIOUS NATURE. NO PREVIOUS OCCURRENCES HAVE BEEN RECORDED. SIMILAR EVENTS: 374/85-014 AND 374/85-017.

[189] LACROSSE DOCKET 50-409 LER 85-001
CONTAINMENT BUILDING VENTILATION ISOLATION DUE TO SPURIOUS HIGH ACTIVITY SIGNAL.
EVENT DATE: 031285 REPORT DATE: 040485 NSSS: AC TYPE: BWR
VENDOR: TRACER LAB

(NSIC 193923) THE CONTAINMENT BUILDING AIR EXHAUST GAS AND DELAYED PARTICULATE ACTIVITY MONITORS FAILED HIGH. THE CB VENTILATION VALVES CLOSED ON THE HIGH ACTIVITY SIGNAL. ALL OTHER INDICATIONS WERE NORMAL INCLUDING THE CB IMMEDIATE PARTICULATE ACTIVITY MONITOR. THE PLANT WAS IN COLD SHUTDOWN WITH CONTAINMENT INTEGRITY NOT REQUIRED. A SPARE INSTRUMENT DRAWER WAS TEMPORARILY INSTALLED AND TESTED WHILE THE DRAWER CONTAINING THE CB GAS AND DELAYED PARTICULATE ACTIVITY METERS AND POWER SUPPLY WAS REMOVED FOR TROUBLESHOOTING. NO MALFUNCTION WAS DETECTED DURING TROUBLESHOOTING THE DRAWER IN THE INSTRUMENT SHOP. THE SPARE WAS REMOVED AND THE DRAWER WAS REINSTALLED. DURING REINSTALLATION, A PIN DROPPED OUT

OF THE DOWNSCALE TRIP PLUG. THIS PLUG HAD NOT BEEN USED WITH THE SPARE DRAWER SINCE THE SPARE DID NOT HAVE A DOWNSCALE TRIP FUNCTION. IT IS POSTULATED THAT MOVEMENT OF THE PIN SHORTED OUT THE DRAWER, CAUSING IT TO APPARENTLY FAIL HIGH. THE PIN WAS SECURELY REPLACED. A FUNCTIONAL TEST WAS PERFORMED WITH SATISFACTORY RESULTS. SIMILAR PLUGS WERE CHECKED AND PINS WERE DETERMINED TO BE SECURELY IN PLACE. LERS 84-20 AND 84-17 COVERED CB VENTILATION ISOLATION DUE TO OTHER CAUSES.

[190] LACROSSE DOCKET 50-409 LER 85-003
PREPARATION FOR FACILITY MODIFICATION CAUSES INITIATION OF SAFETY SYSTEMS.
EVENT DATE: 032385 REPORT DATE: 041285 NSSS: AC TYPE: BWR

(NSIC 193869) IN PREPARATION FOR PERFORMING A FACILITY CHANGE DURING A REFUELING OUTAGE, FUSE 55-2 WAS PULLED. BOTH HPCS PUMPS AND BOTH EMERGENCY DG'S STARTED AND SOME CONTAINMENT BLDG ISOLATION VALVES CLOSED. THIS EQUIPMENT INITIATION WAS NOT EXPECTED. THE FUSE WAS REINSTALLED, AND EQUIPMENT WAS SHUT DOWN AND RETURNED TO AUTO. THE CIRCUITS SUPPLIED BY FUSE BLOCK 55-2 INCLUDE, IN PART, ALL ROD INSERT AUX RELAYS, REACTOR LEVEL AUX RELAYS FOR EMERGENCY CORE SPRAY PUMPS, CONTROL ROD DRIVE SCRAM SOLENOID AUX RELAYS AND CONTROL ROD ACCUMULATOR FAILURE AUX RELAYS. A LIST POSTED IN THE CONTROL ROOM BENCHBOARD FUSE CABINET HAD BEEN CONSULTED. THE LIST, HOWEVER, WAS NOT SUFFICIENTLY DETAILED. A MORE DETAILED LIST WILL BE DEVELOPED AND POSTED TO FULLY IDENTIFY THE LOADS ON EACH FUSE BLOCK. NO FUEL WAS IN THE REACTOR AT THE TIME OF THIS EVENT. INFO ON THE INCIDENT WAS DISSEMINATED TO APPROPRIATE PLANT PERSONNEL.

[191] LACROSSE DOCKET 50-409 LER 85-004
RETENTION TANK AND DEMINERALIZED WATER VALVES LEAK.
EVENT DATE: 040385 REPORT DATE: 043085 NSSS: AC TYPE: BWR
VENDOR: BLACK, SIVALLS & BRYSON, INC.
CRANE VALVE CO.

(NSIC 193833) DURING A REFUELING OUTAGE, LEAKAGE MEASURED THROUGH 2 CONTAINMENT ISOLATION VALVES WAS ABOVE THE ACCEPTANCE CRITERIA FOR TYPE C LEAKAGE TESTING. LACBWR TECH SPECS CURRENTLY SET AN INDIVIDUAL VALVE LEAKAGE LIMIT RATHER THAN A CUMULATIVE LEAKAGE LIMIT FOR ALL TYPE B AND C TESTS. THE 2 VALVES WERE THE RETENTION TANK PUMP DISCHARGE VALVE AND THE DEMINERALIZED WATER CONTAINMENT ISOLATION VALVE. MAINTENANCE WAS PERFORMED ON BOTH VALVES. THE AS-LEFT LEAKAGE RATES WERE 0.144 SCFH THROUGH THE DEMINERALIZED WATER CHECK VALVE AND ZERO LEAKAGE THROUGH THE RETENTION TANK PUMP DISCHARGE VALVE. SIMILAR OCCURRENCES WERE COVERED IN LER'S 75-05, 79-04, 80-15, AND 82-09.

[192] LACROSSE DOCKET 50-409 LER 85-005
EMERGENCY SERVICE WATER SUPPLY SYSTEM VALVE HAS BODY CRACK.
EVENT DATE: 040785 REPORT DATE: 043085 NSSS: AC TYPE: BWR
VENDOR: CRANE VALVE CO.

(NSIC 193832) DURING THE PERFORMANCE OF THE SURVEILLANCE TEST OF THE EMERGENCY SERVICE WATER SUPPLY SYSTEM (ESWSS), A CRACK WAS OBSERVED IN THE ESWSS EXTERIOR HEADER ISOLATION VALVE. THE DISCHARGE HOSE WAS MOVED TO THE ESWSS INTERIOR HEADER ISOLATION VALVE, BUT THE CRACK IN THE EXTERIOR VALVE PREVENTED THE DESIRED FLOW RATE OF 900 GPM FROM BEING ACHIEVED. APPROX 880 GPM WAS MEASURED. THE ESWSS CONSISTS OF 3 PORTABLE GASOLINE ENGINE-DRIVEN PUMPS WITH ASSOCIATED HOSES AND A DISTRIBUTOR. THE SYSTEM IN ITSELF IS NOT SAFETY-RELATED, BUT IT FUNCTIONS AS A BACKUP FOR THE SAFETY-RELATED ALTERNATE CORE SPRAY PUMPS. THEREFORE, THIS INCIDENT IS BEING REPORTED. THE CAUSE OF THE VALVE BODY CRACKING IS UNKNOWN. THE VALVE WAS REPLACED AND THE TEST WAS CONDUCTED WITH ACCEPTABLE RESULTS.

[193] LACROSSE DOCKET 50-409 LER 85-006
 DISCHARGE OF WASTE WATER TANK WHILE TANK NOT ISOLATED FROM DRAIN SYSTEM.
 EVENT DATE: 041085 REPORT DATE: 050385 NSSS: AC TYPE: BWR

(NSIC 193924) ON 4-10-85, THE 3000 GALLON WASTE WATER TANK IN THE TURBINE BLDG WAS DISCHARGED TO THE RIVER. FOLLOWING COMPLETION OF THE DISCHARGE, IT WAS NOTICED THAT THE TANK HAD NOT BEEN ISOLATED FROM THE DRAIN SYSTEM. IN ADDITION TO THE WATER WHICH HAD BEEN IN THE TANK, WATER FROM THE DRAIN SYSTEM WAS DISCHARGED. LACBWR TECH SPECS REQUIRE THAT LIQUID WASTES BE BATCH-SAMPLED AND ANALYZED PRIOR TO RELEASE. THE WATER FROM THE DRAIN SYSTEM, THOUGH OF SIMILAR ORIGIN TO THE WATER IN THE TANK, WAS NOT SAMPLED PRIOR TO RELEASE. THE LIQUID WASTE WAS MONITORED DURING THE RELEASE. SINCE THE INDICATED ACTIVITY DID NOT EXCEED THE ALARM SETPOINT, THE ACTIVITY OF THE WATER WAS WITHIN ALLOWABLE LIMITS. LIQUID WASTE DISCHARGE PROCEDURE IS BEING CHANGED TO REQUIRE THAT THE OPERATOR COMMENCING THE DISCHARGE CHECK THAT THE TANK INLET VALVE IS CLOSED. A SIMILAR, BUT NOT IDENTICAL, INCIDENT WAS DISCUSSED IN LER 79-15.

[194] LACROSSE DOCKET 50-409 LER 85-007
 ALTERNATE CORE SPRAY SYSTEM MISALIGNED DURING REACTOR VESSEL HYDROSTATIC TEST.
 EVENT DATE: 041285 REPORT DATE: 050885 NSSS: AC TYPE: BWR

(NSIC 193925) A REACTOR VESSEL HYDROSTATIC TEST WAS PERFORMED ON 4-12-85 FOLLOWING REACTOR REFUELING. AFTERWARDS, IT WAS NOTICED THAT THE ALTERNATE CORE SPRAY SYSTEM (ACS) WAS MANUALLY LINED UP TO THE RIVER, RATHER THAN THE REACTOR VESSEL. THIS IS THE NORMAL LINEUP FOR A REFUELING OUTAGE, BUT CURRENT LACBWR TECH SPECS REQUIRE THAT ACS BE AVAILABLE FOR AUTOMATIC OPERATION EXCEPT WHEN THE REACTOR IS SHUTDOWN AND THE SYSTEM DEPRESSURIZED TO APPROX ATMOSPHERIC PRESSURE. THEREFORE, ACS WAS REQUIRED TO BE AVAILABLE DURING THE HYDROSTATIC TEST BY THE SPECIFICATION WORDING. ACS IS A LOW PRESSURE CORE SPRAY SYSTEM AND SERVES AS THE BACKUP TO THE HIGH PRESSURE CORE SPRAY SYSTEM, WHICH IS DESIGNED FOR ALL REACTOR PRESSURES. THE REACTOR VESSEL HYDROSTATIC TEST PROCEDURE PREREQUISITE REQUIRING ACS TO BE LINED UP FOR NORMAL OPERATION WAS SKIPPED. THE PROCEDURE WILL BE MODIFIED INTO A CHECKLIST FORMAT. THIS WILL HELP ENSURE STEPS ARE NOT SKIPPED IN THE FUTURE.

[195] LACROSSE DOCKET 50-409 LER 85-008
 CONTROL ROD DRIVE SCRAM SOLENOID FAILURE CAUSES REACTOR SCRAM.
 EVENT DATE: 042085 REPORT DATE: 051685 NSSS: AC TYPE: BWR
 VENDOR: ALLIS CHALMERS
 ROYAL INDUSTRIES, INC.

(NSIC 193986) REACTOR SCRAMMED FROM 73% POWER WHEN 1 OF 2 SCRAM SOLENOID VALVES ON CONTROL ROD NO. 12 FAILED. OPENING OF THE SOLENOID RESULTED IN LOW OIL LEVEL FOR THAT CONTROL ROD DRIVE MECHANISM, WHICH IS A PARTIAL SCRAM SIGNAL. DURING A PARTIAL SCRAM, THE CENTER 13 CONTROL RODS ARE INSERTED, RENDERING THE REACTOR SUBCRITICAL. THE 1B RESERVE FEED BREAKER DID NOT CLOSE AUTOMATICALLY, RESULTING IN LOW VOLTAGE ON THE 1B BUSES. A FULL SCRAM SIGNAL WAS GENERATED BY LOW VOLTAGE AT REACTOR BLDG MOTOR CONTROL CENTER 1A. THE 1B EMERGENCY DG STARTED AND PICKED UP THE 1B ESSENTIAL BUS LOADS. THE 1B RESERVE FEED BREAKER WAS CLOSED BY MANUAL OPERATION OF THE CONTROL ROOM SWITCH AND THE ELECTRICAL LINEUP RETURNED TO NORMAL. THE SPARE LOWER CONTROL ROD DRIVE MECHANISM WAS INSTALLED AND TESTED. THE SCRAM SOLENOID ON THE MECHANISM WHICH HAD BEEN IN POSITION 12 WAS REPLACED. IT IS BELIEVED TO HAVE BEEN A RANDOM FAILURE. THE CONTROL SWITCH AND CONTROL CIRCUIT FOR THE 1B RESERVE FEED BREAKER WERE CHECKED. TWO CONTROL SWITCH CONTACT SETS WERE CLEANED AND ADJUSTED. SIMILAR OCCURRENCE: LER 81-13.

[196] LACROSSE DOCKET 50-409 LER 85-010
THREE DEGRADED FIRE BARRIER PENETRATIONS (APPENDIX R).
EVENT DATE: 042485 REPORT DATE: 052085 NSSS: AC TYPE: BWR

(NSIC 193988) THE FIRE BARRIER BETWEEN THE ELECTRICAL PENETRATION ROOM AND THE DIESEL BLDG ELECTRICAL EQUIPMENT ROOM WAS OBSERVED TO HAVE BEEN DEGRADED BY AN APPENDIX R MODIFICATION WHICH HAD BEEN INSTALLED DURING THE RECENTLY COMPLETED REFUELING OUTAGE. CABLES WHICH HAD BEEN REROUTED THROUGH A CABLE TRAY PENETRATING THE WALL HAD DAMAGED THE BARRIER. CLOSE EXAMINATION REVEALED THE BARRIER HAD NOT BEEN PROPERLY INSTALLED ORIGINALLY. TWO OTHER FIRE BARRIER PENETRATIONS INVOLVED IN AN ONGOING MODIFICATION WERE INSPECTED. IT WAS DETERMINED THAT THESE BARRIERS HAD NOT BEEN RESTORED IN ACCORDANCE WITH PROCEDURE. HOURLY FIRE PATROLS WERE ESTABLISHED FOR THE 3 PENETRATIONS UNTIL REPAIRS WERE COMPLETED ON 5-8-85. CAUTION SIGNS WILL BE POSTED NEAR ELECTRICAL PENETRATION THROUGH FIRE BARRIERS PROTECTING SAFETY-RELATED AREAS. SIMILAR OCCURRENCE: LER 80-16.

[197] LIMERICK 1 DOCKET 50-352 LER 85-028
INADEQUATE FIRE SEALS IN THE DIESEL GENERATOR CORRIDOR AND CELLS.
EVENT DATE: 030185 REPORT DATE: 032985 NSSS: GE TYPE: BWR

(NSIC 193903) WITH THE UNIT AT APPROX 2.5% POWER, AT 10:30 AM, 3-1-85, IT WAS DETERMINED THAT INTERNAL SEALS FOR HOT GAS AND SMOKE PROTECTION WERE NOT PRESENT IN CONDUITS 1BI647, 1CL048 AND 1DL046. THESE CONDUITS PENETRATE THE SECTION OF DG CELLS B, C & D FROM THE SERVICE WATER PIPE TUNNEL FLOOR SLAB. THE PROPER SEALS WERE PRESENT ON THE SERVICE WATER SIDE OF THE TUNNEL; HOWEVER, NO SEALS WERE INSTALLED ON THE DG SIDE OF THE TUNNEL. AS AN IMMEDIATE CORRECTIVE ACTION, AN HOURLY FIRE WATCH WAS ESTABLISHED IN THE SERVICE WATER PIPE TUNNEL AND THE SMOKE AND FIRE DETECTORS WERE DETERMINED TO BE OPERABLE IN C AND D DIESEL CELLS, AS DIRECTED BY TECH SPEC 3.7.7.A. THE B DIESEL CELL WAS ALREADY UNDER A CONTINUOUS FIRE WATCH DUE TO AN INOPERABLE SMOKE DETECTOR SYSTEM IN THIS CELL. INSTALLATION OF INTERNAL CONDUIT SEALS ON THE DG SIDE OF THE CONDUITS WERE COMPLETED ON 3-8-85.

[198] LIMERICK 1 DOCKET 50-352 LER 85-029
CONTROL ROOM CHLORINE DETECTOR FAILS.
EVENT DATE: 030185 REPORT DATE: 040185 NSSS: GE TYPE: BWR
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193904) AT 11:45 AM ON 3-1-85, THE OPERATORS RECEIVED AN ALARM 'CONTROL ROOM CHLORINE ISOLATION INITIATED' AND THE 'B' TRAIN OF CONTROL ROOM EMERGENCY FRESH AIR SYSTEM (AN ESP) STARTED. INVESTIGATION DETERMINED THAT THE SAMPLE TAPE OF THE 'D' CHLORINE ANALYZER (AE-78-016D), AN MDA SCIENTIFIC, INC. MODEL 740 FAN, HAD BROKEN. THE SUSPECTED CAUSE IS EXCESSIVE VIBRATION OF THE SAMPLE PUMP CAUSING THE SENSING TAPE TO TEAR. IN AN ATTEMPT TO MITIGATE THE SENSING TAPE BREAKAGE, ADDITIONAL SUPPORTS ARE BEING INSTALLED BENEATH THE SAMPLE PUMP TO DAMPEN EXCESS VIBRATION.

[199] LIMERICK 1 DOCKET 50-352 LER 85-030
CONTROL ROOM CHLORINE DETECTOR FAILS.
EVENT DATE: 030385 REPORT DATE: 040185 NSSS: GE TYPE: BWR
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193905) AT 9:50 AM ON 3-3-85, THE OPERATORS RECEIVED AN ALARM 'CONTROL ROOM CHLORINE ISOLATION INITIATED' AND THE 'B' TRAIN OF CONTROL ROOM EMERGENCY FRESH AIR SYSTEM (AN ESP) STARTED. INVESTIGATION DETERMINED THAT THE SAMPLE TAPE OF THE 'D' CHLORINE ANALYZER (AE-78-016D), AN MDA SCIENTIFIC, INC. MODEL 740 FAN, HAD BROKEN. THE SUSPECTED CAUSE IS EXCESSIVE VIBRATION OF THE SAMPLE PUMP

CAUSING THE SENSING TAPE TO TEAR. IN AN ATTEMPT TO MITIGATE THE SENSING TAPE BREAKAGE, ADDITIONAL SUPPORTS ARE BEING INSTALLED BENEATH THE SAMPLE PUMP TO DAMPEN EXCESS VIBRATION.

[200] LIMERICK 1 DOCKET 50-352 LER 85-031
CONTROL ROOM CHLORINE DETECTOR FAILS.
EVENT DATE: 031485 REPORT DATE: 040185 NSSS: GE TYPE: BWR
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193906) AT 4:05 AM ON 3-14-85, THE OPERATORS RECEIVED AN ALARM 'CONTROL ROOM CHLORINE ISOLATION INITIATED' AND THE 'B' TRAIN OF CONTROL ROOM EMERGENCY FRESH AIR SYSTEM (AN ESF) STARTED. INVESTIGATION DETERMINED THAT THE SAMPLE TAPE OF THE 'D' CHLORINE ANALYZER (AE-78-016D), AN MDA SCIENTIFIC, INC. MODEL 740 FAN, HAD BROKEN. THE SUSPECTED CAUSE IS EXCESSIVE VIBRATION OF THE SAMPLE PUMP CAUSING THE SENSING TAPE TO TEAR. THIS IS CURRENTLY UNDER INVESTIGATION. IN AN ATTEMPT TO MITIGATE THE SENSING TAPE BREAKAGE, ADDITIONAL SUPPORTS ARE BEING INSTALLED BENEATH THE SAMPLE PUMP TO DAMPEN EXCESS VIBRATION.

[201] LIMERICK 1 DOCKET 50-352 LER 85-032
INOPERABLE FIRE DAMPER.
EVENT DATE: 031485 REPORT DATE: 041885 NSSS: GE TYPE: BWR

(NSIC 193719) ON 3-14-85 AT 3:45 PM WITH UNIT NO. 1 IN THE COLD SHUTDOWN CONDITION DURING SURVEILLANCE TESTING, IT WAS DISCOVERED THAT A FIRE DAMPER IN THE REACTOR ENCLOSURE WAS PHYSICALLY HELD IN THE OPEN POSITION WITH WIRE INSTEAD OF THE FUSIBLE LINK, THUS RENDERING IT INOPERABLE. TECH SPEC 3.7.7 WAS VIOLATED SINCE THE APPROPRIATE FIRE WATCH HAD NOT BEEN ESTABLISHED. UPON IDENTIFICATION, THE FIRE DAMPER WAS CLOSED, THE FUSIBLE LINK WAS REPLACED AND THE FIRE DAMPER WAS RETURNED TO SERVICE. THE CAUSE OF THIS EVENT IS A PERSONNEL ERROR BY UNDETERMINED INDIVIDUALS. THERE WERE NO FIRES DETECTED IN THE AREA OF THE INOPERABLE FIRE DAMPER. A MEMO WAS ISSUED TO INFORM PLANT SUPERVISORY PERSONNEL OF THE REQUIREMENTS FOR OPERABILITY OF FIRE DAMPERS.

[202] LIMERICK 1 DOCKET 50-352 LER 85-033
HOURLY FIRE WATCH VIOLATION.
EVENT DATE: 032185 REPORT DATE: 042285 NSSS: GE TYPE: BWR

(NSIC 193855) WITH THE UNIT IN COLD SHUTDOWN ON 3-21-85 DURING A REVIEW OF FIRE WATCH INSPECTION DOCUMENTATION IT WAS DETERMINED THAT THE REQUIRED HOURLY FIRE WATCH HAD NOT BEEN PERFORMED WITHIN THE ALLOTTED TIMES FOR THE RHR ROOM #102. ON 3-3-85, THIS AREA WAS PATROLLED AT 7:24 AM AND WAS NOT INSPECTED AGAIN UNTIL 8:44 AM, 80 MINS AFTER THE FIRST INSPECTION. THIS AREA WAS BEING PATROLLED DUE TO AN INOPERABLE FIRE BARRIER AND TECH SPEC 3/4.7.7 WHICH REQUIRES AN HOURLY FIRE WATCH. THE CAUSE OF THIS EVENT WAS A RESULT OF INADEQUATE COMMUNICATION BETWEEN FIRE WATCH PERSONNEL AT SHIFT TURNOVER. THIS REPORT IS BEING SUBMITTED BECAUSE A VIOLATION OF TECH SPEC OCCURRED.

[203] LIMERICK 1 DOCKET 50-352 LER 85-034
LOW SODIUM PENTABORATE LEVEL IN STANDBY LIQUID CONTROL TANK.
EVENT DATE: 032285 REPORT DATE: 041285 NSSS: GE TYPE: BWR

(NSIC 193856) ON 3-22-85, IT WAS DETERMINED THAT THE STANDBY LIQUID CONTROL TANK HAD, SINCE 10-17-84, FREQUENTLY CONTAINED LESS THAN THE TECH SPEC REQUIREMENT OF 5500 POUNDS AVAILABLE SODIUM PENTABORATE. THIS CONDITION WAS THE RESULT OF A SURVEILLANCE TEST PROCEDURE DEFICIENCY. APPROX 280 GALS OF SOLUTION FOR CORE INJECTION IS UNAVAILABLE DUE TO THE PHYSICAL LOCATION OF PUMP SUCTION PIPING AND THE CALIBRATION FOR PUMP ZERO LEVEL SHUTOFF. THE WEIGHT OF SODIUM PENTABORATE

REPEATEDLY WAS CALCULATED TO BE SATISFACTORY BECAUSE THE GROSS VOLUME OF SOLUTION WAS INADVERTENTLY REPORTED AS THE NET VOLUME OF SOLUTION. DURING THIS TIME, THE TECH SPEC WAS NOT MET WHEN THE PLANT WAS IN STARTUP AND IN THE REFUELING MODE UNDER CERTAIN CONDITIONS OF CONTROL ROD WITHDRAWAL. ADDITIONAL SODIUM PENTABORATE WAS ADDED TO BRING THE TANK CONTENTS TO WITHIN THE TECH SPEC REQUIREMENT, AND THE APPROPRIATE SURVEILLANCE TEST WAS REVISED TO PRECLUDE A RECURRENCE OF THIS EVENT.

[204] LIMERICK 1 DOCKET 50-352 LER 85-035
 REACTOR WATER CLEANUP SYSTEM ISOLATES.
 EVENT DATE: 032385 REPORT DATE: 041885 NSSS: GE TYPE: BWR

(NSIC 193776) ON 3-23-85 A SPURIOUS ISOLATION OF THE RWCU OCCURRED. THE OUTBOARD ISOLATION VALVE, HV-44-1P004, CLOSED TO ITS ISOLATION POSITION. THE ISOLATION LOGIC WAS RESET AND THE RWCU SYSTEM WAS RETURNED TO SERVICE. THE SPECIFIC CAUSE IS STILL UNDER INVESTIGATION. THERE WERE NO ADVERSE EFFECTS AS A RESULT OF THE RWCU ISOLATION. SIMILAR EVENTS: 352/84-035 AND 352/85-025.

[205] LIMERICK 1 DOCKET 50-352 LER 85-037
 TWO LPCI SYSTEM INJECTIONS DUE TO INSTRUMENT VALVING ERROR.
 EVENT DATE: 032685 REPORT DATE: 042585 NSSS: GE TYPE: BWR

(NSIC 193806) ON 3-26-85 AT 8:20 AM WITH UNIT NO. 1 IN THE COLD SHUTDOWN CONDITION, A DIV II LOCA SIGNAL WAS RECEIVED RESULTING IN A 'B' LPCI SYSTEM INJECTION INTO THE REACTOR VESSEL. SIMULTANEOUSLY, THE D-12 DG STARTED, THE D-12 BUS LOAD SHED, THE 'B' CORE SPRAY INJECTION VALVE OPENED, THE B1 RPS CHANNEL PRODUCED A HALF-SCRAM, A DIV II NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM ISOLATION OCCURRED ALONG WITH VARIOUS BALANCE-OF-PLANT ISOLATIONS, A HPCI INITIATION WAS RECEIVED, AND A LOSS OF HOTWELL LEVEL CONTROL AND INDICATION OCCURRED. AT 8:27 AM A SECOND SIMILAR EVENT OCCURRED. INVESTIGATION INDICATED THAT BOTH CAUSES WERE THE RESULT OF AN I&C TECHNICIAN ERROR WHEN HE OPENED THE LOW SIDE DRAIN VALVE INSTEAD OF THE HIGH SIDE DRAIN VALVE WHILE PERFORMING AN INSTRUMENT BACKFILL PROCEDURE. THE LOW LEG OF INSTRUMENT LT-42-1N085B IS A REFERENCE LEG WHICH IS SHARED BY MOST OF THE INSTRUMENTS ON THE DIV II SAFEGUARD INSTRUMENT RACK, 10C027. BY PRESSURIZING THE REFERENCE LEG, THE INSTRUMENTS EFFECTIVELY FAILED LOW PRODUCING THE VARIOUS ESF ACTUATIONS. ALL ISOLATIONS WERE RESET, ALL INITIATION LOGICS WERE RESET AND THE AFFECTED SYSTEMS WERE RETURNED TO NORMAL.

[206] LIMERICK 1 DOCKET 50-352 LER 85-036
 48 CONDUIT FIRE SEALS REMOVED DURING TELEPHONE INSTALLATION.
 EVENT DATE: 032785 REPORT DATE: 050285 NSSS: GE TYPE: BWR

(NSIC 193805) ON 3-27-85, IT WAS DETERMINED THAT AT&T TELEPHONE PERSONNEL HAD REMOVED THE INTERNAL CONDUIT SEALS FROM CERTAIN TELEPHONE CONDUITS FOR THE PURPOSE OF CABLE INSTALLATION, INADVERTENTLY PLACING THE PLANT IN A LCO. PER TECH SPEC 3.7.7, FIRE BARRIER PENETRATION SEAL INOPERABILITY INVOKES AN LCO ACTION STATEMENT WHICH REQUIRES FIREWATCHES TO BE ESTABLISHED WITHIN 1 HR OF INOPERABILITY. THE TECH SPEC ACTION STATEMENT WAS NOT MET WHEN THE 1 HR TIME LIMIT WAS EXCEEDED. FURTHER INVESTIGATION REVEALED 48 DISASSEMBLED FIRE SEALS INVOLVING 6 FIRE BARRIERS IN THE CONTROL ENCLOSURE, AND 6 FIRE BARRIERS IN THE REACTOR BLDG. FIRE WATCHES WERE POSTED IN THE AFFECTED AREAS UNTIL THE FIRE SEALS WERE REPLACED.

[207] LIMERICK 1 DOCKET 50-352 LER 85-038
 PROCEDURAL DEFECT RESULTS IN RHR SHUTDOWN COOLING ISOLATION.
 EVENT DATE: 032885 REPORT DATE: 042385 NSSS: GE TYPE: BWR

(NSIC 193807) ON 3-28-85, AT 7:35 PM WITH UNIT 1 IN COLD SHUTDOWN, THE INBOARD RHR SHUTDOWN COOLING SUCTION VALVE HV-51-1F009 CLOSED TO THE ISOLATION POSITION. SHUTDOWN COOLING WAS ISOLATED FOR APPROX 12 MINS. CAUSE OF THE EVENT WAS A PROCEDURAL INADEQUACY. AT THE TIME OF THE EVENT, ST-2-036-631-1 WAS BEING PERFORMED. AT THE BEGINNING OF THE PROCEDURE, POWER IS REMOVED FROM HV-51-1F009 SO THAT THE VALVE WILL NOT CLOSE WHEN AN ISOLATION SIGNAL IS GENERATED DURING INSTRUMENT LINE BACKFILLING. AT THE CONCLUSION OF THE BACKFILLING, THE ISOLATION RESET SWITCH IS PUSHED TO RESET THE ISOLATION SIGNAL. HOWEVER, PRIOR TO PUSHING THE RESET SWITCH, 14 VALVE CONTROL SWITCHES MUST BE IN THE 'CLOSED' POSITION TO ENABLE THE RESET RELAY TO BE ENERGIZED. THE PROCEDURE DID NOT REQUIRE PLACING THE APPROPRIATE VALVE CONTROL SWITCHES IN THE 'CLOSED' POSITION. THEREFORE, WHEN THE RESET SWITCH WAS PUSHED, THE RESET RELAY DID NOT ENERGIZE TO RESET THE ISOLATION. AS A RESULT, THE ISOLATION SIGNAL REMAINED SEALED-IN AND HV-51-1F009 CLOSED TO THE ISOLATION POSITION WHEN ITS POWER WAS RESTORED.

[208] LIMERICK 1 DOCKET 50-352 LER 85-039
INSTRUMENT VALVE TEST CAUSES SPURIOUS ESF ACTUATION.
EVENT DATE: 033085 REPORT DATE: 042585 NSSS: GE TYPE: BWR

(NSIC 193857) ON 3-30-85 WITH UNIT 1 IN COLD SHUTDOWN, AN ESF ACTUATION OCCURRED. TEST ENGINEERS PERFORMING AN INSTRUMENT VALVE 'CHECK-OFF LIST' INITIATED A SPURIOUS NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM ISOLATION SIGNAL WHICH CLOSED THE PRIMARY CONTAINMENT ATMOSPHERE CAMPLING ISOLATION VALVES. THIS ESF ACTUATION WAS CAUSED BY A FALSE LOW REACTOR WATER LEVEL SIGNAL CAUSED BY PERSONNEL ERROR. THE INSTRUMENT VALVE CHECK-OFF LIST IS PERFORMED PERIODICALLY TO VERIFY THE PROPER OPEN OR CLOSED POSITION OF PARTICULAR INSTRUMENT RACK VALVES. THE ISOLATION WAS IMMEDIATELY RESET, AND THE SAMPLING VALVES WERE RE-OPENED. A FORMAL PROCEDURE COVERING THE INSTRUMENT VALVE CHECKOFF LIST IS BEING WRITTEN TO MITIGATE SIMILAR OCCURRENCES. THERE WERE NO ADVERSE EFFECTS.

[209] LIMERICK 1 DOCKET 50-352 LER 85-040
INSTRUMENT TEST CAUSES SPURIOUS ESF ACTUATION.
EVENT DATE: 033085 REPORT DATE: 042585 NSSS: GE TYPE: BWR

(NSIC 193858) ON 3-30-85 AT 2111 HRS WITH UNIT 1 IN COLD SHUTDOWN, A DIVISION 4 LOCA SIGNAL OCCURRED. THE 'D' CORE SPRAY AND 'D' RHR PUMPS OF THE ECCS STARTED AND BEGAN INJECTING WATER INTO THE REACTOR VESSEL. IN ADDITION, THE 'D-14' DG STARTED AND DIV 4 LOAD SHEDDING AND PRIMARY CONTAINMENT GROUP ISOLATION OCCURRED. THE HIGH DRYWELL PRESSURE COULD NOT BE CONFIRMED BY REDUNDANT INSTRUMENTATION IN THE MAIN CONTROL ROOM NOR BY TRIP UNITS IN THE AUX EQUIPMENT ROOM. THE 'D' CORE SPRAY AND 'D' RHR PUMPS WERE SHUTDOWN, THE LOCA SIGNAL WAS RESET, CONTAINMENT ISOLATION WAS RESET, AND LOAD RESTORED TO THE EQUIPMENT TRIPPED UPON RECEIPT OF THE DIV 4 LOCA SIGNAL USING SPECIAL EVENT AND GENERAL PLANT PROCEDURES. VESSEL INVENTORY INCREASED APPROX 10 INCHES AS A RESULT OF THE ECCS INJECTION. INVESTIGATION HAS DETERMINED THAT AN INSTRUMENT VALVING ERROR DURING A SURVEILLANCE TEST OF THE CONTAINMENT INSTRUMENT GAS DIFFERENTIAL PRESSURE SWITCH PRESSURIZED A SENSING LINE WITH INSTRUMENT GAS RESULTING IN THE DIV 4 LOCA SIGNAL.

[210] LIMERICK 1 DOCKET 50-352 LER 85-041
ERRATIC PRESSURE SIGNAL CAUSES REACTOR ENCLOSURE HVAC ISOLATION.
EVENT DATE: 040185 REPORT DATE: 050185 NSSS: GE TYPE: BWR

(NSIC 193808) WITH UNIT 1 IN COLD SHUTDOWN, THE REACTOR ENCLOSURE HVAC SYSTEM ISOLATED AS A RESULT OF A SPURIOUS LOW REACTOR ENCLOSURE TO OUTSIDE AIR DIFFERENTIAL PRESSURE SIGNAL. IN CONJUNCTION WITH THE ISOLATION, WHICH CLOSES THE SUPPLY AND EXHAUST DAMPERS TO THE REACTOR ENCLOSURE HVAC SYSTEM, THE SBTG AND THE REACTOR ENCLOSURE RECIRCULATION SYSTEM RESPONDED CORRECTLY. AN INVESTIGATION BY I&C TECHNICIANS AND TEST ENGINEERS POSTULATED A SPURIOUS OPENING OF THE

CURRENT LOOP IN THE EMERGENCY RESPONSE FACILITY DATA SYSTEM PORTION OF THE CIRCUIT. THE ISOLATION WAS RESET AND NEITHER THE ERRATIC DIFFERENTIAL PRESSURE READINGS NOR ISOLATION HAVE RECURRED. EFFORTS TO REPRODUCE THE ISOLATION HAVE BEEN UNSUCCESSFUL.

[211] LIMERICK 1 DOCKET 50-352 LER 85-045
SAFETY PARAMETER DISPLAY SYSTEM OPERABILITY DEADLINE MISSED.
EVENT DATE: 040185 REPORT DATE: 050185 NSSS: GE TYPE: BWR

(NSIC 193811) LIMERICK GENERATING STATION LICENSE CONDITION 2.C.8.(B) REQUIRES THAT THE SAFETY PARAMETER DISPLAY SYSTEM (SPDS) BE MADE OPERABLE BY 4-1-85. THE SPDS, AS DESCRIBED IN SECTION 18.2 OF NUREG-0991, SER SUPPLEMENT 3, WAS NOT FULLY OPERABLE BY 4-1-85 BECAUSE THE SPDS VALIDATION PROCESS, WHICH MUST BE COMPLETED PRIOR TO RELEASING THE SPDS FOR USE BY THE CONTROL ROOM OPERATORS, IS NOT COMPLETE. THE FINAL ACTIVITIES IN THE SPDS VALIDATION PROCESS REQUIRE PLANT POWER LEVELS UP TO AND INCLUDING 100% POWER. THESE ACTIVITIES INVOLVE TESTING THE PARAMETER VALIDATION ALGORITHMS AND COMPOSED POINT LOGIC AT DEFINED PLANT POWER LEVELS DURING THE POWER ASCENSION TEST PROGRAM. THEREFORE, THE SPDS IS NOT CONSIDERED TO BE FULLY OPERABLE AT THIS TIME BECAUSE THE LIMIT OF THE 5% POWER LICENSE HAS MADE THE COMPLETION OF THE NECESSARY SPDS VALIDATION TESTING IMPOSSIBLE.

[212] LIMERICK 1 DOCKET 50-352 LER 85-042
BROKEN CHLORINE DETECTOR TAPE CAUSES CONTROL ROOM HVAC ISOLATION.
EVENT DATE: 040285 REPORT DATE: 050285 NSSS: GE TYPE: BWR
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193809) ON 4-2-85, AT 2:05 PM, WITH THE UNIT IN STARTUP AT 2% POWER, AN ESP ACTUATION OCCURRED. FAILURE OF THE 'D' CONTROL ROOM CHLORINE DETECTOR CAUSED THE NORMAL VENTILATION TO ISOLATE AND THE 'B' TRAIN OF THE CONTROL ROOM EMERGENCY FRESH AIR SYSTEM TO START. THE SAMPLE TAPE IN THE DETECTOR INSTRUMENT HAD BROKEN, CAUSING THE ANALYZER TO INDICATE FULL SCALE. THE TAPE WAS REPAIRED, THE ANALYZER WAS TESTED AND RETURNED TO SERVICE, AND THE ISOLATION WAS RESET. PREVIOUS OCCURRENCES HAVE BEEN REPORTED AS LER'S 84-008, 84-010, 84-028, 84-033, 84-046, 85-029, 30 AND 31. VARIOUS MODIFICATIONS TO THE DETECTOR INSTRUMENT HAVE BEEN IMPLEMENTED. SEVERAL MORE ARE UNDER INVESTIGATION. THERE WERE NO ADVERSE EFFECTS.

[213] LIMERICK 1 DOCKET 50-352 LER 85-043
FAILURE TO PERFORM REQUIRED HOURLY FIRE WATCHES.
EVENT DATE: 040285 REPORT DATE: 050285 NSSS: GE TYPE: BWR

(NSIC 193810) ON 4-2-85 THE REQUIRED HOURLY FIRE WATCH WAS NOT PERFORMED WITHIN THE TIME SPECIFIED BY TECH SPEC 3/4.7.7 FOR 3 AREAS ON ELEVATION 283 OF THE REACTOR ENCLOSURE. THESE FIRE WATCH PATROLS WERE REQUIRED BECAUSE OF MISSING INTERNAL CONDUIT SEALS FOR TELEPHONE LINES. EACH OF THESE AREAS WERE PATROLLED APPROX 91 MINS AFTER AN EARLIER PATROL. ONE INDIVIDUAL WAS RESPONSIBLE FOR THE 3 AREAS ON THE SAME ELEVATION AND FAILED TO INSPECT THESE AREAS OF THE REACTOR ENCLOSURE. THIS INDIVIDUAL HAS BEEN COUNSELLED ON THE IMPORTANCE OF PERFORMING AND SIGNING OFF THESE INSPECTIONS WITHIN THEIR DESIGNATED TIME PERIODS.

[214] LIMERICK 1 DOCKET 50-352 LER 85-044
RADIO INTERFERENCE CAUSES SPURIOUS HALON INJECTION AND VENTILATION ISOLATION.
EVENT DATE: 041085 REPORT DATE: 051085 NSSS: GE TYPE: BWR

(NSIC 194026) ON 4-10-85 WITH UNIT 1 IN THE STARTUP CONDITION THE AUX EQUIPMENT ROOM 'A' SUPPLY FAN TRIPPED DUE TO ELECTRICAL INTERFERENCE CAUSED BY A RADIO

TRANSMISSION FROM A PORTABLE, HAND-HELD TRANSMITTER/RECEIVER UNIT BEING UTILIZED WITHIN AN ELECTRICAL CABINET. TECHNICIANS WERE PERFORMING WORK ON TEMPERATURE CONTROL VALVES FOR THE AUX EQUIPMENT ROOM 'A' SUPPLY FAN COILS. WHEN THE 'B' SUPPLY FAN AUTOMATICALLY STARTED, A HALON INJECTION INTO THE AUX EQUIPMENT ROOM OCCURRED. SUBSEQUENTLY, A 'HIGH TOXIC CHEMICAL CONCENTRATION' ALARM WAS RECEIVED IN THE CONTROL ROOM AND AT 1:42 PM, A MAIN CONTROL ROOM VENTILATION ISOLATION WAS MANUALLY INITIATED IN ACCORDANCE WITH SPECIAL EVENT PROCEDURE SE-2, 'TOXIC GAS'. THE ALARM WAS DIRECT RESULT OF THE HALON INJECTION AND NO ACTUAL FIRE CONDITION EXISTED IN THE AUX EQUIPMENT ROOM. THE HALON INJECTION WAS CAUSED BY A HEAT DETECTOR WHICH IS SENSITIVE TO THE RAPID INCREASE IN PRESSURE RESULTING FROM THE TRIPPING OF THE NORMAL SUPPLY FAN AND SUBSEQUENT AUTO-START OF THE STANDBY SUPPLY FAN. AN INVESTIGATION INTO THE PURCHASE OF NEW HEAT DETECTORS WHICH ARE NOT PRESSURE SENSITIVE IS BEING CONDUCTED. ALL SMOKE DETECTORS AND HEAT DETECTORS IN THE AUX EQUIPMENT ROOM ARE OPERABLE FOR ALARM PURPOSE; HOWEVER, THE AUTOMATIC INJECTION OF HALON HAS BEEN DISARMED AS AN IMMEDIATE CORRECTIVE ACTION. ADDITIONALLY, A FIRE WATCH IS POSTED IN THE AREA.

[215] LIMERICK 1 DOCKET 50-352 LER 85-051
TESTING ERROR CAUSES ISOLATION OF THE REACTOR WATER CLEANUP SYSTEM.
EVENT DATE: 050785 REPORT DATE: 052985 NSSS: GE TYPE: BWR

(NSIC 193973) ON 5-7-85, AT 1012 HRS WITH UNIT 1 IN COLD SHUTDOWN, THE RWCU SYSTEM INBOARD SUCTION VALVE CLOSED TO THE ISOLATION POSITION WHEN A SIMULATED HIGH DIFFERENTIAL FLOW SIGNAL WAS INSERTED INTO THE ISOLATION LOGIC DURING SURVEILLANCE TESTING. THE CAUSE OF THE EVENT WAS POOR COMMUNICATION BETWEEN THE INSTRUMENT AND CONTROL TECHNICIANS AND CONTROL ROOM OPERATORS DURING THE FUNCTIONAL TEST OF THE FLOW DIFFERENTIAL SWITCH OF THE RWCU SYSTEM INBOARD SUCTION VALVE. THE ISOLATION SIGNAL WAS CLEARED AND THE RWCU SYSTEM WAS RETURNED TO SERVICE AT 1025 HRS THE SAME DAY. PREVIOUS SIMILAR OCCURRENCES RELATING TO FAILURE OF COMMUNICATIONS: LER 85-033; 85-006; 85-003; 84-031. PREVIOUS SIMILAR OCCURRENCES RELATING TO INADVERTENT RWCU SYSTEM ISOLATION ON HIGH DIFFERENTIAL FLOW: LER 85-003; 85-002; 84-031.

[216] MAINE YANKEE DOCKET 50-309 LER 85-001
UNLOCKED ECCS VALVE.
EVENT DATE: 021185 REPORT DATE: 031485 NSSS: CE TYPE: PWR

(NSIC 193713) ON 2-11-85 A LPSI HEADER STOP VALVE WAS TAKEN OUT OF SERVICE FOR MAINTENANCE. THE VALVE WAS OPENED TO ITS SAFEGUARDS POSITION AND DISABLED BY LOCKING OPEN ITS 2 SUPPLY BREAKERS. THE VALVE HANDWHEEL WAS NOT LOCKED AS REQUIRED BY TECH SPEC 3.6. BOTH LPSI TRAINS WERE CONTINUOUSLY CAPABLE OF PERFORMING THEIR SAFEGUARDS FUNCTION. VALVE LSI-M-31 HAS 2 FUNCTIONS. IT OPENS ON RECEIPT OF A SAFETY INJECTION ACTUATION SIGNAL TO ALIGN LPSI TO THE RCS. IT CAN ALSO BE REMOTELY CLOSED FROM THE MAIN CONTROL BOARD FOR CONTAINMENT ISOLATION. SINCE THIS VALVE IS COMMON TO BOTH LPSI TRAINS, PLANS WERE MADE TO DISABLE IT OPEN IN ITS SAFEGUARDS POSITION TO SATISFY PLANT TECH SPECS FOR OPERABLE SAFEGUARD TRAINS.

[217] MAINE YANKEE DOCKET 50-309 LER 85-002
MANUAL REACTOR TRIP ON CONDENSER DIFFERENTIAL PRESSURE.
EVENT DATE: 031065 REPORT DATE: 041085 NSSS: CE TYPE: PWR

(NSIC 193890) ON 3-10-85 AT 0745 A MANUAL REACTOR TRIP WAS INITIATED WHEN CONDENSER DIFFERENTIAL PRESSURE EXCEEDED ITS ADMINISTRATIVE OPERATING LIMIT. THE PLANT WAS OPERATING AT 80% POWER FOR INVESTIGATION OF CHLORIDE INTRUSION INTO THE MAIN CONDENSER. AS OPERATORS WERE RETURNING A CONDENSER WATERBOX TO SERVICE, CIRCULATING WATER FLOW DECREASED IN AN ADJACENT WATERBOX. DIFFERENTIAL PRESSURE BETWEEN THE TWO HALVES OF THE CONDENSER INCREASED. THE REACTOR WAS MANUALLY

TRIPPED TO RESTORE BALANCED PRESSURE BETWEEN CONDENSER HALVES. PLANT SAFETY SYSTEMS RESPONDED NORMALLY FOLLOWING THE TRIP. THE PROCEDURE FOR CIRCULATING WATER SYSTEM OPERATION WAS REVISED TO PREVENT RECURRENCE.

[218] MCGUIRE 1 DOCKET 50-369 LER 84-022
DESIGN DEFICIENCY IN CONTROL ROOM FILTER TRAIN PIPING.
EVENT DATE: 072084 REPORT DATE: 082084 NSSS: WE TYPE: PWR

(NSIC 194009) ON 7-11-84, AS A RESULT OF A SIMILAR DEFICIENCY IDENTIFIED AT CATAWBA, IT WAS DISCOVERED THAT FIRE PROTECTION AND DRAIN PIPING SERVING THE CONTROL ROOM PRESSURIZATION FILTER TRAINS DO NOT INCORPORATE SEISMIC DESIGN CRITERIA. A CONTROL ROOM DOSE ANALYSIS PERFORMED USING DESIGN BASIS ASSUMPTIONS AND METHODOLOGY INDICATED A POTENTIAL CONTROL ROOM DOSE GREATER THAN GENERAL DESIGN CRITERIA (GDC) 19. THIS DESIGN DEFICIENCY IS REPORTABLE UNDER 10CFR50.73(A)(2)(V) AND 10CFR21. SUBSEQUENT ANALYSIS, PERFORMED USING AVAILABLE PLANT-SPECIFIC DATA, INDICATED THAT CONTROL ROOM AIR CLEANUP SYSTEMS COULD PERFORM THEIR INTENDED SAFETY FUNCTION. MODIFICATIONS ARE PLANNED WHICH WILL ENSURE MAXIMUM PROTECTION FOR OPERATING PERSONNEL.

[219] MCGUIRE 2 DOCKET 50-370 LER 85-002
SNUBBERS REMOVED WITHOUT PROPER CLEARANCE.
EVENT DATE: 012385 REPORT DATE: 022585 NSSS: WE TYPE: PWR

(NSIC 193778) IT WAS DETERMINED THAT THE REMOVAL OF 2 SNUBBERS AS PART OF A NUCLEAR STATION MODIFICATION WAS PERFORMED WITHOUT PROPER ADMINISTRATIVE CONTROLS. A SUBSEQUENT ANALYSIS SHOWED THAT REMOVAL OF THE SNUBBERS HAD NO EFFECT ON THE OPERABILITY OF THE SYSTEM, CHEMICAL AND VOLUME CONTROL. NRC REGION II HAD BEEN NOTIFIED IN 12-83 OF DUKE'S INTENT TO REMOVE THE SNUBBERS, AS REQUIRED BY TECH SPECS. HOWEVER, THE SNUBBERS WERE REMOVED BY CRAFT PERSONNEL WITHOUT THE PRIOR KNOWLEDGE AND CONSENT OF THE SHIFT SUPERVISOR. THE MAJOR CAUSE OF THIS EVENT IS CONSIDERED TO BE AN ADMINISTRATIVE DEFICIENCY, DUE TO INADEQUATE TRAINING AND GUIDANCE PROVIDED TO CRAFT PERSONNEL BY THEIR SUPERVISION. A PROCEDURAL DEFICIENCY ALSO CONTRIBUTED TO THIS EVENT, IN THAT A MAINTENANCE PROCEDURE DID NOT CLEARLY ENOUGH CONVEY THE REQUIREMENT FOR A SHIFT SUPERVISOR'S SIGNATURE. CORRECTIVE ACTIONS WILL ADDRESS CLARIFICATION, IN BOTH INSTRUCTION TO CRAFT PERSONNEL AND PROCEDURES, AS TO THE REQUIREMENTS FOR PRIOR APPROVAL BY THE SHIFT SUPERVISOR.

[220] MCGUIRE 2 DOCKET 50-370 LER 85-004
FIRE BARRIER PENETRATION INOPERABLE.
EVENT DATE: 020485 REPORT DATE: 030785 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: MCGUIRE 1 (PWR)

(NSIC 193729) ON 2-4-85, A SMALL HOLE WAS DISCOVERED IN THE FLOOR OF THE CONTROL ROOM. THE HOLE WAS IN A METAL PLATE WHICH COVERED A FIRE BARRIER PENETRATION, THUS RENDERING THE FIRE BARRIER INOPERABLE. THE ORIGIN OF THE HOLE IS UNKNOWN. FOLLOWING THE DISCOVERY, A FIRE WATCH WAS ESTABLISHED, PENDING REPAIR OF THE HOLE. THE UNIT WAS IN MODE 5 AT THE TIME OF DISCOVERY.

[221] MCGUIRE 2 DOCKET 50-370 LER 85-006
VIOLATION OF CONTAINMENT INTEGRITY DURING CORE ALTERATIONS.
EVENT DATE: 021985 REPORT DATE: 032585 NSSS: WE TYPE: PWR

(NSIC 193779) ON 2-19-85, CONTAINMENT INTEGRITY OF MCGUIRE UNIT 2 WAS VIOLATED WHILE CORE ALTERATIONS WERE IN PROGRESS. A VALVE IN THE AUX STEAM SUPPLY SYSTEM WAS DISASSEMBLED FOR REPAIR, CREATING A FLOW PATH FROM CONTAINMENT TO THE INTERIOR DOGHOUSE. THE CORE ALTERATIONS IN PROGRESS AT THE TIME CONSISTED OF

UNLATCHING CONTROL RODS, AND DID NOT INVOLVE FUEL MOVEMENT. THE CAUSE OF THIS EVENT IS AN ADMINISTRATIVE DEFICIENCY, BECAUSE WORK WHICH AFFECTED CONTAINMENT INTEGRITY WAS NOT ADEQUATELY CONTROLLED. IN THIS INSTANCE, THE NUMBER OF THE VALVE TO BE REPAIRED WAS ENTERED INCORRECTLY INTO A COMPUTER, AND APPROVAL TO BEGIN WORK WAS GRANTED BASED ON THAT INCORRECT VALVE NUMBER.

[222] MILLSTONE 1 DOCKET 50-245 LER 83-028 REV 1
UPDATE ON AIR EJECTOR OFF-GAS MONITOR FAILURE.
EVENT DATE: 093083 REPORT DATE: 102384 NSSS: GE TYPE: BWR

(NSIC 193950) ON 9-30-83, AT 2300 HRS, OFF-GAS RADIATION MONITOR, CHANNEL 2, FAILED DOWNSCALE. OFF-GAS RADIATION MONITOR, CHANNEL 2, WAS DECLARED INOPERABLE AND AN INVESTIGATION IMMEDIATELY INITIATED. TECH SPEC 3.2.D.1 REQUIRES BOTH AIR EJECTOR OFF-GAS RADIATION MONITORS, CHANNEL 1 AND 2, TO BE OPERABLE DURING REACTOR POWER OPERATION. INVESTIGATION REVEALED THE OFF-GAS MONITOR FAILED DUE TO SHORTED RESISTOR R142. RESISTOR, R142, WAS REPLACED AND THE OFF-GAS MONITOR WAS RECALIBRATED. DURING THE 1984 REFUEL OUTAGE, INSTRUMENTATION AND CONTROLS PERSONNEL REPLACED RESISTOR R142 IN ALL LOGARITHMIC RADIATION MONITOR DRAWERS.

[223] MILLSTONE 1 DOCKET 50-245 LER 83-029 REV 1
UPDATE ON DRYWELL PRESSURE SWITCH SETPOINT DRIFT.
EVENT DATE: 110883 REPORT DATE: 102384 NSSS: GE TYPE: BWR
VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 193951) ON 11-8-83, AT 1500 HRS, WHILE PERFORMING DRYWELL HIGH PRESSURE FUNCTIONAL AND CALIBRATION TEST, HIGH DRYWELL PRESSURE SWITCHES 1620B AND 1620C TRIPPED AT 2.07 AND 2.02 PSIG RESPECTIVELY. THIS RESULTED IN BOTH CHANNELS BEING DECLARED INOPERABLE. TECH SPEC 3.1 REQUIRES A HIGH DRYWELL PRESSURE TRIP LEVEL SETTING OF LESS THAN OR EQUAL TO 2 PSIG. SIMILAR OCCURRENCE 78-24/3L. TESTING PERFORMED ON THE MICRO-SWITCHES FOR 1620B AND 1620C INDICATED AN UNUSUALLY HIGH RESISTANCE ACROSS THE CONTACTS. THIS RESISTANCE COULD RESULT IN SETPOINT DRIFT AND A SUBSEQUENT OUT OF CALIBRATION CONDITION. THE SWITCHES WERE RESET TO THEIR REQUIRED SETPOINT AND SATISFACTORILY TESTED. DURING THE 1984 REFUEL OUTAGE ALL DRYWELL HIGH PRESSURE SWITCHES WERE REPLACED WITH QUALIFIED STATIC-O-RING PRESSURE SWITCHES.

[224] MILLSTONE 1 DOCKET 50-245 LER 83-033 REV 1
UPDATE ON STANDBY GAS TREATMENT SYSTEM TRAIN INOPERABLE.
EVENT DATE: 112683 REPORT DATE: 011485 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 193742) ON 11-26-83, AT 1530 HRS WHILE DEINERTING FOR COLD SHUTDOWN, THE 5KW HEATER FOR THE 'B' STANDBY GAS TREATMENT TRAIN WOULD NOT ENERGIZE. THE 'B' STANDBY GAS TREATMENT TRAIN WAS DECLARED INOPERABLE AND ON INVESTIGATION INITIATED. TECH SPEC 3.7.B.1 REQUIRES BOTH TRAINS OF THE STANDBY GAS TREATMENT SYSTEM TO BE OPERABLE AT ALL TIMES WHEN SECONDARY CONTAINMENT INTEGRITY IS REQUIRED. INVESTIGATION REVEALED THAT A SCREW FELL OUT OF PLACE IN HFA RELAY 11T-15RCSXB WHICH RESULTED IN A LOSS OF CONTINUITY IN THE HEATER CONTACT CIRCUIT. THE SCREW WAS REINSTALLED AND THE RELAY RETESTED SATISFACTORILY. TO PREVENT A RECURRENCE, THE RELAY SETUP PROCEDURE WAS REVISED TO INCLUDE A PROVISION FOR VERIFYING THE TIGHTNESS OF THE SCREW. ADDITIONALLY, DURING THE 1984 REFUEL OUTAGE A RANDOM SAMPLE OF 100 HFA RELAYS WERE VISUALLY INSPECTED FOR LOOSE SCREWS AND FOUND ACCEPTABLE.

[225] MILLSTONE 1 DOCKET 50-245 LER 84-008 REV 1
 UPDATE ON CRACKS FOUND IN PIPE WELDS.
 EVENT DATE: 042784 REPORT DATE: 121084 NSSS: GE TYPE: BWR
 VENDOR: DRAVO, INC.

(NSIC 193695) DURING THE 1984 REFUEL OUTAGE AUGMENTED INSERVICE INSPECTIONS WERE PERFORMED ON PORTIONS OF CLASS I AND II SERVICE SENSITIVE SYSTEMS PER NRC GENERIC LETTER NO. 84-11, "INSPECTIONS OF BWR STAINLESS STEEL PIPE". ADDITIONALLY, AN ULTRASONIC TEST OF THE REACTOR RECIRCULATION SYSTEM WAS COMPLETED AS A PREREQUISITE TO PERFORMING INDUCTION HEAT STRESS IMPROVEMENT (IHSI). THE RESULTS OF THE ULTRASONIC TESTING AND ADDITIONAL NONDESTRUCTIVE EXAMINATION REVEALED THAT A TOTAL OF 23 WELDS EXHIBITED REPORTABLE LINEAR INDICATIONS KNOWN AS INTERGRANULAR STRESS CORROSION CRACKS (IGSCC). OF THESE WELDS, 7 WERE WELD OVERLAY REPAIRED, 15 WERE REPLACED WITH LOW-CARBON STAINLESS STEEL AND 1 WAS ACCEPTED IN THE "AS FOUND" CONDITION SUBSEQUENT TO AN EVALUATION. FOLLOWING THE ABOVE REPAIRS, THE AFFECTED SYSTEMS WERE HYDROSTATICALLY PRESSURE TESTED AND DECLARED OPERABLE.

[226] MILLSTONE 2 DOCKET 50-336 LER 85-002
 INADVERTENT ISOLATION OF CONTAINMENT PURGE VALVES.
 EVENT DATE: 030285 REPORT DATE: 040185 NSSS: CE TYPE: PWR

(NSIC 193901) WHEN IN MODE 5 AND AGAIN WHEN THE CORE WAS OFF-LOADED, THE ENGINEERED SAFETY ACTUATION SYSTEM PROCESSED A CONTAINMENT PURGE VALVE ISOLATION SIGNAL THAT WAS GENERATED BY A CONTAINMENT AIR MONITORING SYSTEM RADIATION MONITOR TRIPPING WHICH SATISFIED THE 1 OUT OF 4 TRIP LOGIC AND CONSEQUENTLY CLOSED THE CONTAINMENT PURGE VALVES. THE RADIATION MONITOR WAS TRIPPED DURING TROUBLESHOOTING FOR AN INTERMITTENT ALARM PROBLEM WHEN AN I&C TECHNICIAN AND A REACTOR OPERATOR UNINTENTIONALLY CAUSED THE RADIATION MONITOR TO FAIL. THE RADIATION MONITOR WAS RESTORED TO ITS OPERATING MODE AND THE CONTAINMENT PURGE VALVES WERE RE-OPENED BY OPERATIONS AFTER THE CAUSE OF THE ACTUATION WAS DETERMINED. IN ORDER TO PREVENT RECURRENCE, SIGNS WERE PLACED AT THE RADIATION MONITOR LOCATIONS WHICH WILL ALERT PERSONNEL THAT THE PURGE VALVES ARE OPEN. IN ADDITION, THE RADIATION MONITOR CIRCUITRY WILL BE REVIEWED SO IMPROVEMENTS CAN BE MADE.

[227] MILLSTONE 2 DOCKET 50-336 LER 85-006
 MAINTENANCE ERROR CAUSES ESAS CHANNEL II ACTUATION.
 EVENT DATE: 032985 REPORT DATE: 042685 NSSS: CE TYPE: PWR
 VENDOR: CONSOLIDATED CONTROLS CORP.

(NSIC 193972) WITH THE UNIT IN AN UNDEFINED MODE (NO FUEL IN THE REACTOR VESSEL), CHANNEL II OF THE ENGINEERED SAFEGUARDS ACTUATION SYSTEM (ESAS) PROCESSED A SAFETY INJECTION ACTUATION SIGNAL (SIAS), A CONTAINMENT ISOLATION ACTUATION SIGNAL (CIAS), AND AN ENCLOSURE BLDG FILTRATION ACTUATION SIGNAL (EBFAS). THESE SIGNALS WERE GENERATED DURING THE INSTALLATION OF NEW RESPONSE TIME TESTED RELAYS BY I&C TECHNICIANS. SPECIFICALLY, REMOVAL OF THE SIAS BLOCK RELAY TRIGGERED FULL CHANNEL II ESAS. FOLLOWING RECEIPT OF THESE SIGNALS, THE NEW RELAYS WERE PROMPTLY INSTALLED. ALL PROCEDURES WERE FOLLOWED AND ALL EQUIPMENT FUNCTIONED AS DESIGNED WITH THE EXCEPTION OF DAMPER, 2-AC-11, (PURGE EXHAUST DISCHARGE DAMPER); ITS OPERATION COULD NOT BE VERIFIED DUE TO DUAL INDICATION ON THE CONTROL BOARD. SUBSEQUENT TESTING OF THIS DAMPER VERIFIED PROPER RESPONSE TO THE ACCIDENT SIGNAL. PROCEDURE CHANGES WILL BE PROCESSED TO PREVENT FUTURE INADVERTENT ESAS ACTUATIONS.

[228] MILLSTONE 2 DOCKET 50-336 LER 85-005
 TESTING ERROR CAUSES LOSS OF POWER ON 4.16 KV BUS 24D.
 EVENT DATE: 040185 REPORT DATE: 043085 NSSS: CE TYPE: PWR

(NSIC 193971) WHILE IN A REFUEL OUTAGE, IN AN UNDEFINED MODE (CORE FULLY OFF-LOADED), RETEST OF A CONTROL SWITCH IN THE CONTROL CIRCUITRY FOR THE MAIN FEEDER BREAKER FROM THE RESERVE STATION SERVICE TRANSFORMER (RSST) TO THE 4.16 KV EMERGENCY BUS 24D CAUSED A LOSS OF NORMAL POWER SIGNAL TO BE GENERATED ON THE FACILITY 2 BUS. THE DG STARTED, HOWEVER, DID NOT REENERGIZE THE BUS DUE TO THE BREAKER TEST IN PROGRESS. FACILITY 2 EQUIPMENT AND SYSTEMS WERE OUT OF SERVICE AT THE TIME OF THE OCCURRENCE. THE CAUSE OF THE OCCURRENCE WAS A FAILURE TO RECOGNIZE ALL COMPONENTS AND SIGNALS EFFECTED BY RELAY TESTING. TEST PERSONNEL INVOLVED WERE INSTRUCTED TO EXHIBIT INCREASED CAUTION WHEN RESEARCHING CIRCUITS TO BE TESTED AND THE USE OF PRE-TEST BRIEFINGS HAS BEEN URGED TO REVIEW ALL ASPECTS OF A TEST. THIS PRECAUTION HAS BEEN ADDED TO THE ELECTRICAL FUNCTION TEST PROCEDURE. NO FURTHER CORRECTIVE ACTION IS REQUIRED.

[229] MONTICELLO DOCKET 50-263 LER 85-007
 WIDE RANGE GAS MONITOR FAILURE.
 EVENT DATE: 030885 REPORT DATE: 042585 NSSS: GE TYPE: BWR

(NSIC 193752) THE CHANNEL B REACTOR BLDG VENT WIDE RANGE GAS MONITOR ISOLATED THE REACTOR BLDG VENTILATION AND STARTED THE STANDBY GAS TREATMENT SYSTEM WHEN A VALVE WAS NOT POSITIONED PROPERLY DURING ROUTINE PERFORMANCE TEST #0389 REACTOR BLDG VENT NOBLE GAS GRAB SAMPLING. VALVE VGM-35-2 WAS INADVERTENTLY LEFT CLOSED. WHEN THE PLANT RADIATION PROTECTION SPECIALIST PERFORMING THE PROCEDURE STARTED CLOSING VALVE VGM-29-2 TO OBTAIN THE PROPER SAMPLE FLOW RATE, ALL SAMPLE FLOW WAS CUT OFF TO B CHANNEL REACTOR BLDG VENTILATION WIDE RANGE GAS MONITOR. THE LOSS OF SAMPLE FLOW INITIATED HIGH AND INOP TRIPS OF THE MONITOR, RESULTING IN ISOLATION OF THE REACTOR BLDG VENTILATION AND STARTUP OF THE STANDBY GAS TREATMENT SYSTEM. THIS EVENT WAS CAUSED BY PERSONNEL ERROR. THE ERROR WAS CORRECTED AND TRIPS WERE RESTORED.

[230] MONTICELLO DOCKET 50-263 LER 85-006
 CONTROL ROOM HVAC ISOLATED DUE TO BROKEN TOXIC GAS DETECTOR TAPE.
 EVENT DATE: 031385 REPORT DATE: 041285 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193844) DURING POWER OPERATION ON 3-14-85, AT 1600 THE EFT SYSTEM AUTOMATICALLY TRANSFERRED TO THE TOXIC CHEMICAL EMERGENCY MODE WHEN THE HYDROGEN CHLORIDE MONITOR AT-9036 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 A SMALL IMPERFECTION IN THE TAPE SURFACE THAT CAUGHT ON THE DETECTOR HEAD AND INITIATED A TEAR. THERE HAS BEEN 1 PREVIOUS SIMILAR OCCURRENCE, LER 84-009.

[231] MONTICELLO DOCKET 50-263 LER 85-008
 SCRAM RESULTING FROM OFFSITE TRANSFORMER GROUNDING.
 EVENT DATE: 041185 REPORT DATE: 051085 NSSS: GE TYPE: BWR

(NSIC 193882) AT AN OFFSITE SUBSTATION DURING THE RESTORATION OF A TRANSFORMER THAT WAS OUT OF SERVICE FOR MAINTENANCE, A PHASE FAULT OCCURRED. THE FAULT WAS CAUSED BY A NON-PLANT WORKER WHO NEGLECTED TO REMOVE GROUNDING CABLES AFTER COMPLETION OF MAINTENANCE ACTIVITIES. AS A RESULT OF THE TRIPPING CONTROL CIRCUITRY NOT YET BEING ACTIVATED AT TIME OF THE FAULT AND THE FAULT'S EFFECTS ON THE DISTRIBUTION SYSTEM, THE TURBINE CONTROL SYSTEM INITIATED A SCRAM. ACTIONS WERE INITIATED TO RETURN THE PLANT TO NORMAL POWER OPERATION. MODIFICATION OF SUBSTATION RELAYING TO ACTIVATE TRIPPING CONTROL CIRCUITRY EARLIER WILL ALLOW

DETECTION OF FUTURE FAULTS OF THIS TYPE. GROUNDING PRACTICES WILL BE REVIEWED BY THE OFF-SITE GROUPS INVOLVED.

[232] MONTICELLO DOCKET 50-263 LER 85-009
RADIATION MONITOR SPIKE CAUSES REACTOR BUILDING VENTILATION ISOLATION.
EVENT DATE: 041785 REPORT DATE: 051785 NSSS: GE TYPE: BWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 193963) THE CHANNEL A REACTOR BLDG VENT WIDE RANGE GAS MONITOR ISOLATED THE REACTOR BLDG VENTILATION AND STARTED THE STANDBY GAS TREATMENT SYSTEM DUE TO A SPURIOUS HIGH HIGH RADIATION ALARM. THE TRIP WAS ATTRIBUTED TO DIRTY CONNECTIONS ON A CIRCUIT BOARD CAUSED BY SOLDERING FLUX RESIDUES ON THE BOARD FROM MANUFACTURING PROCESSES. ALL TRIPS WERE RESTORED AND THE MONITOR WAS REPAIRED AND RETURNED TO SERVICE.

[233] NINE MILE POINT 1 DOCKET 50-220 LER 85-006
RADIATION MONITOR SPIKE STARTS RB EMERGENCY VENTILATION SYSTEM.
EVENT DATE: 041985 REPORT DATE: 052085 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 193955) DURING NORMAL OPERATION ON 4-19-85, THE AUTOMATIC INITIATION OF THE REACTOR BUILDING EMERGENCY VENTILATION SYSTEM OCCURRED. THIS INITIATION WAS THE RESULT OF AN OFF-NORMAL SPIKING OF THE NO. 11 REACTOR BUILDING VENTILATION DUCT RADIATION MONITOR. THE RADIATION MONITOR WAS SOURCE CALIBRATED BY RADIATION PROTECTION AND SATISFACTORILY RETURNED TO SERVICE.

[234] NORTH ANNA 2 DOCKET 50-339 LER 85-003
UV OUTPUT CARD IN SOLID STATE PROTECTION SYSTEM FAILS.
EVENT DATE: 102984 REPORT DATE: 032585 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 193774) ON 10-29-84 WITH UNIT 2 IN MODE 4, THE TRAIN A UV OUTPUT CARD WAS FOUND TO BE FAILED DURING TESTING. THE FAILURE WOULD HAVE DISABLED A SINGLE TRAIN OF AUTOMATIC REACTOR TRIP CIRCUITRY. THE FAILURE DID NOT AFFECT THE REDUNDANT AUTOMATIC REACTOR TRIP CIRCUITRY OR THE MANUAL REACTOR TRIP CAPABILITY OF EITHER TRAIN. NORTH ANNA HAS HAD 2 PREVIOUS FAILURES OF THE UV OUTPUT CARD. BOTH PREVIOUS FAILURES WERE ON UNIT 2. NONE OF THE FAILURES HAVE OCCURRED DURING POWER OPERATION. THE FIRST FAILURE OCCURRED IN 4-80 AND THE SECOND FAILURE OCCURRED IN 5-83. WESTINGHOUSE WAS CONSULTED TO DETERMINE IF MULTIPLE FAILURES OF THIS OUTPUT CARD HAVE OCCURRED AT OTHER SOLID STATE PROTECTION PLANTS. WESTINGHOUSE HAS ONLY REPORTED FAILURES THAT OCCURRED DURING OUTAGES AFTER MAINTENANCE INSIDE THE REACTOR TRIP SWITCHGEAR CUBICLES. THIS SCENARIO COINCIDES WITH THE LAST 2 FAILURES AT NORTH ANNA. FOR ALL 3 OF THE FAILURES, THE POSSIBILITY EXISTED TO SHORT OUT THE UV OUTPUT CARD DURING MAINTENANCE IN THE REACTOR TRIP BREAKER SWITCHGEAR CUBICLE. THIS REPORT IS BEING SUBMITTED AS A VOLUNTARY LER.

[235] OYSTER CREEK DOCKET 50-219 LER 82-048 REV 1
UPDATE ON ERRONEOUS REACTOR LEVEL INDICATION DUE TO REFERENCE LEG LEAK.
EVENT DATE: 082682 REPORT DATE: 012285 NSSS: GE TYPE: BWR
VENDOR: YARWAY CORP.

(NSIC 193996) DURING SHUTDOWN, THE REACTOR WATER LEVEL INSTRUMENTATION FOR 1 CHANNEL IN EACH RPS AND 1 CHANNEL IN EACH OF SEVERAL SAFETY SYSTEMS WERE RENDERED INOPERABLE AS A RESULT OF A LOSS OF REFERENCE COLUMN HEAD. THIS IS A VIOLATION OF TECH SPEC 3.1.A AND IS REPORTABLE PER TECH SPECS, PARA. 6.9.2.B.2. AS THE REACTOR WAS SHUTDOWN, THE SAFETY SIGNIFICANCE IS CONSIDERED MINIMAL. THE CAUSE

OF ERRONEOUS VESSEL WATER LEVEL INDICATION WAS A DECREASE IN REFERENCE LEG HEAD. THE REFERENCE LEG FOR THE AFFECTED INSTRUMENTS WAS FILLED AND RESTORED AS OPERABLE. A TEST PROGRAM WAS IMPLEMENTED AND RESULTED IN REPLACEMENT OF A VALVE MANIFOLD, REPACKING OF 2 ROOT VALVES, AND REPLACEMENT OF AN INSTRUMENT DIAPHRAGM.

[236] OYSTER CREEK DOCKET 50-219 LER 81-022 REV 1
 UPDATE ON TWO SNUBBERS FOUND INOPERABLE.
 EVENT DATE: 101483 REPORT DATE: 012385 NSSS: GE TYPE: BWR
 VENDOR: PACIFIC SCIENTIFIC COMPANY

(NSIC 193740) WHILE PERFORMING STROKE TESTS ON ALL INSTALLED MECHANICAL SNUBBERS 2 SNUBBERS WERE DEMONSTRATED TO BE INOPERABLE. AS A RESULT OF INOPERABLE SNUBBERS THE MAIN STEAM AND CORE SPRAY SYSTEM MIGHT HAVE BEEN IN A DEGRADED CONDITION DURING A SEISMIC EVENT. SNUBBER N-1-5 DISSASSEMBLY REVEALED SLIGHT WEARING OF THE CAPSTAN SPRING AND CORROSION OF THE MOVING PARTS. FAILURE WAS ATTRIBUTED TO IMPAIRED MOVEMENT CAPABILITY. SNUBBER N-20-4 ALSO REVEALED INTERNAL CORROSION DUE TO A LEAKING PILOT VALVE ON THE EMRV. BOTH WERE REPLACED WITH NEW OPERABLE REPLACEMENT UNITS.

[237] OYSTER CREEK DOCKET 50-219 LER 85-006
 REACTOR SCRAM DUE TO LOW WATER LEVEL.
 EVENT DATE: 022485 REPORT DATE: 032785 NSSS: GE TYPE: BWR

(NSIC 194012) ON 2-24-85, AN AUTOMATIC REACTOR SCRAM OCCURRED DUE TO LOW REACTOR WATER LEVEL DURING A PLANT STARTUP. THE REACTOR WAS OPERATING AT A POWER LEVEL OF 400 MWT WITH LEVEL AND PRESSURE BEING CONTROLLED AUTOMATICALLY. A PLANNED DRYWELL INSPECTION FOR STEAM LEAKS REQUIRED REACTOR POWER TO BE LESS THAN 10% WITH STEAM FLOW MINIMIZED. IN PREPARATION, RODS WERE INSERTED TO DECREASE POWER. THE ROD MOVEMENT CAUSED A LEVEL, POWER AND PRESSURE TRANSIENT WHICH ULTIMATELY LED TO AN AUTOMATIC SCRAM ON LOW LEVEL DESPITE OPERATOR ATTEMPTS TO STABILIZE THE TRANSIENT. IN RESPONSE TO THE SCRAM, ALL CONTROL RODS FULLY INSERTED, ALL PLANT SYSTEMS RESPONDED AS EXPECTED AND CONTROL ROOM OPERATORS BROUGHT THE PLANT TO A SHUTDOWN CONDITION. A POST TRIP REVIEW GROUP MEETING WAS HELD TO REVIEW THE EVENT. THE ROOT CAUSE OF THE EVENT HAS BEEN DETERMINED TO BE OPERATOR ERROR IN INTRODUCING A TOO-RAPID DECREASE IN REACTOR POWER AND THE INABILITY OF THE OPERATORS TO STABILIZE PLANT PARAMETERS. A NON-INDICATING FEEDWATER FLOW RECORDER CONTRIBUTED TO THE OCCURRENCE AND WAS REPAIRED PRIOR TO THE NEXT STARTUP. THE DRYWELL ACCESS PROCEDURE WILL BE REVISED TO CAUTION THE OPERATORS ON THE SENSITIVITY OF LEVEL AND PRESSURE TO POWER CHANGES AT LOW POWER CONDITIONS. SIMILAR EVENT 219/84-030.

[238] OYSTER CREEK DOCKET 50-219 LER 85-007
 FAILURE TO SAMPLE FLOOR DRAIN TANK.
 EVENT DATE: 032085 REPORT DATE: 041985 NSSS: GE TYPE: BWR

(NSIC 193836) ON 3-20-85 DURING A ROUTINE TECH SPEC SURVEILLANCE, IT WAS DISCOVERED BY THE PLANT CHEMISTRY DEPARTMENT THAT THE OUTSIDE FLOOR DRAIN SAMPLE TANK WAS BEING USED BUT HAD NOT BEEN SAMPLED SINCE 3-13-85. THIS IS IN VIOLATION OF TECH SPEC SECTION 4.6.(3)D WHICH REQUIRES THIS TANK TO BE SAMPLED EVERY 72 HRS UNLESS IT HAS BEEN VALVED OUT OF SERVICE AFTER DETERMINING ITS RADIOACTIVE CONTENT. UPON DISCOVERING THAT THE TANK WAS BEING USED BUT NOT SAMPLED, A SAMPLE WAS TAKEN TO CONFIRM THAT THE TANK DID NOT EXCEED THE APPLICABLE TECH SPEC MAXIMUM CURIE LIMIT.

[239] OYSTER CREEK DOCKET 50-219 LER 85-008
 4160V EMERGENCY BUS UNDERVOLTAGE RELAYS AND TIMERS DO NOT MEET NEW TECH SPEC
 REQUIREMENTS.
 EVENT DATE: 040185 REPORT DATE: 043085 NSSS: GE TYPE: BWR

(NSIC 193793) A PLANT ENGINEERING REVIEW OF TECH SPEC AMENDMENT 80 FOUND THAT EXISTING PROCEDURES DID NOT MEET THE NEW TECH SPEC REQUIREMENTS AND CALIBRATION TOLERANCES. EXISTING CALIBRATION DOCUMENTATION WAS REVIEWED FOR DEGRADED VOLTAGE RELAYS AND THE DEGRADED VOLTAGE RELAY TIMERS. ALTHOUGH THEY WERE FOUND TO BE WITHIN THE ACCEPTABLE TOLERANCES STATED IN THE EXISTING PROCEDURES, THE PROCEDURES HAD NOT BEEN REVISED TO INCORPORATE THE RECENTLY ISSUED TECH SPEC REQUIREMENTS. BECAUSE THE AMENDMENT WAS EFFECTIVE ON THE DATE OF ISSUANCE, IT DID NOT PROVIDE FOR AN IMPLEMENTATION PERIOD IN WHICH TO REVISE THE PROCEDURES. IMMEDIATE ACTION WAS TAKEN TO TEMPORARILY CHANGE THE PROCEDURES REQUIRED TO ENSURE COMPLIANCE WITH THE TECH SPEC AMENDMENT.

[240] PALISADES DOCKET 50-255 LER 84-016
 PCS LOOP DIFFERENTIAL PRESSURE SENSING LINE LEAKS.
 EVENT DATE: 081084 REPORT DATE: 091084 NSSS: CE TYPE: PWR

(NSIC 193697) ON 8-10-84, WITH THE PLANT AT 29% POWER, A PRIMARY COOLANT SYSTEM (PCS) LEAK RATE CALCULATION IDENTIFIED EXCESSIVE UNIDENTIFIED PCS LEAKAGE. THE LEAK WAS DISCOVERED TO BE FROM A CRACKED SOCKET WELD ON A PCS LOOP DIFFERENTIAL PRESSURE SENSING LINE. FOLLOWING REPLACEMENT, VISUAL EXAMINATION OF THE PIPING DURING PRESSURE TESTING REVEALED PCS LEAKAGE FROM THE IDENTICAL LOCATION. THE OCCURRENCES WERE ATTRIBUTED TO FATIGUE INDUCED CRACKING OF THE SOCKET WELD. A SUPPORT WAS ADDED TO THE PIPING TO INHIBIT THE DYNAMIC FORCES WHICH RESULTED IN THE FAILURE. THE CAUSE OF THE OCCURRENCES DETERMINED THAT 2 ISOLATION VALVES, WHICH ARE IMMEDIATELY DOWNSTREAM OF THE CRACKED SOCKET WELD LOCATION, HAD BEEN REPLACED DURING THE 1983/1984 REFUELING OUTAGE. THE REPLACEMENT VALVES WERE HEAVIER THAN THE ORIGINAL VALVES BY APPROX 9 LBS. EACH. THE EFFECT OF THE ADDITIONAL WEIGHT WITH NORMAL SYSTEM VIBRATION INDUCES MOTION IN THE CANTILEVER-TYPE CONFIGURATION OF SUFFICIENT MAGNITUDE TO CAUSE THE OBSERVED FATIGUE FAILURE IN THE SOCKET WELD AREA.

[241] PALISADES DOCKET 50-255 LER 85-002
 FAILURE TO PERFORM SAFETY INJECTION TANK SURVEILLANCE.
 EVENT DATE: 021985 REPORT DATE: 032085 NSSS: CE TYPE: PWR

(NSIC 193705) ON 2-19-85, DURING REVIEW OF A COMPLETED TECH SPEC TEST, IT WAS DISCOVERED THAT THE SURVEILLANCE INTERVAL FOR 3 OF 4 SAFETY INJECTION TANKS HAD BEEN EXCEEDED. ALTHOUGH SATISFACTORY RESULTS WERE OBTAINED, THE OVERDUE SAMPLES RESULTED IN A CONDITION THAT CAUSED THE TANKS TO BE ADMINISTRATIVELY INOPERABLE. THEREFORE, A CONDITION PROHIBITED BY TECH SPEC 3.3.2(A) EXISTED IN THAT MORE THAN ONE SAFETY INJECTION TANK WAS INOPERABLE. THE INCIDENT WAS ATTRIBUTED TO PERSONNEL ERROR. DISCIPLINARY ACTION AND COUNSELING OF INVOLVED PERSONNEL WAS PROVIDED. A COMPUTERIZED TRACKING SYSTEM WILL BE DEVELOPED. REFERENCE LER 255/84-018.

[242] PALISADES DOCKET 50-255 LER 85-004
 FAILURE TO PERFORM DAILY HEAT BALANCE.
 EVENT DATE: 041185 REPORT DATE: 051385 NSSS: CE TYPE: PWR

(NSIC 194015) TECH SPEC TABLE 4.1.1, ITEM 1, REQUIRES THAT A CHANNEL ADJUSTMENT OF THE POWER RANGE SAFETY CHANNELS WILL BE PERFORMED DAILY TO AGREE WITH HAND CALCULATIONS. ON 4-11-85 WITH THE PLANT AT 30% POWER, OPERATIONS PERSONNEL INADVERTENTLY UTILIZED THE PREVIOUS DAYS DATA AND THEREFORE, FAILED TO VERIFY THE ADJUSTMENT. THE ERROR WAS NOTED ON 4-12-85 AND PROPER AGREEMENT VERIFIED. NO

ADJUSTMENTS OF THE POWER RANGE CHANNELS WERE REQUIRED. THE OCCURRENCE HAS BEEN ATTRIBUTED TO A PERSONNEL ERROR IN THAT PROCEDURAL REQUIREMENTS WERE NOT PERFORMED. THE ERROR IS CONSIDERED TO BE AN ISOLATED INCIDENT. THE PERSONNEL INVOLVED HAVE BEEN COUNSELED. THE OCCURRENCE WILL BE REVIEWED WITH OTHER OPERATIONS PERSONNEL. SINCE NO ADJUSTMENT WAS REQUIRED FOR THE POWER RANGE CHANNELS, NO ADDITIONAL RISK CAN BE ATTRIBUTED TO THIS OCCURRENCE. A SIMILAR EVENT WAS REPORTED IN LER 85-002. THE PRIOR OCCURRENCE INVOLVED PERSONNEL ERROR AND CERTAIN PROGRAM DEFICIENCIES.

[243] PALO VERDE 1 DOCKET 50-528 LER 85-008
UNANALYZED SAFETY CONDITION INVOLVING THE AUX FEEDWATER SYSTEM.
EVENT DATE: 020485 REPORT DATE: 030685 NSSS: CE TYPE: PWR

(NSIC 194037) THE ASSUMPTION IN THE CESSAR-F CHAPTER 15 SAFETY ANALYSES REGARDING THE DELIVERY OF AUX FEEDWATER FLOW STATES THAT THE MAXIMUM FLOW DELIVERY TO THE SG'S FOLLOWING AUTOMATIC ACTUATION IS 1750 GPM. RECENT ANALYSIS AND CLOSE EXAMINATION OF PUMP HEAD-FLOW CURVES INDICATE THAT AUX FEEDWATER FLOW RATES MAY EXCEED 1750 GPM FOR SOME ACCIDENTS. IT WAS THEN ASSUMED THAT OPERATOR ACTION WOULD PREVENT THIS FROM OCCURRING. HOWEVER, AFTER MEETING WITH THE ARCHITECT - ENGINEER AND THE NSSS VENDOR ON 2-4-85, IT WAS DETERMINED THAT OPERATOR ACTION COULD NOT BE GUARANTEED TO PREVENT THE OCCURRENCE SINCE IT OCCURS VERY SOON AFTER ACTUATION OF THE AUTOMATIC FEEDWATER SIGNAL. AT THIS TIME IT WAS REALIZED THAT THE PLANT, AS BUILT, MAY NOT MEET THE CRITERIA ESTABLISHED IN THE CHAPTER 15 SAFETY ANALYSIS ASSUMPTIONS. PRELIMINARY RESULTS FROM SUBSEQUENT ANALYSES SHOW THAT EVEN THOUGH THE FEEDWATER FLOW RATE MAY BE EXCEEDED, THERE IS NO DECREASE IN THE SAFETY MARGIN OF THE ANALYSIS.

[244] PALO VERDE 1 DOCKET 50-528 LER 85-007
LOSS OF INSTRUMENT POWER ESPAS AUXILIARY RELAY CABINET.
EVENT DATE: 021085 REPORT DATE: 031285 NSSS: CE TYPE: PWR

(NSIC 193739) AN AUTOMATIC ACTIVATION OF THE NSSS ESF'S ACTUATION SYSTEM AUX RELAY CABINET OCCURRED BECAUSE OF A TRAIN 'A' POWER SUPPLY FAILURE. THIS FAILURE OCCURRED WHILE TRANSFERRING TRAIN 'B', CLASS 'E', 120V INSTRUMENT AC POWER FROM THE NORMAL SOURCE TO THE ALTERNATE. ALL ACTUATED ESPAS EQUIPMENT FUNCTIONED NORMALLY. THE FAILED POWER SUPPLY WAS INSPECTED AND A FAULTY TRANSFORMER APPEARED TO BE THE CAUSE OF THE SUPPLY FAILURE. THE REASON FOR THE BREAKDOWN OF THE TRANSFORMER COULD NOT BE DETERMINED. THE POWER SUPPLY WAS REPLACED AND FUNCTIONALLY CHECKED. THE NSSS ESPAS AUX RELAY CABINET WAS RETURNED TO ITS NORMAL CONDITION.

[245] PALO VERDE 1 DOCKET 50-528 LER 85-010
AUTOMATIC ACTUATION OF BALANCE OF PLANT ESPAS.
EVENT DATE: 022285 REPORT DATE: 032585 NSSS: CE TYPE: PWR

(NSIC 193792) AUTOMATIC ACTUATION OF THE BALANCE OF PLANT ESF'S ACTUATION SYSTEM (BOP ESPAS) OCCURRED WHEN PLACING THE TRAIN 'A' SEQUENCER IN MANUAL MODE FROM AUTO MODE. DURING THE TRANSFER FROM AUTO TO MANUAL, TRAIN 'A' FUEL BLDG ESSENTIAL VENTILATION ACTUATION SIGNAL (FBEVAS) AND CONTROL ROOM ESSENTIAL FILTRATION ACTUATION SIGNAL (CREPAS) AS WELL AS THE CROSS-TRIP TO TRAIN 'B' FBEVAS AND CREPAS WERE INITIATED. RESETTNG BOTH TRAIN 'A' AND 'B' CABINETS RETURNED THE SYSTEM TO NORMAL. INVESTIGATION SHOWED THAT DIGITAL CIRCUIT FLIP-FLOP U-14 AT MC 6676 IS SET FOR A SHORT PERIOD WHILE THE FBEVAS MODULE IS BEING TESTED BY THE SEQUENCER DIAGNOSTIC SOFTWARE PROGRAM. IF A TRANSFER FROM AUTO TO MANUAL IS COMPLETED AT THE PROPER INSTANT, FLIP-FLOP U-14 CAN BE LEFT IN THE SET CONDITION WITH NO MEANS FOR IT TO RESET; THIS RESULTS IN A VALID TRIP CONDITION, THEREBY CAUSING THE SEQUENCER IN TRAIN 'A' TO ACTUATE THE APPROPRIATE EQUIPMENT AND ALSO TO CROSS-TRIP TRAIN 'B' CAUSING THE SAME SEQUENCING.

[246] PALO VERDE 1 DOCKET 50-528 LER 85-014
 LOSS OF POWER TO BALANCE OF PLANT ENGINEERED SAFETY FEATURES PANEL.
 EVENT DATE: 030285 REPORT DATE: 040185 NSSS: CE TYPE: PWR

(NSIC 193941) DURING RECOVERY FROM A SCHEDULED MAINTENANCE OUTAGE OF THE 125V DC CLASS BUSES OF THE 'A' SAFETY TRAIN, PANEL PNA-D25 WAS DE-ENERGIZED TO ALLOW FOR REMOVAL OF TEMPORARY POWER SUPPLIED DURING MAINTENANCE. DUE TO A DC BACKUP POWER SUPPLY IN THE 'A' TRAIN BALANCE OF PLANT ESFAS CABINET BEING OUT OF SERVICE, CROSS TRIPS OF THE 'B' TRAIN BALANCE OF PLANT ESFAS OCCURRED. THIS RESULTED IN INITIATION OF THE FUEL BLDG ESSENTIAL VENTILATION ACTUATION SYSTEM, CONTROL ROOM ESSENTIAL FILTRATION ACTUATION SIGNAL, AND CONTAINMENT PURGE ISOLATION ACTUATION SYSTEM SIGNALS 'B' TRAIN. AFTER RETURNING POWER TO THE 'A' TRAIN BALANCE OF PLANT ESFAS CABINET, THE ACTUATED EQUIPMENT WAS RETURNED TO NORMAL.

[247] PALO VERDE 1 DOCKET 50-528 LER 85-012
 ERRONEOUS ACTUATION OF LOW STEAM GENERATOR PRESSURE REACTOR TRIP.
 EVENT DATE: 031285 REPORT DATE: 041185 NSSS: CE TYPE: PWR

(NSIC 193940) TWO CHANNELS OF THE 4 LOW SG PRESSURE SIGNALS WERE SPURIOUSLY ACTUATED RESULTING IN THE PLANT PROTECTION SYSTEM OPENING ALL 4 BREAKERS OF THE REACTOR TRIP SWITCHGEAR. AT THE TIME OF THE INCIDENT, THE PLANT HAD NOT BEEN ABOVE MODE 5 AND ALL CONTROL ELEMENT ASSEMBLIES WERE FULLY INSERTED. ONE OF THE TWO SIGNALS CLEARED WITHIN 319 MILLISECONDS AND NO DEFINITIVE CAUSE OF SIGNAL INITIATION COULD BE DETERMINED.

[248] PALO VERDE 1 DOCKET 50-528 LER 85-026
 DIESEL GENERATOR FAILURE AS PER TECHNICAL SPECIFICATIONS.
 EVENT DATE: 032985 REPORT DATE: 042985 NSSS: CE TYPE: PWR

(NSIC 194040) THIS SPECIAL REPORT IS REQUIRED BY PALO VERDE UNIT 1 TECH SPEC 4.8.1.1.3. UNIT 1 DG 'B' FAILED TO ATTAIN THE REQUIRED FREQUENCY WITHIN 10 SECS PER TECH SPEC 4.8.1.1.2.D.4.(D). THIS START FAILURE WAS THE THIRD FAILURE IN 5 VALID TESTS PLACING UNIT 1 IN A SHORTENED TEST INTERVAL SCHEDULE PER REG GUIDE 1.108.C.2.D.(3). SIMILAR CIRCUMSTANCES AND CONCLUSIONS WERE DOCUMENTED IN SPECIAL REPORT #85-018 FOR A START FAILURE OF DG 'B' ON 3-8-85. THIS EVENT, HOWEVER, HAD THE SAME CAUSE, AND REQUIRES THE SAME CORRECTIVE ACTION AS THAT REPORTED BEFORE. THEREFORE, UNIT 1 WILL MAINTAIN THE TEST SCHEDULE SPECIFIED IN R.G. 1.108.C.2.D.(2).

[249] PALO VERDE 1 DOCKET 50-528 LER 85-020
 INADVERTENT START OF DIESEL GENERATOR B.
 EVENT DATE: 040285 REPORT DATE: 050285 NSSS: CE TYPE: PWR

(NSIC 193942) AT 1356 ON 4-2-85 WHILE IN MODE 5, AN INADVERTENT START OCCURRED ON DG B DURING THE PERFORMANCE OF RETESTING PER CONTRACTOR WORK ORDER 81614 FOR PCP 85-13-DG-021 THAT MODIFIED THE DG STARTING CIRCUIT TO MEET FSAR SECTION 8.3.1.1.4.3. DG B STARTED WHEN THE WORK ORDER DIRECTED THE TEST DIRECTORS TO JUMPER AND ENERGIZE THE 4EX3 RELAY. A 'SNEAK' CIRCUIT, WHICH WAS NOT FOUND DURING THE WRITING OF THE RETEST, CAUSED THE 4EX1 RELAY TO ENERGIZE WHEN THE 4EX3 RELAY ENERGIZED, GIVING THE ENGINE A START SIGNAL. UPON ANALYSIS OF THE DG STARTING CIRCUIT, THE CURRENT PATH WAS FOUND THAT ENERGIZED THE 4EX1 RELAY AND CIRCUIT WAS VERIFIED TO HAVE FUNCTIONED PER DESIGN. CWO 81614 WAS AMENDED TO REMOVE THE 4EX1, 4EX2, AND 4S RELAYS FROM THE CIRCUIT AS A PRECAUTION AGAINST ANY FURTHER START SIGNALS.

[250] PALO VERDE 1 DOCKET 50-528 LER 85-017
 RADIATION MONITOR FAILURE RESULTS IN ACTUATION OF CONTROL ROOM VENTILATION.
 EVENT DATE: 040585 REPORT DATE: 050685 NSSS: CE TYPE: PWR

(NSIC 194038) FOLLOWING MAINTENANCE, WHILE CLOSING THE BREAKER TO THE CONTROL ROOM VENTILATION RADIATION MONITOR, A MOMENTARY HIGH OUTPUT OCCURRED CAUSING THE TRAIN 'A' CONTROL ROOM ESSENTIAL FILTRATION ACTUATION SIGNAL WHICH ALSO CROSS-TRIPPED THE TRAIN 'B' CONTROL ROOM ESSENTIAL FILTRATION ACTUATION SIGNAL. BOTH TRAIN 'A' AND 'B' SIGNALS WERE RESET AND ALL ACTUATED EQUIPMENT WAS SECURED TO RETURN THE SYSTEMS TO NORMAL. CORRECTIVE ACTION PLANNED TO PREVENT RECURRENCE IS TO PLACE THE AFFECTED BALANCE OF PLANT ESPAS MODULE IN BYPASS PRIOR TO RESTORATION OF POWER TO THE ASSOCIATED RADIATION MONITOR.

[251] PALO VERDE 1 DOCKET 50-528 LER 85-023
 TESTING ERROR RESULTS IN INADVERTENT ACTUATION OF ESF EQUIPMENT.
 EVENT DATE: 040685 REPORT DATE: 050685 NSSS: CE TYPE: PWR

(NSIC 194039) WHILE PERFORMING AN ELECTRICAL SURVEILLANCE TEST ON 4-6-85, AN ELECTRICAL TEST TECHNICIAN OPENED A BREAKER NOT SPECIFIED IN THE TEST PROCEDURE RESULTING IN AUTOMATIC ACTUATION OF THE CONTROL ROOM ESSENTIAL FILTRATION ACTUATION SIGNAL, SAFETY INJECTION ACTUATION SIGNAL, CONTAINMENT SPRAY ACTUATION SIGNAL, MAIN STEAM ISOLATION ACTUATION SIGNAL, AND RECIRCULATION ACTUATION SIGNAL. IN ADDITION, REACTOR TRIP BREAKERS 'A' AND 'C' OPENED, CONDENSATE TRANSFER PUMPS 'A' AND 'B' STARTED, AND THE CONTROL ROOM NORMAL FAN STOPPED. TO PREVENT RECURRENCE OF THIS EVENT, MEMBERS OF THE BREAKER TEST ORGANIZATION HAVE BEEN RE-INSTRUCTED IN THE NEED FOR PROCEDURAL COMPLIANCE AND THE IMPORTANCE OF RESOLVING ALL QUESTIONS REGARDING TEST PROCEDURES PRIOR TO PERFORMANCE OF TESTS.

[252] PEACH BOTTOM 3 DOCKET 50-278 LER 85-008
 SUPPRESSION POOL WATER LEVEL ABOVE TECH SPEC LIMITS.
 EVENT DATE: 031385 REPORT DATE: 041785 NSSS: GE TYPE: BWR

(NSIC 193755) ON 3-13-85, AT 9:45 AM, WITH UNIT 3 OPERATING AT 90% POWER, SYSTEM PROCEDURE S.3.3.L, 'HPCI TURBINE TEST SLOW START', WAS BEING USED TO OPERATE THE HPCI TURBINE. THE PROCEDURE REQUIRES THAT THE HPCI PUMP TAKE SUCTION FROM THE CONDENSATE STORAGE TANK AND DISCHARGE BACK TO THE CST. DURING THE VALVE LINEUP, THE CONTROL ROOM OPERATOR MISTAKENLY OPENED THE TORUS TEST BYPASS VALVE RATHER THAN THE CST TEST RETURN VALVE. THIS RESULTED IN APPROX 37,000 GALS OF WATER FROM THE CST BEING PUMPED INTO THE TORUS. THE TORUS WATER LEVEL INCREASED FROM 14.8 FT TO 15.3 FT, 0.4 FT ABOVE THE TECH SPEC LIMIT. WHEN THE VALVING ERROR WAS DISCOVERED, THE OPERATOR CLOSED THE DISCHARGE TO THE TORUS AND SHUT OFF THE HPCI TURBINE. THE TORUS FILTER WATER PUMP WAS USED TO RETURN THE SUPPRESSION POOL WATER INVENTORY TO THE PROPER LEVEL WITHIN 6 HRS.

[253] PEACH BOTTOM 3 DOCKET 50-278 LER 85-009
 POSSIBLE LOSS OF SECONDARY CONTAINMENT INTEGRITY.
 EVENT DATE: 032885 REPORT DATE: 042985 NSSS: GE TYPE: BWR

(NSIC 193756) ON 3-28-85 AT 11:00 AM WITH UNIT 3 AT 90% POWER AND UNIT 2 IN A MAJOR MODIFICATION AND REFUEL OUTAGE, IT WAS DISCOVERED THAT A 26-INCH X 26-INCH INSPECTION PLATE HAD BEEN REMOVED FROM THE STANDBY GAS TREATMENT SYSTEM SUCTION PLENUM. THE PLATE, WHICH IS LOCATED ON THE COMMON PLENUM, MAY HAVE PREVENTED THE REACTOR BLDG FROM BEING MAINTAINED AT THE NEGATIVE 1/4-INCH WATER GAUGE PRESSURE REQUIRED BY THE TECH SPECS. UPON DISCOVERY, THE PLATE WAS IMMEDIATELY REINSTALLED. THE CAUSE WAS PERSONNEL ERROR. SIMILAR EVENT - 278/84-012.

[254] PEACH BOTTOM 3 DOCKET 50-278 LER 85-010
 FAULTY TEST EQUIPMENT CAUSES FALSE REACTOR LOW LEVEL SIGNAL.
 EVENT DATE: 041085 REPORT DATE: 050685 NSSS: GE TYPE: BWR

(NSIC 193796) ON 4-10-85, WITH UNIT 3 AT 90% POWER, THE E-1 AND E-3 DG'S AUTOMATICALLY STARTED AND THE DRYWELL COOLERS TRIPPED AFTER RECEIVING A FALSE REACTOR LOW LEVEL SIGNAL. REACTOR POWER WAS DECREASED TO 50% IN ANTICIPATION OF A POSSIBLE ACCELERATED SHUTDOWN. THE SIGNAL WAS CAUSED BY DEFECTIVE TEST EQUIPMENT. INSTRUMENT TECHNICIANS WERE PERFORMING SURVEILLANCE TEST ST-2.10.12. DURING THIS TEST, SPECIAL TEST EQUIPMENT IS CONNECTED INTO THE 'A' CORE SPRAY LOGIC TO MONITOR THE STATUS OF 2 SETS OF SERIES CONTACTS. A SHORT CIRCUIT BETWEEN 2 WIRES IN THE MULTI-PIN CONNECTOR PRODUCED A CURRENT PATH AROUND THE SERIES CONTACTS AND CAUSED RELAY 14A-K11A TO ENERGIZE. ENERGIZING 14A-K11A STARTS THE E-1 AND E-3 DG'S AND TRIPS THE DRYWELL COOLERS. FAILURE OF THE TEST EQUIPMENT WAS CAUSED BY PRAYED WIRE INSULATION ON THE TEST EQUIPMENT CABLE. AFTER THE INITIATION SIGNAL WAS CLEARED, THE DG'S WERE SHUT DOWN AND THE DRYWELL COOLERS WERE RETURNED TO NORMAL OPERATION.

[255] PILGRIM 1 DOCKET 50-293 LER 83-036 REV 1
 UPDATE ON CONTROL ROD UNCOUPLES.
 EVENT DATE: 061683 REPORT DATE: 120784 NSSS: GE TYPE: BWR
 VENDOR: GEMS, INC.

(NSIC 193744) CN 6-16-83, DURING A STARTUP FROM COLD SHUTDOWN, AN OVERTRAVEL ALARM WAS RECEIVED DURING A ROUTINE COUPLING CHECK FOR CONTROL ROD 30-51 INDICATING A POSSIBLE UNCOUPLED ROD. TECH SPEC 3.3.B REQUIRES ALL CONTROL RODS BE COUPLED (TO ASSURE BLADE MOVEMENT WITH THE DRIVE.) THE ROD WAS IMMEDIATELY RECOUPLED IN ACCORDANCE WITH PROCEDURES. THIS TYPE EVENT IS ANALYZED IN FSAR SECTION 4.7.1. LER 77-18 ALSO REPORTED AN UNCOUPLED ROD. CONTROL ROD DRIVE 30-51, SER #1273, WAS REPLACED WITH SER #1395 DURING RFO #6. VISUAL INSPECTION OF THE UNCOUPLING ROD, SPUD, AND FILTERS PROVIDED NO OBVIOUS REASON FOR THE UNCOUPLING EVENT. THE INNER FILTER, ALTHOUGH TIGHT, WAS NOT PROPERLY LATCHED, AND APPEARS TO BE THE MOST PROBABLE CAUSE OF THE EVENT. CRD SERIAL #1273 WAS REBUILT.

[256] PILGRIM 1 DOCKET 50-293 LER 85-004
 REACTOR VESSEL DRAIN LINE LEAKS.
 EVENT DATE: 021585 REPORT DATE: 031585 NSSS: GE TYPE: BWR
 VENDOR: BECHTEL CORP.

(NSIC 193885) ON 2-15-85, A REACTOR SHUTDOWN WAS COMPLETED AS THE RESULT OF A SMALL LEAK IN A SOCKET WELD BETWEEN AN ISOLATION VALVE AND PIPE SPOOL PIECE OF THE 2 INCH REACTOR DRAIN LINE. THE MOST PROBABLE CAUSE OF THE LEAK IS A POROUS WELD. CORRECTIVE ACTION WAS TO REPLACE THE SPOOL PIECE INCLUDING THE WELD. THE UNIT WAS RETURNED TO SERVICE ON 2-18-85.

[257] PILGRIM 1 DOCKET 50-293 LER 85-006
 ROOT VALVE ON YARWAY REACTOR WATER LEVEL INSTRUMENT FAILS.
 EVENT DATE: 031585 REPORT DATE: 041285 NSSS: GE TYPE: BWR
 VENDOR: YARWAY CORP.

(NSIC 193886) ON 3-15-85, A REACTOR SCRAM FROM 100% POWER OCCURRED DURING SURVEILLANCE TESTING OF THE REACTOR WATER LEVEL SAFEGUARDS SYSTEM. CAUSE OF THE SCRAM WAS THE RESULT OF A FALSE HIGH REACTOR PRESSURE SIGNAL WHICH WAS INITIATED WHEN A VALVE MOMENTARILY STUCK, THEN RELEASED, WHILE TECHNICIANS WERE 'VALVING IN' AN ADJACENT YARWAY LEVEL TRANSMITTER AFTER COMPLETING ITS SURVEILLANCE TEST. SUBSEQUENT TO THE SCRAM, THE TURBINE GENERATOR DID NOT AUTOMATICALLY TRIP AS DESIGNED. IMMEDIATE OPERATOR ACTION WAS TO MANUALLY TRIP THE UNIT. A BLOWN FUSE

IN THE DC TURBINE TRIP CIRCUIT WAS RESPONSIBLE FOR THE FAILURE OF THE TURBINE GENERATOR TO TRIP. CORRECTIVE ACTION WAS TO REPLACE THE FUSE. A SEARCH OF RECORDS INDICATES A PREVIOUS REACTOR SCRAM OCCURRED DURING SURVEILLANCE TESTING OF THE REACTOR WATER LEVEL SAFEGUARDS SYSTEM IN 9-83. NO PREVIOUS FAILURES OF THE TURBINE TO TRIP WERE IDENTIFIED. THE FUSE MANUFACTURER IS ECO.

[258] PILGRIM 1 DOCKET 50-293 LER 85-007
SECONDARY CONTAINMENT DAMPERS INOPERABLE DUE TO BROKEN GEARS.
EVENT DATE: 031685 REPORT DATE: 041285 NSSS: GE TYPE: BWR
VENDOR: PACIFIC AIR PRODUCTS

(NSIC 193887) ON 3-16-85, TWO IN-SERIES SECONDARY CONTAINMENT ISOLATION SYSTEM DAMPERS IN THE REFUELING FLOOR EXHAUST DUCT WOULD NOT FULLY CLOSE AS A RESULT OF BROKEN DRIVE GEARS. TWO OTHER DAMPERS WERE ALSO FOUND INOPERABLE WITH BROKEN DRIVE GEARS OR MISALIGNED LINKAGE; HOWEVER, REDUNDANT DAMPERS WERE OPERABLE. THE PROBLEMS WERE IDENTIFIED DURING A SECONDARY CONTAINMENT DAMPER INSPECTION. THE REACTOR WAS IN COLD SHUTDOWN AT THE TIME OF THE EVENT. LONG-TERM CORRECTIVE ACTION INCLUDES A PLAN TO MODIFY THE DAMPER CONTROL SYSTEM (REF. PDC 85-14). PREVIOUS OCCURRENCES OF A SIMILAR NATURE WERE DISCUSSED IN LER'S 81-041, 82-041, AND 83-062. THE NYLON DRIVE GEARS ARE A PNEUMASEAL #700-2 AND WERE SUPPLIED BY PACIFIC AIR PRODUCTS.

[259] PILGRIM 1 DOCKET 50-293 LER 85-008
HPCI SYSTEM INOPERABLE TWICE.
EVENT DATE: 033185 REPORT DATE: 042685 NSSS: GE TYPE: BWR
VENDOR: AMPHENOL
BERGEN-PATTERSON PIPE SUPPORT CORPORATION
BLACK, SIVALLS & BRYSON, INC.
TERRY STEAM TURBINE COMPANY

(NSIC 193797) ON 3-31-85, WHILE PERFORMING A ROUTINE HPCI OPERABILITY FLOW TEST, THE HPCI TURBINE TRIPPED ON OVERSPEED. SUBSEQUENTLY, A BLOWN RUPTURE DISC, BROKEN SNUBBER, AND 2 DEGRADED BASEPLATES WERE IDENTIFIED ON THE HPCI TURBINE EXHAUST LINE. CAUSE OF THE TRIP WAS THE RESULT OF A FAULTY CONNECTOR IN THE HPCI TURBINE CONTROL SYSTEM. PROBABLE CAUSE OF THE BLOWN RUPTURE DISC, BROKEN SNUBBER AND DEGRADED BASEPLATES IS BELIEVED TO BE THE RESULT OF AN ANOMALOUS EVENT (I.E., WATERHAMMER). CORRECTIVE ACTION WAS TO REPLACE THE CONNECTOR, REPLACE THE RUPTURE DISC, AND REBUILD THE SNUBBER AND BASEPLATES. THE FAULTY CONNECTOR IS CONSIDERED AN ISOLATED EVENT. TO PRECLUDE RECURRENCE OF THE RUPTURE DISC, SNUBBER, AND BASEPLATE PROBLEM, THE DURATION AND FREQUENCY OF THE HPCI TURBINE EXHAUST LINE BLOWDOWN HAS BEEN INCREASED. FINAL CORRECTIVE ACTION IS PENDING ENGINEERING ANALYSIS OF ROOT CAUSE.

[260] PILGRIM 1 DOCKET 50-293 LER 85-009
REACTOR SCRAM ON HIGH TURBINE VIBRATION SIGNAL.
EVENT DATE: 040485 REPORT DATE: 050285 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 193757) ON 4-4-85, A REACTOR SCRAM OCCURRED AS THE RESULT OF A TURBINE TRIP ON A HIGH VIBRATION SIGNAL. CAUSE OF THE TRIP WAS THE RESULT OF INADEQUATE LUBRICATION OF A TURBINE VIBRATION DETECTOR AT THE POINT OF CONTACT WITH THE MAIN SHAFT OF THE TURBINE. INVESTIGATION FOUND THAT THE TEFLON TIP OF THE VIBRATION DETECTOR FOR THE #9 BEARING WAS DAMAGED. CAUSE OF THE TIP DAMAGE WAS THE RESULT OF A PIN-HOLE SIZED LUBE OIL ORIFICE WHICH BECAME BLOCKED AND PREVENTED ADEQUATE LUBRICATION AT THE POINT WHERE THE VIBRATION DETECTOR TIP RIDES ON THE MAIN SHAFT OF THE TURBINE. THE VIBRATION DETECTOR, MODEL #5470364G43, IS MANUFACTURED BY GE. CORRECTIVE ACTION WAS TO RESTORE LUBE OIL FLOW TO THE DETECTOR BY CLEANING

THE RESTRICTING ORIFICE AND FLUSHING THE SUPPLY PIPING. THE VIBRATION DETECTOR WAS REPLACED. THE UNIT WAS RETURNED TO SERVICE ON 4-5-85.

[261] PILGRIM 1 DOCKET 50-293 LER 85-010
SECONDARY CONTAINMENT DAMPERS INOPERABLE.
EVENT DATE: 041285 REPORT DATE: 051085 NSSS: GE TYPE: BWR
VENDOR: PACIFIC AIR PRODUCTS

(NSIC 193888) ON 4-12-85, DURING A ROUTINE INSPECTION OF THE SECONDARY CONTAINMENT ISOLATION SYSTEM DAMPERS, TWO IN-SERIES DAMPERS (AON 82 & 83) IN THE REFUELING FLOOR SUPPLY DUCT WOULD NOT FULLY CLOSE DUE TO THE ALIGNMENT OF THE DRIVE GEARS. IT WAS ALSO FOUND AT THIS TIME THAT THE GEARS IN BOTH DAMPERS HAD SIGNS OF CRACKING. AON 83 WAS MANUALLY CLOSED TO ASSURE SECONDARY CONTAINMENT AND PERFORM WORK ON AON 82. WHILE REPLACING THE CRACKED GEARS ON AON 82, THE DRIVE TAB ON A LOUVER WAS INADVERTENTLY BROKEN. THE REACTOR WAS AT 100% POWER AT THE TIME OF THE EVENT. CAUSE OF THE PROBLEM WAS THE RESULT OF MISALIGNMENT OF THE GEARS (SLIPPAGE). THE CRACKING OF THE GEARS IS DUE TO AGING AND FATIGUE. INTERIM CORRECTIVE ACTION WAS TO REPLACE THE CRACKED GEARS IN AON 82 AND 83 AND TO INSTALL A TEMPORARY MODIFICATION NO. 82-25 TO REPLACE THE TAB THAT WAS INADVERTENTLY BROKEN. IN ADDITION, PROCEDURE 8.7.3.1 WAS RECENTLY REVISED TO INCREASE THE DAMPER INSPECTION SURVEILLANCE FREQUENCY FROM QUARTERLY TO ONCE PER MONTH. PREVIOUS OCCURRENCES OF A SIMILAR NATURE WERE DISCUSSED IN LER'S 81-041, 82-041, 83-062, AND 85-007. THE NYLON DRIVE GEARS ARE PART OF A PNEUMASEAL #700-2 AND WERE SUPPLIED BY PACIFIC AIR PRODUCTS.

[262] PRAIRIE ISLAND 1 DOCKET 50-282 LER 83-011
DIESEL GENERATOR TRIPS ON HIGH CRANKCASE PRESSURE.
EVENT DATE: 051083 REPORT DATE: 052483 NSSS: WE TYPE: PWR
VENDOR: DWYER, F.W. MFG CO., INC.
FAIRBANKS MORSE

(NSIC 193700) DURING SURVEILLANCE TEST, D2 DG TRIPPED ON HIGH CRANKCASE PRESSURE. THIS TRIP IS BYPASSED WHEN AN SI SIGNAL IS PRESENT. THIS IS A NON-REPETITIVE EVENT. TECH SPEC 3.7.A.5 APPLIES. REDUNDANT EQUIPMENT WAS OPERABLE. DRIFT IN A DRYER PRESSURE SWITCH MODEL NO. 1322.1. SWITCH WAS RECALIBRATED AND SURVEILLANCE TEST RUN SATISFACTORILY.

[263] PRAIRIE ISLAND 2 DOCKET 50-306 LER 85-001
CAUSTIC STANDPIPE BELOW TECH SPEC LEVEL.
EVENT DATE: 022085 REPORT DATE: 032285 NSSS: WE TYPE: PWR

(NSIC 193712) ON 2-20 WHILE RECIRCULATING THE CAUSTIC ADDITION STANDPIPE AT 2325, THE LOW LEVEL ALARM WAS RECEIVED AND THE TANK OBSERVED TO BE AT 95%, BELOW THE TECH SPEC LIMIT OF 97.25%. THE OVERFLOW VALVE HAD BEEN LEFT OPEN BY MISTAKE, CAUSING THE LOSS OF LEVEL DURING RECIRCULATION. THE VALVE WAS CLOSED AND LEVEL RESTORED IN ABOUT AN HR. THE EVENT WAS DISCUSSED WITH INVOLVED PERSONNEL. THE MOST RECENT SIMILAR EVENT WAS UNIT 2 LER 84-003. PRESENT SYSTEM DESIGN HAS LED TO SEVERAL OPERATIONAL DIFFICULTIES. THE DESIGN CHANGE DISCUSSED IN PREVIOUS EVENT REPORTS WILL RECEIVE A HIGHER PRIORITY FOR COMPLETION.

[264] QUAD CITIES 1 DOCKET 50-254 LER 85-012
FUEL POOL RADIATION MONITOR TRIPS 3 TIMES.
EVENT DATE: 032785 REPORT DATE: 042285 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: QUAD CITIES 2 (BWR)
VENDOR: GENERAL ELECTRIC CORP. (NUCLEAR ENG DIV)

(NSIC 193839) ON 3-27-85 AT 1525 HRS THE 1A FUEL POOL RADIATION MONITOR SPIKED

UPSCALE ENERGIZING THE 'FUEL POOL 'A' HIGH RADIATION' ALARM. THE REACTOR BLDG VENTILATION SYSTEM ISOLATED AND THE 'A' STANDBY GAS TREATMENT SYSTEM AUTOMATICALLY STARTED AS DESIGNED. ON 4-18-85 AT 0644 HRS THE 1A FUEL POOL RADIATION MONITOR AGAIN SPIKED UPSCALE ENERGIZING THE 'FUEL POOL 'A' HIGH RADIATION' ALARM. IN AN ATTEMPT TO ISOLATE THE PROBLEM AND FIND THE DEFECTIVE PART, THE TRIP UNITS WERE EXCHANGED BETWEEN THE 1A AND 1B CHANNELS. THE SENSOR UNITS BETWEEN THE 1A AND 1B CHANNELS WERE ALSO EXCHANGED. ON 4-19-85 AT 0234 HRS THE 1B FUEL POOL RADIATION MONITOR SPIKED UPSCALE ENERGIZING THE 'FUEL POOL 'B' HIGH RADIATION' ALARM. IT APPEARS THAT THE CAUSE OF THE SPURIOUS TRIPS WAS A LOOSE CAPACITOR IN THE SENSOR UNIT OF THE RADIATION MONITOR. WHEN THE SENSOR UNIT FROM THE 1A MONITOR WAS EXCHANGED WITH THE 1B MONITOR THE 1B MONITOR TRIPPED ON THE FOLLOWING DAY. IN ADDITION, A LIGHT EMITTING DIODE WAS ALSO FOUND TO BE OPEN. THE LOOSE CAPACITOR TOGETHER WITH THE OPEN LED WOULD CAUSE SPURIOUS UPSCALE SPIKES.

[265] QUAD CITIES 1 DOCKET 50-254 LER 85-013
 RELAY FAILURE CAUSES STANDBY GAS TREATMENT SYSTEM AUTO-START.
 EVENT DATE: 032985 REPORT DATE: 041985 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: QUAD CITIES 2 (BWR)
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193840) ON 3-29-85 AT 1850 HRS, THE 'B' STANDBY GAS TREATMENT SYSTEM AUTOMATICALLY STARTED WITHOUT ANY APPARENT START SIGNAL. AT 1903 HRS, THE REACTOR BLDG VENTILATION SYSTEM AND THE CONTROL ROOM VENTILATION SYSTEM TRIPPED. THE ROOT CAUSE OF THIS EVENT WAS A FAILED RELAY ATTRIBUTABLE TO THE RELAY ELECTRICAL COIL REACHING ITS END OF LIFE. THE COIL FAILED, DEENERGIZING THE RELAY. BECAUSE THE 1/2 'B' TRAIN WAS SELECTED AS THE SECONDARY, IT DELAYED FOR 25 SECS TO ALLOW THE 1/2 'A' TRAIN TO START, WHICH DID NOT BECAUSE THERE WAS NO VALID INITIATION SIGNAL. THEN THE 1/2 'B' TRAIN STARTED. IT IS BELIEVED, BUT CANNOT BE DETERMINED, THAT THE VENTILATION ISOLATION CIRCUITS OF THE RELAY REMAINED ENERGIZED TEMPORARILY, UNTIL THE COMPLETE FAILURE OF THE RELAY. THE RELAY IS A GE CR120A RELAY AND THE COIL THAT FAILED IS PART #551G022. THERE HAS BEEN NO PREVIOUS FAILURE OF THIS RELAY RESULTING IN STANDBY GAS TREATMENT AUTO-INITIATION BUT THE CR120A TYPE RELAY HAS FAILED ON NUMEROUS OCCASIONS. MODIFICATION M-4-1(2)-85-17 HAD BEEN INITIATED PREVIOUSLY TO REPLACE ALL OF THE CR120A RELAYS IN CONTROL PANELS 902-40 AND 41 (AND 901-40 AND 41) WITH CR120B RELAYS.

[266] QUAD CITIES 1 DOCKET 50-254 LER 85-014
 FUEL POOL RADIATION MONITOR SPIKED HIGH.
 EVENT DATE: 040385 REPORT DATE: 041785 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: QUAD CITIES 2 (BWR)
 VENDOR: GENERAL ELECTRIC CORP. (NUCLEAR ENG DIV)

(NSIC 193841) ON 4-3-85 THE 1A FUEL POOL RADIATION MONITOR SPIKED UPSCALE ENERGIZING THE 'FUEL POOL CHANNEL A HIGH RADIATION' ALARM. THE MONITOR RESET IMMEDIATELY AND WAS VERIFIED TO BE OPERABLE. DUE TO THE SPURIOUS SIGNAL, THE REACTOR BLDG VENTILATION SYSTEM ISOLATED AND THE STANDBY GAS TREATMENT SYSTEM AUTOMATICALLY STARTED. THERE WAS NO RADIOACTIVE RELEASE ASSOCIATED WITH THIS EVENT, AND ALL SYSTEMS AND LOGIC PERFORMED AS DESIGNED. THE PROBABLE CAUSE OF THESE FAILURES IS SURMISED TO BE ELECTRICAL 'NOISE' INTERFERENCE. SIMILAR EVENTS - 254/85-005 AND 254/85-012.

[267] QUAD CITIES 2 DOCKET 50-265 LER 83-024 REV 2
 UPDATE ON 14 SNUBBER FAILURES.
 EVENT DATE: 120183 REPORT DATE: 101984 NSSS: GE TYPE: BWR
 VENDOR: PACIFIC SCIENTIFIC COMPANY

(NSIC 194000) WHILE PERFORMING THE OPERATING CYCLE FUNCTIONAL TEST OF SAFETY RELATED MECHANICAL SNUBBERS, A TOTAL OF 14 SNUBBERS FAILED TO MEET THE ACCEPTANCE CRITERIA OF THE FUNCTIONAL TESTS. ALTHOUGH THESE SNUBBERS FAILED THE FUNCTIONAL TEST, THEY WOULD HAVE PERFORMED THEIR DESIGN FUNCTION OF DAMPENING ANY EXCESSIVE PIPE MOVEMENT. THUS, THERE WAS NO DEGRADATION OF PLANT SAFETY DUE TO THIS OCCURRENCE. THIS SUPPLEMENTAL REPORT WAS INITIATED TO DOCUMENT THE CAUSES OF THE SNUBBER FAILURES AND THE CORRECTIVE ACTIONS TAKEN. ROOT CAUSES OF THE SNUBBER FAILURES WERE EXTENSIVE SIDE LOADING, EXCESSIVE INTERIOR RUST AND CORROSION, AND INERTIA MASS MISALIGNMENT. ALL 14 FAILED SNUBBERS WERE REPLACED LIKE-FOR-LIKE PRIOR TO UNIT STARTUP.

[268] QUAD CITIES 2 DOCKET 50-265 LER 85-006
 MAIN STEAM ISOLATION VALVES LEAK.
 EVENT DATE: 031885 REPORT DATE: 041285 NSSS: GE TYPE: BWR
 VENDOR: NUMATICS

(NSIC 193707) ON 3-18-85, 2 MSIV'S LEAKED IN EXCESS OF THE 11.5 SCFH LIMIT GIVEN IN TECH SPEC 3.7.A.2.A.3. THE EXCESSIVE LEAKAGE FOR VALVES AO 2-203-2B AND AO 2-203-2D WERE IDENTIFIED DURING LLRT PERFORMED WHILE UNIT 2 WAS SHUTDOWN FOR THE END OF CYCLE 7 REFUELING AND MAINTENANCE OUTAGE. CAUSES FOR THE EXCESSIVE LEAKAGES HAVE NOT BEEN DETERMINED YET. REPAIRS WILL BE COMPLETED, AND LEAKAGES WILL BE BROUGHT TO WITHIN TECH SPEC REQUIREMENTS PRIOR TO THE UNIT STARTUP. A SUPPLEMENTAL REPORT WILL BE ISSUED AT THAT TIME.

[269] QUAD CITIES 2 DOCKET 50-265 LER 85-007
 COMBINED LEAK RATE FROM ALL VALVES & PENETRATIONS TOO HIGH.
 EVENT DATE: 031885 REPORT DATE: 041585 NSSS: GE TYPE: BWR

(NSIC 193964) ON 3-18-85, QUAD-CITIES UNIT 2 WAS SHUTDOWN FOR REFUELING. WHILE PERFORMING REFUELING OUTAGE LLRT, 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 SUPPLEMENTAL REPORT WILL BE SUBMITTED WHEN ALL LEAK RATE TESTING AND REPAIRS HAVE BEEN COMPLETED.

[270] QUAD CITIES 2 DOCKET 50-265 LER 85-009
 FUEL POOL RADIATION MONITOR TRIP.
 EVENT DATE: 032085 REPORT DATE: 040985 NSSS: GE TYPE: BWR

(NSIC 193708) ON 3-20-85, UNIT 2 WAS SHUTDOWN FOR THE END OF CYCLE 7 REFUELING AND MAINTENANCE OUTAGE. AT 0230 HRS, THE 2A FUEL POOL RADIATION MONITOR SPIKED ABOVE ITS TRIP SETPOINT OF 100 MR/HR, ISOLATING THE REACTOR BLDG VENTILATION AND STARTING THE STANDBY GAS TREATMENT SYSTEM. THE 2A FUEL POOL RADIATION MONITOR TRIPPED BECAUSE OF THE TRANSFER OF THE STEAM DRYER FROM THE REACTOR CAVITY TO THE DRYER-SEPARATOR STORAGE PIT. RADIATION LEVELS IN THE AREA AROUND THE REACTOR CAVITY WERE MONITORED CONTINUOUSLY AND WERE NOT EXCESSIVE. SINCE THE REACTOR BLDG VENTILATION SYSTEM AND THE STANDBY GAS TREATMENT SYSTEM PERFORMED AS DESIGNED, THE SAFETY CONSEQUENCES OF THIS OCCURRENCE WERE MINIMAL.

[271] QUAD CITIES 2 DOCKET 50-265 LER 85-010
 RADIOGRAPHY CAUSES TWO REACTOR SCRAMS.
 EVENT DATE: 032885 REPORT DATE: 042485 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193846) ON 3-28-85 UNIT 2 WAS IN THE SHUTDOWN MODE FOR THE END OF CYCLE 7 REFUELING AND MAINTENANCE OUTAGE. AT 1515 HRS, AND AT 1520 HRS, A REACTOR SCRAM SIGNAL WAS INITIATED BY A MAIN STEAM LINE HIGH RADIATION SIGNAL. THE SCRAMS WERE IMMEDIATELY RESET. THE MAIN STEAM LINE HIGH RADIATION SIGNAL WAS CAUSED BY

RADIOGRAPHY THAT WAS BEING PERFORMED NEAR THE MAIN STEAM LINE RADIATION MONITORS. THE SHIFT ENGINEER BELIEVED THESE SCRAMS WERE PART OF A 'PRE-PLANNED' SEQUENCE OF EVENTS BECAUSE HE HAD RECEIVED PRIOR NOTIFICATION THAT THE RADIOGRAPHY WAS ABOUT TO TAKE PLACE. THE RESIDENT INSPECTOR INFORMED THE STATION THAT A FORMAL PROCEDURE WAS NECESSARY FOR THE SCRAMS TO BE CONSIDERED AS A 'PRE-PLANNED SEQUENCE'. PRIOR TO THIS, THERE WAS NO FORMAL PROCEDURE WRITTEN TO DELINEATE THE NOTIFICATION BY THE RADIOGRAPHER OF HIS INTENTION TO PERFORM X-RAY OPERATIONS IN THE PLANT. AS A RESULT, NOTIFICATION WAS NOT MADE UNTIL 18 HRS, 6 MINS AFTER THE FIRST SCRAM.

[272] QUAD CITIES 2 DOCKET 50-265 LER 85-008
 LINEAR INDICATION ON REACTOR RECIRCULATION SYSTEM WELDS.
 EVENT DATE: 040185 REPORT DATE: 041585 NSSS: GE TYPE: BWR
 VENDOR: DRAVO, INC.

(NSIC 193845) ON 3-18-85, QUAD-CITIES UNIT 2 WAS SHUTDOWN FOR REFUELING. ON 4-1, VISUAL INSPECTION REVEALED A RECIRCULATION WELD AREA WITH WATER SEEPING FROM A SMALL CRACK. SUBSEQUENT TO THIS DISCOVERY, WHILE REVIEWING ULTRASONIC TEST DATA TAKEN DURING THE ONGOING INSPECTIONS REQUIRED BY THE INSERVICE INSPECTION PROGRAM AND THE NUREG 1061, 2 ADDITIONAL RECIRCULATION WELDS WERE IDENTIFIED TO HAVE CIRCUMFERENTIAL AND AXIAL INDICATIONS IN THEIR HEAT AFFECTED ZONES. THE CAUSE OF THIS OCCURRENCE IS POSTULATED AS BEING INTERGRANULAR STRESS CORROSION CRACKING. FURTHER ANALYSES ARE BEING PERFORMED TO DETERMINE THE APPLICABILITY OF USING WELD OVERLAYS AS A REPAIR. THIS REPORT IS AN INITIAL SUMMATION OF FINDINGS AS OF THIS REPORTING DATE, AND DOES NOT PRESENT COMPLETE RESULTS OF THE ONGOING INSPECTIONS. A SUPPLEMENTAL REPORT WILL BE SUBMITTED WHEN ALL INSPECTIONS AND REPAIRS HAVE BEEN COMPLETED.

[273] ROBINSON 2 DOCKET 50-261 LER 85-009
 MAIN TRANSFORMER LIGHTNING ARRESTER FAILS.
 EVENT DATE: 022785 REPORT DATE: 031985 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 193706) ON 2-27-85, THE PLANT WAS OPERATING AT 100% POWER. AT 1754 HRS THE 'C' MAIN TRANSFORMER LIGHTNING ARRESTER FAILED. THIS CAUSED A GENERATOR TO MAIN BANK TRANSFORMER DIFFERENTIAL GENERATOR LOCKOUT RESULTING IN A TURBINE TRIP AND SUBSEQUENT REACTOR TRIP. THE LIGHTNING ARRESTER HAS BEEN REPLACED. LIGHTNING ARRESTERS ON THE OTHER 2 MAIN TRANSFORMERS HAVE BEEN SATISFACTORILY INSPECTED FOR CRACKS OR OIL LEAKS. THE CAUSE OF THE ARRESTER'S FAILURE HAS NOT BEEN DETERMINED. THE LIGHTNING ARRESTER WAS DESTROYED; THEREFORE, IT IS UNLIKELY THAT THE CAUSE OF ITS FAILURE WILL BE DETERMINED. EXPERIENCE HAS SHOWN THAT THE FAILURE OF A LIGHTNING ARRESTER SELDOM OCCURS. NO FURTHER CORRECTIVE ACTION IS PLANNED.

[274] ROBINSON 2 DOCKET 50-261 LER 85-010
 FEEDWATER REGULATING VALVE FAILURE CAUSES REACTOR TRIP.
 EVENT DATE: 030185 REPORT DATE: 032785 NSSS: WE TYPE: PWR
 VENDOR: COPES-VULCAN, INC.

(NSIC 193751) ON 3-1-85 AT 1352 HRS, THE PLANT TRIPPED FROM 52% POWER DUE TO THE LOSS OF FEEDFLOW TO 'B' SG. HIGH VIBRATIONS AT THE FEEDWATER REGULATING VALVES CAUSED AN INSTRUMENT AIR LINE TO THE 'B' FWRV OPERATOR TO SEPARATE. 'B' FWRV FAILED CLOSED, AND THE PLANT TRIPPED ON A 'LOW SG LEVEL COINCIDENT WITH STEAM FLOW GREATER THAN FEEDWATER FLOW' REACTOR TRIP SIGNAL. IMPROPERLY DESIGNED FWRV INTERNALS WAS THE CAUSE OF THE HIGH VIBRATIONS. CORRECTIVE ACTION CURRENTLY PLANNED IS TO REPLACE THE VALVE INTERNALS WITH THE PROPERLY DESIGNED INTERNALS. IN THE INTERIM, UNTIL THE INTERNALS CAN BE REPLACED, A SPECIAL PROCEDURE HAS BEEN IMPLEMENTED WHICH ALLOWS VALVES IN THE FEEDWATER SYSTEM TO BE THROTTLED IN ORDER

TO REDUCE THE VIBRATIONS AT THE FWRV'S. THE FWRV INTERNALS WILL BE REPLACED NEXT REFUELING OUTAGE.

[275] ROBINSON 2 DOCKET 50-261 LER 85-012
FIRE PROTECTION (HALON) CYLINDERS HAVE LOW PRESSURE.
EVENT DATE: 030885 REPORT DATE: 041885 NSSS: WE TYPE: PWR

(NSIC 193881) SEMI-ANNUAL OPERATIONAL SURVEILLANCE TEST, OST-630 WAS BEING PERFORMED ON 3-8-85. OST-630 REQUIRES THE HALON CYLINDERS PROVIDING FIRE PROTECTION TO THE EMERGENCY BUSES E-1/E-2 ROOM AND THE COMPUTER ROOM TO BE WEIGHED AND PRESSURE CHECKED. 2 OF 10 CYLINDERS OF HALON IN 1 OF 2 BANKS WERE RECORDED AS HAVING LESS THAN THE REQUIRED PRESSURE, BUT WERE DOCUMENTED AS SATISFACTORY. THIS DISCREPANCY WAS NOT RECOGNIZED UNTIL 4-4-85, WHEN THE FIRE PROTECTION STAFF REVIEWED THE OST. THE DELAY IN REVIEWING THE OST WAS DUE TO CYLINDERS ON THE RESERVE BANK BEING LOW IN PRESSURE OR WEIGHT WHICH NEEDED TO BE RECHARGED BEFORE THE OST COULD BE COMPLETED AND TURNED IN FOR THE REVIEW. ALTHOUGH THIS LOWER PRESSURE TECHNICALLY RENDERED THE SYSTEM INOPERABLE, THE SYSTEM WAS LINED UP FOR AUTOMATIC ACTUATION AND WOULD HAVE PROVIDED ADEQUATE FIRE SUPPRESSION CAPABILITY FOR BOTH ROOMS. WHEN INOPERABLE, TECH SPEC 3.14.6.2 REQUIRES A FIRE WATCH BE POSTED WITHIN 1 HR. THIS WAS NOT DONE BECAUSE THE PERSON PERFORMING THE OST DID NOT RECOGNIZE THAT THE CYLINDERS WERE BELOW THEIR MINIMUM REQUIRED PRESSURE.

[276] SALEM 1 DOCKET 50-272 LER 85-004
FOREIGN MATTER CONTAMINATION OF NEW TERRESTIC T-68 LUBE OIL.
EVENT DATE: 022685 REPORT DATE: 032885 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: SALEM 2 (PWR)
VENDOR: GOULDS PUMPS INC.

(NSIC 193754) ON 2-26-85, DARK COLORED OIL CONTAINING A BURNT SMELL WAS DISCOVERED IN NO. 11 SPENT FUEL PIT PUMP; THE PUMP WAS DRAINED, FLUSHED AND REFILLED WITH NEW OIL. THE FOLLOWING DAY, DARK COLORED OIL WAS ALSO DISCOVERED IN NO. 11 BORIC ACID TRANSFER PUMP. BECAUSE BOTH PUMPS UTILIZED EXXON'S TERRESTIC T-68 OIL, ALL UNIT 1 AND UNIT 2 PUMPS UTILIZING T-68 OIL WERE INSPECTED. THE OIL IN NUMEROUS PUMPS WAS DISCOVERED TO BE DARK, AND WAS CHANGED; HOWEVER, THE OIL DISCOLORED AFTER ONLY A SHORT TIME IN USE. ALL T-68 OIL ON SITE WAS CONFIRMED TO HAVE COME FROM 2 LOT NUMBERS. LAB SAMPLES OF UNUSED OIL FROM THESE LOTS REVEALED THAT THE OIL CONTAINED A HIGH PARTICULATE COUNT, WHICH APPARENTLY CAUSED THE OIL TO OXIDIZE UNDER USE. NEW OIL WAS OBTAINED FROM ANOTHER GENERATING STATION, AND ALL PUMPS UTILIZING T-68 OIL WERE DRAINED, FLUSHED AND REFILLED. THE EARLY DETECTION OF THE CONTAMINATED OIL RESULTED IN MINIMUM EQUIPMENT DAMAGE; I.E., BEARING DAMAGE TO NO. 21 COMPONENT COOLING PUMP AND TO NO. 11 SPENT FUEL PIT PUMP. REDUNDANT EQUIPMENT REMAINED OPERATIONAL AND ENTRY INTO TECH SPEC ACTION STATEMENTS WAS NOT REQUIRED. THE OIL QUALITY CONTROL PROGRAM WAS REVIEWED, AND AS A RESULT, THE VENDOR WAS REQUESTED TO COMPLY WITH SEVERAL ACTIONS. IN ADDITION, PSE&G IS TAKING ADDITIONAL STEPS TO VERIFY OIL QUALITY PRIOR TO USE.

[277] SALEM 1 DOCKET 50-272 LER 85-006
SERVICE WATER LEAK INSIDE OF CONTAINMENT.
EVENT DATE: 032085 REPORT DATE: 040385 NSSS: WE TYPE: PWR
VENDOR: CVI CORP.

(NSIC 194016) ON 3-20-85, A CONTAINMENT SUMP PUMP RUN INDICATED AN UNIDENTIFIED CONTAINMENT SUMP IN-LEAKAGE RATE OF GREATER THAN 1 GPM. PRESSURIZER LEVEL WAS STABLE, AND THERE WAS NO INCREASE IN CHARGING FLOW OR RCS MAKEUP. THE LEAKAGE WAS CONSERVATIVELY CLASSIFIED AS RCS LEAKAGE, TECH SPEC ACTION STATEMENT 3.4.6.2.B WAS ENTERED AND AN RCS WATER INVENTORY BALANCE CALCULATION WAS

INITIATED. SERVICE WATER TO NO. 13 CFCU WAS ISOLATED BECAUSE THE CFCU HAD BEEN PLACED IN SERVICE JUST PRIOR TO THE OCCURRENCE. A CONTAINMENT ENTRY REVEALED A SERVICE WATER LEAK HAD DEVELOPED ON NO. 13 CFCU MOTOR COOLER. SURVEILLANCE PROCEDURE SP(0) 4.4.6.2 VERIFIED THAT THE RCS UNIDENTIFIED LEAK RATE WAS LESS THAN 1 GPM, AND THE ACTION STATEMENT WAS TERMINATED. INVESTIGATION REVEALED THAT THE LEAK WAS FROM THE MOTOR COOLER HEAD GASKET. BECAUSE THE UNIT WAS OPERATING AT POWER, THE ENTIRE MOTOR COOLER WAS REPLACED TO EXPEDITE THE REPAIR. NO. 13 CFCU WAS PLACED IN SERVICE, SATISFACTORILY TESTED AND RESTORED TO AN OPERABLE STATUS. THE IMMEDIATE ISOLATION OF THE SERVICE WATER LEAK RESULTED IN NO ACCUMULATION OF WATER INSIDE CONTAINMENT; HOWEVER, THIS REPORT IS BEING SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF I.E. BULLETIN NO. 80-24, WHICH REQUIRES THE REPORTING OF ALL SERVICE WATER LEAKS INSIDE OF CONTAINMENT.

[278] SALEM 2 DOCKET 50-311 LER 85-003
PRESSURIZER OVERPRESSURE PROTECTION SYSTEM CHANNEL II INITIATIONS.
EVENT DATE: 032985 REPORT DATE: 042685 NSSS: WE TYPE: PWR

(NSIC 194017) ON 3-29-85, DURING RCS FILL AND VENT OPERATIONS, WITH RCS PRESSURE AT 325 PSIG, PRESSURIZER OVERPRESSURE PROTECTION SYSTEM (POPS) CHANNEL II ACTUATED WHEN A REACTOR COOLANT PUMP WAS STARTED. FOLLOWING THE RELIEF VALVE ACTUATION, A POPS FUNCTIONAL TEST VERIFIED THAT THE RELIEF VALVE SETPOINTS ASSOCIATED WITH BOTH POPS CHANNELS WERE WITHIN SPEC. ON 3-30-85, WITH RCS PRESSURE BETWEEN 325 AND 350 PSIG, 2PR2 AGAIN ACTUATED WHEN A REACTOR COOLANT PUMP WAS STARTED. 2PR2 CLOSED WITHIN 5 SECS FOLLOWING THE TRANSIENTS, AND THE MAXIMUM PRESSURE REACHED DURING BOTH TRANSIENTS WAS 380 PSIG. THE TECH SPECS REQUIRE THE 2PR2 SETPOINT TO BE LESS THAN OR EQUAL TO 375 PSIG, AND THE VALVE WAS OBSERVED TO ACTUATE AT A MINIMUM INDICATED PRESSURE OF 360 PSIG. THE MINIMUM PRESSURE FOR STARTING REACTOR COOLANT PUMPS IS 325 PSIG, WHICH RESULTS IN THE RELIEF VALVE SETPOINT BEING VERY CLOSE TO THE MINIMUM PRESSURE REQUIRED FOR REACTOR COOLANT PUMP OPERATION. THE INDUCED PRESSURE TRANSIENTS, WHICH NORMALLY RESULT WHEN REACTOR COOLANT PUMPS ARE STARTED, CAUSED 2PR2 TO ACTUATE. IN ACCORDANCE WITH TECH SPEC 3.4.10.3 REQUIREMENTS, BECAUSE THE POPS WAS USED TO MITIGATE A RCS PRESSURE TRANSIENT, THIS SPECIAL REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF TECH SPEC 6.9.2.

[279] SAN ONOPRE 1 DOCKET 50-206 LER 85-007
CONTAINMENT NOBLE GAS ACTIVITY MONITOR HAS INCORRECT SETPOINT.
EVENT DATE: 031485 REPORT DATE: 041685 NSSS: WE TYPE: PWR

(NSIC 194011) DURING A ROUTINE PROCEDURE REVIEW CONDUCTED BY THE OPERATIONS AND CHEMISTRY DIVISIONS ON 3-14-85, IT WAS DETERMINED THE SETPOINT FOR CONTAINMENT NOBLE GAS ACTIVITY MONITOR R-1212, WAS INCORRECT WHEN SELECTED TO THE CONTAINMENT. ON 5 OCCASIONS BETWEEN 1-4 AND 3-14-85, CHANGES IN MODE HAD OCCURRED WHILE ACTION STATEMENT 10 OF TECH SPEC 3.5.5, WAS EFFECTIVE. SINCE AN EXCEPTION TO TECH SPEC 3.0.4 IS NOT STATED, THESE CHANGES IN OPERATIONAL MODE SHOULD HAVE BEEN PROHIBITED. THIS ADMINISTRATIVE ERROR OCCURRED BECAUSE PROCEDURES DID NOT ADDRESS THE RESTRICTIONS ASSOCIATED WITH THE DUAL USE OF THE MONITOR WHICH CAN FUNCTION AS EITHER CONTAINMENT ISOLATION INSTRUMENTATION OR RADIOACTIVE GASEOUS PROCESS AND EFFLUENT MONITORING INSTRUMENTATION. WHEN FUNCTIONING AS CONTAINMENT ISOLATION INSTRUMENTATION, MODE CHANGES SHOULD BE PROHIBITED AS DISCUSSED ABOVE; HOWEVER, WHEN FUNCTIONING AS RADIOACTIVE GASEOUS PROCESS AND EFFLUENT MONITORING INSTRUMENTATION, MODE CHANGES ARE PERMITTED BY TECH SPEC 3.5.9 SINCE AN EXCEPTION TO TECH SPEC 3.0.4 IS STATED. AS CORRECTIVE ACTION, THE PROCEDURES HAVE BEEN ENHANCED TO DESCRIBE THE OPERATIONAL RESTRICTIONS OF BOTH TECH SPECS WHICH GOVERN THE DUAL USE OF THE MONITOR R-1212 AND TO REQUIRE FORWARD TRACKING TO ENSURE IDENTIFICATION OF THE TECH SPEC IN EFFECT. IN ADDITION, THIS EVENT HAS BEEN DISCUSSED IN SHIFT BRIEFINGS.

[280] SAN ONOFRE 2 DOCKET 50-361 LER 85-006
 TOXIC GAS MONITOR FAILS.
 EVENT DATE: 011385 REPORT DATE: 020885 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 193720) ON 1-13-85, AT 0005, WITH UNIT 2 DEFUELED AND UNIT 3 IN MODE 1 AT 100% POWER, TOXIC GAS ISOLATION SYSTEM TRAIN 'A' ACTUATED DURING PERFORMANCE OF SURVEILLANCE TESTING OF THE TGIS PANEL. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM ACTUATED AS REQUIRED. CREACUS WAS RESET AT 0010. THE CAUSE OF THE TGIS ACTUATION WAS A HYDROCARBON ANALYZER FLAME-OUT, WHICH CAUSES AN INSTRUMENT FAILURE ACTUATION SIGNAL. THE FLAME-OUT WAS CAUSED BY CLOGGED FILTERS AT THE INLET TO THE ANALYZER'S BURNER AND IN AN INSTRUMENT AIR REGULATOR. THE CLOGGED FILTERS WERE CAUSED BY DUST ACCUMULATION FOLLOWING ACCIDENTAL BREAKING AND SUBSEQUENT REPLACEMENT OF A PORTION OF THE INSTRUMENT AIR LINE. THE CORRECTIVE ACTION WAS TO REPLACE THE DIRTY FILTERS. TGIS TRAIN 'A' WAS TESTED SATISFACTORY AND RESTORED TO OPERABLE STATUS AT 2250. AS ADDITIONAL CORRECTIVE ACTION, A REPETITIVE MAINTENANCE ORDER WILL BE GENERATED TO REQUIRE REPLACEMENT OF APPROPRIATE TGIS FILTERS ON A PERIODIC BASIS.

[281] SAN ONOFRE 2 DOCKET 50-361 LER 85-019
 THREE SPURIOUS ACTUATIONS OF THE TOXIC GAS ISOLATION SYSTEM.
 EVENT DATE: 020885 REPORT DATE: 030785 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 193721) ON 2-8-85 AT 1641, 2-10-85 AT 1545 AND 2-15-85 AT 1338, WITH UNITS 2 AND 3 IN MODE 5, SPURIOUS TGIS TRAIN 'B' ACTUATIONS OCCURRED. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM ACTUATED AS REQUIRED. THE ACTUATION WAS VERIFIED TO BE SPURIOUS BY CONFIRMING THAT THE METER INDICATIONS ON THE TGIS PANEL WERE LESS THAN THEIR RESPECTIVE SETPOINTS, AND TGIS WAS RESET. SEE ALSO LERS 84-006, -012, -021, -026, -032, -037, -042, -052, -055, -065 AND 85-003. SPURIOUS TGIS ACTUATIONS HAVE BEEN A RECURRING EVENT, AND HAVE BEEN THE RESULT OF ONE OR MORE OF THE FOLLOWING CONDITIONS: OVERLY CONSERVATIVE ALARM SETPOINTS; ELECTRICAL NOISE; RAPID TEMPERATURE AND PRESSURE CHANGES; RADIO TRANSMISSIONS; VIBRATION, AND DUST AND DIRT ACCUMULATION. CORRECTIVE ACTIONS HAVE REDUCED THE NUMBER OF SPURIOUS ACTUATIONS FROM AN AVERAGE OF 30 PER QUARTER TO 8 IN THE LAST QUARTER OF 1984. A TECH SPEC AMENDMENT HAS BEEN ISSUED TO ALLOW MORE APPROPRIATE SETPOINTS TO BE IMPLEMENTED. THIS SHOULD FURTHER REDUCE THE NUMBER OF SPURIOUS ACTUATIONS. A TGIS TASK FORCE HAS RECOMMENDED ADDITIONAL CORRECTIVE ACTIONS AND THESE ACTIONS ARE ALL IN PROGRESS.

[282] SAN ONOFRE 2 DOCKET 50-361 LER 85-021
 TESTING ERROR RESULTS IN RADIOACTIVE RELEASE.
 EVENT DATE: 021985 REPORT DATE: 031985 NSSS: CE TYPE: PWR

(NSIC 193722) ON 2-19-85 AT 2252 WITH UNIT 2 IN MODE 5, FHB TRAINS 'A' AND 'B' ACTUATED DUE TO AN INCREASE IN RADIOACTIVE GASEOUS ACTIVITY IN THE FUEL HANDLING BLDG. NO FUEL HANDLING WAS IN PROGRESS AT THE TIME OF THE EVENT. ALL FHB TRAIN 'A' AND 'B' COMPONENTS FUNCTIONED PROPERLY. THE CAUSE OF THE INCREASED GASEOUS ACTIVITY WAS AN OPEN VENT VALVE WHICH HAD BEEN POSITIONED TO SUPPORT ILRT PREPARATIONS. WHEN A NORMAL VALVE LINEUP ON VALVES UPSTREAM OF THE VENT WAS PERFORMED TO ALIGN AN INSTRUMENT TO THE WASTE GAS TANK, THIS VENTED THE ON-LINE WASTE GAS TANK TO THE PENETRATION BLDG. THE GAS WAS THEN DRAWN INTO THE FHB WHICH CAUSED THE FHB TO ACTUATE. THE FHB VENTILATION EXHAUSTED TO THE PLANT VENT STACK WHERE IT WAS MONITORED BY RADIATION MONITORS. THE GAS LEAK WAS ISOLATED, ACTIVITY LEVELS RETURNED TO NORMAL AND FHB RESET. TO PREVENT RECURRENCE PROCEDURE S023-V-3.12 "CONTAINMENT INTEGRATED LEAK RATE TEST" HAS BEEN REVISED TO REQUIRE APPROPRIATE TAGGING OF UPSTREAM VALVES TO IDENTIFY OPEN VENTS. OUR EVALUATION OF THE SITE BOUNDARY CONCENTRATIONS INDICATES A MAX CONCENTRATION OF 0.13 MPC EXISTED DURING THE RELEASE.

[283] SAN ONOFRE 2 DOCKET 50-361 LER 85-010
 SPURIOUS TOXIC GAS ISOLATION SYSTEM ACTUATIONS.
 EVENT DATE: 032185 REPORT DATE: 042285 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 193907) ON 3-21-85 AT 0700, WITH UNIT 2 IN MODE 4 AND UNIT 3 IN MODE 1 AT 62% POWER, A SPURIOUS TGIS TRAIN 'A' ACTUATION OCCURRED. SUBSEQUENT TO THIS DATE, ADDITIONAL SPURIOUS ACTUATIONS OCCURRED ON 3/31 AND 4/7. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM ACTUATED AS REQUIRED. EACH ACTUATION WAS VERIFIED TO BE SPURIOUS BY CONFIRMING THAT THE METER INDICATIONS ON THE TGIS PANEL WERE LESS THAN THEIR RESPECTIVE SETPOINTS, AND TGIS WAS RESET. SEE ALSO LERS 84-006, -012, -021, -026, -032, -037, -042, -052, -055, -065, 85-003, AND -019 (DOCKET NO. 50-361). SPURIOUS TGIS ACTUATIONS HAVE BEEN A RECURRING EVENT, AND HAVE BEEN THE RESULT OF ONE OR MORE OF THE FOLLOWING CONDITIONS: OVERLY CONSERVATIVE ALARM SETPOINTS; ELECTRICAL NOISE; RAPID TEMPERATURE AND PRESSURE CHANGES; RADIO TRANSMISSIONS; VIBRATION; AND DUST AND DIRT ACCUMULATION. CORRECTIVE ACTIONS HAVE SIGNIFICANTLY REDUCED THE NUMBER OF SPURIOUS ACTUATIONS. A TECH SPEC AMENDMENT HAS IMPLEMENTED MORE APPROPRIATE SETPOINTS WHICH SHOULD FURTHER REDUCE THE NUMBER OF SPURIOUS ACTUATIONS. A TGIS TASK FORCE HAS RECOMMENDED ADDITIONAL CORRECTIVE ACTIONS AND THESE ACTIONS ARE ALL IN PROGRESS.

[284] SAN ONOFRE 2 DOCKET 50-361 LER 85-022
 INADVERTENT ACTUATION OF SAFETY INJECTION SYSTEM.
 EVENT DATE: 033085 REPORT DATE: 042585 NSSS: CE TYPE: PWR

(NSIC 193908) ON 3-30-85, WITH UNIT 2 IN MODE 4, AN I&C TECHNICIAN TEAM WAS PERFORMING A MONTHLY SURVEILLANCE ON THE PRESSURIZER PRESSURE LOW (PPL), CHANNEL B OF THE PLANT PROTECTION SYSTEM (PPS). PPL CHANNELS A, C AND D OF THE PPS WERE IN TRIP BYPASS BECAUSE THE RCS PRESSURE WAS BELOW 400 PSIA, IN ACCORDANCE WITH THE APPROPRIATE OPERATING PROCEDURES. IN ORDER TO SATISFY A PROCEDURAL STEP OF THE SURVEILLANCE, A TECHNICIAN ELECTED TO REMOVE THE BYPASS FROM CHANNELS A, C AND D, CONTRARY TO THE PROCEDURE. UPON REMOVAL OF THE BYPASS FROM CHANNEL C AND D, THE 2 OUT OF 4 LOGIC WAS SATISFIED ON LOW PRESSURIZER PRESSURE AND THE SAFETY INJECTION SYSTEM WAS ACTUATED. THE TECHNICIAN RETURNED THE PPS CHANNELS TO BYPASS, SAFETY INJECTION WAS SECURED AND ALL APPROPRIATE OPERATIONS ACTIONS WERE PERFORMED. THE CAUSE OF THE EVENT WAS TECHNICIAN ERROR, WITH A CONTRIBUTING CAUSE OF PROCEDURE INADEQUACY. AS CORRECTIVE ACTIONS: THE TECHNICIAN WAS DISCIPLINED; A REVIEW OF THE EVENT WITH ALL I&C TECHNICIANS WAS CONDUCTED; AND I&C PROCEDURES ARE BEING ENHANCED.

[285] SAN ONOFRE 2 DOCKET 50-361 LER 85-023
 CONTAINMENT RADIATION MONITOR SPURIOUSLY ACTUATES.
 EVENT DATE: 033185 REPORT DATE: 042685 NSSS: CE TYPE: PWR

(NSIC 193909) ON 3-31-85 AT 0604 WITH UNIT 2 IN MODE 4, THE TRAIN 'A' CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) SPURIOUSLY ACTUATED FROM AN ELECTRICAL NOISE SPIKE ON CONTAINMENT AREA RADIATION MONITOR 2RT-7856. CONTAINMENT RADIATION LEVELS WERE VERIFIED TO BE BELOW THE CPIS ACTUATION SETPOINT AND CPIS WAS RESET AT 0915. THE CPIS ACTUATION CORRESPONDED WITH THE SECURING OF HPSI PUMP 2P-018 WHICH MAY HAVE CAUSED THE ELECTRICAL NOISE SPIKE ON 2RT-7856. THE CAUSE OF THE ELECTRICAL NOISE IS UNDER INVESTIGATION AS REPORTED PREVIOUSLY IN LERS 84-002, 84-004, 84-049, 84-061, 84-071, 84-076, 85-009 (DOCKET NO. 361) AND 84-010 (DOCKET NO. 50-362). OUR PRELIMINARY INVESTIGATION HAS BEEN COMPLETED, AND WE ARE CURRENTLY PERFORMING A DETAILED STUDY OF THE PLANT GROUND SYSTEM WHICH BEGAN IN MARCH 1985. COMPLETION OF THE GROUND SYSTEM STUDY IS SCHEDULED FOR 11-1-85, AND UPON DETERMINATION OF CORRECTIVE ACTION, WE WILL SUBMIT A REVISION TO LER 84-002.

[286] SAN ONOPRE 3 DOCKET 50-362 LER 85-004
 DELINQUENT RCS SAMPLE WITH DOSE EQUIVALENT IODINE LIMITS EXCEEDED.
 EVENT DATE: 013085 REPORT DATE: 022785 NSSS: CE TYPE: PWR

(NSIC 194027) ON 1-30-85 AT 0900 WITH UNIT 3 IN MODE 5, FOLLOWING COLLAPSING OF THE PRESSURIZER STEAM BUBBLE AFTER A SHUTDOWN, ANALYSIS OF A RCS SAMPLE, TAKEN ONLY FOR OBSERVATION PURPOSES AND NOT REQUIRED BY TECH SPECS, INDICATED THAT RCS SPECIFIC ACTIVITY EXCEEDED 1.0 MICROCURIE/GRAM DOSE EQUIVALENT IODINE-131. RCS SPECIFIC ACTIVITY WAS REDUCED TO LESS THAN 1.0 MICROCURIE/GRAM DE I-131 BY 1930 WITH PURIFICATION FLOW. THE INCREASED ACTIVITY WAS CAUSED WHEN THE IODINE IN THE PRESSURIZER STEAM BUBBLE WAS FORCED INTO SOLUTION WHILE COLLAPSING THE BUBBLE. A 4 HR SAMPLE DUE TO BE TAKEN AT 1650 WAS NOT TAKEN UNTIL 1930. OUR INVESTIGATION OF THE ADMINISTRATIVE CONTROLS SURROUNDING THE DELINQUENT SAMPLE DETERMINED THAT THE CAUSE OF THE DELINQUENT SAMPLE WAS PERSONNEL ERROR IN THAT THE RESPONSIBLE CHEMISTRY TECHNICIAN AND CHEMISTRY FOREMAN UNDERSTOOD THE SAMPLING REQUIREMENTS BUT FAILED TO COMPLETE THEM WITHIN THE REQUIRED TIME. APPROPRIATE DISCIPLINARY ACTION WAS TAKEN. ADDITIONALLY, THIS EVENT WAS DISCUSSED WITH ALL CHEMISTRY TECHNICIANS AND FOREMEN. THIS SUBMITTAL ALSO PROVIDES THE REPORT PURSUANT TO LCO 3.4.7, ACTION STATEMENT 'D', RCS SPECIFIC ACTIVITY EXCEEDING 1.0 MICROCURIES/GRAM DE I-131.

[287] SAN ONOPRE 3 DOCKET 50-362 LER 85-002
 FIVE HPSI SNUBBERS FOUND DEFICIENT.
 EVENT DATE: 022085 REPORT DATE: 030885 NSSS: CE TYPE: PWR
 VENDOR: PACIFIC SCIENTIFIC COMPANY

(NSIC 193777) ON 2-20-85 WITH UNIT 3 IN MODE 5, DURING THE 100% VISUAL SURVEILLANCE OF PACIFIC SCIENTIFIC MECHANICAL SNUBBERS REQUIRED PER TECH SPEC 4.6.7.B, ONE SNUBBER ON THE HPSI SYSTEM WAS NOTED TO BE AT THE END OF STROKE. THE SNUBBER WAS SUBSEQUENTLY MANUALLY STROKED, FOUND FROZEN AND DECLARED INOPERABLE. IT WAS THEN REMOVED AND DISASSEMBLED TO DETERMINE THE CAUSE OF THE FAILURE. THE DAMAGE WAS APPARENTLY CAUSED BY A HYDRAULIC TRANSIENT. ALL ADDITIONAL SNUBBERS WHICH MAY HAVE BEEN POTENTIALLY EXPOSED TO THE SAME TRANSIENT WERE MANUALLY STROKED. AS A RESULT OF THE STROKING, A TOTAL OF 5 OUT OF 35 SNUBBERS WERE FOUND TO BE INOPERABLE, 4 WITH TRANSIENT DAMAGE AND 1 WITH ENVIRONMENTAL DEGRADATION. AS CORRECTIVE ACTION ALL DEFICIENT SNUBBERS HAVE BEEN REPLACED AND AN ENGINEERING EVALUATION OF THE EFFECTS OF THESE SNUBBER FAILURES ON THE PIPING AND THE OTHER SUPPORTS HAS BEEN PERFORMED. AS A RESULT, NO DAMAGE, OTHER THAN TO THE SNUBBERS, WAS FOUND, AND AFTER SNUBBER REPLACEMENT THE SYSTEM REMAINS CAPABLE OF PERFORMING ITS FUNCTION UNDER THE FSAR DESIGN BASIS. A SIMILAR EVENT LER-84-079, REVISION 1.

[288] SAN ONOPRE 3 DOCKET 50-362 LER 85-003
 REACTOR COOLANT SYSTEM THERMOWELL LEAKAGE.
 EVENT DATE: 031285 REPORT DATE: 040985 NSSS: CE TYPE: PWR
 VENDOR: ROSEMOUNT, INC.

(NSIC 193859) ON 3-11-85 WITH UNIT 3 IN MODE 2, AN INVESTIGATION OF ERRONEOUS TEMPERATURE READINGS FROM RTD 3TE-0112-1 WAS INITIATED. ON 3-12-85, A CONTAINMENT ENTRY WAS MADE AND AN INSPECTION OF THE RTD REVEALED WATER INSIDE THE JUNCTION BOX AND AROUND THE RTD SHAFT. BASED ON A SAMPLE OF THIS WATER, LEAKAGE WAS CONCLUDED TO BE FROM THE RCS AND LCO 3.4.5.2, ACTION STATEMENT 'A', REQUIRING UNIT SHUTDOWN, WAS INVOKED. AN UNUSUAL EVENT WAS DECLARED AND CLOSED OUT AT 2015 ON 3-12-85. UNIT 3 ENTERED MODE 3 AT 2030 ON 3-12-85 AND MODE 5 AT 0237 ON 3-14-85. THE CAUSE OF THE LEAKAGE IS BELIEVED TO BE DUE TO A SMALL LEAK WHICH DEVELOPED IN THE THERMOWELL. THE CAUSE OF THE POTENTIAL THERMOWELL DEGRADATION WILL BE INVESTIGATED DURING THE NEXT REFUELING OUTAGE. THE RTD WAS REMOVED FROM THE THERMOWELL AND INSTALLED IN A SPARE THERMOWELL. THE SUSPECT THERMOWELL WAS PLUGGED AND SEAL WELDED. ALL OTHER UNIT 3 AND UNIT 2 IN-SERVICE THERMOWELLS WERE

INSPECTED FOR LEAKAGE. NO ADDITIONAL THERMOWELL FAILURES WERE FOUND, THEREFORE, THIS EVENT IS CONSIDERED TO BE AN ISOLATED CASE.

[289] SAN ONOFRE 3 DOCKET 50-362 LER 85-006
SAFETY INJECTION ACTUATION DUE TO LOW RCS PRESSURE.
EVENT DATE: 031385 REPORT DATE: 041185 NSSS: CE TYPE: PWR
VENDOR: CONTROL COMPONENTS

(NSIC 193910) ON 3-13-85 AT 1443 WITH UNIT 3 IN MODE 4 DURING COOLDOWN AND DEPRESSURIZATION, THE SAFETY INJECTION SYSTEM (SIS) AUTOMATICALLY ACTUATED AT A RCS PRESSURE OF 330 PSIA. ALL SIS ACTUATED COMPONENTS FUNCTIONED PROPERLY CAUSING INJECTION WATER (APPROX 4500 GALS) TO FLOW INTO THE RCS. AT 1445, OPERATORS SECURED SAFETY INJECTION AFTER VERIFYING THAT THERE WERE NO INDICATIONS OF RCS LEAKAGE. AT 1459, AN UNUSUAL EVENT WAS DECLARED AND AT 1502, THE UNUSUAL EVENT WAS CLOSED AFTER VERIFYING THAT RCS PRESSURE AND TEMPERATURE WERE STABLE. AT 1525, THE SIAS WAS RESET. POST-EVENT ANALYSIS OF COMPUTER RECORDS DISCLOSED THAT AT 1428, A SUDDEN INCREASE IN COOLDOWN RATE OCCURRED WHEN A STEAM BYPASS CONTROL VALVE IMPROPERLY OPENED FURTHER DUE TO A STICKY VALVE OPERATOR. THE RESULTING INCREASE IN COOLDOWN RATE CAUSED RCS PRESSURE TO BE REDUCED BELOW THE SIAS SETPOINT MUCH SOONER THAN THE TIME ANTICIPATED BY THE OPERATOR WHEN SIAS WAS TO BE BYPASSED. A DESIGN CHANGE TO PROVIDE DEMAND/ACTUAL POSITION INDICATION IN THE CONTROL ROOM FOR THE STEAM BYPASS CONTROL VALVES HAS BEEN IMPLEMENTED IN UNIT 2 AND WILL BE IMPLEMENTED IN UNIT 3 DURING THE UPCOMING REFUELING OUTAGE.

[290] SAN ONOFRE 3 DOCKET 50-362 LER 85-009
CONTAINMENT EMERGENCY FAN COOLER HAS LOW FLOW.
EVENT DATE: 032685 REPORT DATE: 042585 NSSS: CE TYPE: PWR

(NSIC 193974) THE CONTAINMENT EMERGENCY COOLING SYSTEM (CECS) HAS 4 EMERGENCY COOLING UNITS (ECU), 2 IN EACH OF 2 TRAINS. FLOW BALANCING FOR THE COMPONENT COOLING WATER SYSTEM WHICH SERVES THESE COOLERS IS BY SETTING SYSTEM MANUAL ISOLATION VALVES IN SPECIFIED, PARTIALLY OPEN POSITIONS. THE TECH SPECS INCLUDE THE REQUIREMENT FOR A MONTHLY CHECK OF FLOW THROUGH EACH ECU. MINIMUM FLOW FOR AN ACCEPTABLE SURVEILLANCE IS 2,000 GPM. ON 3-26-85, WITH UNIT 3 AT 100% POWER, THE INDICATED FLOW FOR ECU 3E-401 WAS 1,700 GPM. THE MANUAL OUTLET ISOLATION VALVE FOR THIS UNIT WAS CHECKED AND FOUND TO BE LESS THAN THE SPECIFIED AMOUNT OPEN. IT WAS PROMPTLY OPENED TO INCREASE FLOW THROUGH THE UNIT TO MORE THAN 2,000 GPM. AN EVALUATION HAS BEEN PERFORMED TO DETERMINE IF THE OPERABILITY OF THE AFFECTED TRAIN OF THE CECS WAS AFFECTED BY THE REDUCED FLOW THROUGH ECU 3E-401. THIS EVALUATION HAS DETERMINED THAT THE TRAIN WAS AT ALL TIMES OPERABLE IN THAT IT WAS CAPABLE OF REMOVING HEAT IN EXCESS OF ITS DESIGN HEAT LOAD OF 140 MILLION BTU/HR UNDER ALL REQUIRED CONDITIONS. INVESTIGATION HAS DETERMINED THAT THE ISOLATION VALVE WAS INCORRECTLY POSITIONED FOLLOWING A LLRT PERFORMED AFTER THE FEB SURVEILLANCE FLOW TEST. INCORRECT POSITIONING WAS DUE TO A LEGIBILITY PROBLEM IN THE HANDWRITTEN DOCUMENTATION FOR VALVE REALIGNMENT FOLLOWING THE LLRT AND THE LACK OF ADEQUATE VALVE POSITION INDICATION.

[291] SAN ONOFRE 3 DOCKET 50-362 LER 85-011
CONTAINMENT AIRBORNE MONITOR FAILS.
EVENT DATE: 040185 REPORT DATE: 041885 NSSS: CE TYPE: PWR
VENDOR: NUCLEAR MEASUREMENTS CORP.

(NSIC 193911) ON 4-1-85 AT 1225 WITH UNIT 3 IN MODE AT 100% POWER, CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) TRAIN 'B' ACTUATED ON AN INSTRUMENT FAILURE SIGNAL FROM CONTAINMENT AIRBORNE MONITOR 3RI-7807. BECAUSE THERE WAS NO PURGE IN PROGRESS, ONLY THE LOGIC CIRCUIT ACTUATED, AND THERE WAS NO ACTUATION OF CPIS COMPONENTS. A SHIFT SUPERINTENDENT ACCELERATED MAINTENANCE (SSAM) WAS DECLARED TO INVESTIGATE THE CAUSE OF THE ACTUATION SIGNAL. CPIS WAS RESET AFTER THE

FAILED MONITOR WAS PLACED IN ALARM DEFEAT. INVESTIGATION REVEALED THE CAUSE OF THE ACTUATION SIGNAL TO BE A FAILED POWER SUPPLY BRIDGE DIODE. THE DEFECTIVE DIODE WAS REPLACED, AND THE MONITOR WAS RESTORED TO OPERABLE STATUS ON APR 8. THIS IS CONSIDERED AN ISOLATED FAILURE AND THEREFORE NO FURTHER CORRECTIVE ACTION IS PLANNED. BECAUSE THE SYSTEM ACTUATES ON LOSS OF POWER, THERE WAS NO SAFETY SIGNIFICANCE TO THIS FAILURE.

[292] SAN ONOFRE 3 DOCKET 50-362 LER 85-014
CONTAINMENT IODINE MONITOR FAILURE.
EVENT DATE: 041885 REPORT DATE: 051685 NSSS: CE TYPE: PWR
VENDOR: NUCLEAR MEASUREMENTS CORP.

(NSIC 194028) ON 4-18-85, AT 1454 WITH UNIT 3 IN MODE 1 AT 100% POWER, THE TRAIN B CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) ACTUATED ON A HIGH IODINE SIGNAL FROM CONTAINMENT AIRBORNE RADIATION MONITOR 3RE-7807A2 (IODINE CHANNEL). SINCE THERE WAS NO PURGE IN PROGRESS AND ALL OF THE CPIS COMPONENTS WERE ALREADY CLOSED, THIS WAS A LOGIC CIRCUIT ACTUATION ONLY. THE CHARCOAL FILTER WAS REPLACED, WHICH CLEARED THE ALARM STATE, AND CPIS WAS RESET AT 1537. THE CPIS ACTUATION WAS DUE TO THE FAILURE OF THE HIGH VOLTAGE POWER SUPPLY CARD WHICH CAUSED THE DETECTOR TO READ MORE ACTIVITY THAN EXISTED. THE HIGH VOLTAGE CARD WAS REPLACED AND THE MONITOR WAS RETESTED SATISFACTORILY. ADDITIONALLY, SINCE THE MONITOR WAS ALREADY OUT OF SERVICE FOR THE REPAIR, THE 31 DAY SURVEILLANCE AND 92 DAY LUBE WERE PERFORMED WITH NO FURTHER PROBLEMS. THE CAUSE OF THE HIGH VOLTAGE POWER SUPPLY FAILURE COULD NOT BE DETERMINED AND IS CONSIDERED AN ISOLATED OCCURRENCE. 3RE-7807A2 WAS RETURNED TO SERVICE AT 1830 ON 5-7-85.

[293] SEQUOYAH 1 DOCKET 50-327 LER 85-012
FAILURE TO COMPLY WITH ONE HOUR FIRE WATCH.
EVENT DATE: 031285 REPORT DATE: 040885 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 193769) AN HOURLY FIRE WATCH WAS NOT PERFORMED WITHIN 1 HR DUE TO AN INOPERABLE DOOR. DOOR A 123 TO THE UNIT 1 AUX BLDG SUPPLY AIR FAN ROOM WAS FOUND TO BE INOPERABLE, AND A MAINTENANCE REQUEST WAS ISSUED. THE DOOR OPENING BAR WAS HANGING LOOSE, AND THE DOOR COULD NOT BE OPENED. MECHANICAL MAINTENANCE PERSONNEL WORKED ON THE DOOR AND WERE ABLE TO RELEASE THE DOOR LATCHES ALLOWING THE DOOR TO OPEN. AFTER THE DOOR WAS OPENED, IT WAS DISCOVERED THAT THE SCREWS THAT SECURE THE PULL HANDLE TO THE LATCH ROD LEVER HAD BROKEN. THE FIRE WATCH WAS REESTABLISHED AS SOON AS THE DOOR WAS REPAIRED. THIS CONDITION IS REPORTABLE PER 10 CFR 50.73(A)(2)(I) AND THE SPECIAL REPORT REQUIREMENTS OF TECH SPEC 3.7.12. SIMILAR EVENTS - 327/84-075, 327/85-008 AND 327/85-011.

[294] SEQUOYAH 1 DOCKET 50-327 LER 85-014
TESTING ERROR CAUSES INADVERTENT AUX BLDG ISOLATION.
EVENT DATE: 040485 REPORT DATE: 050185 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 194020) ON 4-4-85, AN INADVERTENT AUX BLDG ISOLATION (ABI) OCCURRED DURING THE SCHEDULED CALIBRATION OF O-RM-90-101 (AUX BLDG STACK RADIATION MONITOR). VERIFYING THE RADIATION MONITOR ALARM SETPOINTS IN FUNCTIONAL TEST SI-82, REQUIRES THAT AN ABI BLOCK HAND SWITCH BE PROPERLY SELECTED FOR THE CHANNEL BEING TESTED TO PREVENT AN ABI FROM OCCURRING. WHILE TESTING THE TRIP SETPOINTS ON RM-90-101A (AUX BLDG STACK PARTICULATE RADIATION MONITOR), THE CHANNEL HIGH RADIATION ALARM CAME IN, AS EXPECTED, BUT THE ASSOCIATED ANNUNCIATOR DID NOT LIGHT AS REQUIRED. THE INSTRUMENT MECHANICS PROCEEDED TO TEST THE TRIP POINTS ON THE RM-90-101B (AUX BLDG STACK NOBLE GAS RADIATION MONITOR) CHANNEL WHICH REQUIRED MOVING THE ABI BLOCK SWITCH FROM THE RM-90-101A POSITION TO RM-90-101B. REMEMBERING THAT A TIME DELAY HAD BEEN INSTALLED TO PREVENT SPURIOUS ABI

ACTUATION, THE APPRENTICE DECIDED TO RETEST 101A, BUT FAILED TO RETURN THE ABI BLOCK SWITCH TO THE RM-90-101A CHANNEL BEFORE RETESTING THE ANNUNCIATOR. WHEN THE TEST SIMULATED A HIGH RADIATION SIGNAL THE ABI OCCURRED. THE ISOLATION WAS IDENTIFIED AND RESET APPROX 1 AND 1/2 HRS AFTER THE INITIAL OCCURRENCE.

[295] SEQUOYAH 1 DOCKET 50-327 LER 85-015
FAILURE TO COMPLY WITH ONE HOUR FIRE WATCH.
EVENT DATE: 040485 REPORT DATE: 050285 NSSS: WE TYPE: PWR

(NSIC 193899) AT 1800 CST ON 4-4-85, THE HOURLY FIRE WATCH FOR THE UNIT 1 AUX BLDG SUPPLY AIR FAN ROOM COULD NOT BE CONDUCTED BECAUSE DOOR A-123 WOULD NOT OPEN. IT WAS FOUND THAT THE PIN THAT SECURES THE LOWER DOGGING PIN TO THE DOGGING PIN RELEASE ROD HAD COME OUT. FIRE WATCHES WERE REESTABLISHED AS SOON AS POSSIBLE AFTER THE PROBLEM WAS FOUND AND REPAIRED, ALTHOUGH SOME HOURLY FIRE WATCHES WERE NOT PERFORMED. THE DOOR FAILED IN A CLOSED LOCKED CONDITION WHICH ASSURED OPERABILITY AS A FIRE BARRIER. THESE EVENTS ARE REPORTABLE PER 10 CFR 50.73 A.2.I AND THE SPECIAL REPORT REQUIREMENTS OF TECH SPEC 3.7.12. PREVIOUS OCCURRENCES - 327-85-013, 85-012, 85-011, 85-008, 85-003, AND 84-075.

[296] SEQUOYAH 1 DOCKET 50-327 LER 85-018
CONDUIT PENETRATING A FIRE BARRIER WITHOUT BEING SEALED (APPENDIX R).
EVENT DATE: 041385 REPORT DATE: 051085 NSSS: WE TYPE: PWR

(NSIC 194021) DURING AN INSPECTION OF CONDUIT TO ENSURE COMPLIANCE WITH THE FIRE PROGRAM REQUIREMENTS FOR SEALANT, 3 CONDUITS WERE FOUND THAT WERE NOT SEALED ON BOTH SIDES OF THE FIRE BARRIERS AT AUX BLDG ELEVATION 734 IN THE 1A 480V CONTAINMENT AND AUX BLDG VENTILATION BOARD ROOM. A FIRE WATCH HAD ALREADY BEEN ESTABLISHED IN THE AFFECTED AREAS FROM PREVIOUS 10 CFR 50 APPENDIX R REQUIREMENTS. THIS FIRE WATCH SATISFIES REQUIREMENTS PER THE ACTION STATEMENT OF TECH SPEC 3.7.12 AND WILL REMAIN IN EFFECT UNTIL FULL COMPLIANCE WITH APPENDIX R CAN BE ACHIEVED. THIS REPORT IS REQUIRED PER 10 CFR 50.73 PARAGRAPH A.2.II AND SPECIAL REPORT REQUIREMENTS OF TECH SPEC 3.7.12. PREVIOUS EVENT - 328/85-003.

[297] SHOREHAM DOCKET 50-322 LER 85-008
AUTOMATIC START OF EMERGENCY DIESEL GENERATOR OCCURS.
EVENT DATE: 022785 REPORT DATE: 032285 NSSS: GE TYPE: BWR

(NSIC 193767) ON 2-27-85 AT 5:40 AM EMERGENCY DG 103 AUTO STARTED DUE TO AN I&C TECHNICIANS ERROR. THE PLANT WAS IN OPERATIONAL CONDITION 4 AND NONE OF THE EMERGENCY DG'S WERE REQUIRED TO BE OPERABLE AT THIS TIME PER TECH SPEC REQUIREMENTS. TWO I&C TECHNICIANS WERE PERFORMING A SURVEILLANCE PROCEDURE (4160V EMERGENCY BUS LOAD SEQUENCE PROGRAM CALIBRATION AND FUNCTIONAL CHECK), WHEN THE CONTROL ROOM RECEIVED INDICATION AND AN ALARM OF A GROUND ON THE 125V DC BATTERY C SYSTEM. AFTER APPROX 30 SECS THE GROUND INDICATION CLEARED, BUT THE ALARM REQUIRED A MANUAL RESET. COINCIDENTAL WITH THE OPERATOR RESETTING THE GROUND ALARM RELAY, THE UNDERVOLTAGE LOCKOUT RELAY FOR EMERGENCY BUS 103 TRIPPED. THIS CAUSED THE NSST BREAKER FOR EMERGENCY BUS 103 TO TRIP, THE RSST BREAKER TO TRIP AND LOCKOUT, AND CREATED AN UNDERVOLTAGE CONDITION ON EMERGENCY BUS 103. DG 103 STARTED AND REENERGIZED THE BUS.

[298] SHOREHAM DOCKET 50-322 LER 85-009
TESTING CAUSES INADVERTENT REACTOR WATER CLEANUP (RWCU) OUTBOARD ISOLATION.
EVENT DATE: 030585 REPORT DATE: 032985 NSSS: GE TYPE: BWR

(NSIC 193894) ON 3-5-85 AT 5:50 PM POST WORK LOGIC CIRCUIT TESTING ON THE STEAM LEAK DETECTION SYSTEM CAUSED AN INADVERTENT ISOLATION OF THE RWCU. THE PLANT WAS IN OPERATIONAL CONDITION 4 AND THE CONTAINMENT ISOLATION SYSTEM WAS NOT REQUIRED

TO BE OPERABLE PER TECH SPEC REQUIREMENTS (RWCU IS NOT A TECH SPEC REQUIRED SYSTEM). THE POST WORK TESTING INVOLVED THE PERFORMANCE OF CONTINUITY CHECKS OF A NEWLY INSTALLED TIME DELAY RELAY (B21-K32B). THE POST WORK TEST PROCEDURE IN THE MODIFICATION PACKAGE REQUIRED THE LIFTING OF 2 LEADS FROM THE NEUTRAL SIDE OF THE B21K32B RELAY COIL TO PREVENT RELAY ENERGIZATION. LIFTING THE 2 NEUTRAL LEADS NOT ONLY ENSURED CONTINUED DEENERGIZATION OF THE RELAY, IT ALSO INTERRUPTED SEVERAL ENERGIZED CIRCUITS. THIS RESULTED IN THE DEENERGIZATION OF SEVERAL STEAM LEAK DETECTION SYSTEM TEMPERATURE MODULES AND CAUSED THE SPURIOUS ACTUATION OF 1 OF THE MODULES. THE ACTUATED TEMPERATURE MODULE (RWCU AMBIENT TEMPERATURE MONITOR) PROVIDED A SIGNAL TO AUTOMATICALLY CLOSE THE RWCU ISOLATION VALVE (G33*MOV034), THUS RESULTING IN THE OUTBOARD ISOLATION OF THE RWCU SYSTEM.

[299] SHOREHAM DOCKET 50-322 LER 85-015
 ACCUMULATION OF SEDIMENT IN INTAKE CANAL.
 EVENT DATE: 040585 REPORT DATE: 050385 NSSS: GE TYPE: BWR

(NSIC 193800) THIS SPECIAL REPORT IS SUBMITTED PURSUANT TO TECH SPEC 6.9.2 TO COMPLY WITH TECH SPEC 3.7.1.4. ON 4-5-85 ANNUAL SOUNDINGS OF THE INTAKE CANAL WERE TAKEN IN ACCORDANCE WITH TECH SPEC 4.7.1.4.A.1. THE RESULTS OF THE SOUNDING WERE FINALIZED AND REPORTED TO THE WATCH ENGINEER ON 4-26-85 AND SHOWED THAT OF 27 TRANSECTS MEASURED, 2 WERE FOUND TO BE ABOVE THE LIMIT OF -11 FT (BELOW MEAN WATER LEVEL) WITH READINGS OF -10.9 AND -10.7 FT. THE PLANT WAS IN OPERATIONAL CONDITION 4 AT THE TIME. THE DECREASE IN DEPTH IS DUE TO NORMAL DEPOSITION. NO MAJOR STORMS WERE EXPERIENCED AT THE SITE SINCE THE LAST ANNUAL SOUNDING. THE AVERAGE DEPTH OF THE CANAL WAS DETERMINED TO BE -12.3 FT. TO BRING THE INTAKE CANAL BACK INTO COMPLIANCE, A CONTRACTOR IS BEING OBTAINED TO DREDGE THE CANAL. DREDGING IS EXPECTED TO BE COMPLETED BY 7-30-85.

[300] SHOREHAM DOCKET 50-322 LER 85-013
 HIGH PRESSURE COOLANT INJECTION CIRCUIT INVERTER FAILURE.
 EVENT DATE: 040785 REPORT DATE: 043085 NSSS: GE TYPE: BWR
 VENDOR: TOPAZ ELECTRONICS

(NSIC 193798) ON 4-7-85 AT 1735 A FAILURE OF THE HPCI CIRCUIT INVERTER CAUSED A LOSS OF POWER TO THE HPCI SYSTEM CONTROLS, RENDERING THE HPCI SYSTEM INOPERABLE. IN ADDITION, THE SRV TAILPIPE PRESSURE INDICATORS ALSO EXPERIENCED A LOSS OF POWER. THE PLANT WAS IN OPERATIONAL CONDITION 4, A CONDITION NOT REQUIRING THE HPCI SYSTEM OR THE SRVS TO BE OPERATIONAL. THE "HPCI SYSTEM INOP" ALARM WAS SEALED IN DUE TO THE REACTOR PRESSURE BEING BELOW 150 PSIG. CONTROL ROOM OPERATORS RECEIVED A "HPCI CIRCUIT INVERTER POWER FAILURE" ALARM AND UPON INVESTIGATING, SMELLED AN ACRID ODOR. THE CAUSE OF THE INVERTER FAILURE WAS A FAILURE OF A COOLING FAN PHYSICALLY LOCATED ON THE SIDE OF THE INVERTER. THE FAN IS USED TO CIRCULATE AIR THROUGH THE CABINET TO COOL THE INVERTER AND ITS CIRCUITRY. THE HEAT BUILDUP WAS SUFFICIENT ENOUGH TO CAUSE A CAPACITOR TO FAIL AND CAUSE A RESISTOR IN THE CIRCUIT TO BURN. THIS RESULTED IN THE FAILURE OF THE INVERTER. THE COMPONENTS WERE REPLACED (FAN, CAPACITOR, AND RESISTOR), THE INVERTER WAS TESTED, AND WAS PLACED BACK INTO SERVICE ON 4-10-85.

[301] SHOREHAM DOCKET 50-322 LER 85-014
 SECURITY COMPUTER MALFUNCTION CAUSES LATE FIREWATCH PATROLS.
 EVENT DATE: 040885 REPORT DATE: 050385 NSSS: GE TYPE: BWR

(NSIC 193799) ON 4-8-85 AN HOURLY FIREWATCH REQUIRED BY TECH SPEC 3.7.7.3.A AND 3.7.8.A WAS LATE BY 10 MINS FOR EMERGENCY DG ROOMS 101, 102, AND 103. THE PLANT WAS IN MODE 4, WITH ALL CONTROL RODS INSERTED. THE AUTOMATIC FEATURE OF THE CARBON DIOXIDE FIRE SUPPRESSION SYSTEM WAS INOPERABLE AND VARIOUS FIRE DOORS AND FIRE RATED ASSEMBLIES IN THE ROOMS WERE INOPERABLE, REQUIRING THE HOURLY FIRE PATROLS. A FIRE PATROL HAD BEEN ACCOMPLISHED AT 8:35 AM AND THEREFORE, WAS

REQUIRED AGAIN BY 9:35 AM. HOWEVER, DUE TO A PROBLEM WITH THE SECURITY COMPUTER, THE FIREWATCH PATROL COULD NOT GAIN ENTRY INTO THE AREA THROUGH THE VITAL AREA DOORS. BY THE TIME SECURITY ARRIVED AND PERMITTED ACCESS TO THE AREA, THE REQUIRED PATROL WAS 10 MINS LATE. ALL OTHER FIREWATCH PATROLS WERE COMPLETED WITHIN THE PROPER TIME FRAME. LER'S 85-002, 85-004, AND 85-007 ALSO DISCUSSED RELATED EVENTS WITH FIREWATCHES.

[302] SHOREHAM DOCKET 50-322 LER 85-016
AUTOMATIC INITIATION OF THE CONTROL ROOM AIR CONDITIONING (CRAC) SYSTEM.
EVENT DATE: 041385 REPORT DATE: 051085 NSSS: GE TYPE: BWR

(NSIC 193895) ON 4-13-85 AT 1130, A CONTROL ROOM AIR CONDITIONING (CRAC) SYSTEM AUTOMATIC INITIATION OCCURRED AS A RESULT OF A LOW NEGATIVE DIFFERENTIAL PRESSURE CONDITION ACROSS THE REACTOR BLDG SECONDARY CONTAINMENT. THE PLANT WAS IN OPERATIONAL CONDITION 4, CORE ALTERATIONS WERE NOT IN PROGRESS, AND SECONDARY CONTAINMENT WAS NOT REQUIRED. THE DIFFERENTIAL PRESSURE DECREASE OCCURRED DUE TO FLUCTUATIONS IN SECONDARY CONTAINMENT PRESSURE RESULTING FROM NORMAL USAGE OF THE VARIOUS AIRLOCKS LEADING INTO THE REACTOR BLDG. UPON REESTABLISHMENT OF THE DIFFERENTIAL PRESSURE, THE CRAC SYSTEM WAS SECURED. TO PREVENT FURTHER AUTOMATIC CRAC INITIATIONS, STANDING ORDERS HAVE BEEN ISSUED TO REQUIRE MANUAL INITIATION OF THE CRAC SYSTEM IN THE EVENT THAT THE RBNVS IS TO BE SECURED AND THE RBSVS IS TO MAINTAIN THE REACTOR BLDG SECONDARY CONTAINMENT DIFFERENTIAL PRESSURE.

[303] SHOREHAM DOCKET 50-322 LER 85-017
TESTING ERROR CAUSES REACTOR SCRAM AND RHR ISOLATION.
EVENT DATE: 042985 REPORT DATE: 051785 NSSS: GE TYPE: BWR

(NSIC 193968) ON 4-29-85 AT 0914 AN I&C TECHNICIAN, WHILE PERFORMING AN MSIV LEAKAGE CONTROL SURVEILLANCE TEST, STARTED TO VALVE IN PRESSURE TRANSMITTER 1E32*P042 AND CAUSED A PRESSURE TRANSIENT IN THE REACTOR PRESSURE VESSEL LEVEL REFERENCE LEG. THE TRANSIENT CAUSED MOMENTARY FALSE LOW LEVEL SIGNALS RESULTING IN A FULL SCRAM AND A ONE HALF NS4 ISOLATION. THE PLANT WAS IN OPERATIONAL CONDITION 4, WITH THE MODE SWITCH IN REFUEL TO ACCOMMODATE REPAIR WORK ON THE CONTROL ROD DRIVES. THE REFERENCE LEG IS COMMON TO REACTOR PRESSURE VESSEL LEVEL TRANSMITTERS 1B21*LT154C AND D. RHR B SHUTDOWN COOLING LOOP WAS AUTOMATICALLY ISOLATED CAUSING THE PUMP TO TRIP. VESSEL LEVEL WAS VERIFIED TO BE NORMAL AND THE SCRAM RESET. WITHIN A FEW SECS AFTER RESETTING THE SCRAM A SECOND LOW LEVEL SCRAM WAS INITIATED FROM THE SAME SOURCE DUE TO PRESSURE OSCILLATIONS IN THE REFERENCE LEG. VESSEL LEVEL WAS NORMAL AT +42", VESSEL TEMPERATURE WAS 124 F AND VESSEL PRESSURE WAS 0 PSIG. PLANT MANAGEMENT WAS NOTIFIED AND ALL WORK WHICH COULD AFFECT THE LEVEL REFERENCE LEG WAS IMMEDIATELY STOPPED. AT 0948 THE NS4 ISOLATION WAS RESET AND RHR SHUTDOWN COOLING LOOP B WAS RETURNED TO SERVICE. THE NRC WAS NOTIFIED OF THE EVENT PER 10 CFR 50.72 AT 1046.

[304] ST. LUCIE 1 DOCKET 50-335 LER 85-004
BATTERY SPECIFIC GRAVITY LEVEL CORRECTION.
EVENT DATE: 040485 REPORT DATE: 050685 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: ST. LUCIE 2 (PWR)

(NSIC 194022) WITH UNIT 1 IN MODE 1 AND UNIT 2 IN MODE 5, A DEVIATION FROM TECH SPEC WAS DISCOVERED BY AN NRC INSPECTOR. A FOOTNOTE IN THE TECH SPECS REQUIRES MEASURED BATTERY SPECIFIC GRAVITY BE CORRECTED FOR BOTH TEMPERATURE AND LEVEL; HOWEVER, THE PLANT MAINTENANCE PROCEDURES ONLY REQUIRED THE TEMPERATURE CORRECTION. THE ELECTRICAL DEPARTMENT HAS EVALUATED THAT BATTERY AVAILABILITY AND THEREFORE, PLANT SAFETY HAS NOT BEEN AFFECTED BY THE EVENT. THE CAUSE OF THE EVENT WAS PERSONNEL ERROR IN PREPARATION OF THE ORIGINAL PROCEDURE. THE PROCEDURE AUTHORS OVERLOOKED THE FOOTNOTE IN THE TECH SPECS AND SUBSEQUENT PERIODIC PROCEDURE REVIEWS FAILED TO DETECT THE OMISSION. THE MAINTENANCE

PROCEDURES AND DATA SHEETS HAVE BEEN REVIEWED AGAINST THE TECH SPECS AND NO OTHER OMISSIONS WERE DETECTED. THE PROCEDURES HAVE BEEN CORRECTED SO AS TO INCLUDE THE ELECTROLYTE LEVEL CORRECTION FACTOR. QUALITY INSTRUCTION NO. 5 HAS BEEN REWRITTEN TO GIVE SPECIFIC GUIDELINES FOR COMPARING PLANT PROCEDURES AGAINST SOURCE DOCUMENTS DURING THE PERIODIC PROCEDURAL REVIEWS.

[305] SUMMER 1 DOCKET 50-395 LER 85-006
LAPSE OF OPERATOR LICENSE.
EVENT DATE: 032085 REPORT DATE: 041985 NSSS: WE TYPE: PWR

(NSIC 193919) DURING THE PERFORMANCE OF A REVIEW OF OPERATOR LICENSE STATUS, NUCLEAR TRAINING PERSONNEL DISCOVERED THAT AN OPERATOR'S LICENSE HAD EXPIRED ON 2-3-85, AND A RENEWAL APPLICATION HAD NOT BEEN SUBMITTED. THIS DISCOVERY OCCURRED ON 3-20-85 AT 1100 HRS AND INVOLVED SRO LICENSE NO. SOP-20001. THE OPERATOR WAS IMMEDIATELY REMOVED FROM LICENSED OPERATOR DUTIES AND WAS NOT REINSTATED UNTIL THE NRC ISSUED A NEW LICENSE. THE CAUSE OF THIS EVENT WAS DETERMINED TO BE PERSONNEL ERROR IN THAT THE PERSONS RESPONSIBLE FOR SUBMITTING LICENSE RENEWAL APPLICATIONS DID NOT VERIFY THAT THE APPLICATION WAS SUBMITTED TO OR RECEIVED BY THE NRC. THERE WERE NO ADVERSE CONSEQUENCES FOR THIS EVENT. THE OPERATOR WAS FULLY QUALIFIED BY TRAINING AND EXPERIENCE TO PERFORM CONTROL ROOM SUPERVISOR DUTIES. ALSO, ANOTHER SRO LICENSED OPERATOR, IN ADDITION TO THE SHIFT SUPERVISOR, WAS PRESENT IN THE CONTROL ROOM FOR ALL BUT 2 OF THE 29 SHIFTS IN QUESTION. THE LICENSEE HAS TAKEN CORRECTIVE ACTION TO PROVIDE BETTER ADMINISTRATIVE CONTROL CONCERNING THE PREPARATION AND SUBMITTAL OF LICENSE RENEWAL APPLICATIONS.

[306] SUMMER 1 DOCKET 50-395 LER 85-009
INADEQUATE CONTAINMENT PENETRATION PROTECTION DEVICES.
EVENT DATE: 032585 REPORT DATE: 043085 NSSS: WE TYPE: PWR

(NSIC 194031) DURING THE COURSE OF A RE-EVALUATION OF SCE&G COMPLIANCE WITH REG GUIDE 1.63, 'ELECTRIC PENETRATION ASSEMBLIES IN CONTAINMENT STRUCTURES FOR LIGHT WATER-COOLED NUCLEAR POWER PLANTS,' GILBERT COMMONWEALTH, INC. IDENTIFIED THAT THE SIZING OF THE PRIMARY AND BACKUP OVERCURRENT PROTECTION DEVICES FOR THE INCORE INSTRUMENTATION FLUX MAPPING SPACE HEATERS WAS INADEQUATE. SCE&G VERIFIED THE INADEQUACY OF THE OVERCURRENT PROTECTION FOR THOSE CIRCUITS AND, IN ADDITION, DETERMINED THIS CONDITION TO BE A POTENTIAL SUBSTANTIAL SAFETY HAZARD. FOR CORRECTIVE ACTION, THE LICENSEE TAGGED THE PRIMARY OVERCURRENT PROTECTION DEVICE (CIRCUIT BREAKER) IN THE OPEN POSITION WITH THE RESTRICTION THAT THE SPACE HEATERS CAN ONLY BE ENERGIZED WHEN THE PLANT IS SHUTDOWN AND CONTAINMENT IS OPENED. NO NUCLEAR SAFETY RELATED CIRCUITS ARE AFFECTED; THEREFORE, THE OPERATION AND SAFE SHUTDOWN CAPABILITY OF THE PLANT IS NOT IMPAIRED. HOWEVER, A FAILURE OF THE PENETRATION CONDUCTOR COULD HAVE RESULTED IN A BREACH IN CONTAINMENT AND, SUBSEQUENTLY A RADIOACTIVE RELEASE GREATER THAN THAT ALLOWED BY 10 CFR 100. THE LICENSEE IS EVALUATING THE FEASIBILITY OF MODIFYING THE PROTECTION DEVICES TO ALLOW USE OF SPACE HEATERS DURING NORMAL PLANT OPERATIONS.

[307] SUSQUEHANNA 1 DOCKET 50-387 LER 82-025 REV 1
UPDATE ON CHLORINE DETECTOR FAILURES DURING CREOASS MODIFICATION.
EVENT DATE: 101282 REPORT DATE: 011685 NSSS: GE TYPE: BWR

(NSIC 193947) WHILE IN AN OUTAGE FROM STARTUP TESTING, IN OPERATIONAL CONDITION 4, BOTH CHLORINE DETECTORS WERE DECLARED INOPERABLE DUE TO A LACK OF ELECTROLYTE. THE ACTION STATEMENT REQUIRES 1 CONTROL ROOM EMERGENCY OUTSIDE AIR SUPPLY SYSTEM TRAIN BE PUT IN RECIRCULATION. AT THIS TIME, IT WAS NOTED THAT BOTH CREOASS TRAINS WERE OUT OF SERVICE FOR MODIFICATIONS. THE CREOASS SPECIFICATION ALLOWS BOTH TRAINS TO BE INOPERABLE IN O.C.4, PROVIDED CORE ALTERATIONS ARE SUSPENDED. BECAUSE THE CREOASS ACTION STATEMENT ALLOWED BOTH TRAINS TO BE INOPERABLE, THE

CHLORINE ACTION STATEMENT COULD NOT BE ADHERED TO AND THE UNIT WAS IN A CONDITION LESS CONSERVATIVE THAN PERMITTED BY THE ACTION STATEMENT. ONE CHLORINE DETECTOR WAS RETURNED TO SERVICE WITHIN APPROX 5 HRS, AND THE REMAINING DETECTOR WAS OPERABLE SHORTLY THEREAFTER. TO PREVENT RECURRENCE, THE OPERATORS REVIEWED THE EVENT AND WERE CAUTIONED AS TO RELEASING EQUIPMENT FROM SERVICE. A REVIEW OF THE EVENT INDICATES NO CHANGE IN THE UNIT'S TECH SPECS ARE NEEDED, SINCE THERE HAS NOT BEEN A RECURRENCE OF THE SITUATION, AND OPERATIONS PERSONNEL ARE AWARE OF THE ACTION STATEMENTS.

[308] SUSQUEHANNA 1 DOCKET 50-387 LER 82-054 REV 1
 UPDATE ON HIGH DRYWELL TEMPERATURE DUE TO CHILLER FAILURES.
 EVENT DATE: 111582 REPORT DATE: 012185 NSSS: GE TYPE: BWR

(NSIC 193948) DURING THE STARTUP TESTING PROGRAM, IT WAS DETERMINED THAT THE DRYWELL TEMPERATURE EXCEEDED THE TECH SPEC LIMIT OF 135 F (TECH SPEC 3.6.1.7). THIS WAS THE RESULT OF THE INSERVICE DRYWELL CHILLER TRIPPING WHILE THE STANDBY UNIT WAS OUT OF SERVICE FOR MAINTENANCE. THE TEMPERATURE EXCEEDED 135 F AT 0730 AND RETURNED TO WITHIN LIMITS BY 0940. ALL DRYWELL COOLERS WERE TURNED ON AND RBCCW FLOW WAS INCREASED. THESE ACTIONS LOWERED THE TEMPERATURE INCREASE. CHILLERS WERE RETURNED TO SERVICE AND TEMPERATURES RETURNED TO NORMAL. DRYWELL CHILLERS TRIPPED ON LOSS OF THE CONDENSER WATER PUMPS DUE TO STRAINER BLOCKAGE. THE STRAINERS WERE REMOVED AND THE SYSTEM RETURNED TO SERVICE. BECAUSE THERE HAS BEEN NO RECURRENCE OF THIS EVENT, THE PROPOSED PLANT MODIFICATION TO REPLACE THE STRAINER CONFIGURATION IS NO LONGER CONSIDERED NECESSARY.

[309] SUSQUEHANNA 1 DOCKET 50-387 LER 83-011 REV 1
 UPDATE ON DIESEL GENERATOR LOW AIR START RECEIVER PRESSURE.
 EVENT DATE: 011183 REPORT DATE: 030785 NSSS: GE TYPE: BWR

(NSIC 193746) DURING THE STARTUP TEST PROGRAM, THE 'C' DG WAS DECLARED INOPERABLE UPON DETERMINATION THAT THE AIR START RECEIVER PRESSURE WAS BELOW THE LIMIT OF 240 PSIG. THIS IS REPORTABLE PER 6.9.1.9.B. THERE WERE NO ADVERSE CONSEQUENCES IN THAT OFFSITE POWER WAS NOT LOST AND THE REMAINING DG'S WERE OPERABLE. THE PRESSURE REACHED 237 PSIG BECAUSE OF NORMAL INSTRUMENT DRIFT WHICH LOWERED THE SETPOINT TO BELOW SPECIFICATION LIMITS. THE SETPOINT WAS RECALIBRATED TO ASSURE RECEIVER PRESSURE REMAINS WITHIN TECH SPEC LIMITS. THIS PROBLEM HAS NOT RECURRED SINCE THIS INCIDENT AND NO FURTHER ENGINEERING ACTION IS BEING PURSUED.

[310] SUSQUEHANNA 1 DOCKET 50-387 LER 85-002
 THREE DIESEL GENERATORS FAIL TO START.
 EVENT DATE: 012185 REPORT DATE: 022885 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)

(NSIC 193781) THE 'B' DG WAS REMOVED FROM SERVICE AT 0820 ON 1-21-85 FOR 18 MONTH PREVENTIVE MAINTENANCE. A 3 DAY LCO WAS ENTERED AND THE REMAINING DG'S WERE TESTED AS REQUIRED BY TECH SPECS. A START ATTEMPT WAS MADE ON THE 'A' DIESEL AT 0902 WHICH RESULTED IN A TRIP. THE DIESEL WAS DECLARED INOPERABLE AND TECH SPEC ACTION STATEMENT REQUIRES 3 DIESELS TO BE RESTORED TO OPERABLE STATUS WITHIN 2 HRS OR BE IN HOT SHUTDOWN WITHIN THE NEXT 12 HRS. AT 0935 THE 'C' DIESEL WAS SUCCESSFULLY STARTED. A START ATTEMPT WAS MADE AT 1018 ON THE 'D' DIESEL; THE DIESEL FAILED TO START; THE DIESEL WAS DECLARED INOPERABLE AND THE TECH SPEC ACTION STATEMENT REMAINED THE SAME, I.E., RESTORE 3 DIESELS TO OPERABLE STATUS WITHIN 2 HRS OR BE IN HOT SHUTDOWN WITHIN THE NEXT 12 HRS. THE MAINTENANCE ACTIVITY ON THE 'B' DIESEL WAS POSTPONED AND THE 'B' DIESEL WAS SUCCESSFULLY STARTED AT 1058. THE 'A' DIESEL WAS SUCCESSFULLY STARTED AT 1122 AND THE 'D' DIESEL WAS SUCCESSFULLY STARTED AT 1142. ALL 4 DIESELS WERE DECLARED OPERABLE AT 1200. THE STARTING PROBLEMS WERE DETERMINED TO BE COLD TEMPERATURE RELATED. CORRECTIVE ACTIONS HAVE BEEN INITIATED TO PREVENT THE DIESEL BLDGS AND RELATED

DIESEL EQUIPMENT FROM FUTURE COLD TEMPERATURE COMPLICATIONS. INTERIM CORRECTIVE MEASURES INCLUDED USE OF TEMPORARY SPACE HEATERS AND REPAIR OF DG OUTSIDE AIR SUPPLY DAMPERS.

[311] SUSQUEHANNA 1 DOCKET 50-387 LER 85-008
TRANSFORMER MAINTENANCE ERROR TRIPS RPS POWER BUS.
EVENT DATE: 030285 REPORT DATE: 032985 NSSS: GE TYPE: BWR

(NSIC 193917) ON 3-2-85 WITH THE UNIT SHUT DOWN FOR ITS FIRST REFUELING OUTAGE, 2 NON-LICENSED, NON-UTILITY ELECTRICIANS COMMENCED WORK ON A MODIFICATION TO THE 'B' RPS ALTERNATE POWER SOURCE TRANSFORMER. WHILE REMOVING THE TRANSFORMER'S GROUND WIRE, THEY CAUSED THE BUS IN RPS DISTRIBUTION PANEL 1Y201B TO TRIP. THIS RESULTED IN THE START OF THE STANDBY GAS TREATMENT SYSTEM AND CONTROL ROOM EMERGENCY OUTSIDE AIR SUPPLY SYSTEMS. (BOTH SYSTEMS ARE ESF'S.) CORE ALTERATIONS WERE SUSPENDED WHILE THE SYSTEMS WERE RESTORED TO THEIR NORMAL STATUS. THE ELECTRICIANS DID NOT FOLLOW THEIR APPROVED WORK PLAN AND DID NOT USE PROTECTIVE EQUIPMENT. CONTRACTOR ELECTRICIANS WERE RETRAINED IN THE FOLLOWING AREAS: USE OF PROPER PERSONNEL PROTECTIVE CLOTHING AND EQUIPMENT. PROPER EQUIPMENT PROTECTION WHEN WORKING IN ENERGIZED PANELS. THE IMPORTANCE OF FOLLOWING APPROVED WORK INSTRUCTIONS. UNIT 2 LER 388/85-002-00 REPORTS A SIMILAR OCCURRENCE.

[312] SUSQUEHANNA 1 DOCKET 50-387 LER 85-009
WELDING CAUSES 3 INADVERTENT ENGINEERED SAFETY FEATURE ACTUATIONS.
EVENT DATE: 031085 REPORT DATE: 040985 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)

(NSIC 193981) ON 3-10, 3-11, AND 3-28-85, INADVERTENT ESF ACTUATIONS OCCURRED. ON 3-10, THE CONTROL ROOM EMERGENCY OUTSIDE AIR SUPPLY SYSTEM, A COMMON SYSTEM FOR UNIT 1 AND 2, STARTED UNEXPECTEDLY ON A HIGH-HIGH RADIATION DETECTION SYSTEM SPIKE. NO ACTUAL HIGH RADIATION CONDITION EXISTED. ON 3-11, WITH THE 'B' RPS CHANNEL SCRAM PRESENT DUE TO MODIFICATION WORK, A NOISE SPIKE ON INTERMEDIATE RANGE MONITOR 'C' CAUSED A SCRAM SIGNAL ON THE 'A' RPS CHANNEL RESULTING IN AN RPS ACTUATION. ON 3-28, WITH THE 'A' RPS CHANNEL SCRAM SIGNAL PRESENT DUE TO MODIFICATION WORK, A NOISE SPIKE ON IRM 'D' CAUSED A SCRAM SIGNAL ON THE 'B' RPS CHANNEL RESULTING IN AN RPS ACTUATION. THERE WAS NO CONTROL ROD MOVEMENT ON EITHER RPS ACTUATION AS THE REACTOR WAS SHUTDOWN AND DEFUELED AT THE TIME OF THE INCIDENTS. ALL 3 INCIDENTS HAVE BEEN ATTRIBUTED TO WELDING IN THE VICINITY OF THE DETECTORS INDUCING NOISE IN THE INSTRUMENTATION.

[313] SUSQUEHANNA 1 DOCKET 50-387 LER 85-010
RADIATION DETECTOR TRIPS DUE TO RADIATION SHINE FROM REACTOR VESSEL.
EVENT DATE: 031385 REPORT DATE: 041285 NSSS: GE TYPE: BWR

(NSIC 193918) ON 3-13-85, WITH THE UNIT SHUTDOWN FOR ITS FIRST REFUELING OUTAGE AND ALL FUEL REMOVED FROM THE REACTOR VESSEL, THE REACTOR CAVITY WAS BEING DRAINED TO FACILITATE IN-VESSEL OUTAGE WORK. THE REFUEL FLOOR HIGH EXHAUST RADIATION MONITOR CHANNEL 'A' TRIPPED DURING THE CAVITY DRAINING PROCESS. THE SGTS AND CONTROL ROOM EMERGENCY OUTSIDE AIR SUPPLY SYSTEM STARTED CORRECTLY ON THE MONITOR TRIP. BECAUSE NO AIRBORNE RADIATION WAS DETECTED BY HEALTH PHYSICS PERSONNEL ON THE REFUEL FLOOR, THE CAUSE OF THIS OCCURRENCE IS CONSIDERED TO BE SHINE ASSOCIATED WITH LOWERING THE REACTOR CAVITY WATER LEVEL. THE SOURCE OF THE SHINE IS SUSPECTED TO BE THE REACTOR VESSEL ITSELF CAUSING AN INCREASE IN BACKGROUND RADIATION LEVELS AT THE DETECTOR SUFFICIENT TO ACTUATE ITS TRIP SIGNAL AND SUBSEQUENT AUTOMATIC ACTIONS. OPERATIONS SHALL ADD A CAUTION TO THE APPROPRIATE PROCEDURES TO ALERT PERSONNEL DRAINING THE REACTOR CAVITY TO THE POSSIBILITY OF INCREASES IN BACKGROUND AND AIRBORNE RADIATION LEVELS.

[314] SUSQUEHANNA 1 DOCKET 50-387 LER 85-011
 SGTS AND CREOASS START TWICE DUE TO RADIOGRAPHY TESTING.
 EVENT DATE: 032385 REPORT DATE: 042565 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)

(NSIC 193829) ON 3-23 AND 4-2-85 RADIOGRAPHY BEING PERFORMED ON THE REFUELING FLOOR TRIPPED REFUEL FLOOR RADIATION MONITORS. THIS CAUSED THE STANDBY GAS TREATMENT SYSTEM AND CONTROL ROOM EMERGENCY OUTSIDE AIR SUPPLY SYSTEM TO START. DURING THE 3-23 OCCURRENCE, ALL SYSTEMS OPERATED NORMALLY. DURING THE 4-2 OCCURRENCE, THE SGTS TRAIN 'B' TRIPPED AND A FAN IN THE REACTOR BLDG RECIRCULATION SYSTEM DID NOT START AS IT SHOULD. THE SGTS TRIP WAS CAUSED BY A SYSTEM LOW FLOW SIGNAL WHICH HAS SINCE BEEN DELETED FROM THE FAN START LOGIC. THE TRIP IS NO LONGER NECESSARY BECAUSE BOTH SGTS FANS ARE OPERATED IN 'LEAD'. THE RECIRCULATION FAN DID NOT START DUE TO MALFUNCTIONING DAMPERS WHICH WERE REPAIRED. SEE LER 50-388/85-012-00.

[315] SUSQUEHANNA 1 DOCKET 50-387 LER 85-015
 FIRE WRAP NOT INSTALLED ON STRUCTURAL STEEL.
 EVENT DATE: 040985 REPORT DATE: 051085 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)

(NSIC 193983) ON 12-13-84, PORTIONS OF STRUCTURAL STEEL IN THE UPPER CABLE SPREADING ROOM WERE FOUND TO BE WITHOUT THE REQUISITE 3 HR FIREPROOFING. THE AREAS VOID OF FIRE WRAP WERE INTENTIONAL CUTOUTS MADE TO FACILITATE THE INSTALLATION OF HANGERS, BRACKETS, ETC. REQUIRED WHILE SEVERAL MODIFICATIONS WERE BEING MADE IN THE AREA. AN INITIAL DETERMINATION WAS MADE ON 1-31-85, THAT THE ITEMS LACKING FIREPROOFING COULD BE CONSIDERED INSIGNIFICANT WITH RESPECT TO THE TOTAL PROTECTION AFFORDED BY THE REMAINING FIREPROOFING IN THE AREA. SUBSEQUENTLY, REVIEW BY HOME OFFICE PERSONNEL ESTABLISHED THAT THE EXISTING CONDITION WAS INADEQUATE ON 3-8-85. AFTER SOME ADDITIONAL DISCUSSIONS BETWEEN SITE AND HOME OFFICE PERSONNEL, THE FIRE WATCH SPECIFIED BY TECH SPEC 3.7.7 WAS ESTABLISHED ON 4-9-85. THE FIRE WATCH WILL BE MAINTAINED UNTIL THE FIREPROOFING IS RESTORED. ADDITIONAL INSPECTION WILL BE PERFORMED TO IDENTIFY OTHER AREAS WHICH MAY REQUIRE RE-WORKING.

[316] SUSQUEHANNA 1 DOCKET 50-387 LER 85-014
 OPERATOR ERROR DEENERGIZED RPS BUS.
 EVENT DATE: 041385 REPORT DATE: 051485 NSSS: GE TYPE: BWR

(NSIC 193982) ON 4-13-85, WITH THE UNIT SHUT DOWN FOR ITS FIRST REFUELING OUTAGE, A NON-LICENSED OPERATOR (UTILITY EMPLOYEE) COMMENCED MOVING WELDING EQUIPMENT OBSTRUCTING HIS WORK STATION. AS HE DID SO, A WELDING LEAD DISCONNECTED AND FELL AGAINST THE HANDLE OF THE CIRCUIT BREAKER SUPPLYING ALTERNATE POWER TO RPS BUS 'A', CAUSING THE BREAKER TO OPEN. (THE PRIMARY POWER SOURCE FOR RPS BUS 'A' - RPS MOTOR-GENERATOR SET 'A' - WAS NOT IN SERVICE AT THE TIME OF THIS EVENT.) THE LOSS OF POWER TO RPS BUS 'A' CAUSED THE ISOLATION OF HVAC ZONE III (REFUEL FLOOR) AND THE START OF THE 'A' TRAINS OF BOTH THE SGTS AND CREOASS PER DESIGN. THE SGTS AND CREOASS ARE ESP'S. THE BREAKER WAS CLOSED AND ALL AFFECTED SYSTEMS WERE RESTORED TO THEIR NORMAL STATUS. THE RESPONSIBLE INDIVIDUAL WAS COUNSELED ON THE NEED TO EXERCISE CAUTION WHEN MOVING EQUIPMENT IN THE VICINITY OF ELECTRICAL PANELS/SWITCHGEAR. THE PROBABILITY OF RECURRENCE IS UNLIKELY. NO FURTHER ACTIONS ARE PLANNED.

[317] SUSQUEHANNA 1 DOCKET 50-387 LER 85-013
 LOSS OF ALTERNATE SAMPLING WHILE SPINGS INOPERABLE.
 EVENT DATE: 041685 REPORT DATE: 052185 NSSS: GE TYPE: BWR

(NSIC 194030) ALTERNATE SAMPLING FOR THE TURBINE BLDG VENT WAS LOST TWICE AND FOR

THE REACTOR BLDG VENT WAS LOST ONCE ON 4-16-85, WHEN THE CIRCUIT POWERING THE SAMPLE PUMPS TRIPPED DUE TO THE CIRCUIT BEING OVERLOADED. RESTORATION OF THE SAMPLING WAS ACCOMPLISHED BY POWERING THE TURBINE BLDG SAMPLING EQUIPMENT THROUGH ANOTHER BREAKER. THE UNIT WAS SHUTDOWN FOR ITS FIRST REFUELING OUTAGE, WITH THE REACTOR DEFUELED DURING THIS EVENT. INVESTIGATION BY ENGINEERED PERSONNEL DETERMINED THAT TEMPORARY LIGHTING BEING USED TO SUPPORT OUTAGE WORK WAS BEING POWERED FROM A RECEPTACLE FED BY THE SAME BREAKER BEING USED TO FEED BOTH SAMPLE PUMPS. THIS CONDITION CAUSED THE CIRCUIT OVERLOAD AND SUBSEQUENT BREAKER TRIPS. THE RESPONSIBLE ENGINEER IS INVESTIGATING ALTERNATE POWER SUPPLIES TO THE RECEPTACLES.

[318] SUSQUEHANNA 2 DOCKET 50-388 LER 85-007
SGTS TRAIN INOPERABLE DURING CONTAINMENT PURGE.
EVENT DATE: 013085 REPORT DATE: 030585 NSSS: GE TYPE: BWR

(NSIC 193782) DURING A PURGE OF THE UNIT 2 CONTAINMENT, ONE TRAIN OF THE SGTS BECAME INOPERABLE. UNIT 2 TECH SPECS REQUIRE BOTH TRAINS OF SGTS TO BE OPERABLE PRIOR TO COMMENCING A PURGE, AND WHILE THE PURGE SYSTEM IS IN USE. THE PURGE WAS INITIATED USING SGTS TRAIN A BY ONE SHIFT AT 0640 ON 1-30-85. SOMETIME DURING THE NEXT SHIFT THE SGTS B HEATER FAILURE ALARM ANNUNCIATED IN THE CONTROL ROOM AND CAUSED THE 'B' TRAIN OF SGTS TO BE INOPERABLE. THE SHIFT DID NOT RECOGNIZE THAT PURGING SHOULD HAVE BEEN SUSPENDED. THE ABILITY OF OPERATIONS PERSONNEL TO ANALYZE THE SITUATION WAS IMPACTED DUE TO A DIFFERENCE IN UNIT 1 AND UNIT 2 TECH SPECS AND THE FACT THAT MAINTENANCE WAS IN PROGRESS ON A DAMPER IN THE 'B' TRAIN. THE EVENT WILL BE REVIEWED WITH ALL LICENSED OPERATORS AND ALARM RESPONSE FOR SGTS WILL BE REVIEWED AND REVISED AS NECESSARY TO IDENTIFY THE TECH SPEC REQUIREMENTS REGARDING PURGING. IN ADDITION, CHANGE TO UNIT 1 TECH SPECS WAS SUBMITTED TO THE NRC ON 5-18-84, AND IS EXPECTED TO BE ISSUED SOON.

[319] SUSQUEHANNA 2 DOCKET 50-388 LER 85-011
BOTH SGTS TRAINS INOPERABLE CAUSES POWER REDUCTION.
EVENT DATE: 031085 REPORT DATE: 040985 NSSS: GE TYPE: BWR
VENDOR: ITT GENERAL CONTROLS

(NSIC 193984) ON 3-10-85, REMOVAL OF AN ENGINEERED SAFETY SYSTEM BUS FROM SERVICE REQUIRED THE UNIT 2 ZONE III FANS TO BE SWAPPED FROM THE 'B' SET TO THE 'A' SET. DUE TO A MALFUNCTIONING FAN EXHAUST DAMPER, THE REQUIRED ZONE III DELTA-P COULD NOT BE MAINTAINED AND THE SGTS TRAIN 'A' WAS STARTED. DUE TO THE MALFUNCTIONING OF A DAMPER IN SGTS TRAIN 'A', THAT TRAIN WAS DECLARED INOPERABLE AT 1135. SGTS TRAIN 'B' HAD BEEN OUT OF SERVICE SINCE 3-7-85, FOR MODIFICATION WORK AND PREVENTIVE MAINTENANCE ACTIVITIES. WITH BOTH TRAINS OF SGTS UNAVAILABLE, REACTOR POWER REDUCTION COMMENCED AT 1235. POST MAINTENANCE TESTING OF SGTS TRAIN 'B' WAS COMPLETED AND THE TRAIN WAS RESTORED TO OPERABLE STATUS AT 1334, THUS CLEARING LCO 3.0.3. INVESTIGATION BY MAINTENANCE PERSONNEL IDENTIFIED A DAMAGED DAMPER ACTUATOR. THE DAMAGED ACTUATOR WAS FOUND TO HAVE A SCORED SHAFT, BROKEN SEAL ON THE BOTTOM BUSHING AND DAMAGED O-RINGS. MOST PROBABLE CAUSE FOR THE SHAFT DAMAGE WAS MIS-ALIGNMENT UPON INSTALLATION, WHICH, THROUGH PROGRESSIVE OPERATION, CAUSING THE SCORING. INVESTIGATION/CORRECTION OF THE PROBLEM WITH THE 'A' SET OF ZONE III FANS REQUIRES A TWO-UNIT OUTAGE AND WILL BE COMPLETED AS PLANT CONDITIONS PERMIT.

[320] SUSQUEHANNA 2 DOCKET 50-388 LER 85-012
MAINTENANCE ERROR CAUSES SGTS AND CREOASS ACTUATION.
EVENT DATE: 031685 REPORT DATE: 041585 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: SUSQUEHANNA 1 (BWR)

(NSIC 193866) ON 3-16-85, I&C PERSONNEL COMMENCED THE CALIBRATION OF THE SGTS EXHAUST VENT PROCESS RADIATION MONITOR. DURING THE REMOVAL OF A COMPONENT, THE

POWER SUPPLY TO THE MONITOR WAS MOMENTARILY SHORTED, CAUSING FALSE HIGH RADIATION AND DOWNSCALE/INOP SIGNALS. THIS RESULTED IN THE START OF THE SGTS AND THE CREOASS, BOTH OF WHICH ARE ESF'S. DURING SYSTEM RESTORATION, IT WAS NOTED THAT A FAN IN THE REACTOR BLDG RECIRCULATION SYSTEM DID NOT START AS IT SHOULD. INVESTIGATION DETERMINED THE CAUSE OF THE FAN'S FAILURE TO START TO BE BROKEN COUNTERWEIGHT DRIVE LINKAGES IN THE RECIRCULATION PLENUM BACKDRAFT DAMPERS. THE DAMPERS WERE STUCK PARTIALLY OPEN AND ALLOWING SUFFICIENT AIR FLOW THROUGH THE RECIRCULATION PLENUM SUCH THAT THE RECIRCULATION FAN 'B' STANDBY START LOW AIR FLOW SWITCH WAS 'SATISFIED'. THIS GAVE THE 'B' FAN FALSE INDICATION THAT RECIRCULATION FAN 'A' WAS RUNNING. THE DAMPER LINKAGES WERE REPAIRED AND A MISSING SETSCREW BOLT WAS REPLACED.

[321] SUSQUEHANNA 2 DOCKET 50-388 LER 85-013
 SBLC ISOLATED FOR PUMP REPAIRS.
 EVENT DATE: 032785 REPORT DATE: 042685 NSSS: GE TYPE: BWR
 VENDOR: UNION PUMP COMPANY

(NSIC 193867) STANDBY LIQUID CONTROL PUMP 'A' DID NOT DEVELOP SUFFICIENT FLOW TO MEET THE MINIMUM VALUE ESTABLISHED BY TECH SPEC 3.1.5 WHEN TESTED BY ITS REGULARLY SCHEDULED 92 DAY SURVEILLANCE TEST. INVESTIGATION DETERMINED THAT THERE WAS EITHER LEAKAGE THROUGH THE PUMP OR ITS ASSOCIATED RELIEF VALVE. OVER THE FOLLOWING 2 DAYS, ADJUSTMENTS TO THE RELIEF VALVE AND REPLACEMENT OF THE PUMP'S INTERNAL SUCTION AND DISCHARGE VALVES NECESSITATED CLOSING THE ISOLATION VALVE IN THE COMMON SUCTION LINE FROM THE SBLC TANK TO BOTH SBLC PUMPS. LCO ACTION STATEMENT 'B' WAS ENTERED AND CLEARED EACH TIME. WHILE THE ISOLATION VALVE WAS CLOSED, THE ENTIRE SBLC SYSTEM WAS UNAVAILABLE FOR OPERATION DURING THOSE PERIODS. SBLC PUMP 'B' HAD PASSED A SIMILAR FLOW TEST ON 3-7-85. EVALUATION OF THIS OCCURRENCE BY MAINTENANCE PERSONNEL HAS DETERMINED THAT THE MALFUNCTIONS ASSOCIATED WITH SBLC PUMP 'A' ARE ISOLATED CASES AND NO FURTHER ACTION IS NEEDED.

[322] THREE MILE ISLAND 2 DOCKET 50-320 LER 85-003
 INCORE THERMOCOUPLE FAILS.
 EVENT DATE: 030385 REPORT DATE: 032585 NSSS: BW TYPE: PWR
 VENDOR: BELFAB, INC.

(NSIC 193716) AT 0400 HRS ON 3-3-85, INCORE THERMOCOUPLE G-13 WAS DECLARED INOPERABLE DUE TO ERRATIC BEHAVIOR. THE THERMOCOUPLE WAS CHECKED TO ENSURE THAT THE FAILURE CAUSE WAS NOT A COMPONENT THAT WAS ACCESSIBLE FOR REPAIRS. NO FURTHER ACTION IS CONSIDERED APPLICABLE. THE PRECISE REASON FOR THE FAILURE/ERRATIC BEHAVIOR OF INCORE THERMOCOUPLE G-13 IS NOT KNOWN AND MAY NOT BE POSSIBLE TO DETERMINE GIVEN THE CONDITION OF THE TMI-2 CORE RELATIVE TO INCORE INSTRUMENTATION. AT THE TIME OF THE OCCURRENCE, THE UNIT 2 FACILITY WAS IN A LONG-TERM COLD SHUTDOWN STATE. THE REACTOR DECAY HEAT WAS BEING REMOVED VIA LOSS TO AMBIENT. THROUGHOUT THE EVENT THERE WAS NO EFFECT ON THE RCS OR THE CORE. TO DATE 16 LER'S HAVE BEEN SUBMITTED CONCERNING THERMOCOUPLE FAILURES. INCLUDED WITH THIS SUBMITTAL ARE LER'S 80-13, 80-41, 80-50, 80-53, 81-05, 81-13, 82-15, 83-10, 83-27, 83-32, 83-50, 84-09, 84-16, 84-21, AND 85-02. 28 OF 52 INCORE THERMOCOUPLES ARE CURRENTLY REPORTED AS OUT-OF-SERVICE (B-7, D-14, E-4, E-11, F-3, F-8, F-12, G-5, G-11, G-13, H-5, H-9, H-13, K-11, K-12, L-6, L-11, L-13, M-3, M-7, M-9, N-4, N-8, N-9, O-5, O-6, O-10, AND O-12). THE FAILED THERMOCOUPLE WAS TYPE K, MODEL NO. DAZA-76-7R-1B-1T-1C, MANUFACTURED BY BEL FAB, INC., AND SUPPLIED BY BABCOCK AND WILCOX.

[323] TROJAN DOCKET 50-344 LER 85-002
 TURBINE TRIP, REACTOR TRIP AND SUBSEQUENT HEATER DRAIN PIPING FAILURE.
 EVENT DATE: 030985 REPORT DATE: 040885 NSSS: WE TYPE: PWR
 VENDOR: WRIGHT, SCHUCHART, HARBOR, INC.

(NSIC 193902) ON 3-9-85 AT 2150 PST, THE REACTOR TRIPPED FOLLOWING A TURBINE TRIP DUE TO SPURIOUS HIGH VIBRATION INDICATION ON A MAIN TURBINE BEARING. THE RESULTING MAIN FEEDWATER ISOLATION PRODUCED, AS EXPECTED, A PRESSURE PULSE IN THE HEATER DRAIN AND FEEDWATER SYSTEMS, WHICH CAUSED A RUPTURE AT AN ERODED LOCATION IN THE HEATER DRAIN PUMP DISCHARGE PIPING ON THE 45 FT ELEVATION OF THE TURBINE BUILDING. THE RPS AND PLANT SAFETY SYSTEMS FUNCTIONED AS DESIGNED. AS A RESULT OF THE PIPING RUPTURE, A STEAM-WATER MIXTURE OF APPROX 350 F WAS DEPRESSURIZED INTO THE TURBINE BLDG, WHICH ACTUATED FIRE SUPPRESSION (DELUGE) SYSTEMS, DAMAGED SECONDARY PLANT EQUIPMENT IN THE VICINITY, AND INJURED ONE MEMBER OF THE PLANT OPERATING STAFF. THE REACTOR WAS SAFELY COOLED DOWN USING STEAM LINE POWER OPERATED RELIEF VALVES AND THE RHR SYSTEM.

[324] TURKEY POINT 3 DOCKET 50-250 LER 85-010
 SUBCOOLING MARGIN MONITORS INOPERABLE.
 EVENT DATE: 033085 REPORT DATE: 042985 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: TURKEY POINT 4 (PWR)
 VENDOR: PYCO

(NSIC 194014) AT 7:35 PM, ON 3-30-85, A PLANT SHUTDOWN OF UNIT 3 WAS INITIATED FOR BOTH A SCHEDULED REFUELING OUTAGE AND IN ACCORDANCE WITH THE REQUIREMENTS OF TECH SPEC 3.5, TABLE 3.5-5, WHICH DEFINES THE MINIMUM OPERABILITY REQUIREMENTS FOR THE REACTOR SUBCOOLING MARGIN MONITORING INSTRUMENTATION. THIS SHUTDOWN WAS INITIATED DUE TO THE POTENTIAL FOR LOSS OF OPERABILITY OF BOTH INDEPENDENT CHANNELS OF THE UNIT 3 REACTOR SUBCOOLING MARGIN MONITORING INSTRUMENTATION. THE REASON FOR BOTH INDEPENDENT SUBCOOLING MARGIN MONITORS BEING CONSIDERED INOPERABLE WAS DUE TO THE FAILURE OF 6 RCS WIDE-RANGE TEMPERATURE ELEMENTS TO MEET ENVIRONMENTAL QUALIFICATION ACCEPTANCE CRITERIA. CORRECTIVE ACTIONS WHICH HAVE BEEN TAKEN OR ARE PLANNED TO ENSURE THAT THE SUBJECT TEMPERATURE ELEMENTS HAVE ACCEPTABLE ENVIRONMENTAL QUALIFICATIONS INCLUDE THE FOLLOWING: THE UNIT 4 REACTOR SYSTEM TEMPERATURE ELEMENTS FOR THE SUBCOOLING MARGIN MONITORS WERE HERMETICALLY SEALED AS A PRECAUTION UNTIL THE ENV. QUALIFICATIONS OF THE TEMPERATURE ELEMENTS COULD BE VERIFIED. THE UNIT 3 SUBCOOLING MARGIN MONITOR TEMPERATURE ELEMENTS WILL BE HERMETICALLY SEALED DURING THE PRESENT REFUELING OUTAGE. TO ENHANCE PLANT MAINTENANCE, THE EXISTING TEMPERATURE ELEMENTS WILL BE REPLACED BY ENV. PRE-QUALIFIED TEMPERATURE ELEMENTS OF A DIFFERENT MANUFACTURER. THIS REPLACEMENT WILL BE COMPLETED FOR UNITS 3 AND 4 DURING FUTURE REFUELING OUTAGES.

[325] VERMONT YANKEE DOCKET 50-271 LER 84-011 REV 2
 UPDATE ON CONTAINMENT ISOLATION VALVE SEAT LEAKAGE.
 EVENT DATE: 061684 REPORT DATE: 030885 NSSS: GE TYPE: BWR
 VENDOR: ALLIS CHALMERS
 ANCHOR/DARLING VALVE CO.

(NSIC 194007) WHILE PERFORMING TYPE C LEAK RATE TESTING, CONTAINMENT ISOLATION VALVES MSIV-86B, CRD-412A, PCAC-V16-19-8, FDW-96A AND CA-89C (MAIN STEAM, CONTROL ROD DRIVE, COMBUSTIBLE GAS CONTROL, MAIN FEEDWATER, AND ESSENTIAL AIR) WERE FOUND TO HAVE SEAT LEAKAGE ABOVE THAT PERMITTED BY TECH SPEC SECTION 3.7.A.4. THIS RESULTED IN THE TOTAL APPENDIX J TYPE B AND C LIMIT OF 14.75 LBM/HR BEING EXCEEDED WHICH DOES NOT MEET TECH SPEC SECTION 3.7.A.3 REQUIREMENTS. (BY PROCEDURE, VERMONT YANKEE USES THE MAXIMUM PATHWAY LEAKAGE IN CALCULATING TOTAL PENETRATION LEAKAGE.) VERMONT YANKEE HAS PERFORMED MAINTENANCE ON ALL OF THE ABOVE VALVES AND RETESTED THEM TO ENSURE THAT BOTH TOTAL PENETRATION AND INDIVIDUAL VALVE SEAT LEAKAGES ARE WITHIN TECH SPECS.

[326] VERMONT YANKEE DOCKET 50-271 LER 85-005
 GROUP 3 PRIMARY CONTAINMENT ISOLATION OCCURS DURING SURVEILLANCE.
 EVENT DATE: 040285 REPORT DATE: 042985 NSSS: GE TYPE: BWR

(NSIC 193753) ON 4-2-85 THE PLANT WAS AT 100% POWER DURING NORMAL OPERATION. REFUEL FLOOR ZONE RADIATION MONITOR 17-453B WAS IN BYPASS FOR PERFORMANCE OF FUNCTIONAL CALIBRATION; SUBSEQUENTLY REACTOR BLDG VENTILATION RADIATION MONITOR 17-452B WAS INADVERTENTLY TAKEN OUT OF THE 'OPERATE' MODE. THIS RESULTED IN RELAY DE-ENERGIZATION WITH A CONTACT CLOSURE SIMULATING A HIGH RADIATION TRIP IN ONE LOGIC CHANNEL. THIS CAUSED A GROUP 3 PRIMARY CONTAINMENT ISOLATION AND START OF THE STANDBY GAS TREATMENT SYSTEM. THE MONITOR WAS PUT BACK INTO 'OPERATE' AND THE SYSTEMS WERE RETURNED TO NORMAL. SIMILAR EVENT - 271/84-023.

[327] WATERFORD 3 DOCKET 50-382 LER 85-005
 TWO SPURIOUS ACTUATIONS OF THE CONTROL ROOM ISOLATION SYSTEM.
 EVENT DATE: 021685 REPORT DATE: 031385 NSSS: CE TYPE: PWR

(NSIC 193730) ON 2-16-85, AND AGAIN ON 2-18-85, WATERFORD 3 STEAM ELECTRIC STATION WAS IN MODE 3 WHEN AN AUTOMATIC ACTUATION OF THE ESP'S PORTION OF THE CONTROL ROOM VENTILATION SYSTEM OCCURRED. THE FIRST EVENT OCCURRED WHEN 2 CONTROL ROOM OUTSIDE AIR INTAKE RADIATION MONITORS SPIKED HIGH. CHANNEL 1 OF THE TOXIC GAS MONITOR ALARMED COINCIDENT WITH THE ABOVE SPIKE. SPURIOUS AND/OR INADVERTENT ALARMING OF THE CONTROL ROOM OUTSIDE AIR INTAKE MONITORS IS DUE TO 'NOISE', IN THE FORM OF ELECTRICAL SPIKES, THAT IS PICKED UP BY THE SIGNAL INPUT TO THE PREAMPLIFIER BOARD, AND IS READ AS A SUDDEN INCREASE IN THE RADIATION LEVEL ABOVE THE ALARM SETPOINTS. THE SECOND EVENT OCCURRED WHEN AMMONIA DETECTOR B PEGGED HIGH. IN THE CASE OF THE AMMONIA DETECTORS, HEAVY FOG AROUND THE PLANT SITE WILL CLOUD THE MIRRORS WITHIN THE DETECTORS CAUSING THE REFERENCE LEG TO GO INTO THE ALARM CONDITION. IN EACH EVENT THERE WAS NO DETECTABLE TRACE OF EITHER RADIATION OR TOXIC GASES. EACH EVENT WAS REPORTED TO THE COMMISSION PURSUANT TO 10CFR50.72(B)(2)(II). SIMILAR EVENTS 382/84-001 AND 382/85-003.

[328] WATERFORD 3 DOCKET 50-382 LER 85-007
 INADVERTENT ACTUATION OF REACTOR PROTECTION SYSTEM.
 EVENT DATE: 031485 REPORT DATE: 041185 NSSS: CE TYPE: PWR

(NSIC 193865) AT 1016 HRS CENTRAL STANDARD TIME ON 3-14-85 WHILE PERFORMING A REACTOR SHUTDOWN, WATERFORD 3 STEAM ELECTRIC STATION EXPERIENCED AN INADVERTENT ACTUATION OF THE RPS DUE TO NOISE IN THE CORE PROTECTION CALCULATOR CHANNELS C AND D. WATERFORD 3 WAS IN MODE 3 AT THE TIME OF THE EVENT. THIS EVENT WAS REPORTED TO THE COMMISSION PURSUANT TO 10CFR50.72(B)(2)(II).

[329] WATERFORD 3 DOCKET 50-382 LER 85-012
 FIRE PROTECTION DETECTOR MISSING IN FIRE ZONE 27C.
 EVENT DATE: 040185 REPORT DATE: 043085 NSSS: CE TYPE: PWR

(NSIC 193916) ON 4-1-85 WATERFORD 3 STEAM ELECTRIC STATION WAS IN MODE 4 WHEN PLANT PERSONNEL COMPLETED AN EVALUATION OF THAT PORTION OF THE FIRE PROTECTION SYSTEM LOCATED IN FIRE ZONE 27C OF THE REACTOR AUX BLDG. THE EVALUATION REVEALED THAT THE CURRENT CONFIGURATION DOES NOT AGREE WITH THE CONFIGURATION DESCRIBED IN AMENDMENT 36 OF THE PSAR. THE CABLE RISER SCAFT AREA OF THE REACTOR AUX BLDG +7 ELEVATION DID NOT HAVE THE PROPER DETECTION EQUIPMENT CAPABLE OF AUTOMATICALLY ACTUATING THE SPRINKLERS. THE CONDITION WAS REPORTED TO THE COMMISSION PURSUANT TO SECTION 2, ITEM F OF THE FACILITY OPERATING LICENSE NO. NPF-38.

[330] WOLF CREEK 1 DOCKET 50-482 LER 85-005
TECH SPEC SURVEILLANCE REQUIREMENT NOT MET FOR FIRE DOOR.
EVENT DATE: 031185 REPORT DATE: 041785 NSSS: WE TYPE: PWR

(NSIC 193872) AT 1215 ON 3-18-85, A SURVEILLANCE TEST PROCEDURE OMISSION WAS IDENTIFIED THAT HAD RESULTED IN 1 ROLL-UP FIRE DOOR IN THE AUX BLDG NOT BEING VERIFIED CLOSED EVERY 7 DAYS AS REQUIRED BY THE PLANT TECH SPECS. THE PROCEDURE DEFICIENCY OCCURRED AS THE RESULT OF A SURVEILLANCE PROCEDURE REV WHICH WAS APPROVED ON 2-26-85. THE DEFICIENCY IS CONSIDERED TO HAVE EXISTED FROM 3-11-85 UNTIL THE CORRECTIVE ACTION TO CHANGE THE PROCEDURE WAS COMPLETED ON 4-10-85.

[331] WOLF CREEK 1 DOCKET 50-482 LER 85-003
CONTROL ROOM VENTILATION ISOLATION OCCURS.
EVENT DATE: 031485 REPORT DATE: 041285 NSSS: WE TYPE: PWR

(NSIC 193789) AT 1732 CST ON 3-14-85, DURING INITIAL FUEL LOADING, AN ESP ACTUATION SIGNAL WAS INITIATED BY A STATION OPERATOR INADVERTENTLY DEENERGIZING A CONTROL ROOM RADIATION MONITOR CAUSING A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS). PRIOR TO THE EVENT, THE CONTROL ROOM OPERATORS NOTED THAT THE VACUUM PUMP FOR GK-RE-05 WAS OPERATING ERRATICALLY AND THAT THE ASSOCIATED AIR FLOW WAS LOW. A STATION OPERATOR BEGAN INVESTIGATING THE PROBLEM WITH GK-RE-05 AND AT 1732 INADVERTENTLY DEENERGIZED IT RESULTING IN THE CRVIS. ALL REQUIRED ESP'S EQUIPMENT RESPONDED PROPERLY EXCEPT FOR 1 CONTROL ROOM PRESSURIZATION FAN WHICH WAS OUT OF SERVICE FOR MAINTENANCE AS PERMITTED BY THE TECH SPECS. NO RADIATION ABOVE NORMAL BACKGROUND WAS PRESENT.

[332] WOLF CREEK 1 DOCKET 50-482 LER 85-004
TECH SPEC VIOLATION - MISSED HOURLY FIRE WATCH.
EVENT DATE: 031985 REPORT DATE: 041785 NSSS: WE TYPE: PWR

(NSIC 193871) FROM 2300 CST ON 3-19-85 TO 0100 ON 3-20-85, FOLLOWING INITIAL FUEL LOADING, HOURLY FIRE WATCH PATROLS FOR 1 ROOM IN THE AUX BLDG AND 1 ROOM IN THE CONTROL BLDG WERE MISSED. THIS IS A VIOLATION OF TECH SPEC ACTION STATEMENT 3.7.11.A. THIS RESULTED IN FIRE BARRIERS WITH INOP PENETRATION SEALS NOT BEING PATROLLED DURING THE 2300 HR PATROL AND DURING THE 2400 HR PATROL. PATROL OF ONE ROOM WAS REESTABLISHED DURING THE 2400 HR PATROL, AND PATROL OF THE SECOND ROOM WAS REESTABLISHED DURING THE 0100 PATROL. THE REQUIRED ROOM FIRE DETECTION AND SUPPRESSION SYSTEMS WERE OPERABLE DURING THIS TIME.

[333] WOLF CREEK 1 DOCKET 50-482 LER 85-006
INADVERTENT ISOLATION OF FUEL BUILDING AND CONTROL ROOM VENTILATION.
EVENT DATE: 040785 REPORT DATE: 050385 NSSS: WE TYPE: PWR

(NSIC 193934) AT 1038 CST ON 4-7-85, AN ESP ACTUATION OCCURRED WHEN AN I&C TECHNICIAN INADVERTENTLY ACTUATED A FUEL BLDG VENTILATION ISOLATION SIGNAL. THIS SIGNAL ALSO RESULTED IN A CONTROL ROOM VENTILATION ISOLATION SIGNAL. ALL REQUIRED ESP'S EQUIPMENT RESPONDED PROPERLY. THE ESPAS CABINETS WERE BEING RESTORED TO NORMAL FOLLOWING MINOR MODIFICATIONS. PART OF THE RESTORATION PROCEDURE REQUIRED REMOVAL AND REINSERTION OF THE DECODER BOARDS TO ALLOW RESET OF THE AUTOMATIC TEST INSERTION FUNCTION. WHILE REINSERTING THE DECODER BOARD IN ONE CABINET, THE I&C TECHNICIAN INADVERTENTLY DEPRESSED A FBVIS TRAIN 'A' MANUAL ACTUATION PUSH BUTTON LOCATED ON THE FRONT OF AN ADJACENT CIRCUIT BOARD.

[334] WOLF CREEK 1 DOCKET 50-482 LER 85-007
INADVERTENT CONTROL ROOM VENTILATION ISOLATION.
EVENT DATE: 040885 REPORT DATE: 050385 NSSS: WE TYPE: PWR

(NSIC 193935) AT 0847 CST, ON 4-8-85, AN ESPAS WAS INITIATED WHEN AN I&C TECHNICIAN DEENERGIZED A CONTROL ROOM RADIATION MONITOR ERRONEOUSLY REPORTED TO BE IN BYPASS BY THE SUPERVISING OPERATOR. THIS CAUSED A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS). ALL REQUIRED ESP'S EQUIPMENT RESPONDED PROPERLY. THE PLANT WAS IN MODE 5 AT THE TIME.

[335] WOLF CREEK 1 DOCKET 50-482 LER 85-008
SPURIOUS CONTAINMENT PURGE AND CONTROL ROOM VENTILATION ISOLATIONS.
EVENT DATE: 040985 REPORT DATE: 050385 NSSS: WE TYPE: PWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 193936) ON 4-9-85, AT 1409 CST, AN ESPAS WAS INITIATED WHILE RESETTING FLOW ON A CONTAINMENT PURGE GASEOUS ACTIVITY MONITOR CAUSING A CONTAINMENT PURGE ISOLATION SIGNAL AND A CONTROL ROOM VENTILATION ISOLATION SIGNAL. ALL REQUIRED ESP'S EQUIPMENT RESPONDED PROPERLY. THE PLANT WAS IN MODE 5 THROUGHOUT THE EVENT. INVESTIGATION INTO THE EVENT REVEALED A FAULTY VACUUM TRANSDUCER, WHICH HAS BEEN REPLACED.

[336] WOLF CREEK 1 DOCKET 50-482 LER 85-011
SPURIOUS ACTUATION OF CHLORINE MONITOR CAUSES CONTROL ROOM VENTILATION ISOLATION.
EVENT DATE: 041285 REPORT DATE: 051085 NSSS: WE TYPE: PWR
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 194035) AT 2215 CST ON 4-12-85, AN ESP ACTUATION SIGNAL WAS INITIATED BY A CONTROL ROOM CHLORINE MONITOR SPURIOUS SPIKE CAUSING A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS). NO CAUSE COULD BE FOUND. THE PLANT WAS IN MODE 5 AT THE TIME OF THE EVENT AND ALL REQUIRED ESP'S EQUIPMENT RESPONDED PROPERLY.

[337] WPPSS 2 DOCKET 50-397 LER 84-072 REV 2
UPDATE ON REACTOR WATER CLEANUP ISOLATIONS.
EVENT DATE: 070584 REPORT DATE: 101184 NSSS: GE TYPE: BWR
VENDOR: ROSEMOUNT, INC.

(NSIC 193703) DURING PLANT OPERATION, RWCU ISOLATIONS OCCURRED, DUE TO ERRONEOUS RWCU HIGH DELTA-FLOW TRIPS. (ISOLATION OF RWCU IS AN ESP ACTUATION.) A TOTAL OF 3 ISOLATIONS OCCURRED, 1 ON 7-5-84 AND 2 ON 7-6-84. PRIOR TO THESE TRIPS, RWCU DELTA FLOW WAS FUNCTIONING JUST BELOW ITS TRIP SETPOINT. SIX ADDITIONAL ISOLATIONS OCCURRED AS FOLLOWS: 1 ON 7-31-84; 2 ON 8-3-84; 1 ON 8-10-84; AND 2 ON 9-18-84. THESE WERE REPORTED TO THE NRC AT 1450 HRS ON 7-31-84, 0145 HRS ON 8-9-84, AND 0414 HRS ON 8-10-84, AND 0300 HRS AND 1229 HRS ON 9-18-84.

[338] WPPSS 2 DOCKET 50-397 LER 84-082 REV 2
UPDATE ON THREE RCIC ISOLATIONS ON HIGH STEAM FLOW.
EVENT DATE: 080284 REPORT DATE: 121394 NSSS: GE TYPE: BWR
VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 193704) ON 8-2-84 AND 8-23-84 THE REACTOR WAS SHUTDOWN WITH THE RCIC SYSTEM IN USE TO MAINTAIN REACTOR WATER LEVEL. ON BOTH DATES SPURIOUS HIGH STEAM FLOW ISOLATIONS OCCURRED. THE ISOLATIONS OCCURRED AT REACTOR PRESSURES OF BETWEEN 150 TO 300 PSIG. IT WAS VERIFIED THAT NO STEAM LEAKAGE HAD OCCURRED. AFTER THE 8-2-84 EVENT THE CONDENSATE SYSTEM WAS PLACED INTO OPERATION TO PROVIDE REACTOR WATER MAKEUP. FOLLOWING THE 8-23-84 EVENT THE RCIC WAS RETURNED TO SERVICE. ON 10-4-84 THE REACTOR WAS SHUTDOWN, AND ON DECREASING VESSEL PRESSURE, RCIC ISOLATED ON SPURIOUS HIGH STEAM FLOW. THIS ISOLATION OCCURRED WITH VESSEL PRESSURE BETWEEN 150 TO 200 PSIG. ANALYSIS INDICATED THAT THE SENSING LINE BREAK DETECTION SETPOINT AND RESET VALUE ON RCIC-DPIS-13A&B WERE TOO NEAR THE NORMAL

OPERATING LEVELS. THIS SETPOINT WAS CHANGED AND THE INSTRUMENTS WERE RECALIBRATED.

[339] WPPSS 2 DOCKET 50-397 LER 85-007
 REACTOR SCRAM AND SAFETY INJECTION OCCURS ON LOSS OF POWER.
 EVENT DATE: 013185 REPORT DATE: 022585 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193920) AT APPROX 0757 HRS ON 1-31-85, 1 OF 2 GENERATOR PRIMARY PROTECTION LOCKOUT RELAYS SPRUIOUSLY TRIPPED (GE HEA RELAYS). THE 86XIU RELAY IS USED AS A SLAVE FOR THE 86XU (MASTER) LOCKOUT RELAY. TOGETHER THESE RELAYS PROVIDE THE GENERATOR PRIMARY PROTECTION AND THE OFFSITE POWER SUPPLY FAST TRANSFER FUNCTIONS. THE SPURIOUS TRIPPING OF THE 86XIU RESULTED IN THE FOLLOWING ABNORMAL ELECTRICAL OPERATIONS: THE 500 KV GENERATOR OUTPUT BREAKER AT THE BONNEVILLE POWER ADMINISTRATION ASHE SUBSTATION TRIPPED; THE OFFSITE SOURCE BREAKERS AT THE 4.16 KV NON-CLASS 1E BUSES CLOSED WITHOUT INITIATING A TRIP OF THE NORMAL SOURCE BREAKERS (I.E. FAILURE OF HALF THE FAST TRANSFER SCHEME); THE TURBINE/GENERATOR REMAINED ON LINE. THIS CONNECTED THE MAIN GENERATOR TO THE PLANT 4160V NON-CLASS 1E BUSES THROUGH THE NORMAL TRANSFERS AND THEN BACK TO THE BPA 230 KV GRID VIA THE STARTUP TRANSFORMER. WHEN PROTECTIVE RELAYING TRIPPED THE 230 KV CIRCUIT BREAKERS AT ASHE, THE CLASS 1E BUSES' UNDERVOLTAGE LOGIC REENERGIZED BY ITS DEDICATED DG. THE OPENING OF THE 500 KV CIRCUIT BREAKERS INITIATED THE DIGITAL ELECTRO-HYDRAULIC CONTROL SYSTEM OVERSPEED PROTECTION CIRCUIT ACTION WHICH CLOSED THE TURBINE CONTROL VALVES WHICH THEN RESULTED IN A REACTOR SCRAM. EITHER A LOSS OF POWER TO THE RPS MOTOR GENERATOR SETS OR THE NORMAL SENSED WATER LEVEL TRANSIENT RESULTED IN A FULL CONTAINMENT ISOLATION.

[340] WPPSS 2 DOCKET 50-397 LER 85-008
 DIESEL GENERATOR HAS LOW OUTPUT VOLTAGE.
 EVENT DATE: 013185 REPORT DATE: 022785 NSSS: GE TYPE: BWR
 VENDOR: STEWART & STEVENSON SERVICES, INC.

(NSIC 193921) DURING A SCRAM AND THE SUBSEQUENT LOSS OF NORMAL AND PREFERRED POWER INCIDENT ON 1-31-85 (SEE LER 397/85-007 FOR DETAILS), THE STANDBY ELECTRIC DG'S DID NOT REACH THE REQUIRED VOLTAGE TO ALLOW AUTOMATIC CLOSURE OF THEIR OUTPUT BREAKERS. THE VOLTAGE ADJUST POTENTIOMETERS FOR BOTH GENERATORS WERE FOUND TO HAVE BEEN ADJUSTED TO THE LOW VOLTAGE LIMIT. THIS WOULD HAVE PRECLUDED THE DG'S FROM ACCOMPLISHING THEIR AUTOMATIC SAFETY FUNCTIONS WITHOUT FURTHER OPERATION ACTION.

[341] WPPSS 2 DOCKET 50-397 LER 85-020
 EXCESS FLOW CHECK VALVE BYPASS VALVES FOUND OPEN.
 EVENT DATE: 022785 REPORT DATE: 032885 NSSS: GE TYPE: BWR

(NSIC 193985) ON 2-27-85 WHILE PERFORMING FIELD MEASUREMENTS REQUIRED TO GENERATE A DESIGN CHANGE PACKAGE, AN EXCESS FLOW CHECK VALVE BYPASS WAS FOUND PARTIALLY OPENED. IN THE EVENT OF A SENSING LINE RUPTURE DOWNSTREAM OF THIS VALVE, THE POTENTIAL EXISTED FOR A VIOLATION OF CONTAINMENT INTEGRITY. THE VALVE WAS IMMEDIATELY SHUT. SUBSEQUENT INVESTIGATION DISCLOSED 3 OTHER BYPASS VALVES NOT FULLY SHUT. THESE VALVES WERE SHUT AND A VERBAL REPORT MADE TO THE NRC.

[342] WPPSS 2 DOCKET 50-397 LER 85-021
 SPURIOUS CONTAINMENT ISOLATION VALVE CLOSURE TRIPS HYDRAULIC CONTROL UNIT.
 EVENT DATE: 030785 REPORT DATE: 032885 NSSS: GE TYPE: BWR
 VENDOR: MAROTTA SCIENTIFIC CONTROLS, INC.
 TARGET ROCK CORP.

(NSIC 193922) AT 0947 ON 3-7-85 OPERATORS NOTED THAT REACTOR RECIRCULATION FLOW CONTROL VALVE 'B' HYDRAULIC POWER UNIT WAS TRIPPED OFF AND THE ASSOCIATED CONTAINMENT ISOLATION VALVES HY-V-17B, 18B, 19B, 20B, 33B, 34B, 35B & 36B WERE CLOSED. INVESTIGATION INTO THIS EVENT DETERMINED THAT THE CLOSURE OF THE CONTAINMENT ISOLATION VALVES CAUSED THE RECIRCULATION FLOW CONTROL VALVE TO BECOME FIXED 'IN POSITION'. THIS CAUSED THE HYDRAULIC UNIT TO TRIP DUE TO THE EXCESSIVE SERVO ERROR RESULTING FROM NORMAL SYSTEM AUTOMATIC CORRECTIONS. NO CAUSE FOR THE ISOLATION COULD BE IDENTIFIED AND THE VALVES AND HYDRAULIC CONTROL UNIT WERE RETURNED TO NORMAL SERVICE.

[343] WPPSS 2 DOCKET 50-397 LER 85-023
CABLE ELECTRICAL SEPARATION INADEQUATE (APPENDIX R).
EVENT DATE: 031885 REPORT DATE: 041685 NSSS: GE TYPE: BWR

(NSIC 193868) ON 2-85, FOUR CABLES WERE DISCOVERED WHICH APPEARED TO BE AN INFRACTION OF THE ELECTRICAL SEPARATION CRITERIA OR APPENDIX R. THE FIRST INVESTIGATION RESULTED IN AN EVALUATION WHICH SHOWED NO INFRACTION OF ELECTRICAL SEPARATION OR APPENDIX R HAD OCCURRED. HOWEVER, FURTHER DISCUSSIONS WITH ENGINEERING, TECH STAFF AND MAINTENANCE PERSONNEL UNCOVERED OTHER AREAS OF CONCERN WHICH NEEDED EVALUATION. DUE TO THE GENERAL CONCERNS SURFACING, A WALKDOWN WAS MADE ON 3-18-85 TO OBSERVE ANY ADDITIONAL INSTANCES SIMILAR TO THE CABLE SPREADING/CABLE CHASE ROOMS' CONDITIONS. A TOTAL OF 28 ITEMS WERE FOUND WHICH CAN BE CATEGORIZED AS FOLLOWS: 1. SPARED CABLES HANGING OUT OF CONDUITS/RACEWAYS. 2. TEMPORARY CABLES, IE., EXTENSION CORDS. 3. COMMUNICATION CABLES. 4. CABLES WHICH RUN OUT OF AND BACK INTO RACEWAYS. 5. SPATIAL SEPARATION INVOLVING RACEWAYS CARRYING PRIME CIRCUITS (NON-CLASS 1E CIRCUITS CONNECTED TO CLASS 1E POWER SUPPLY.) ALL 28 ITEMS WERE PUT ON THE FIRE WATCH UNTIL THE PROBLEM WAS ALLEVIATED. AN MWR WAS PROCESSED AND IMPLEMENTED TO ALLEVIATE AS MANY ITEMS AS POSSIBLE. 23 ITEMS WERE ELIMINATED AS AN ELECTRICAL SEPARATION CONCERN WHEREAS ALL 28 ITEMS WERE NOT AN APPENDIX R INFRACTION. THE REMAINING 5 ELECTRICAL SEPARATION INFRACTIONS ARE OF A TYPE WHICH LEADS US TO EXPAND OUR EVALUATION TO OTHER AREAS OF THE PLANT.

[344] WPPSS 2 DOCKET 50-397 LER 85-025
DRYWELL ATMOSPHERE SAMPLING MISSED DURING PURGE.
EVENT DATE: 040485 REPORT DATE: 042985 NSSS: GE TYPE: BWR

(NSIC 193830) DURING PLANT SHUTDOWN ON 4-1-85 THE DRYWELL ATMOSPHERE WAS SAMPLED FOR RELEASE AND THE DRYWELL PURGED VIA THE STANDBY GAS TREATMENT SYSTEM PER TECH SPEC 3.11.2.8 WITH SAMPLES TAKEN AND ANALYZED EACH SHIFT. AT 0345 HRS ON 4-3-85 THE DRYWELL PURGE WAS TRANSFERRED FROM SGT TO REACTOR BLDG VENTILATION SYSTEM. THE OPERATING CREW DID NOT NOTIFY CHEMISTRY TECHNICIANS OF THE CHANGE AND THE CHEMISTRY TECHNICIANS STOPPED TAKING ONCE PER SHIFT SAMPLES WHEN THEY FOUND THE SGT SYSTEM SHUTDOWN. DUE TO THIS LACK OF NOTIFICATION, THE 12 HR SAMPLE REQUIREMENT DURING CONTAINMENT DRYWELL VENTING AND PURGING WAS NOT MET. THE HEALTH PHYSICS/CHEMISTRY DEPARTMENT SURVEILLANCE PROCEDURE HAS BEEN CHANGED SO THAT THE CHEMISTRY TECHNICIAN WILL VERIFY CONTAINMENT VENT AND PURGE STATUS AT THE START OF EACH SHIFT. IN ADDITION, THE OPERATIONS DEPARTMENT SURVEILLANCE PROCEDURE NOW REQUIRES THAT A NOTIFICATION BE MADE TO THE HEALTH PHYSICS/CHEMISTRY DEPARTMENT THAT SAMPLING IS REQUIRED PRIOR TO, AND ONCE PER 12 HRS DURING CONTAINMENT VENT AND PURGE OPERATIONS THROUGH OTHER THAN THE SGT SYSTEM. NORMAL DRYWELL PARTICULATE AND GASEOUS SAMPLE MONITORS WERE IN OPERATION AS WERE LOCAL AREA RADIATION MONITORS AND PORTABLE CONTINUOUS AIR MONITORS. NO ABNORMAL LEVELS WERE DETECTED DURING THIS PURGE.

[345] WPPSS 2 DOCKET 50-397 LER 85-027
 DEFECTIVE TEST PROCEDURE CAUSES PARTIAL ISOLATION.
 EVENT DATE: 041285 REPORT DATE: 042985 NSSS: GE TYPE: BWR

(NSIC 193831) ON 4-12-85 INSTRUMENT TECHNICIANS WERE PERFORMING DIV I AND II TECH SPEC REQUIRED HIGH DRYWELL PRESSURE INSTRUMENTATION CHANNEL CALIBRATIONS. DIV I CHANNEL CALIBRATIONS WERE COMPLETED, AND THE DIV II PROCEDURES WERE STARTED. WHEN THE FIRST DIV II INSTRUMENT WAS BROUGHT TO ITS TRIP SETPOINT AN AUTOMATIC ISOLATION OF THE DIV I BALANCE OF PLANT RELAY CABINET OCCURRED AS WELL AS A PARTIAL OUTBOARD NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM ISOLATION. INVESTIGATION REVEALED THAT THE PROCEDURES IN USE DID NOT HAVE STEPS REQUIRING RESET OF NSSSS LOGIC AFTER SPECIFIC INSTRUMENTS UNDER TEST HAD BEEN PRESSURIZED THROUGH THEIR RESPECTIVE TRIP SETPOINTS. THIS CAUSED DIV I LOGIC INPUTS TO NSSSS AND BOP ISOLATION CABINETS TO BE IN A 1/2 TRIPPED CONDITION. WHEN THE DIV II PROCEDURES WERE PERFORMED, THEIR INPUTS TO THE NSSSS SYSTEM AND DIV I BOP ISOLATION SYSTEM CAUSED A PARTIAL NSSSS ISOLATION AND A FULL DIV I BALANCE OF PLANT ISOLATION. OPERATORS DETERMINED THAT ISOLATION WAS DUE TO THE PROCEDURE BEING PERFORMED AND IMMEDIATELY RESET THE ISOLATION LOGIC AND RETURNED AFFECTED SYSTEMS TO A NORMAL LINE-UP.

[346] ZION 1 DOCKET 50-295 LER 85-009
 MISSED INOPERABLE RADIATION MONITOR SURVEILLANCE.
 EVENT DATE: 022585 REPORT DATE: 032585 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: ZION 2 (PWR)

(NSIC 193758) AUX BLDG AREA RAD MONITOR ORT-AR08 WAS TAKEN OUT OF SERVICE FOR INSTRUMENT MAINTENANCE. MONITOR ORT-AR08 WAS STILL OUT OF SERVICE AT THE END OF THAT SHIFT. DUE TO A LACK OF COMMUNICATION BETWEEN SHIFT SUPERVISORS, MANUAL SURVEYS OF THE AREA MONITORED BY ORT-AR08 WERE NOT PERFORMED DURING THE FOLLOWING SHIFT, THUS VIOLATING TECH SPEC 3.14.1.C. AT THE END OF THE SECOND SHIFT, THE ONCOMING SUPERVISOR FOUND THE ORT-AR08 WAS INOPERABLE AND INITIATED MANUAL SURVEYS, AS REQUIRED. THIS HAS NOT BEEN A RECURRING PROBLEM AT ZION. STATION PROCEDURES REQUIRE SHIFT SUPERVISOR AUTHORIZATION FOR INSTRUMENTS TO BE LEFT OUT OF SERVICE OVER A SHIFT. THIS EVENT WAS DISCUSSED WITH THE SUPERVISORS INVOLVED. NO FURTHER CORRECTIVE ACTION WAS NECESSARY.

[347] ZION 1 DOCKET 50-295 LER 85-010
 INOPERABLE AIRCRAFT FIRE PROTECTION SYSTEM.
 EVENT DATE: 030685 REPORT DATE: 040585 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: ZION 2 (PWR)

(NSIC 193759) A PAPERCLIP WAS FOUND HOLDING THE 'O' DG AIRCRAFT CRASH FIRE DETECTION PANEL IN THE 'RESET' MODE, PREVENTING AUTO-ACTUATION. UPON DISCOVERY THE PAPERCLIP WAS IMMEDIATELY REMOVED. CORRECTIVE ACTION WILL ALSO INCLUDE A STANDING ORDER AND A CAUTION SIGN PLACED NEAR THE PANELS.

[348] ZION 2 DOCKET 50-304 LER 84-032
 REACTOR TRIPS DUE TO INCORRECT RTD WIRING.
 EVENT DATE: 070584 REPORT DATE: 043085 NSSS: WE TYPE: PWR

(NSIC 193747) ON 7-5-84, WHILE UNIT 2 WAS CRITICAL BUT AT 0% POWER DURING LOW POWER PHYSICS TESTING, THE UNIT WAS TRIPPED WHEN THE TEST SETUP FOR THE RTD CROSS CALIBRATION SURVEILLANCE WAS BEING DISCONNECTED. AFTER THE ACTIVE LOOP B T-COLD RTD HAD FAILED DURING THE CYCLE, THE WIRING FOR IT HAD BEEN SWITCHED TO ITS SPARE RTD. HOWEVER, WHEN THIS WAS DONE, THE WIRING FOR THE RTD TEST CART INTERCONNECTION WAS REWIRED INCORRECTLY. AS A RESULT, WHEN THE TEST CART WAS BEING DISCONNECTED, BOTH RTD'S WERE CONNECTED TO THE T-COLD INPUT OF THE LOOP B T-AVE AND DELTA-T PROTECTION CIRCUITS. THE RESULTING 'APPARENT' LARGE CHANGE IN

(NSIC 193762) AT 7:59 ON 2-28-85 THE 1B DG TRIPPED WHILE BEING RUN FOR NORMAL SURVEILLANCE TESTING. THE 'CONFIRMATORY ORDER' DATED 2-29-80 ESTABLISHED DG TEST FREQUENCY AND ALLOWABLE OUTAGE TIMES. IT FURTHER REQUIRES ZION STATION TO COMPLY WITH THE TESTING CRITERIA OF REG GUIDE 1.108. THE DG FAILURE PLACED THE UNIT ON A 12 HR CLOCK REQUIRING IT TO BE IN AT LEAST HOT SHUTDOWN BY 1959 HRS. THE DEFECTIVE 2B DG WAS SUCCESSFULLY REPAIRED AND TESTED BUT WAS NOT DECLARED FULLY OPERABLE UNTIL ABOUT 2000 HRS WHICH WOULD HAVE BEEN UP TO 1 MIN AFTER UNIT 2 SHOULD HAVE BEEN SHUTDOWN. THE UNIT WAS RETURNED TO FULL POWER AFTER THE DG WAS DECLARED OPERABLE.

(NSIC 193761) WHILE PERFORMING PT-10 ON 3-3-85 AT 1245 HRS, VALVE OFCV-SW54 FAILED TO SHUT FULLY UPON RECEIPT OF A TEST ISOLATION SIGNAL. UNIT 1 WAS IN COLD SHUTDOWN AND UNIT 2 WAS AT 99% POWER. THIS VALVE WAS FULLY OPEN PRIOR TO TESTING AND NORMALLY IS EITHER FULLY OPEN OR SHUT. THE VALVE CONTROLS SERVICE WATER STRAINER BACKWASH TO A RETURN HEADER WHICH FLOWS TO THE FOREBAY. BACKWASH WATER FROM BOTH STRAINERS OF UNIT 1 AND 2 GOES THROUGH THIS VALVE AND CLOSING IT PREVENTS BACKWASH OF ALL SERVICE WATER STRAINERS. NORMALLY 2 SERVICE WATER PUMPS RUN PER UNIT AND WITH CONTINUOUS BACKWASH ABOUT 15% OF SERVICE WATER FLOW IS DIVERTED TO BACKWASH (NORMALLY BACKWASH IS LIMITED TO A PERIOD OF 30 SECS WHEN REQUIRED). NO STRAINERS WERE IN THE PROCESS OF BACKWASHING AT THE TIME OF THIS TEST.

(NSIC 193711) DURING NORMAL OPERATION ON3-3-85 THE UNIT 2 NSO OBSERVED VALVE 2FCV-PR24B GO SHUT BY VALVE INDICATION WITH NO OPERATOR ACTION. 2FCV-PR24B IS ONE OF THE CONTAINMENT AIR SAMPLING SYSTEM ISOLATION VALVES. INVESTIGATION REVEALED THAT THE VALVE WAS INDEED CLOSED, AND THE CAUSE OF THE CLOSURE WAS A RUPTURED DIAPHRAGM. AGE OF THE DIAPHRAGM IS BELIEVED TO BE THE ROOT CAUSE. SINCE 2FCV-PR24B IS A CONTAINMENT ISOLATION VALVE, ITS FAILURE REPRESENTS AN AUTOMATIC ACTUATION OF AN ESF AND IS REPORTABLE UNDER 10CFR50.73(A)(2)(IV). THE FAILURE WAS CONSERVATIVE FROM A CONTAINMENT ISOLATION STANDPOINT SINCE THE VALVE FAILED CLOSED AS DESIGNED. THE DIAPHRAGM WAS REPLACED AND THE VALVE WAS RETURNED TO SERVICE.

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 195, 241
 AIR 308
 AIR DRIERS 89
 BATTERIES & CHARGERS 31, 125, 153, 297, 304
 BEARING 12, 276
 BLOWERS 63, 90, 214, 300, 308, 314, 319, 320, 331
 BREAKER 9, 74, 76, 97, 102, 103, 108, 111, 119, 122, 123, 127, 142, 163, 195, 215, 228, 246, 251, 311, 312, 316, 317, 339
 BYPASS 40, 78, 80, 109, 141, 252, 341
 CABLES AND CONNECTORS 2, 19, 23, 29, 37, 61, 64, 74, 78, 79, 86, 95, 103, 119, 122, 123, 142-144, 156, 166, 178, 179, 186-190, 210, 228, 231, 259, 297, 298, 306, 311, 316, 319, 320, 339, 343, 348
 COMMUNICATION SYSTEM 214
 COMPONENTS 2, 5, 7, 12, 18, 25, 28, 47, 61, 112, 114, 142, 149, 191, 198-201, 212, 230, 236, 258, 259, 261, 267, 293, 306, 307, 319, 320
 COMPUTER, DIGITAL 3, 105, 211, 301, 324, 328, 332
 CONDENSER 81, 109, 114, 217, 323
 CONTAINMENT AIR LOCK 18, 100, 302
 CONTAINMENT EQUIPMENT HATCH 33, 124
 CONTAINMENT SUMP 12, 105
 CONTRACTOR PERSONNEL 206, 251, 311, 314
 CONTROL 2, 15, 32, 37, 38, 47, 61, 75, 103, 142, 143, 174, 237, 274, 289, 309, 340, 342, 350
 CONTROL PANEL/ROOM 246
 CONTROL ROD DRIVES 255
 CONTROL RODS 3, 255
 CONTROLLER 47, 103, 310
 COOLING DEVICE 254, 277, 290
 CYLINDER GAS 275
 DEMINERALIZERS 48
 DOOR 4, 5, 9, 18, 33, 62, 79, 88, 100, 110, 124, 171, 221, 253, 293, 295, 301, 330
 DRAINAGE 17, 89, 91, 101, 218
 DRIVE 85, 101, 114, 142, 236, 259, 319, 350
 ELECTRIC POWER 9, 74, 76, 93, 97, 102, 103, 108, 111, 119, 122, 127, 142, 163, 195, 215, 228, 244, 246, 251, 291, 311, 312, 316, 320, 339
 ELECTRONIC FUNCTION UNITS 30, 42, 47, 97, 102, 139, 164, 186, 195, 222, 232, 234, 244, 245, 264, 265, 291, 292, 300, 320, 335, 348
 ENGINES, INTERNAL COMBUSTION 123, 248, 349
 EQUIPMENT 7, 63, 73, 76, 82, 110, 176, 177, 217, 260
 FAILURE, COMPONENT 2, 5, 7, 12, 18, 25, 28, 47, 61, 112, 114, 142, 149, 191, 198-201, 212, 230, 236, 258, 259, 261, 267, 293, 307, 307, 319, 320
 FAILURE, EQUIPMENT 1-7, 9, 12-15, 17-19, 21-27, 29, 31-38, 40-42, 45-50, 52-55, 58-67, 69-71, 73-76, 78-86, 88-95, 97, 98, 100-103, 105, 108-112, 114, 118-120, 122-128, 135-146, 149, 151-153, 155, 156, 159-166, 168, 171, 172, 174-179, 181-195, 197-201, 203-211, 213-222, 224, 227-229, 231, 232, 234-238, 240, 241, 243-246, 248, 249, 251-255, 257-264, 267-269, 273-278, 280, 282, 285-293, 295-304, 306, 308-312, 314-321, 323-325, 328, 330-332, 335, 337-343, 348-351
 FAILURE, INSTRUMENT 1, 2, 9, 11, 13-15, 18-20, 26-28, 30, 33-35, 38, 39, 41-45, 47, 48, 50-53, 56, 57, 59, 61, 65, 66, 69, 70, 72-75, 77, 86, 93, 95-97, 102, 104, 107, 108, 110-113, 115-117, 119, 125-127, 136, 137, 139-145, 147-149, 151, 152, 154, 156, 164, 165, 167, 169, 170, 172, 174, 176-179, 182-188, 190, 195, 205, 207-210, 214-216, 222-224, 226-229, 232, 233, 235, 237, 239, 242, 247-250, 254, 257, 260, 262, 264-266, 270, 271, 279, 284, 285, 288, 291, 292, 294, 297, 298, 300, 303, 306, 309, 310, 312-314, 320, 322-324, 326, 327, 329, 331, 333-335, 337-340, 345-348
 FAILURE, PIPE 8, 16, 17, 22, 48, 54, 75, 81, 99, 109, 150, 159, 169, 218, 225, 240, 256, 272, 274, 323
 FAILURE, TUBING 35, 75, 120
 FASTENER 1, 5, 7, 18, 21, 33, 37, 224, 293, 295, 320
 FILTERS 55, 91, 138, 255, 280, 308
 FIRE 45, 214, 329, 347
 FIRE PROTECTION 121, 196, 202
 FLOW 15, 32, 37, 38, 47, 142, 237, 274, 289, 342, 350
 FLUX DISTRIBUTION 19, 20, 77, 110, 113, 242
 FUEL ELEMENTS 84, 286
 FUSE 30, 39, 95, 188, 190, 257
 GAS 45, 173, 180, 198-200, 212, 214, 230, 280, 281, 283, 307, 327, 336
 GENERATOR, DIESEL 31, 41, 70, 123, 127, 140, 248, 249, 262, 309, 310, 349
 GENERATOR, MOTOR 21
 GENERATORS 340
 HEAT EXCHANGERS 2, 15, 35, 53, 64, 65, 75, 78, 80, 81, 89, 114, 120, 164, 165, 217, 243, 254, 274, 277, 290, 308, 323
 HEATERS 65, 75, 224, 318

COMPONENT INDEX

- HYDRAULIC SYSTEM 38, 47, 342
 INDICATORS 11, 19, 20, 28, 45, 47, 50, 57, 59, 72, 73, 77, 110, 113, 140, 144, 149, 151, 173, 180, 198-200, 212, 214, 222, 226, 229, 230, 235, 242, 250, 270, 279-281, 283-285, 288, 291, 294, 300, 307, 310, 313, 320, 323, 326, 327, 331, 334-337, 346
 INSTRUMENT LINE 26, 41, 126, 141, 172, 174, 184, 185, 205, 209, 235, 303, 337, 341
 INSTRUMENT, ALARM 42, 74, 297, 312
 INSTRUMENT, COOLANT QUALITY 185
 INSTRUMENT, CURRENT 19, 127, 306
 INSTRUMENT, FLOW 165, 337
 INSTRUMENT, INTERLOCK 1, 18, 30, 33, 43, 74, 93, 125, 142, 183, 228, 339
 INSTRUMENT, LIQUID LEVEL 126, 205, 208
 INSTRUMENT, POSITION 14, 15, 33, 38, 53, 96, 143, 144
 INSTRUMENT, SPEED 47
 INSTRUMENT, SWITCH 9, 14, 26, 27, 33-35, 38, 41, 44, 47, 48, 51, 53, 56, 59, 66, 70, 74, 96, 97, 102, 104, 108, 111, 112, 116, 127, 136, 137, 141, 145, 147, 148, 151, 154, 167, 169, 170, 172, 174, 176-179, 182, 184, 187, 195, 207, 209, 214, 215, 223, 224, 232, 247, 262, 266, 271, 294, 298, 303, 310, 314, 320, 323, 327, 333, 338, 345
 INSTRUMENT, TESTING 137
 INSTRUMENT, VOLTAGE 61, 64, 70, 74, 142, 239, 297, 310, 340
 INSTRUMENTS, MISC. 139, 248
 INSULATION 315
 INVERTER 300
 LICENSED OPERATOR 3, 52, 56, 105, 113, 114, 125, 137, 139, 165, 194, 207, 215, 226, 237, 252, 279, 307
 LIGHTING 317
 LIGHTNING 273
 MONITOR 288
 MOTORS 13, 38, 40, 53, 59, 61, 64, 76, 78, 81, 103, 105, 127, 142, 277, 317, 335, 342
 NEUTRON 19, 20, 77, 110, 113, 242
 NONLICENSED OPERATOR 82, 125, 172, 193, 216, 250, 316
 NOZZLE 36
 OPERATOR ACTION 1, 4, 6-9, 14-16, 23-29, 31, 37-39, 42, 43, 45, 49-51, 54, 55, 59, 60, 62, 68, 72-78, 83, 85-89, 91-93, 102, 105-107, 111, 119, 121, 124, 126, 127, 134, 135, 137-139, 143-145, 151-154, 156, 161, 163, 166, 167, 169-171, 177, 179, 183, 184, 186-188, 190, 193, 196-203, 205, 208, 209, 211-213, 218-221, 224, 226-228, 231, 232, 234, 236, 238-243, 245, 248, 249, 253, 256, 258, 261, 263, 267, 270, 274-276, 279, 282, 284, 286, 289, 290, 293-296, 301, 303-306, 315, 318-320, 324, 329-334, 336, 337, 340, 341, 343-345, 347, 349, 351
 OPERATOR ACTION 301, 303-306, 315, 318-320, 324, 329-334, 336, 337, 340, 341, 343-345, 347, 349, 351
 PENETRATION 6, 16, 18, 33, 83, 100, 124, 220, 221, 258, 261, 269, 302, 306, 341
 PENETRATION, ELECTRICAL 98
 PENETRATION, PIPE 16
 PIPES AND PIPE FITTINGS 8, 17, 22, 24, 45, 48, 54, 75, 81, 89, 99, 109, 150, 159, 169, 206, 218, 225, 240, 256, 272, 274, 296, 323
 PNEUMATIC SYSTEM 54, 75, 91, 143, 274, 319
 POWER DISTRIBUTION 310
 PRESSURE DROP 2, 309
 PRESSURE RELIEF 34, 58, 75, 259, 278, 321
 PRESSURE VESSELS 139, 142, 174, 178, 237, 339
 PRESSURE, INTERNAL 2, 309
 PRESSURIZER 75
 PUMPS 12, 13, 39, 53, 59, 61, 64, 75, 81, 105, 127, 142, 146, 149, 162, 176, 198-200, 276, 278, 285, 317, 321, 331, 335, 342
 RADIATION MONITORS 9, 11, 26, 28, 35, 42, 44, 50, 57, 59, 66, 116, 154, 156, 169, 222, 226, 229, 232, 233, 250, 264, 266, 270, 271, 279, 285, 291, 292, 294, 312-314, 320, 326, 327, 331, 334, 335, 346
 REACTOR 139, 142, 174, 178, 237, 339
 RECOMBINERS 151
 RECORDERS 65, 185, 237, 248
 RELAYS 13, 30, 41, 43, 47, 52, 61, 70, 74, 93, 107, 115, 117, 119, 125, 127, 137, 142, 152, 183, 186, 216, 224, 227, 228, 239, 249, 254, 265, 297, 306, 339
 RESPONSE TIME 41, 47, 137, 239
 SAFETY DEVICE 273
 SAMPLING 50
 SEAL 6, 12, 25, 91, 98, 118, 121-123, 128, 146, 149, 196, 197, 202, 206, 213, 235, 277, 296, 319, 332
 SENSORS, FLOW 48, 65, 140, 141, 145, 165, 182, 184, 215, 237, 314, 320, 337, 338
 SENSORS, LEVEL 34, 112, 126, 151, 172, 179, 205, 208, 235, 303
 SENSORS, PRESSURE 41, 47, 51, 53, 69, 72, 73, 75, 104, 147, 148, 151, 164, 167, 170, 172, 174, 176-178, 187, 209, 210, 223, 247, 257, 262, 284, 300, 345
 SENSORS, TEMPERATURE 86, 136, 151, 288, 298, 322-324, 348
 SERVOMECHANISM 32, 37, 38, 40, 46, 47, 76, 97, 108, 111
 SHOCK ABSORBER 94, 219, 236, 259, 267, 287
 SMOKE 45, 214, 329, 347

COMPONENT INDEX

SOLENOID 80, 166, 195
SOLID STATE DEVICE 42, 47, 216, 222,
232, 245, 264, 291, 292, 300
STEAM GENERATOR 2, 15, 53, 64, 65, 75,
78, 80, 81, 120, 164, 165, 243, 274
STEEL 323
STEEL, STAINLESS 8, 99, 225, 272
STORAGE CONTAINER 135, 203, 238, 252,
263, 309
STRUCTURE 31, 299, 315
SUPPORT STRUCTURE 89, 94, 219, 236,
259, 267, 287
TOXICITY 45, 173, 180, 198-200, 212,
214, 230, 280, 281, 283, 307, 327, 336
TRANSFORMERS 61, 64, 231, 244, 273
TUBING 35, 75, 120
TURBINE 2, 7, 15, 38, 47, 52, 53, 61,
65, 74, 75, 142, 178, 217, 231, 257,
259, 260, 273, 339
VALVE OPERATORS 14, 15, 32, 35, 37, 38,
40, 46-48, 54, 66, 69, 74-76, 78, 91,
92, 97, 108, 111, 114, 122, 123, 126,
128, 136, 137, 140-143, 145, 152, 159,
160, 166, 172, 174, 176-179, 182-184,
186-188, 204, 207, 208, 215, 216, 257,
274, 278, 282, 289, 298, 303, 319,
321, 337-339, 342
VALVE, CHECK 25, 54, 118, 155, 162,
175, 191, 221
VALVES 4, 5, 9, 12, 14, 15, 18, 25, 27,
32-35, 37, 38, 40, 46-50, 54, 60, 62,
66, 67, 69, 71, 74-76, 78-81, 83, 85,
88-92, 97, 100, 101, 108-111, 114,
118, 122-124, 126, 128, 136, 137, 140-
146, 152, 155, 159-162, 166, 168, 171,
172, 174-179, 181-184, 186-188, 191-
195, 201, 204, 207-209, 215-217, 221,
227, 229, 235-237, 240, 252, 253, 257,
258, 261, 263, 268, 269, 274, 278,
282, 289, 290, 293, 295, 298, 301,
303, 310, 314, 318-321, 325, 330, 337-
339, 341, 342, 350, 351
VIBRATION 178, 260

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 13, 23, 27, 30, 38, 39, 45, 56, 72, 73, 104, 112, 137, 144, 152, 164, 167, 172-174, 176-180, 183, 184, 186-188, 198-200, 205, 207-209, 212, 214, 227, 230, 235, 244, 245, 254, 257, 265, 280, 281, 283, 284, 307, 327, 333, 336, 345
- AIR 16
- ANNUNCIATORS 42, 74, 170, 297
- AUXILIARY 13, 65, 75, 76, 80, 87, 90, 221, 243, 293, 302, 346
- BUILDING 17, 27, 45, 63, 66, 67, 83, 87, 90, 171, 214, 218, 293, 301, 302, 307, 315, 331, 346
- BUILDING/SSF 17
- BUILDING/TSF 83, 90, 346
- BYPASS 15, 289, 323
- CABLES AND CONNECTORS 122, 123
- CALIBRATION 1, 11, 14, 25, 26, 28, 43, 49, 51, 55, 59, 60, 68-70, 72, 82, 87, 92, 93, 102, 103, 106, 107, 119, 126, 135, 137-139, 151, 153, 164, 167, 169, 170, 179, 183, 184, 193, 203, 208, 209, 215, 226, 228, 229, 238, 241, 242, 245, 248, 249, 251, 254, 257, 271, 275, 282, 284, 286, 290, 294, 297, 298, 303, 304, 314, 320, 326, 330, 334, 345, 346, 348
- COMMUNICATION SYSTEM 110, 214
- COMPONENT COOLING SYSTEM 117, 142, 276
- COMPONENT COOLING SYSTEM/TSF 117
- COMPUTER, DIGITAL 105, 211
- CONDENSER 81, 109, 114, 217, 323
- CONDENSER COOLING SYSTEM 61, 217, 252, 299
- CONSTRUCTION 115, 296
- CONTAINMENT 12, 16, 24, 27-29, 89, 138, 143, 146, 168, 224, 227, 253, 254, 277, 290, 302, 308, 313, 314, 318-320, 344
- CONTAINMENT ATMOSPHERE 151
- CONTAINMENT ISOLATION 1, 16, 18, 25, 27, 33, 37, 46, 48, 54, 66, 92, 96, 100, 101, 108, 118, 122, 123, 136, 137, 144, 145, 152, 155, 159, 172, 175-177, 181-184, 186-188, 191, 204, 207, 215, 221, 258, 261, 268, 269, 298, 302, 303, 306, 325, 337, 338, 341, 342, 351
- CONTAINMENT PURGE 254, 308, 344
- CONTAINMENT PURGE/TSF 344
- CONTAINMENT SPRAY 37, 111, 263
- CONTAINMENT SPRAY/SSF 37, 111
- CONTAINMENT VACUUM BREAKER 168
- CONTAINMENT/SSF 146, 319
- CONTAINMENT/TSF 16, 28, 253, 254, 302, 308
- CONTROL 16, 27, 45, 63, 66, 67, 83, 151, 214, 218, 307, 315, 331
- CONTROL PANEL/ROOM 9, 79, 110, 300
- CONTROL ROD DRIVES 195, 255
- CONTROL SYSTEM 27, 41, 53, 61, 65, 70, 74, 80, 107, 115, 127, 139, 142, 151, 178, 234, 249, 260, 262, 309, 310, 323, 340, 342
- CONTROL SYSTEM/SSF 234
- COOLANT PURIFICATION SYSTEM 12, 48, 58, 60, 75, 99, 122, 123, 145, 146, 159, 172, 182, 204, 215, 219, 225, 256, 298, 337
- COOLANT PURIFICATION SYSTEM/TSF 48, 122, 123, 145, 159, 172, 182, 204, 215, 298, 337
- COOLING SYSTEM, SECONDARY 2, 13, 15, 53, 54, 61, 64, 65, 71, 75, 76, 78, 80, 81, 94, 109, 114, 120, 139, 142, 151, 164, 165, 217, 221, 236, 237, 243, 267, 274, 323, 339
- COOLING SYSTEM, SECONDARY/SSF 13, 64
- COOLING SYSTEM, SECONDARY/TSF 53, 65, 75, 109, 142, 243, 274, 339
- CORE 3, 84, 255, 286
- CORE REFLOODING SYSTEM 76, 241
- CORE SPRAY 97, 194, 225, 236
- CORE SPRAY/SSF 97
- CORE SPRAY/TSF 194
- DEMINERALIZERS 17, 109
- DRAINAGE 105, 193, 218, 238
- DRAINAGE/SSF 193
- ELECTRIC POWER 21, 29, 31, 37, 47, 61, 64, 74, 76, 97, 102, 108, 111, 119, 122, 123, 125, 127, 142, 143, 153, 163, 166, 195, 215, 216, 228, 231, 239, 246, 257, 273, 297, 304, 317, 319, 339, 343
- ELECTRIC POWER/SSF 31, 339
- ELECTRIC POWER/TSF 231
- ELECTRIC POWER, VITAL 9, 30, 64, 93, 103, 142, 190, 244, 246, 251, 300, 311, 312, 316, 320
- EMERGENCY COOLING SYSTEM 285, 287
- EMERGENCY POWER, ELECTRIC 31, 41, 70, 91, 107, 111, 115, 123, 127, 140, 248, 249, 262, 309, 310, 340, 349
- EMERGENCY POWER, ELECTRIC/SSF 31, 41, 70, 111, 123, 140, 248, 249, 262, 309, 310, 340, 349
- EMERGENCY POWER, ELECTRIC/TSF 127
- ENGINEERED SAFETY FEATURE 13, 23, 27, 30, 38, 39, 45, 56, 72, 73, 104, 112, 137, 144, 152, 164, 167, 172-174, 176-180, 183, 184, 186-188, 198-200, 205, 207-209, 212, 214, 227, 230, 235, 244, 245, 254, 257, 265, 280, 281, 283, 284, 307, 327, 333, 336, 345
- ENGINEERED SAFETY FEATURE/SSF 27, 244
- ENGINES, INTERNAL COMBUSTION 41, 70, 91, 107, 115, 127, 249, 262, 301, 309,

SYSTEM INDEX

ENGINES, INTERNAL COMBUSTION 310, 340
 EQUIPMENT 105, 193, 218, 238
 FAILURE, ADMINISTRATIVE CONTROL 25,
 138, 177, 211, 220, 221, 239, 304, 305
 FAILURE, DESIGN ERROR 7, 16, 18, 23,
 24, 27, 29, 45, 74, 75, 78, 89, 91,
 105, 127, 143, 166, 179, 197, 218,
 240, 243, 274, 289, 306, 324, 329,
 336, 337, 343, 351
 FAILURE, FABRICATION ERROR 35, 54, 85,
 212, 232, 276
 FAILURE, INSTALLATION ERROR 6, 31, 86,
 143, 144, 161, 186, 187, 196, 206,
 227, 236, 237, 256, 315, 319, 333, 343
 FAILURE, MAINTENANCE ERROR 9, 10, 18,
 37-39, 44, 50, 57, 66, 74, 77, 79, 91,
 111, 124, 134, 145, 154, 159, 167,
 188, 190, 205, 207, 214, 221, 224,
 231, 234, 240, 244, 246, 250, 253,
 261, 270, 311, 312, 317, 321, 331,
 340, 341, 348
 FAILURE, OPERATOR ERROR 3, 15, 35, 52,
 56-58, 62, 66, 73, 76, 81, 88, 90,
 105, 113, 114, 116, 121, 125, 134,
 137, 139, 142, 165, 171, 172, 182,
 193, 194, 201, 202, 207, 213, 215-217,
 237, 252, 271, 277-279, 293-295, 297,
 301, 307, 313, 314, 316, 318, 332, 349
 FEEDWATER 13, 15, 53, 61, 64, 65, 75,
 76, 78, 80, 81, 109, 139, 142, 151,
 221, 237, 243, 274, 339
 FIRE PROTECTION 4-6, 45, 49, 62, 98,
 121, 124, 134, 135, 161, 196, 197,
 201, 202, 206, 213, 214, 218, 220,
 275, 295, 296, 301, 315, 323, 329,
 330, 332, 347
 FIRE PROTECTION/SSF 62, 214, 301, 323
 FIRE PROTECTION/TSF 134, 275, 329, 347
 FLOW, RECIRCULATION 342
 GENERATORS 2, 15, 52, 61, 65, 74, 75,
 81, 114, 142, 178, 217, 231, 257, 260,
 273, 323, 339
 HEAT EXCHANGERS 109
 HEATERS 123
 HPCI 7, 34, 37, 38, 40, 47, 108, 141,
 142, 259, 300
 HPCI/TSF 7, 34, 37, 38, 47, 108, 141,
 142, 259, 300
 HYDROGEN 151
 INSTRUMENT, ALARM 42, 74, 170, 297
 INSTRUMENT, IN CORE 10, 19, 20, 77, 79,
 110, 113, 125, 157, 158, 242, 306,
 312, 322, 348
 INSTRUMENT, IN CORE/SSF 20, 79
 INSTRUMENT, NON-NUCLEAR 2, 15, 34, 47,
 75, 140, 141, 143, 144, 149, 166, 169,
 185, 195, 207, 214, 224, 237, 240,
 248, 259, 274, 300, 314, 320, 341
 INSTRUMENT, NON-NUCLEAR/SSF 149, 185,
 300
 LEAK DETECTION 28, 35, 48, 50, 66, 136,
 145, 148, 151, 182, 189, 210, 215,
 LEAK DETECTION 223, 226, 233, 279, 285,
 291, 292, 298, 300, 335, 337, 338
 LIGHTING 317
 LUBRICATION 38, 260, 276
 MAIN COOLING SYSTEM 2, 8, 12, 14, 15,
 22, 53, 60, 61, 64, 65, 75, 78, 80,
 81, 84, 85, 106, 120, 128, 139, 160,
 164-166, 172, 174, 178, 179, 221, 225,
 236, 243, 272, 274, 278, 286, 289, 342
 MAIN COOLING SYSTEM/SSF 12
 MAIN COOLING SYSTEM/TSF 2, 60, 75, 84,
 106, 139, 286, 289
 MONITOR 45, 134, 214, 323, 329, 347
 MONITORING SYSTEM, RADIATION 9, 26, 43,
 55, 57, 59, 82, 116, 222, 229, 232,
 250, 264, 266, 270, 294, 312-314, 317,
 320, 326, 327, 331, 334, 346
 MONITORING SYSTEM, RADIATION/SSF 222
 OFF GAS 109, 114
 OFF GAS/SSF 109
 OFF SITE 61, 231, 273, 339
 ON SITE 21, 29, 31, 37, 47, 61, 64, 74,
 76, 97, 102, 108, 111, 119, 127, 142,
 143, 163, 195, 215, 228, 239, 297,
 317, 319, 339, 343
 PNEUMATIC SYSTEM 16, 54, 91, 142, 143,
 309
 PNEUMATIC SYSTEM/SSF 16, 91
 PNEUMATIC SYSTEM/TSF 143
 POISON, SOLUBLE 58
 PRESSURE RELIEF 71, 128, 160, 166, 172,
 174, 178, 179, 236
 PRESSURE VESSELS 36, 139, 142, 174,
 178, 237, 339
 PRESSURIZER 14, 75, 278
 PROCESS MONITORING 3, 11, 44, 51, 52,
 69, 86, 93, 95, 103, 117, 126, 147,
 151, 154, 156, 165, 172, 195, 235,
 247, 257, 271, 288, 303, 312, 324,
 328, 348
 RADIATION PROTECTION PERSONNEL 344
 RCIC 38, 137, 141, 142, 152, 168, 225,
 338
 RCIC/TSF 38, 137, 141, 142, 152, 168,
 338
 REACTOR CONTROL 27
 REACTOR POWER 27
 REACTOR PROTECTION SYSTEM 3, 11, 44,
 51, 52, 69, 86, 93, 95, 103, 117, 126,
 147, 151, 154, 156, 165, 172, 195,
 235, 247, 257, 271, 288, 303, 312,
 328, 348
 REACTOR PROTECTION SYSTEM/SSF 95, 247,
 288, 312, 328, 348
 RHR 216
 RHR-LPCI 22, 32, 35, 37, 47, 136, 150,
 176, 177, 183, 184, 186-188, 207, 303
 RHR-LPCI/SSF 37, 47, 150, 177, 186-188,
 207, 303
 RHR-LPCI/TSF 35, 136, 176, 183, 184
 SAMPLING 185
 SEAL 81, 114

SYSTEM INDEX

SECURITY 301, 332
 SERVICE WATER SYSTEM 35, 127, 140, 162, 192, 277, 308, 350
 SERVICE WATER SYSTEM/SSF 35, 140, 192
 SHUTDOWN SYSTEM, SECONDARY 203, 321
 SHUTDOWN SYSTEM, SECONDARY/TSP 321
 SOLID STATE DEVICE 234
 SPENT FUEL POOL 276
 STACK 68, 282
 STACK/TSP 68, 282
 STEAM 65, 75, 81, 114, 221
 STEAM GENERATOR 2, 15, 53, 64, 65, 71, 75, 78, 80, 81, 120, 164, 165, 221, 243, 274
 STORAGE CONTAINER 38, 260, 276
 STRUCTURE 88
 SUBSYSTEM FAULT 2, 12, 13, 16, 17, 20, 27, 29, 31, 35, 37, 41, 47, 62-64, 66, 70, 79, 91, 95, 97, 109, 111, 123, 140, 146, 149, 150, 177, 185-188, 192, 193, 207, 214, 222, 224, 234, 244, 247-249, 262, 288, 300, 301, 303, 307, 309, 310, 312, 314, 318, 319, 323, 328, 339, 340, 348, 349
 SUPPORT STRUCTURE 122, 123
 TESTING 1, 11, 14, 25, 26, 28, 43, 49, 51, 55, 59, 60, 68-70, 72, 82, 87, 92, 93, 102, 103, 106, 107, 119, 126, 135, 137-139, 151, 153, 164, 167, 169, 170, 174, 179, 183, 184, 193, 203, 208, 209, 215, 226, 228, 229, 238, 241, 242, 245, 248, 249, 251, 254, 257, 271, 275, 282, 284, 286, 290, 294, 297, 298, 303, 304, 314, 320, 326, 330, 334, 345, 346, 348
 TORUS 40, 168, 252
 TORUS/TSP 40, 168
 TOTAL SYSTEM FAULT 2, 7, 16, 24, 27, 28, 34, 35, 37, 38, 40, 47, 48, 53, 60, 65, 68, 74, 75, 83, 84, 87, 90, 106, 108, 109, 117, 122, 123, 127, 134, 136, 137, 139, 141-143, 145, 152, 159, 168, 172, 176, 182-184, 194, 204, 215, 218, 231, 243, 253, 254, 259, 274, 275, 282, 286, 289, 298, 300, 302, 308, 319, 321, 323, 329, 337-339, 344, 346, 347
 TURBINE 2, 15, 17, 52, 61, 65, 74, 75, 81, 114, 142, 178, 217, 231, 257, 260, 273, 289, 323, 339
 TURBINE/SSF 2
 TURBINE/TSP 74, 323
 VENTILATION SYSTEM 24, 27, 29, 45, 63, 66, 67, 83, 87, 89, 90, 138, 143, 214, 218, 224, 227, 253, 254, 277, 290, 302, 307, 308, 310, 314, 318-320, 331, 344
 VENTILATION SYSTEM/SSF 29, 63, 66, 224, 307, 314, 318, 319
 VENTILATION SYSTEM/TSP 24, 27, 83, 87, 90, 143, 218, 302, 319
 WASTE MANAGEMENT 17, 171
 WASTE TREATMENT, GAS 282
 WASTE TREATMENT, LIQUID 169, 193
 WASTE TREATMENT, LIQUID/SSF 193

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 195, 241
 ACTUATION 2, 9, 13, 30, 39, 44, 45, 48, 53, 54, 56, 59, 61, 64, 65, 67, 69, 70, 72-75, 78, 79, 81, 91, 107, 115, 116, 119, 122, 123, 136, 137, 139, 142, 145, 146, 152, 150, 164, 166, 168, 172-174, 175-178, 180, 182-184, 186-190, 195, 198-200, 204, 205, 207-210, 212, 214, 215, 226-230, 232, 233, 244-246, 249-251, 254, 264-266, 270, 280-285, 289, 291, 292, 294, 297, 298, 302, 303, 311-314, 316, 319, 320, 323, 326, 327, 331, 333-339, 342, 345, 351
 ACTUATOR 13, 23, 27, 30, 38, 39, 45, 56, 72, 73, 104, 112, 137, 144, 152, 164, 167, 172-174, 176-180, 183, 184, 186-188, 190, 198-200, 205, 207-209, 212, 214, 227, 230, 235, 244-246, 254, 257, 265, 280, 281, 283, 284, 307, 327, 333, 336, 345
 ADMINISTRATIVE PERSONNEL ERROR - SEE FAILURE, ADMINISTRATIVE CONTROL
 AGE EFFECT - SEE EFFECT, AGE
 AIR 16, 155, 308
 AIR DRIERS 89
 AIR/STEAM BINDING 41, 141, 150
 ANNUNCIATORS 12, 28, 31, 35, 42, 45, 48, 64, 67, 74, 91, 105, 125, 146, 149, 152, 156, 157, 169, 170, 180, 189, 195, 198-200, 212, 217, 222, 226, 252, 255, 260, 297, 298, 300, 318, 327
 ARKANSAS NUCLEAR 2 (PWR) 1-6
 ARNOLD (BWR) 7-11
 AUXILIARY 13, 55, 58, 60, 65, 75, 76, 80, 87, 90, 124, 191, 221, 243, 293-296, 302, 306, 329, 330, 332, 346
 BATTERIES & CHARGERS 31, 125, 130, 153, 297, 304
 BEARING 12, 276
 BEAVER VALLEY 1 (PWR) 12-15
 BIG ROCK POINT (BWR) 16-20
 BLOWDOWN 131
 BLOWERS 63, 50, 214, 300, 308, 314, 319, 320, 331
 BREAKER 9, 74, 76, 97, 102, 103, 108, 111, 119, 122, 123, 127, 163, 195, 215, 228, 246, 251, 311, 312, 316, 317, 339
 BROWNS FERRY 1 (BWR) 21-32, 38, 39
 BROWNS FERRY 2 (BWR) 23-27, 29-31, 33, 34, 36, 39
 BROWNS FERRY 3 (BWR) 23, 24, 26, 27, 29-31, 35-39
 BRUNSWICK 1 (BWR) 40-45
 BRUNSWICK 2 (BWR) 41, 43, 45-48
 BUILDING 6, 17, 24, 27, 33, 45, 55, 57-60, 63, 66, 67, 81, 83, 87, 90, BUILDING 91, 98, 100, 124, 171, 173, 180, 196-200, 206, 212, 214, 218, 220, 230, 250, 264, 266, 270, 274, 280, 281, 283, 293-296, 301, 302, 306, 307, 310, 315, 317, 323, 326, 327, 329-334, 336, 343, 346, 347
 BUILDING/SSF 17, 214, 301, 307, 323
 BUILDING/TSF 83, 90, 329, 346, 347
 BWR REACTOR - SEE REACTOR, BWR
 BYPASS 2, 15, 40, 78, 80, 109, 141, 252, 289, 323, 341
 BYRON 1 (PWR) 49-60
 BYRON 2 (PWR) 55
 CABLES AND CONNECTORS 2, 19, 23, 29, 37, 61, 64, 74, 78, 79, 86, 95, 103, 119, 122, 123, 143, 144, 156, 166, 178, 179, 186-190, 210, 228, 231, 259, 297, 298, 306, 311, 316, 319, 320, 339, 343, 348
 CALIBRATION 1, 11, 14, 25, 26, 28, 38, 43, 49, 51, 55, 59, 60, 68-70, 72, 77, 82, 87, 92, 93, 102-104, 106, 107, 119, 126, 135, 137-139, 147, 151, 153, 154, 160, 164, 167, 169, 170, 174, 179, 180, 183, 184, 193, 203, 208, 209, 215, 226, 228, 229, 238, 241, 242, 245, 248, 249, 251, 254, 257, 262, 271, 275, 282, 284, 286, 290, 294, 297, 298, 303, 304, 309, 314, 320, 326, 330, 334, 340, 345, 346, 348
 CALLAWAY 1 (PWR) 61-70
 CALVERT CLIFFS 1 (PWR) 71-73
 CATAWBA 1 (PWR) 74-79
 CLADDING FAILURE - SEE FAILURE, CLADDING
 COMMUNICATION SYSTEM 31, 110, 206, 214, 343
 COMPONENT COOLING SYSTEM 117, 276
 COMPONENT COOLING SYSTEM/TSF 117
 COMPONENT FAILURE - SEE FAILURE, COMPONENT
 COMPONENTS 2, 5, 7, 12, 18, 25, 28, 47, 61, 112, 114, 149, 191, 198-201, 212, 230, 236, 258, 259, 261, 267, 293, 306, 307, 319, 320
 COMPUTER, DIGITAL 3, 105, 211, 301, 324, 328, 332
 CONCENTRATION 132, 153, 203, 275
 CONDENSATION 122, 123, 156
 CONDENSER 81, 101, 103, 109, 114, 217, 323
 CONDENSER COOLING SYSTEM 61, 217, 252, 299
 CONNECTICUT YANKEE (PWR) 80, 81
 CONSTRUCTION 115, 296
 CONTAINMENT 1, 4, 8, 12, 16, 18, 24, 25, 27-29, 33, 36, 42, 43, 46, 48, 50, 66, 89, 100, 105, 116, 136-138,

KEYWORD INDEX

- CONTAINMENT 143, 144, 146, 151, 168, 189, 201, 202, 206, 209, 210, 213, 223-227, 229, 232, 233, 236, 240, 253, 254, 256, 258, 259, 261, 265, 268, 272, 277, 279, 285, 288, 290-292, 298, 302, 306, 308, 313, 314, 317-320, 326, 335, 341, 344, 345
 CONTAINMENT AIR LOCK 18, 100, 302
 CONTAINMENT ATMOSPHERE 149, 151, 155, 325, 341
 CONTAINMENT ATMOSPHERE/SSF 149
 CONTAINMENT EQUIPMENT HATCH 33, 124
 CONTAINMENT ISOLATION 1, 16, 18, 25, 27, 30, 33, 37, 39, 46, 48, 54, 66, 92, 95, 96, 100, 101, 108, 118, 122, 123, 136, 137, 144, 145, 152, 155, 159, 172, 175-177, 181-184, 186-188, 191, 204, 207, 215, 221, 258, 261, 268, 269, 298, 302, 303, 306, 325, 337, 338, 341, 342, 351
 CONTAINMENT ISOLATION/SSF 27, 95
 CONTAINMENT PURGE 46, 254, 308, 344
 CONTAINMENT PURGE/TSF 344
 CONTAINMENT SPRAY 37, 111, 263
 CONTAINMENT SPRAY/SSF 37, 111
 CONTAINMENT SUMP 12, 105, 131
 CONTAINMENT VACUUM BREAKER 168
 CONTAINMENT/SSF 16, 146, 319
 CONTAINMENT/TSF 16, 28, 253, 254, 302, 308
 CONTAMINATION 17, 26, 35, 75, 84, 102, 108, 127, 169, 195, 218, 232, 260, 276, 280-283, 286, 308, 327
 CONTRACTOR PERSONNEL 206, 251, 311, 314
 CONTROL 2, 15, 16, 27, 32, 37, 38, 45, 47, 57, 59, 61, 63, 66, 67, 83, 103, 143, 149, 151, 155, 173, 174, 180, 198-200, 206, 212, 214, 218, 220, 230, 237, 250, 274, 280, 281, 283, 289, 307, 309, 315, 325, 327, 331, 332, 334, 336, 340-343, 350
 CONTROL PANEL/ROOM 9, 79, 110, 246, 300
 CONTROL ROD DRIVES 27, 163, 195, 255, 325
 CONTROL RODS 3, 255
 CONTROL SYSTEM 27, 36, 41, 53, 61, 64, 65, 70, 74, 80, 107, 115, 127, 139, 142, 151, 178, 234, 249, 257, 260, 262, 309, 310, 340, 342
 CONTROL SYSTEM/SSF 234
 CONTROLLER 47, 103, 310
 COOK 1 (PWR) 82-85
 COOK 2 (PWR) 82, 85-88
 COOLANT PURIFICATION SYSTEM 12, 48, 58, 60, 92, 99, 122, 123, 145, 146, 159, 172, 182, 185, 204, 215, 219, 225, 256, 298, 337, 341
 COOLANT PURIFICATION SYSTEM/TSF 48, 122, 123, 145, 159, 172, 182, 204, 215, 298, 337
 COOLING 127, 140
 COOLING DEVICE 254, 277, 290
 COOLING SYSTEM, SECONDARY 2, 11, 13, 15, 44, 53, 54, 61, 64, 65, 71, 73, 75, 76, 78, 80, 81, 94, 96, 101, 103, 104, 109, 114, 118, 120, 139, 142, 147, 151, 154-156, 164, 165, 175, 217, 221, 236, 237, 243, 247, 267, 268, 271, 274, 323, 325, 339
 COOLING SYSTEM, SECONDARY/SSF 13, 64
 COOLING SYSTEM, SECONDARY/TSF 53, 65, 75, 109, 142, 243, 274, 339
 COOLING TOWER 132
 COOLING/SSF 140
 COOPER (BWR) 89
 CORE 3, 10, 19, 20, 77, 79, 84, 110, 113, 125, 157, 158, 242, 255, 286, 303, 306, 312, 322, 328, 348
 CORE REFLOODING SYSTEM 76, 241
 CORE SPRAY 97, 167, 194, 225, 236, 254
 CORE SPRAY/SSF 97
 CORE SPRAY/TSF 194
 CORE/SSF 20, 79, 328, 348
 CORROSION 8, 22, 36, 99, 148, 225, 236, 267, 272, 350
 CRACK 7, 8, 12, 18, 22, 32, 34, 36, 37, 47, 85, 89, 99, 120, 129, 140, 192, 198-200, 212, 225, 230, 258, 259, 261, 272, 293, 319, 320, 351
 CRUD 26, 75, 102, 108, 127, 169, 195, 232, 260, 276, 280, 281, 283, 308, 327
 CRYSTAL RIVER 3 (PWR) 90, 91
 CYLINDER GAS 275
 DAVIS-BESSE 1 (PWR) 92
 DEFORMATION 35, 142, 191, 236
 DEMINERALIZERS 17, 48, 109, 191
 DESIGN ERROR - SEE FAILURE, DESIGN ERROR
 DIABLO CANYON 1 (PWR) 93
 DIESEL GENERATOR - SEE GENERATOR, DIESEL
 DOOR 4, 5, 9, 18, 33, 62, 79, 88, 100, 110, 124, 171, 221, 253, 293, 295, 301, 330
 DOSE MEASUREMENT, INTERNAL 116
 DRAINAGE 17, 89, 91, 101, 105, 181, 193, 218, 238
 DRAINAGE/SSF 193
 DRESDEN 2 (BWR) 94-110, 115, 116
 DRESDEN 3 (BWR) 98, 100, 107, 111-118
 DRIFT 104, 147, 160, 174, 180, 262, 309
 DRIVE 85, 101, 114, 236, 259, 319, 350
 EARTHQUAKE 29, 31, 89, 218
 EFFECT, AGE 2, 25, 30, 38, 96, 112, 118, 149, 175, 191, 261, 265, 351
 EFFECT, PH 153, 276
 EFFLUENT 131, 132
 ELECTRIC POWER 9, 21, 29, 31, 37, 47, 61, 64, 74, 76, 93, 97, 102, 103, 108, 111, 119, 122, 123, 125, 127,

KEYWORD INDEX

- ELECTRIC POWER 130, 143, 153, 163,
166, 195, 215, 216, 228, 231, 239,
244, 246, 251, 257, 273, 291, 297,
304, 311, 312, 316, 317, 319, 320,
339, 343
- ELECTRIC POWER/SSF 31, 123, 339
- ELECTRIC POWER/TSF 231
- ELECTRIC POWER, VITAL 9, 30, 64, 93,
103, 122, 123, 190, 244, 246, 251,
300, 311, 312, 316, 320
- ELECTRICAL FAILURE 2, 9, 19, 21, 29-
31, 37, 39, 41, 47, 52, 61, 64, 74,
86, 93, 95, 97, 102, 103, 108, 111,
119, 122, 123, 125, 127, 139, 142,
143, 156, 166, 173, 186-190, 195,
210, 216, 222-224, 228, 231, 232,
244, 246, 254, 257, 259, 262, 264,
273, 297, 298, 300, 306, 311, 316,
317, 319, 320, 339, 340, 349
- ELECTRONIC FUNCTION UNITS 30, 42, 47,
93, 102, 139, 164, 186, 195, 222,
232, 234, 244, 245, 264, 265, 291,
292, 300, 320, 335, 348
- EMERGENCY COOLING SYSTEM 285, 287
- EMERGENCY POWER, ELECTRIC 31, 41, 70,
91, 107, 111, 115, 123, 127, 130,
140, 153, 248, 249, 262, 309, 310,
340, 349
- EMERGENCY POWER, ELECTRIC/SSF 31, 41,
70, 91, 111, 123, 140, 248, 249, 262,
309, 310, 340, 349
- EMERGENCY POWER, ELECTRIC/TSF 127
- ENGINEERED SAFETY FEATURE 2, 9, 13,
23, 27, 30, 38, 39, 44, 45, 48, 53,
54, 56, 59, 61, 64, 65, 67, 69, 70,
72-75, 78, 79, 81, 91, 104, 107, 112,
115, 116, 119, 122, 123, 136, 137,
139, 142, 144-146, 152, 159, 164,
166-168, 172-174, 176-180, 182-184,
186-190, 195, 198-200, 204, 205, 207-
210, 212, 214, 215, 226-230, 232,
233, 235, 244-246, 249-251, 254, 257,
264-266, 270, 280-285, 289, 291, 292,
294, 297, 298, 302, 303, 307, 311-
314, 316, 319, 320, 323, 326, 327,
331, 333-339, 342, 345, 351
- ENGINEERED SAFETY FEATURE/SSF 27, 244
- ENGINES, INTERNAL COMBUSTION 6, 31,
41, 70, 91, 98, 107, 115, 123, 127,
140, 196, 197, 248, 249, 262, 301,
309, 310, 340, 347, 349
- ENVIRONMENT/SSF 193
- ENVIRONMENT/TSF 282, 344
- EQUIPMENT 7, 63, 73, 76, 82, 89, 101,
105, 110, 176, 177, 181, 193, 217,
218, 238, 260
- EQUIPMENT FAILURE - SEE FAILURE,
EQUIPMENT
- EROSION 7, 81, 323
- EXPOSURE - SEE PERSONNEL EXPOSURE,
RADIATION
- FABRICATION ERROR - SEE FAILURE,
- FABRICATION ERROR FABRICATION ERROR
FAILURE 1-351
- FAILURE, ADMINISTRATIVE CONTROL 1, 3,
14, 15, 25, 38, 43, 51, 66, 68, 72,
73, 76, 111, 125, 133-135, 137-139,
151, 153, 161, 167, 170, 177, 183,
186, 203, 206-208, 211, 215, 216,
219-221, 227, 239, 245, 248, 249,
270, 271, 279, 282, 290, 296, 303-
305, 315, 330, 334, 344, 345, 348
- FAILURE, CLADDING 84, 286
- FAILURE, COMPONENT 2, 5, 7, 12, 18,
25, 28, 47, 61, 112, 114, 149, 191,
198-201, 212, 230, 236, 258, 259,
261, 267, 293, 306, 307, 319, 320
- FAILURE, DESIGN ERROR 7, 16, 18, 23,
24, 27, 29, 45, 74, 78, 89, 91, 105,
127, 131, 143, 166, 179, 197, 218,
240, 243, 274, 289, 306, 324, 329,
336, 337, 343, 351
- FAILURE, EQUIPMENT 1-7, 9, 12-15, 17-
19, 21-27, 29, 31-38, 40-42, 45-50,
52-55, 58-67, 69-71, 73-76, 78-86,
88-95, 97, 98, 100-103, 105, 108-112,
114, 118-120, 122-130, 132, 133, 135-
146, 149, 151-153, 155, 156, 159-166,
168, 171, 172, 174-179, 181-195, 197-
201, 203-211, 213-222, 224, 227-229,
231, 232, 234-238, 240, 241, 243-246,
248, 249, 251-255, 257-264, 267-269,
273-278, 280, 282, 285-293, 295-304,
306, 308-312, 314-321, 323-325, 328,
330-332, 335, 337-343, 348-351
- FAILURE, FABRICATION ERROR 35, 54, 85,
212, 232, 276
- FAILURE, INHERENT 129, 132
- FAILURE, INSTALLATION ERROR 6, 31, 86,
143, 144, 161, 186, 187, 196, 206,
227, 236, 237, 256, 315, 319, 333,
343
- FAILURE, INSTRUMENT 1, 2, 9, 11, 13-
15, 18-20, 26-28, 30, 33-35, 38, 39,
41-45, 47, 48, 50-53, 56, 57, 59, 61,
65, 66, 69, 70, 72-75, 77, 86, 93,
95-97, 102, 104, 107, 108, 110-113,
115-117, 119, 125-127, 131, 136, 137,
139-145, 147-149, 151, 152, 154, 156,
164, 165, 167, 169, 170, 172, 174,
176-179, 182-188, 190, 195, 205, 207-
210, 214-216, 222-224, 226-229, 232,
233, 235, 237, 239, 242, 247-250,
254, 257, 260, 262, 264-266, 270,
271, 279, 284, 285, 288, 291, 292,
294, 297, 298, 300, 303, 306, 309,
310, 312-314, 320, 322-324, 326, 327,
329, 331, 333-335, 337-340, 345-348
- FAILURE, MAINTENANCE ERROR 9, 10, 18,
37-39, 44, 50, 57, 66, 74, 77, 79,
91, 111, 124, 134, 145, 154, 159,
167, 188, 190, 205, 207, 214, 221,
224, 231, 234, 240, 244, 246, 250,
253, 261, 270, 311, 312, 317, 321,

KEYWORD INDEX

- FAILURE, MAINTENANCE ERROR 331, 340, 341, 348
 FAILURE, OPERATOR ERROR 3, 15, 35, 52, 56-58, 62, 66, 73, 76, 81, 88, 90, 105, 113, 114, 116, 121, 125, 134, 137, 139, 165, 171, 172, 182, 193, 194, 201, 202, 207, 213, 215-217, 237, 252, 271, 277-279, 293-295, 297, 301, 307, 313, 314, 316, 318, 332, 349
 FAILURE, PIPE 8, 16, 17, 22, 48, 54, 75, 81, 99, 109, 150, 159, 169, 218, 225, 240, 256, 272, 274, 323
 FAILURE, TUBING 35, 120
 FARLEY 1 (PWR) 119, 120
 FARLEY 2 (PWR) 121
 FASTENER 1, 5, 7, 18, 21, 33, 37, 129, 224, 293, 295, 320
 FATIGUE 7
 FEEDWATER 13, 15, 53, 61, 64, 65, 75, 76, 78, 80, 81, 109, 118, 139, 142, 151, 155, 165, 175, 221, 237, 243, 274, 325, 339
 FERMI 2 (BWR) 122-126
 FILTERS 55, 91, 138, 255, 280, 308
 FIRE 45, 109, 123, 195, 214, 265, 300, 315, 329, 347
 FIRE PROTECTION 4-6, 45, 49, 62, 98, 121, 124, 133-135, 142, 161, 196, 197, 201, 202, 206, 213, 214, 218, 220, 275, 295, 296, 301, 315, 323, 329, 330, 332, 347
 FIRE PROTECTION/SSF 62, 214, 301, 323
 FIRE PROTECTION/TSF 134, 275, 329, 347
 FITZPATRICK (BWR) 127, 128
 FLAW 8, 22, 36, 48, 99, 225, 240, 256, 272
 FLOOD 122, 123, 156
 FLOW 12, 13, 15, 24, 26, 27, 29, 32, 35, 37, 38, 47, 48, 53, 59, 61-64, 75, 78, 81, 83, 89, 90, 97, 105, 109, 122, 123, 127, 136, 137, 139, 140, 142, 143, 145, 149, 152, 159, 162, 172, 176, 177, 182-188, 192, 194, 204, 207, 214, 215, 217, 237, 243, 259, 260, 274, 276, 277, 280, 285, 289, 290, 298-300, 302, 303, 308, 314, 317-319, 321, 323, 331, 335, 337-339, 342, 347, 350
 FLOW BLOCKAGE 12, 24, 26, 27, 29, 35, 37, 38, 47, 48, 53, 59, 61, 62, 64, 75, 78, 81, 83, 90, 97, 105, 109, 122, 123, 127, 136, 137, 139, 140, 142, 143, 145, 149, 152, 159, 162, 172, 176, 177, 182-188, 192, 194, 204, 207, 214, 215, 217, 259, 260, 274, 276, 277, 280, 285, 290, 298-300, 302, 303, 308, 314, 317-319, 321, 331, 335, 337-339, 342, 347
 FLOW, RECIRCULATION 36, 342
 FLUX DISTRIBUTION 19, 20, 77, 110, 113, 242
 FT. ST. VRAIN (HTGR) 129-133
 FUEL ELEMENTS 84, 264, 266, 270, 286, 326, 333
 FUSE 30, 39, 95, 188, 190, 257
 GAS 45, 173, 180, 198-200, 212, 214, 230, 280, 281, 283, 307, 327, 336
 GENERATOR, DIESEL 31, 41, 70, 123, 127, 130, 140, 248, 249, 262, 309, 310, 349
 GENERATOR, MOTOR 21
 GENERATORS 2, 15, 52, 61, 65, 74, 81, 114, 178, 217, 231, 257, 260, 273, 323, 339, 340
 GINNA (PWR) 134
 GRAND GULF 1 (BWR) 135-139
 HATCH 1 (BWR) 140-146, 151, 153
 HATCH 2 (BWR) 140, 144, 147-160
 HEAT EXCHANGERS 2, 15, 35, 53, 64, 65, 75, 78, 80, 81, 89, 109, 114, 120, 164, 165, 217, 243, 254, 274, 277, 290, 308, 323
 HEATERS 65, 123, 224, 318
 HELIUM 129
 HIGH 2, 12, 13, 15, 16, 38, 40, 41, 63, 65, 75, 78, 81, 83, 89, 90, 92, 105, 109, 114, 127, 139, 142, 159, 168, 174, 205, 209, 216, 217, 243, 248, 252-254, 267, 276, 283, 289, 302, 310, 319, 323, 337
 HIGH RADIATION 11, 35, 116, 270, 271, 313, 314
 HIGH TEMPERATURE 12, 91, 109, 127, 140, 142, 146, 300, 308
 HPCI 7, 23, 25, 34, 37, 38, 40, 47, 108, 141, 142, 148, 259, 300
 HPCI/SSF 300
 HPCI/TSF 7, 34, 37, 38, 47, 108, 141, 142, 259, 300
 HTGR REACTOR - SEE REACTOR, HTGR
 HUMAN FACTORS 7, 16, 25, 35, 39, 58, 60, 73, 81, 144, 145, 177, 196, 211, 234, 293, 295, 301, 307, 347
 HUMIDITY, RELATIVE 267, 323
 HYDRAULIC EFFECT 69, 117, 126, 172, 176, 177, 182, 214, 257, 259, 303, 323
 HYDRAULIC SYSTEM 38, 47, 342
 HYDROGEN 149, 151, 155, 325, 341
 IMPACT SHOCK 9, 152, 316
 INCIDENT, HUMAN ERROR 4, 6, 8, 9, 18, 23, 24, 26-29, 31, 37, 42, 45, 49, 50, 52, 54-57, 59, 62, 70, 74, 75, 77, 78, 82, 83, 85-89, 91-93, 102, 103, 105-107, 113, 119, 121, 124-127, 134, 137, 138, 143, 152, 154, 156, 163-166, 169, 171, 172, 174, 179, 184, 187, 188, 190, 193, 194, 196-202, 205, 209, 212, 213, 218, 220, 221, 224, 226, 228, 229, 231, 232, 236-238, 240-244, 246, 250-253, 256, 258, 261, 263, 267, 274-276, 284, 286, 289, 294, 297, 304-306, 311,

KEYWORD INDEX

- INCIDENT, HUMAN ERROR 314, 316, 318-320, 324, 326, 329, 331-333, 336, 337, 340, 341, 343, 346, 349, 351
- INDIAN POINT 2 (PWR) 161, 162
- INDIAN POINT 3 (PWR) 163
- INDICATORS 11, 19, 20, 28, 45, 47, 50, 57, 59, 72, 73, 77, 110, 113, 140, 144, 149, 151, 173, 180, 198-200, 212, 214, 222, 226, 229, 230, 235, 242, 250, 270, 279-281, 283-285, 288, 291, 294, 300, 307, 310, 313, 320, 323, 326, 327, 331, 334-337, 346
- INDUSTRY, NUCLEAR 86, 111, 306
- INHERENT FAILURE - SEE FAILURE, INHERENT
- INSPECTION 4-6, 8, 17, 22, 24-26, 34, 36-38, 40, 42, 47, 48, 50, 58, 60, 63, 69-71, 76, 78, 80, 83, 85, 88, 94, 95, 97-99, 101-104, 111, 112, 114, 118, 124, 125, 127, 128, 134, 138, 141, 144, 147, 148, 150, 152-155, 160-163, 170, 171, 175, 179, 181, 191, 192, 196, 201, 206, 213, 216, 218-221, 223, 225, 229, 234-236, 239, 248, 252-254, 257-259, 261-263, 267-269, 271, 272, 276, 277, 287, 290, 295-297, 299, 310, 314, 315, 317, 320, 321, 324-326, 329, 336, 341, 345-350
- INSTALLATION ERROR - SEE FAILURE, INSTALLATION ERROR
- INSTRUMENT FAILURE - SEE FAILURE, INSTRUMENT
- INSTRUMENT LINE 26, 41, 126, 141, 172, 174, 184, 185, 205, 209, 235, 303, 337, 341
- INSTRUMENT, ABNORMAL INDICATION 2, 10, 13, 19, 20, 26-28, 34, 42, 44, 45, 47, 48, 50, 53, 57, 59, 61, 65, 66, 69, 70, 72-75, 79, 86, 93, 95, 105, 107, 110, 112, 113, 115-117, 125, 126, 134, 136, 137, 139-145, 149, 152, 156-158, 164, 172, 173, 176-179, 182-184, 187, 189, 198-200, 205, 207-210, 212, 214-216, 222-224, 226, 227, 229, 230, 232-235, 237, 244, 245, 247, 248, 250, 257, 260, 264, 266, 280, 281, 283-285, 288, 291, 292, 294, 298, 300, 301, 303, 307, 310, 312, 314, 320, 322-324, 326-328, 331, 332, 334-338, 345-348
- INSTRUMENT, ALARM 12, 28, 31, 35, 42, 45, 48, 64, 67, 74, 91, 105, 125, 146, 149, 152, 156, 157, 169, 170, 180, 189, 195, 198-200, 212, 217, 222, 226, 252, 255, 260, 294, 297, 298, 300, 312, 318, 327
- INSTRUMENT, COOLANT QUALITY 185
- INSTRUMENT, CURRENT 19, 127, 306
- INSTRUMENT, FLOW 165, 337
- INSTRUMENT, IN CORE 10, 19, 20, 31, 77, 79, 110, 113, 125, 157, 158, 242, INSTRUMENT, IN CORE 306, 312, 322, 348
- INSTRUMENT, IN CORE/SSF 20, 79
- INSTRUMENT, INTERLOCK 1, 18, 30, 33, 43, 74, 93, 125, 183, 228, 339
- INSTRUMENT, LIQUID LEVEL 126, 205, 208
- INSTRUMENT, NON-NUCLEAR 2, 15, 34, 47, 75, 140, 141, 143, 144, 149, 166, 169, 185, 195, 207, 214, 224, 237, 240, 248, 259, 274, 300, 314, 320, 341
- INSTRUMENT, NON-NUCLEAR/SSF 149, 185, 300
- INSTRUMENT, POSITION 14, 15, 33, 38, 53, 96, 143, 144
- INSTRUMENT, SPEED 47
- INSTRUMENT, SWITCH 9, 14, 26, 27, 33-35, 38, 41, 44, 47, 48, 51, 53, 56, 59, 66, 70, 74, 96, 97, 102, 104, 108, 111, 112, 116, 127, 136, 137, 141, 145, 147, 148, 151, 154, 167, 169, 170, 172, 174, 176-179, 182, 184, 187, 195, 207, 209, 214, 215, 223, 224, 232, 247, 262, 266, 271, 294, 298, 303, 310, 314, 320, 323, 327, 333, 338, 345
- INSTRUMENT, TESTING 137
- INSTRUMENT, VOLTAGE 61, 64, 70, 74, 239, 297, 310, 340
- INSTRUMENTS, MISC. 139, 248
- INSULATION 315
- INVERTER 300
- KEWAUNEE (PWR) 164, 165
- LA SALLE 1 (BWR) 166-180
- LA SALLE 2 (BWR) 167, 169, 173, 180-188
- LACROSSE (BWR) 189-196
- LEAK 8, 12, 16, 17, 24, 25, 35, 36, 40, 45, 48, 50, 58, 60, 81, 84, 89, 91, 101, 109, 118, 120, 122, 123, 128, 146, 149, 155, 162, 174, 175, 181, 191-193, 218, 225, 235, 236, 240, 256, 268, 269, 272, 274, 277, 286, 288, 306, 321, 323, 325, 341
- LEAK DETECTION 28, 35, 48, 50, 66, 136, 145, 148, 151, 182, 189, 210, 215, 223, 226, 233, 279, 285, 291, 292, 298, 300, 335, 337, 338, 351
- LICENSED OPERATOR 3, 52, 56, 105, 113, 114, 125, 137, 139, 165, 194, 207, 215, 226, 237, 252, 279, 307
- LIGHTING 317
- LIGHTNING 273
- LIMERICK 1 (BWR) 197-215
- LIQUID 131, 132
- LOW 2, 12, 24, 26, 27, 29, 35, 37, 38, 47, 48, 53, 54, 59, 61, 62, 64, 65, 74, 75, 78, 80, 81, 83, 90, 91, 97, 105, 109, 122, 123, 127, 135-137, 139, 140, 142, 143, 145, 149, 150, 152, 153, 159, 162, 164, 165, 172, 174, 176-178, 182-188, 192, 194, 195, 203, 204, 207, 214, 215, 217, 235,

KEYWORD INDEX

- LOW 237, 243, 257, 259, 260, 263, 274-277, 280, 285, 289, 290, 298-300, 302, 303, 307-310, 313, 314, 317-319, 321, 331, 335, 337-339, 342, 347
 LUBRICATION 21, 38, 41, 97, 111, 127, 260, 276, 310
 MAIN COOLING SYSTEM 2, 8, 12, 14, 15, 22, 23, 36, 51, 53, 60, 61, 64, 65, 69, 72, 73, 75, 78, 80, 81, 84-86, 106, 120, 128, 129, 139, 160, 164-166, 172, 174, 178, 179, 185, 221, 225, 236, 240, 243, 247, 272, 274, 278, 284, 286, 288, 289, 300, 324, 342, 348
 MAIN COOLING SYSTEM/SSF 12, 288
 MAIN COOLING SYSTEM/TSF 2, 60, 75, 84, 106, 139, 286, 289
 MAINE YANKEE (PWR) 216, 217
 MAINTENANCE AND REPAIR 2, 7, 10, 12, 15, 18, 20, 25, 28, 30, 32, 33, 35, 37, 38, 40-42, 44, 45, 47, 48, 53, 54, 57, 64, 65, 75, 79, 83, 91, 95-97, 101, 102, 108-112, 114, 116, 118, 120, 122, 123, 127, 128, 140, 146, 149, 156, 165, 166, 174, 175, 177-179, 185, 187, 189-191, 195, 198-200, 207, 210, 212, 221-224, 230, 232, 236, 244, 255-261, 264, 265, 267, 277, 280, 291-293, 300, 308-310, 312, 314, 317-321, 331, 335, 337, 350, 351
 MAINTENANCE ERROR - SEE FAILURE, MAINTENANCE ERROR
 MCGUIRE 1 (PWR) 218, 220
 MCGUIRE 2 (PWR) 219-221
 MILLSTONE 1 (BWR) 222-225
 MILLSTONE 2 (PWR) 226-228
 MONITOR 45, 134, 214, 288, 329, 347
 MONITORING SYSTEM, RADIATION 9, 26, 43, 55, 57, 59, 82, 116, 222, 229, 232, 250, 264, 266, 270, 294, 312-314, 317, 320, 326, 327, 331, 334, 346
 MONITORING SYSTEM, RADIATION/SSF 222
 MONTICELLO (BWR) 229-232
 MOTORS 13, 38, 40, 53, 59, 61, 64, 76, 78, 81, 103, 105, 127, 142, 277, 317, 335, 342
 NEUTRON 19, 20, 77, 110, 113, 242
 NINE MILE POINT 1 (BWR) 233
 NOISE 10, 19, 20, 44, 110, 157, 158, 214, 233, 266, 281, 283, 285, 312, 327, 328
 NONLICENSED OPERATOR 82, 125, 172, 193, 216, 250, 316
 NORTH ANNA 2 (PWR) 234
 NOZZLE 36
 OFF GAS 109, 114
 OFF GAS/SSF 109
 OFF SITE 35, 58, 61, 193, 231, 273, 282, 339
 ON SITE 17, 21, 29, 31, 37, 47, 61, 64, 74, 76, 97, 102, 108, 111, 119, 122, 123, 127, 142, 143, 156, 163, 195, 215, 228, 239, 297, 317, 319, 339, 343
 OPERATION 1, 2, 4, 5, 12-14, 16-18, 21, 23-26, 34, 36, 38, 42, 43, 45, 47, 52, 53, 58, 60-64, 66-70, 77-79, 81-83, 86-88, 90-93, 95-98, 100, 107-109, 111, 112, 114-116, 127, 137-149, 151-154, 163, 166, 167, 169-172, 178-181, 195, 196, 216-218, 222, 223, 229-233, 238-242, 252-254, 257, 259-266, 273, 274, 276, 277, 279, 280, 283, 290-296, 304-306, 309, 310, 312, 319-321, 323, 324, 326, 337, 339-346, 349-351
 OPERATOR ACTION 1, 4, 6-11, 14-16, 18, 23-29, 31, 35, 37-39, 42-45, 49-52, 54, 55, 57-60, 62, 66, 68-70, 72-79, 81, 83, 85-93, 100, 102, 103, 105-107, 111, 114-116, 119, 121, 124, 126, 127, 134, 135, 137-139, 142-145, 151-154, 156, 159, 161, 163, 164, 166, 167, 169-171, 174, 177, 179, 182-184, 186-188, 190, 193, 196-203, 205, 207-209, 211-215, 217-221, 224, 226-229, 231, 232, 234, 236-246, 248, 249, 253, 254, 256-258, 261, 263, 267, 270, 271, 274-279, 282, 284, 286, 289, 290, 293-298, 301-306, 312-315, 317-321, 324, 326, 329-334, 336, 337, 340, 341, 343-349, 351
 OPERATOR ERROR - SEE FAILURE, OPERATOR ERROR; LICENSED OPERATOR; NONLICENSED OPERATOR
 OXIDATION 8, 22, 36, 99, 148, 225, 236, 267, 272, 350
 OYSTER CREEK (BWR) 235-239
 PALISADES (PWR) 240-242
 PALO VERDE 1 (PWR) 243-251
 PEACH BOTTOM 3 (BWR) 252-254
 PENETRATION 6, 16, 18, 33, 83, 100, 124, 220, 221, 258, 261, 269, 302, 306, 341
 PENETRATION, ELECTRICAL 98
 PENETRATION, PIPE 16
 PERSONNEL EXPOSURE, RADIATION 116
 PH EFFECT - SEE EFFECT, PH
 PILGRIM 1 (BWR) 255-261
 PIPE FAILURE - SEE FAILURE, PIPE; PIPES AND PIPE FITTINGS
 PIPES AND PIPE FITTINGS 8, 17, 22, 24, 45, 48, 54, 75, 81, 89, 99, 109, 150, 159, 169, 206, 218, 225, 240, 256, 272, 274, 296, 323
 PNEUMATIC SYSTEM 16, 31, 54, 91, 143, 155, 274, 309, 319, 325
 PNEUMATIC SYSTEM/SSF 16, 91
 PNEUMATIC SYSTEM/TSF 143
 POISON, SOLUBLE 58, 92, 203
 POWER DISTRIBUTION 310
 PRAIRIE ISLAND 1 (PWR) 262
 PRAIRIE ISLAND 2 (PWR) 263

KEYWORD INDEX

- PRESSURE DROP 2, 78, 308, 309
 PRESSURE PULSE 69, 117, 126, 172, 176, 177, 182, 214, 257, 259, 303, 323
 PRESSURE RELIEF 23, 34, 58, 71, 128, 160, 166, 173, 174, 178, 179, 236, 259, 278, 300, 321
 PRESSURE VESSELS 36, 112, 117, 126, 139, 142, 151, 172, 174, 178, 179, 185, 194, 205, 208, 211, 235, 237, 257, 303, 312, 339
 PRESSURE VESSELS/SSF 185, 312
 PRESSURE VESSELS/TSF 194
 PRESSURE, EXTERNAL 2, 16, 54, 75, 81, 83, 90, 91, 109, 114, 135, 143, 150, 164, 168, 174, 184, 205, 209, 217, 243, 253, 254, 275, 289, 302, 309, 319, 323
 PRESSURE, INTERNAL 2, 16, 54, 75, 81, 83, 90, 91, 109, 114, 135, 143, 150, 164, 168, 174, 184, 205, 209, 217, 243, 253, 254, 275, 289, 302, 309, 319, 323
 PRESSURIZER 14, 51, 69, 72, 164, 278, 284
 PROCEDURES AND MANUALS 1, 3, 4, 6-9, 11, 14-16, 18, 23-29, 31, 35, 37-39, 42, 43, 45, 49-52, 54-57, 59, 62, 66, 68-70, 72-79, 81-83, 85, 86, 88-93, 100, 102, 103, 105-107, 111, 113, 115-117, 119, 121, 124-127, 133-135, 137-140, 142-144, 151-154, 156, 159, 161, 163-167, 169-172, 174, 177, 179, 182-188, 190, 193, 194, 196-203, 205-209, 211-221, 224, 226-229, 231, 232, 234, 236-246, 248-254, 256, 258, 261, 263, 267, 270, 271, 274-276, 279, 282, 284, 289, 290, 294, 296-298, 302-306, 311-320, 324, 326, 329-334, 336, 337, 340, 341, 343-348, 351
 PROCESS MONITORING 3, 11, 44, 51, 52, 69, 86, 93, 95, 103, 117, 126, 147, 151, 154, 156, 165, 172, 195, 235, 247, 257, 271, 288, 303, 311, 312, 316, 324, 328, 348
 PUMPS 12, 13, 38, 53, 59, 61, 64, 78, 81, 105, 127, 129, 142, 146, 149, 162, 176, 198-200, 276, 278, 285, 308, 317, 321, 331, 335, 342
 PWR REACTOR - SEE REACTOR, PWR
 QUAD CITIES 1 (BWR) 264-266
 QUAD CITIES 2 (BWR) 264-272
 RADIATION MONITORS 9, 11, 26, 28, 35, 42, 44, 50, 57, 59, 66, 116, 154, 156, 169, 222, 226, 229, 232, 233, 250, 264, 266, 270, 271, 279, 285, 291, 292, 294, 312-314, 320, 326, 327, 331, 334, 335, 346
 RADIATION PROTECTION PERSONNEL 344
 RADIOACTIVITY RELEASE 17, 35, 58, 84, 132, 169, 193, 218, 282, 286
 RADIONUCLIDE 132
 RATE 131, 283, 289
 RCIC 25, 38, 137, 141, 142, 152, 168, 225, 338
 RCIC/TSF 38, 137, 141, 142, 152, 168, 338
 REACTOR 139, 142, 174, 178, 237, 339
 REACTOR CONTROL 27
 REACTOR POWER 27
 REACTOR PROTECTION SYSTEM 3, 11, 44, 51, 52, 69, 86, 93, 95, 103, 117, 126, 147, 151, 154, 156, 165, 172, 195, 235, 247, 257, 271, 288, 303, 311, 312, 316, 328, 348
 REACTOR PROTECTION SYSTEM/SSF 95, 247, 288, 312, 328, 348
 REACTOR SHUTDOWN 2, 3, 10-12, 15, 17, 19, 20, 25, 44, 52, 53, 61, 64, 69, 75, 79, 81, 86, 93, 103, 109, 110, 113, 114, 117, 122, 125, 126, 139, 142, 156-158, 163, 165, 172, 174, 178, 195, 217, 231, 237, 240, 247, 251, 256, 257, 260, 271, 273, 274, 288, 303, 312, 323, 324, 328, 339, 348
 REACTOR STARTUP 3, 15, 37, 46, 48, 51, 65, 74, 75, 105, 106, 150, 151, 197, 198, 212-214, 237, 255, 256, 288, 337, 348
 REACTOR STARTUP EXPERIENCE 122-126, 243, 299, 301-303, 307, 308, 331
 REACTOR, BWR 7-11, 16-48, 89, 94-118, 122-128, 135-160, 166-215, 222-225, 229-233, 235-239, 252-261, 264-272, 297-303, 307-321, 325, 326, 337-345
 REACTOR, HTGR 129-133
 REACTOR, PWR 1-6, 12-15, 49-88, 90-93, 119-121, 134, 161-165, 216-221, 226-228, 234, 240-251, 262, 263, 273-296, 304-306, 322-324, 327-336, 346-351
 RECOMBINERS 151
 RECORDERS 65, 185, 237, 248
 REFUELING 6-11, 22-27, 29-31, 33, 35, 36, 39, 41, 44, 49, 94, 99-104, 119, 120, 140, 155-162, 164, 190, 191, 221, 225-228, 236, 264-272, 280, 311-313, 315-317, 330, 332, 338
 REGULATION, NRC 89, 239
 RELAYS 13, 30, 41, 43, 47, 52, 61, 70, 74, 93, 107, 115, 117, 119, 125, 127, 137, 142, 152, 183, 186, 216, 224, 227, 228, 239, 249, 254, 265, 297, 306, 339
 RESPONSE TIME 1, 14, 15, 25, 28, 38, 41, 43, 47, 49, 51, 55, 57, 58, 60, 68, 74, 87, 88, 92, 105, 106, 124, 125, 134, 137, 138, 145, 151, 153, 167, 170, 193, 202, 211, 213, 216, 238, 239, 241, 242, 248, 257, 271, 275, 286, 293-295, 301, 304, 305, 307, 310, 318, 330, 332, 337, 344, 346, 349
 REVIEW 1, 14, 16, 23, 25, 27-29, 31, 43, 49, 51, 55, 57, 66, 68, 77, 82,

KEYWORD INDEX

- REVIEW 88, 89, 92, 103, 105-107, 117,
 121, 124, 125, 135, 137, 138, 140,
 143, 151, 153, 154, 167, 169, 170,
 172, 177, 179, 185, 186, 193, 194,
 196, 197, 202, 203, 206, 211, 213,
 224, 238, 239, 241-243, 246, 275,
 279, 305, 315, 318, 330, 332, 340,
 341, 343, 344, 346
 RHR 216
 RHR-LPCI 21, 22, 32, 35, 37, 47, 117,
 136, 150, 155, 167, 170, 176, 177,
 183, 184, 186-188, 207, 303
 RHR-LPCI/SSF 35, 37, 47, 150, 177,
 186-188, 207, 303
 RHR-LPCI/TSF 35, 117, 136, 176, 183,
 184
 ROBINSON 2 (PWR) 273-275
 SAFETY DEVICE 273
 SALEM 1 (PWR) 276, 277
 SALEM 2 (PWR) 276, 278
 SAMPLING 50, 185
 SAN ONOFRE 1 (PWR) 279
 SAN ONOFRE 2 (PWR) 280-285
 SAN ONOFRE 3 (PWR) 280, 281, 283, 286-
 292
 SCRAM, REAL 2, 3, 15, 20, 25, 53, 61,
 64, 75, 81, 86, 93, 109, 114, 122,
 139, 142, 165, 174, 178, 195, 217,
 231, 237, 260, 273, 274, 323, 339
 SCRAM, SPURIOUS 10, 11, 19, 44, 52,
 69, 79, 103, 110, 113, 117, 125, 126,
 156-158, 163, 172, 247, 251, 257,
 271, 303, 312, 328, 348
 SEAL 6, 12, 25, 81, 91, 96, 114, 118,
 121-123, 128, 133, 146, 149, 196,
 197, 202, 206, 213, 235, 277, 296,
 319, 332
 SECURITY 301, 332
 SEISMIC DESIGN 29, 31, 89, 218
 SENSORS, FLOW 48, 65, 131, 140, 141,
 145, 165, 182, 184, 215, 237, 314,
 320, 337, 338
 SENSORS, LEVEL 34, 112, 126, 151, 172,
 179, 205, 208, 235, 303
 SENSORS, PRESSURE 41, 47, 51, 53, 69,
 72, 73, 104, 147, 148, 151, 164, 167,
 170, 172, 174, 176-178, 187, 209,
 210, 223, 247, 257, 262, 284, 300,
 345
 SENSORS, TEMPERATURE 86, 136, 151,
 288, 298, 322, 324, 348
 SEQUOYAH 1 (PWR) 293-296
 SEQUOYAH 2 (PWR) 293, 294
 SERVICE WATER SYSTEM 35, 127, 140,
 162, 192, 277, 308, 350
 SERVICE WATER SYSTEM/SSF 35, 140, 192
 SERVOMECHANISM 32, 37, 40, 46, 47, 76,
 97, 108, 111
 SHOCK ABSORBER 94, 219, 236, 259, 267,
 287
 SHOREHAM (BWR) 297-303
 SHUTDOWN SYSTEM, SECONDARY 203, 321
 SHUTDOWN SYSTEM, SECONDARY/TSF 321
 SMOKE 45, 109, 123, 195, 214, 265,
 300, 315, 329, 347
 SOLENOID 80, 166, 195
 SOLID STATE DEVICE 42, 47, 216, 222,
 232, 234, 245, 264, 291, 292, 300
 SPENT FUEL POOL 276
 ST. LUCIE 1 (PWR) 304
 ST. LUCIE 2 (PWR) 304
 STACK 26, 68, 82, 282
 STACK/TSF 68, 282
 STEAM 65, 75, 114, 191, 221
 STEAM GENERATOR 2, 15, 53, 64, 65, 71,
 73, 75, 78, 80, 81, 120, 164, 165,
 221, 243, 247, 274
 STEAM GENERATOR/SSF 247
 STEEL 323
 STEEL, STAINLESS 8, 99, 225, 272
 STORAGE CONTAINER 38, 135, 203, 238,
 252, 260, 263, 276, 309
 STRESS CORROSION 129
 STRUCTURE 5, 9, 31, 49, 62, 88, 98,
 121, 134, 135, 161, 196, 221, 269,
 275, 299, 312, 315
 STRUCTURE/SSF 62
 STRUCTURE/TSF 134, 275
 SUBSYSTEM FAULT 2, 12, 13, 16, 17, 20,
 27, 29, 31, 35, 37, 41, 47, 62-64,
 66, 70, 79, 91, 95, 97, 109, 111,
 123, 140, 146, 149, 150, 177, 185-
 188, 192, 193, 207, 214, 222, 224,
 234, 244, 247-249, 262, 288, 300,
 301, 303, 307, 309, 310, 312, 314,
 318, 319, 323, 328, 339, 340, 348,
 349
 SUMMER 1 (PWR) 305, 306
 SUPPORT STRUCTURE 89, 94, 122, 123,
 219, 236, 259, 267, 287
 SUSQUEHANNA 1 (BWR) 307-317, 320
 SUSQUEHANNA 2 (BWR) 310, 312, 314,
 315, 318-321
 SYSTEM CAPACITY 2, 12, 15, 40, 53, 64,
 65, 75, 78, 80, 81, 105, 139, 142,
 165, 168, 174, 178, 195, 217, 235,
 237, 252, 263, 274, 307, 313, 337,
 339
 TEMPERATURE 65, 310, 318
 TEST INTERVAL 1, 14, 25, 28, 43, 49,
 51, 55, 60, 68, 87, 106, 133, 138,
 151, 153, 167, 170, 193, 211, 238,
 241, 242, 286, 304, 330, 347, 346
 TEST, SYSTEM OPERABILITY 4-6, 8, 17,
 22, 24-26, 34, 36-38, 40, 42, 47, 48,
 50, 58, 60, 63, 69-71, 76, 78, 80,
 83, 85, 88, 94, 95, 97-99, 101-104,
 111, 112, 114, 118, 124, 125, 127,
 128, 130, 134, 138, 141, 144, 147,
 148, 150, 152-155, 160-163, 170, 171,
 175, 179, 181, 191, 192, 196, 201,
 206, 213, 216, 218-221, 223, 225,
 229, 234-236, 239, 248, 252-254, 257-
 259, 261-263, 267-269, 271, 272, 276,

KEYWORD INDEX

- TEST, SYSTEM OPERABILITY 277, 287,
290, 295-297, 299, 310, 314, 315,
317, 320, 321, 324-326, 329, 336,
341, 345-350
- TESTING 1, 11, 14, 16, 23, 25-29, 31,
43, 49, 51, 55, 57, 59, 60, 66, 68-
70, 72, 77, 82, 87-89, 92, 93, 102,
103, 105-107, 117, 119, 121, 124-126,
135, 137-140, 143, 151, 153, 154,
164, 167, 169, 170, 172, 174, 177,
179, 183-186, 193, 194, 196, 197,
202, 203, 206, 208, 209, 211, 213,
215, 224, 226, 228, 229, 238, 239,
241-243, 245, 246, 248, 249, 251,
254, 257, 271, 275, 279, 282, 284,
286, 290, 294, 297, 298, 303-305,
314, 315, 318, 320, 326, 330, 332,
334, 340, 341, 343-346, 348
- THERMAL TRANSIENT 283, 289
- THREE MILE ISLAND 2 (PWR) 322
- TORUS 40, 168, 252, 341
- TORUS/TSF 40, 168
- TOTAL SYSTEM FAULT 2, 7, 16, 24, 27,
28, 34, 35, 37, 38, 40, 47, 48, 53,
60, 65, 68, 74, 75, 83, 84, 87, 90,
106, 108, 109, 117, 122, 123, 127,
134, 136, 137, 139, 141-143, 145,
152, 159, 168, 172, 176, 182-184,
194, 204, 215, 218, 231, 243, 253,
254, 259, 274, 275, 282, 286, 289,
298, 300, 302, 308, 319, 321, 323,
329, 337-339, 344, 346, 347
- TOXICITY 45, 173, 180, 198-200, 212,
214, 230, 280, 281, 283, 307, 327,
336
- TRANSFORMERS 61, 64, 231, 244, 273
- TRANSIENT 84, 139, 174, 237, 278, 286
- TROJAN (PWR) 323
- TUBING 35, 120
- TUBING FAILURE - SEE FAILURE, TUBING
- TURBINE 2, 7, 15, 17, 24, 33, 38, 52,
53, 61, 65, 74, 75, 81, 100, 114,
142, 178, 196, 217, 231, 257, 259,
260, 273, 274, 289, 317, 323, 339
- TURBINE/SSF 2
- TURBINE/TSF 74, 323
- TURKEY POINT 3 (PWR) 324
- TURKEY POINT 4 (PWR) 324
- UPDATE 16-18, 21-24, 33-37, 40, 41,
46, 94-102, 111-114, 140, 141, 147-
151, 166, 222-225, 235, 236, 255,
267, 307-309, 325, 337, 338
- VALVE OPERATORS 14, 15, 32, 35, 37,
38, 40, 46-48, 54, 66, 69, 74, 76,
78, 91, 92, 97, 108, 111, 114, 122,
123, 126, 128, 136, 137, 140, 141,
143, 145, 152, 159, 160, 166, 172,
174, 176-179, 182-184, 186-188, 204,
207, 208, 215, 216, 257, 274, 278,
282, 289, 298, 303, 319, 321, 337-
339, 342
- VALVE, CHECK 25, 54, 118, 155, 162,
VALVE, CHECK 175, 191, 221
- VALVES 4, 5, 9, 12, 14, 15, 18, 25,
27, 32-35, 37, 38, 40, 46-50, 54, 60,
62, 66, 67, 69, 71, 74-76, 78-81, 83,
85, 88-92, 97, 100, 101, 108-111,
114, 118, 122-124, 126, 128, 132,
136, 137, 140-146, 152, 155, 159-162,
166, 168, 171, 172, 174-179, 181-184,
186-188, 191-195, 201, 204, 207-209,
215-217, 221, 227, 229, 235-237, 240,
252, 253, 257, 258, 261, 263, 268,
269, 274, 278, 282, 289, 290, 293,
295, 298, 301, 303, 310, 314, 318-
321, 325, 330, 337-339, 341, 342,
350, 351
- VENTILATION SYSTEM 24, 27, 29, 42, 45,
46, 55, 57, 59, 63, 66, 67, 83, 87,
89, 90, 138, 143, 144, 173, 180, 198-
200, 212, 214, 218, 224, 227, 239,
230, 232, 250, 253, 254, 258, 261,
265, 277, 280, 281, 283, 290, 294,
302, 307, 308, 310, 314, 317-320,
326, 327, 331, 333, 334, 336, 344
- VENTILATION SYSTEM/SSF 29, 63, 66,
224, 307, 314, 318, 319
- VENTILATION SYSTEM/TSF 24, 27, 83, 87,
90, 143, 218, 302, 319
- VERMONT YANKEE (BWR) 325, 326
- VIBRATION 69, 91, 107, 115, 117, 126,
172, 176-178, 182, 198-200, 214, 240,
257, 259, 260, 274, 281, 283, 303,
310, 323
- WASTE MANAGEMENT 17, 171
- WASTE TREATMENT, GAS 222, 282
- WASTE TREATMENT, GAS/SSF 222
- WASTE TREATMENT, LIQUID 132, 169, 191,
193
- WASTE TREATMENT, LIQUID/SSF 193
- WATERFORD 3 (PWR) 327-329
- WEAR 2, 25, 30, 38, 96, 112, 118, 149,
175, 191, 261, 265, 351
- WELDS 8, 22, 36, 48, 99, 225, 240,
256, 272
- WOLF CREEK 1 (PWR) 330-336
- WPPSS 2 (BWR) 337-345
- ZION 1 (PWR) 25, 346, 347, 350
- ZION 2 (PWR) 346-351

VENDOR CODE INDEX

ALLIS CHALMERS 195, 325
 AMPHENOL 79, 259
 ANCHOR/DARLING VALVE CO. 47, 54, 175, 181, 325
 ASCO VALVES 92
 ATWOOD & MORRILL CO., INC. 155
 BARKSDALE COMPANY 104, 147, 148
 BARTON INSTRUMENT CO., DIV OF ITT 47, 141, 172, 184, 223, 338
 BECHTEL CORP. 256
 BELFAB, INC. 322
 BERGEN-PATTERSON PIPE SUPPORT CORP 259
 BETA CORP. 42
 BLACK, SIVALLS & BRYSON, INC. 191, 259
 BROWN & ROOT INC. 48
 BRUCE GM DIESEL, INC. 127
 C & D BATTERIES, DIV OF ELTRA CORP. 125
 CHICAGO BRIDGE AND IRON COMPANY 18
 CHICAGO FLUID POWER 101
 CIRCLE SEAL 325
 CONSOLIDATED CONTROLS CORP. 227
 CONTROL COMPONENTS 289
 CONVAL INC. 325
 COOPER-BESSEMER CO. 349
 COPES-VULCAN, INC. 274
 CRANE COMPANY 118
 CRANE HOIST ENGINEERING & MFG CO. 114
 CRANE VALVE CO. 37, 191, 192
 CROSBY VALVE & GAGE CO. 166
 CVI CORP. 277
 DRAVO, INC. 225, 272
 DRESSER INDUSTRIAL VALVE & INST DIV 71, 75
 DWYER, F.W. MFG CO., INC. 262
 EDWARDS VALVES DIV 85
 FAIRBANKS MORSE 262
 FIKE METAL PRODUCTS CORP. 34
 FISHER CONTROLS CO. 155
 GEMS, INC. 255
 GEN ELEC CO (STEAM TURB/ENGRD PROD 47
 GENERAL ATOMIC CO. 50, 57, 59, 232, 335
 GENERAL ELECTRIC CO. 2, 19, 20, 30, 44, 96, 97, 102, 108, 111, 127, 156, 169, 178, 183, 224, 233, 260, 265, 271, 339
 GENERAL ELECTRIC CORP. (NUCLEAR ENG 264, 266
 GOULDS PUMPS INC. 276
 GPE CONTROLS 168
 ISHIKAWAJIMA HARIMA INC. (IHI-JAPAN 36
 ITT GENERAL CONTROLS 319
 KELLOGG, M.W. CO., THE 22
 LADISH CO. 99
 LIMITORQUE CORP. 32, 37, 38, 40, 46
 M D A SCIENTIFIC, INC. 180, 198-200, 212, 230, 336
 MAROTTA SCIENTIFIC CONTROLS, INC. 342
 MASONBILAN INTERNATIONAL, INC. 350, 351
 MCGRAW EDISON CO., POWER SYSTEMS D 30
 NORDBERG 41
 NORGREN 91
 NUCLEAR MEASUREMENTS CORP. 291, 292
 NUMATICS 268
 PACIFIC AIR PRODUCTS 258, 261
 PACIFIC SCIENTIFIC COMPANY 94, 236, 267, 287
 PARKER HANNIFIN CORP. 54
 PERFEX, INC. 35
 POWELL, WILLIAM COMPANY, THE 155
 PRATT, HENRY COMPANY 114
 PYCO 324
 RAYCHEM CORP. 19
 RDF CORP. 86
 RILEY COMPANY, THE - PANALARM DIVIS 136
 ROCKWELL MANUFACTURING COMPANY 155, 325
 ROCKWELL-INTERNATIONAL 12
 ROSEMOUNT, INC. 288, 337
 ROYAL INDUSTRIES, INC. 195
 SOLID STATE CONTROLS, INC. 64
 SOUTHWEST GALVENIZING 8
 STATIC-O-RING 179, 187
 STEWART & STEVENSON SERVICES, INC. 340
 TARGET ROCK CORP. 128, 160, 342
 TERRY STEAM TURBINE COMPANY 7, 47, 259
 TOPAZ ELECTRONICS 300
 TRACER LAB 189
 UNION PUMP COMPANY 321
 VELAN VALVE CORP. 46
 WALDRON COUPLINGS-MACHINERY DIV OF 21
 WALWORTH COMPANY 155
 WESTINGHOUSE ELECTRIC CORP. 163, 234, 273
 WOODWARD GOVERNOR COMPANY 47
 WOOLEY COMPANY 1
 WRIGHT, SCHUCHART, HARBOR, INC. 323
 YARWAY CORP. 112, 155, 235, 257

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13. 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 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 revisions to those events occurring prior to 1984 are described in NRC Regulatory Guide 1.16 and NUREG-1061, *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.

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