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# Licensee Event Report (LER) Compilation

For month of August 1984

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Oak Ridge National Laboratory

Prepared for  
U.S. Nuclear Regulatory  
Commission

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For month of August 1984

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Manuscript Completed: September 1984  
Date Published: September 1984

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

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

Abstract

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

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

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CONTENTS

	<u>Page</u>
Licensee Event Reports.....	1
Component Index.....	55
System Index.....	57
Keyword Index.....	59
Vendor Code Index.....	65

[ 1] ARKANSAS NUCLEAR 1  
 UPDATE ON SG TUBING CRACKS.  
 EVENT DATE: 121482 REPORT DATE: 052584  
 VENDOR: BABCOCK & WILCOX COMPANY

DOCKET 50-313 LER 82-030 REV 2  
 NSSS: BW TYPE: PWR

(NSIC 190289) ON 12/14/82, WHILE PERFORMING THE 'B' ONCE THROUGH STEAM GENERATOR (OTSG) TUBING SURVEILLANCE DURING THE REFUELING OUTAGE, EDDY CURRENT TESTING REVEALED 5 TUBES WITH GREATER THAN OR EQUAL TO 40% THROUGH WALL INDICATIONS. THESE RESULTS CAUSED ENTRY INTO THE C-3 CATEGORY AS DEFINED BY TECH SPEC 4.18 SINCE GREATER THAN 1% OF THE TUBES IN THE RANDOM SAMPLE WERE DEFECTIVE. THE TUBES ARE LOCATED IN AN EXPANDED LANE REGION ADJACENT TO BUT NOT IN THE GROUP A-1 (LANE REGION) DEFINED BY TECH SPEC 4.18.3.A.3.(1) AND OUTSIDE THE GROUP A-2 DEFINED BY TECH SPEC 4.18.3.A.3.(2). THIS OCCURRENCE IS REPORTABLE PER TECH SPEC 4.18 AND TECH SPEC 6.12.3.1.(C). OTHER OCCURRENCES REGARDING STEAM GENERATOR TUBE PROBLEMS WERE REPORTED ON LER'S 82-012, 80-034, 80-026 AND 78-005. THE MECHANISM WHICH CAUSED THE TUBE DEFECTS HAS NOT BEEN DETERMINED AT THE TIME OF THIS REPORT. PER THE REQUIREMENTS OF TECH SPEC 4.18, THE SCOPE OF THE INSPECTION WAS EXPANDED TO DETERMINE THE BOUNDARY OF THE DEFECTS. INSPECTIONS HAVE CONTINUED ON 'A' OTSG. AS OF 1/05/83, 40 DEFECTIVE TUBES IN 'A' OTSG AND 21 DEFECTIVE TUBES IN 'B' OTSG HAVE BEEN FOUND OUTSIDE THE A-1 REGION (LANE) AND A-2 REGION (PERIPHERY). AS REQUIRED BY TECH SPEC 4.18.6, A REPORT CONTAINING MORE DETAILED INFORMATION WAS SUBMITTED FOLLOWING INSPECTION COMPLETION.

[ 2] ARKANSAS NUCLEAR 1  
 UPDATE ON ZERO DRIFT OF REACTOR BUILDING PRESSURE TRANSMITTERS.  
 EVENT DATE: 012483 REPORT DATE: 052584  
 VENDOR: FISCHER & PORTER CO.

DOCKET 50-313 LER 83-003 REV 2  
 NSSS: BW TYPE: PWR

(NSIC 190293) ON 1/24/83, WHILE IN REFUELING SHUTDOWN, A REACTOR BLDG PRESSURE TRANSMITTER (PT-2405) WAS FOUND TO BE OUT OF SPECIFIED TOLERANCE. ENGINEERED SAFEGUARDS ACTUATION SYSTEM (ESAS) ANALOG CHANNEL 1 CALIBRATION INDICATED THAT PT-2405 HAD ZERO-SHIFTED APPROX. 1.125% LOW. ON 1/26/83, WHILE PERFORMING ESAS ANALOG CHANNEL 2 CALIBRATION, ANOTHER REACTOR BLDG PRESSURE TRANSMITTER (PT-2406) WAS FOUND TO HAVE ZERO-SHIFTED BY APPROX 1.25% LOW. THESE SHIFTS IN TRANSMITTED OUTPUTS WOULD HAVE RESULTED IN LATE ESAS ACTUATION OF APPROX .45 PSI FOR PT-2405 AND .50 PSI FOR PT-2406. PART OF THE FOLLOWUP ACTIONS TO THE EVENTS DESCRIBED ABOVE INCLUDED A RECHECK OF THE PRESSURE TRANSMITTER SETPOINTS DURING THE NEXT COLD SHUTDOWN OF SUFFICIENT DURATION. THE CAUSE OF THE ZERO-SHIFT COULD NOT BE DETERMINED. THE ZERO ADJUSTMENT WAS THE ONLY CORRECTION REQUIRED. A DESIGN CHANGE INVOLVING THE TRANSMITTERS, CABLES, AND LOSS OF COOLANT ACCIDENT (LOCA) SPLICES IS IN PROGRESS DURING THIS REFUELING. AFTER COMPLETION OF THE DESIGN CHANGE, THE FINAL CHECKOUT AND CALIBRATIONS WERE PERFORMED IN FEB 1983. ON 7/25/83, THE ACTUATION SETPOINTS WERE REDUCED FROM 18.6 PSIA TO 18.03 PSIA AND FROM 44.6 PSIA TO 44.03 PSIA TO PROVIDE ADDITIONAL ALLOWANCE FOR DRIFT.

[ 3] ARKANSAS NUCLEAR 1  
 UPDATE ON AFW PUMP FAILURE.  
 EVENT DATE: 040583 REPORT DATE: 052584  
 VENDOR: INGERSOL-RAND CO.

DOCKET 50-313 LER 83-010 REV 1  
 NSSS: BW TYPE: PWR

(NSIC 190294) ON 4/5/83, WHILE IN HOT SHUTDOWN, THE OUTBOARD BEARING TEMPERATURE FOR THE STEAM DRIVEN EMERGENCY FEEDWATER (EFW) PUMP P-7A EXCEEDED THE LIMITS OF THE MONTHLY SURVEILLANCE TEST. P-7A WAS TAKEN OUT OF SERVICE FOR INVESTIGATION THEREBY ENTERING THE REQUIREMENTS OF TECH SPEC 3.4.5. THIS OCCURRENCE IS REPORTABLE PER TECH SPEC 6.12.3.2.B. THE ELECTRIC DRIVEN EFW PUMP P-7B AND ITS ASSOCIATED TRAIN WERE OPERABLE. LER'S (50-313) REGARDING EFW PUMP BEARINGS WERE 77-003 AND 79-007. THE HIGH BEARING TEMPERATURE OCCURRED BECAUSE THE BALANCE DRUM CLEARANCES WERE IMPROPERLY SET DURING MAINTENANCE ON P-7A. THE BALANCE DRUM CLEARANCE SETTING IS AN INFREQUENT MAINTENANCE ACTIVITY AND THE PROCEDURE DID NOT

CONTAIN DETAIL INSTRUCTIONS FOR PERFORMING THIS ACTIVITY. THE BALANCE DRUM CLEARANCES WERE RESET. THE EPW PUMP MAINTENANCE PROCEDURE WAS REVISED TO PROVIDE SEPARATE, MORE EXPLICIT SECTIONS FOR SPECIAL MAINTENANCE SUCH AS BALANCE DRUM CLEARANCE SETTINGS. P-7A IS A MODEL 4HMTA-9 STG MANUFACTURED BY INGERSOL-RAND.

[ 4] ARKANSAS NUCLEAR 1 DOCKET 50-313 LER 83-011 REV 1  
 UPDATE ON AUXILIARY FEEDWATER PUMP DECLARED INOPERABLE.  
 EVENT DATE: 052483 REPORT DATE: 051884 NSSS: BW TYPE: PWR  
 VENDOR: INGERSOL-RAND CO.

(NSIC 190295) ON 5/24/83, WHILE PERFORMING ANNUAL SURVEILLANCE TESTING ON THE ELECTRIC DRIVEN EMERGENCY FEEDWATER PUMP P-7B, IT WAS OBSERVED THAT THE OUTBOARD THRUST BEARING TEMPERATURE WAS HIGH. THE PUMP WAS DECLARED INOPERABLE. THIS EVENT IS REPORTABLE PER TECH SPECS 3.4.1.4 AND 6.12.3.2.B. SIMILAR LER'S INCLUDE (50-313) 79-007 AND 78-003. EXCESSIVE THRUST BEARING CLEARANCE WAS FOUND. THIS RESULTED IN THE BALANCE DRUM BEING UNBALANCED AND ALLOWED EXCESSIVE THRUST CAUSING THE BEARING TO OVERHEAT. THE THRUST BEARING CLEARANCE WAS .013" WHILE THE ALLOWABLE TOLERANCE RANGE IS .0005" - .002". THE THRUST BEARING WAS REPLACED, AND THE CLEARANCE WAS SET AT .0005". IN ADDITION, THE BEARING COOLING LINES WERE INSPECTED AND FOUND CLEAR OF BLOCKAGE. A DOCUMENTATION SEARCH INDICATES THAT THE PREVIOUS "AS-LEFT" CLEARANCE WAS .002". SINCE NO DETERMINATION COULD BE MADE AS TO WHY THE CLEARANCE INCREASED FROM .002" TO .013", THE THRUST BEARING CLEARANCE WILL BE RECHECKED DURING THE NEXT COLD SHUTDOWN TO ASCERTAIN WHETHER OR NOT IT REMAINS WITHIN ALLOWABLE TOLERANCE.

[ 5] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 82-018 REV 1  
 UPDATE ON LOSS OF EMERGENCY FEEDWATER CHANNEL.  
 EVENT DATE: 051682 REPORT DATE: 052584 NSSS: CE TYPE: PWR  
 VENDOR: WESTON HYDRAULICS DIVISION

(NSIC 190481) ON 5/16/82 WHILE IN MODE 1 AT 100% FULL POWER, THE BREAKER FOR 2CV-1075, DISCHARGED CONTROL VALVE FROM EMERGENCY FEEDWATER PUMP (EFP) 2P-7B TO THE 'B' STEAM GENERATOR 2E-24B, WAS FOUND TO BE TRIPPED. THE VALVE WAS CLOSED AT THE TIME OF THE FAILURE AND COULD NOT BE OPENED REMOTELY IF EMERGENCY FEEDWATER ACTUATION WERE REQUIRED THROUGH THIS FLOW PATH. HOWEVER, THE EQUIPMENT REQUIRED FOR THE REDUNDANT FLOW PATH WAS PROVEN OPERABLE. THIS OCCURRENCE IS REPORTABLE PER TECH SPEC 6.9.1.9.B. SIMILAR OCCURRENCES WERE REPORTED IN LER'S 50-368/79-054 AND 78-009. THE OCCURRENCE WAS CAUSED WHEN THE HYDRAULIC PUMP MOTOR BEARINGS ASSOCIATED WITH THE VALVE OPERATOR FAILED DUE TO HIGH AMBIENT TEMPERATURE IN THE ROOM WHERE 2CV-1075 IS LOCATED. THE HYDRAULIC PUMP MOTOR WAS REPLACED. THE VALVE WAS PROVEN OPERABLE AND RETURNED TO SERVICE. DAMPER ADJUSTMENTS WERE MADE TO ASSIST COOLING IN THE ROOM. THIS WESTON-HYDRAULIC VALVE ACTUATOR WAS REPLACED WITH A LIMITORQUE SMB-000-2 460V A.C. MOTOR OPERATOR DURING THE 2R3 REFUELING OUTAGE.

[ 6] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 82-019 REV 1  
 UPDATE ON DISCHARGE VALVE FROM EFP REMOVED FROM SERVICE.  
 EVENT DATE: 052082 REPORT DATE: 052584 NSSS: CE TYPE: PWR  
 VENDOR: WESTON HYDRAULICS DIVISION

(NSIC 190482) ON 5/20/82 WHILE IN MODE 1 OPERATION AT 100% FULL POWER, 2CV-1075, DISCHARGE CONTROL VALVE FROM EMERGENCY FEEDWATER PUMP (EFP) 2P-7B TO THE 'B' STEAM GENERATOR, WAS TAKEN OUT OF SERVICE FOR MAINTENANCE AFTER DISCOVERY OF A LEAK IN THE HYDRAULIC SYSTEM FOR THE ACTUATOR. THE EQUIPMENT REQUIRED FOR THE REDUNDANT FLOW PATH WAS PROVED OPERABLE. THIS OCCURRENCE IS REPORTABLE PER TECH SPEC 6.9.1.9.B. SIMILAR OCCURRENCES WERE REPORTED IN LER'S 50-368/81-032, 79-092, 79-090, 79-088 AND 79-043. THE ROOT CAUSE OF THE OCCURRENCE COULD NOT BE DETERMINED. INVESTIGATION REVEALED THAT THE HYDRAULIC SYSTEM PUMP AND PUMP MOTOR

HAD FAILED. THE CONTROL BLOCK, HYDRAULIC PUMP AND PUMP MOTOR WERE REPLACED. THE HYDRAULIC SYSTEM LEAK WAS REPAIRED, AND NORMAL 'SET-UP' ADJUSTMENTS WERE MADE. THE VALVE WAS PROVED OPERABLE AND RETURNED TO SERVICE. BECAUSE OF CONTINUAL MAINTENANCE PROBLEMS, THIS WESTON-HYDRAULIC VALVE ACTUATOR WAS REPLACED WITH A LIMITORQUE SMB-000-2 460V A.C. MOTOR OPERATOR DURING THE 2RE REFUELING OUTAGE.

[ 7] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 82-038 REV 1  
 UPDATE ON CONTROL WIRING ERRORS ON VALVES.  
 EVENT DATE: 111182 REPORT DATE: 052584 NSSS: CE TYPE: PWR  
 VENDOR: LIMITORQUE CORP.

(NSIC 190483) ON 11/11/82 WHILE IN MODE 2 DURING LOW POWER PHYSICS TESTING (LPPT), EMERGENCY FEEDWATER (EPW) CONTROL VALVE 2CV-1076-2 WAS FOUND TO NOT BE WIRED ACCORDING TO INSTALLATION DRAWINGS. A CONTACT FOR THE CLOSE CIRCUIT WHICH BYPASSES THE TORQUE SWITCH UNTIL THE VALVE IS APPROXIMATELY 99% CLOSED WAS NOT WIRED INTO THE CIRCUIT. THIS WAS DISCOVERED WHILE TROUBLESHOOTING CONTROL VALVE 2CV-1026-2. THE OCCURRENCE INVOLVING 2CV-1026-2 WAS REPORTED IN LER-82-036 BUT WAS NOT RELATED TO THE WIRING DISCREPANCY ABOVE. THE ONLY OTHER OCCURRENCE REPORTED ON EITHER 2CV-1076-2 OR 2CV-1026-2 WAS LER-79-037 ON 2CV-1076-2 BUT WAS NOT RELATED TO THE CIRCUIT DESCRIBED IN THIS REPORT. THE VALVES WOULD STILL PERFORM THEIR FUNCTION WITHOUT THIS CIRCUITRY. THE CAUSE OF THE OCCURRENCE IS BELIEVED TO BE AN INSTALLATION OVERSIGHT. THE CIRCUITRY FOR THE OPERATORS FOR BOTH 2CV-1076-2 AND 2CV-1026-2 WAS CORRECTED TO CONFORM TO THE ELECTRICAL SCHEMATIC FOR THESE VALVE OPERATORS. AN INSPECTION OF SIMILAR SAFETY RELATED VALVE OPERATORS HAS BEEN CONDUCTED. THREE ADDITIONAL VALVE OPERATORS WERE FOUND TO HAVE THE SAME WIRING DISCREPANCY. THESE DISCREPANCIES HAVE BEEN RESOLVED.

[ 8] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 82-042 REV 1  
 UPDATE ON IMPROPER SHAPE ANNEALING MATRIX USED IN CPC.  
 EVENT DATE: 121082 REPORT DATE: 052584 NSSS: CE TYPE: PWR  
 VENDOR: COMBUSTION ENGINEERING, INC.

(NSIC 190484) ON 12/10/82 DURING POWER ASCENSION TESTING AT 80% FULL POWER, IT WAS DETERMINED THAT THE VALUES OF THE SHAPE ANNEALING MATRIX FOR ALL FOUR CORE PROTECTION CALCULATORS (CPC) HAD BEEN IMPROPERLY LOADED INTO THE CPCs. USE OF AN INCORRECT SHAPE ANNEALING MATRIX CAUSED THE CPC CHANNELS TO CALCULATE A MORE BOTTOM PEAKED CORE POWER DISTRIBUTION THAN ACTUAL AS CALCULATED WITH THE INCORE DETECTOR SYSTEM. THESE ERRORS MAY HAVE CAUSED NONCONSERVATIVE DNBR AND LPD CALCULATIONS BY ALL FOUR CPC CHANNELS. THIS OCCURRENCE IS REPORTABLE PER TECH SPEC 6.9.1.8.F. THE CAUSE OF THIS OCCURRENCE WAS PERSONNEL ERROR. AT THE 50% FULL POWER ASCENSION TEST PLATEAU, NUCLEAR ENGINEERING PERSONNEL DETERMINED SHAPE ANNEALING MATRICES (SAM) FOR EACH CPC CHANNEL. THE MATRICES WERE TRANSPOSED AND INPUT INCORRECTLY INTO EACH CPC CHANNEL. THE CAUSE OF THE TRANSPOSITION WAS INADEQUATE LABELING OF THE INDIVIDUAL MATRIX ELEMENTS AS LISTED BY A SAM ANALYSIS CODE. THE SAM ELEMENTS WERE INSTALLED WITHIN 1 HOUR OF IDENTIFICATION OF THE ERROR. THIS ITEM WAS PREVIOUSLY REPORTED BY LETTER (ANO-82-1246) FROM AP&L (LEVINE) TO NRC (COLLINS) DATED DECEMBER 10, 1982. THE COMPUTER CODE UTILIZED TO CALCULATE THE SHAPE ANNEALING MATRIX WAS MODIFIED TO PROVIDE INDIVIDUAL LABELS FOR EACH MATRIX ELEMENT.

[ 9] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 82-047 REV 1  
 UPDATE ON EMERGENCY FEEDWATER CONTROL VALVE FAILURE.  
 EVENT DATE: 121182 REPORT DATE: 051584 NSSS: CE TYPE: PWR  
 VENDOR: BORG-WARNER CORP.

(NSIC 190485) APPROXIMATELY ONE HOUR AFTER A REACTOR AND TURBINE TRIP, AND FOLLOWING EMERGENCY FEEDWATER (EPW) ACTUATION, THE DISCHARGE CONTROL VALVE FROM THE EMERGENCY FEEDWATER PUMP 2P-7B TO THE 'B' STEAM GENERATOR (2CV-1075) FAILED



TO RESPOND (SHUT) WHEN MANUAL CONTROL OF EPW WAS ATTEMPTED. THE EQUIPMENT REQUIRED FOR THE REDUNDANT FLOW PATH REMAINED OPERABLE. OTHER LERS CONCERNING UNIT 2 EPW VALVES INCLUDE 50-368/82-025, 82-019, 82-018, 82-015, 81-032, 80-008, 79-092, 79-090, 79-089, 79-088, 79-068, 79-054, 79-051, 79-043, 79-040, 79-037, 79-036, 79-035, 79-028, 78-026, 78-009. THIS OCCURRENCE IS REPORTABLE PER TECH SPEC 6.9.1.9.B. THE CAUSE OF THIS EVENT APPEARS TO HAVE BEEN A COMBINATION OF LOOSE LEADS IN THE MOTOR AND LOW HYDRAULIC PRESSURE DUE TO AIR IN THE HYDRAULIC OIL. IMMEDIATE ACTION WAS TO TIGHTEN THE LEADS IN THE MOTOR AND TO REPLACE THE HYDRAULIC OIL. THESE WESTON-HYDRAULIC VALVE ACTUATORS WERE REPLACED WITH LIMTORQUE SMB-00-2 460V A.C. MOTOR OPERATORS DURING THE 2R3 REFUELING OUTAGE.

[ 10] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 84-048 REV 1  
 UPDATE ON EMERGENCY FEEDWATER CONTROL VALVE FAILURE.  
 EVENT DATE: 122282 REPORT DATE: 051584 NSSS: CE TYPE: PWR

(NSIC 190486) ON 12/22/82 WHILE IN MODE 2 OPERATION WITH THE EMERGENCY FEEDWATER (EPW) PUMP 2P-7B SUPPLYING FEEDWATER TO THE STEAM GENERATORS, CONTROL ROOM INDICATION WAS LOST FOR CONTROL VALVE 2CV-1036-1. 2CV-1036-1 SUPPLIES EPW TO 'B' STEAM GENERATOR FROM 2P-7B. OPERABILITY OF 2CV-1036-1 AND ITS ASSOCIATED EPW TRAIN WAS RESTORED WITHIN THE TIME REQUIREMENTS OF TECH SPEC 3.7.1.2. THIS OCCURRENCE IS REPORTABLE PER TECH SPEC 6.9.1.9.B. OTHER OCCURRENCES RELATING TO 2CV-1036-1 AND SIMILAR VALVES ARE LER'S 82-025, 82-015, 81-045, 81-032, 79-051, 79-043, 79-040, 79-037, 79-036, 78-026. EPW PUMP 2P-7A AND ITS ASSOCIATED TRAIN WERE OPERABLE AND AVAILABLE TO SUPPLY FEEDWATER TO THE STEAM GENERATORS. THE CAUSE OF THE LOSS OF INDICATION FOR 2CV-1036-1 WAS AN OPENED FUSE IN THE CONTROL CIRCUIT. THIS WAS CAUSED BY A SHORTED TRIP COIL. IMMEDIATE ACTIONS WERE TO START EPW PUMP WP-7A AND USE ITS ASSOCIATED EQUIPMENT TO SUPPLY FEEDWATER TO 'B' STEAM GENERATOR. CORRECTIVE ACTIONS WERE TO REPLACE THE TRIP COIL AND TO REPLACE THE CONTROL FUSE. THREE EBV VALVES AND ACTUATORS WERE REPLACED WITH GATE VALVES AND LIMITORQUE SMB-00-15 OPERATORS DURING THE 2R3 REFUELING OUTAGE.

[ 11] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 83-007 REV 1  
 UPDATE ON FAILURE OF HYDRAULIC PUMP FOR EMERGENCY FEEDWATER CONTROL VALVE.  
 EVENT DATE: 020383 REPORT DATE: 051584 NSSS: CE TYPE: PWR  
 VENDOR: NUCLEAR VALVE DIVISION

(NSIC 190480) ON 2/3/83, WHILE IN MODE 1 AT 86% FULL POWER, THE HYDRAULIC PUMP FOR THE OPERATOR FOR EMERGENCY FEEDWATER (EPW) CONTROL VALVE 2CV-1075-1 WAS DETERMINED TO NEED REPLACING DURING PERFORMANCE OF PREVENTATIVE MAINTENANCE (PM) ON THE VALVE. ON 2/4/83, AND ON 2/17/83, WHILE IN MODE 3, 2CV-1075-1 FAIL' TO CLOSE WHILE ATTEMPTING TO REDUCE FLOW TO 'B' STEAM GENERATOR. 2CV-1075-1 IS THE CONTROL VALVE BETWEEN EPW PUMP 2P-7B AND VALVE 2CV-1036-1 IN THE EPW TRAIN TO 'B' STEAM GENERATOR. 2CV-1075-1 IS THE CONTROL VALVE BETWEEN EPW PUMP 2P-7A AND VALVE 2CV-1036-1 IN THE EPW TRAIN TO 'B' STEAM GENERATOR. THE REDUNDANT EPW PUMP 2P-7A AND ITS ASSOCIATED TRAIN WERE OPERABLE DURING EACH OCCURRENCE. IN ALL THREE CASES, 2CV-1075-1 WAS RETURNED TO SERVICE WITHIN THE TIME LIMITS OF TECH SPEC 3.7.1.2. PREVIOUS OCCURRENCES FOR UNIT 2 - LER'S 79-043, 79-088, 79-089, 79-090, 79-092, 80-003, 81-032, 82-019 AND 83-005. THE CAUSE OF THE OCCURRENCE OF 2/3/83 WAS THOUGHT TO BE END OF SERVICE LIFE OF THE HYDRAULIC PUMP. CORRECTIVE ACTION TAKEN AT THE TIME WAS PUMP AND MOTOR BEARING REPLACEMENT. THE HYDRAULIC PUMP FAILED AGAIN ON 2/14/83. A DESIGN CHANGE WAS IMPLEMENTED WHICH REPLACED THE ORIGINAL DESIGN GEAR PUMP WITH A PISTON PUMP WHICH VENDOR TESTING HAS DEMONSTRATED TO BE MORE RELIABLE, AND A MODIFICATION WAS MADE TO THE OVERRIDE SWITCH MOUNTING BRACKET TO PREVENT IT FROM COMING LOOSE.

[ 12]            ARKANSAS NUCLEAR 2                            DOCKET 50-368            LER 83-045 REV 1  
 UPDATE ON INADEQUATE FIRE BARRIERS.  
 EVENT DATE: 091693    REPORT DATE: 051084            NSSS: CE            TYPE: PWR  
 OTHER UNITS INVOLVED: ARKANSAS NUCLEAR 1 (PWR)

(NSIC 190352) OBSERVATIONS OF FIRE PROTECTION DEFICIENCIES HAVE BEEN LISTED. THE LIST CONSISTS OF THE DISCOVERY DATE, FACILITY STATUS CODE, METHOD OF DISCOVERY CODE, DISCOVERY DESCRIPTION, CAUSE CODE, CAUSE AND CORRECTIVE ACTIONS. THESE OCCURRENCES ARE REPORTABLE PER TECH SPEC 6.9.1.9.B. OTHER OCCURRENCES REGARDING FIRE PROTECTION DEFICIENCIES WERE REPORTED IN LER'S (50-368) 79-025, 79-026, 80-081, 81-029, 81-036, 81-042, 82-029, 82-039, 83-004, 83-008, 83-020, 83-021, 83-026, 83-032, 83-033, 83-034, 83-037 AND 83-042. ALSO REFERENCE LER 83-035. THE CAUSES AND CORRECTIVE ACTIONS FOR THE INDIVIDUAL OCCURRENCES ARE LISTED. A COMPLETE FIRE PROTECTION SYSTEM WALKDOWN INSPECTION IS IN PROGRESS AS VALIDATION OF THE "ANO FIRE PROTECTION PROGRAM MANUAL." INTERIM CONTROLS HAVE BEEN PLACED ON CONSTRUCTION ACTIVITIES TO ASSURE RESTORATION OF FIRE SYSTEMS AFTER WORK IS PERFORMED. IN THE INTERIM, AP&L HAS ESTABLISHED A ROVING FIRE INSPECTOR PROGRAM FOR THE PURPOSE OF MONITORING ACTIVITIES AFFECTING FIRE SYSTEMS. FUTURE ACTION TO PREVENT RECURRENCE IS THE DEVELOPMENT OF AN INTEGRATED PROGRAM TO PROVIDE ASSURANCE THAT FIRE SYSTEMS ARE MAINTAINED AS REQUIRED.

[ 1.]            ARKANSAS NUCLEAR 2                            DOCKET 50-368            LER 84-011  
 REACTOR TRIPS ON HIGH STEAM GENERATOR LEVEL.  
 EVENT DATE: 050784    REPORT DATE: 060784            NSSS: CE            TYPE: PWR

(NSIC 190333) ON 5/7/84, AT 0126 HRS DURING POWER ESCALATION FOLLOWING A LOAD REDUCTION ORDERED BY THE SYSTEM DISPATCHER, A REACTOR-TURBINE TRIP OCCURRED DUE TO HIGH LEVEL ON 'B' STEAM GENERATOR. DURING THE POWER MANEUVERS, OSCILLATIONS IN FEEDWATER FLOW OCCURRED WITH MAIN FEEDWATER CONTROL IN AUTOMATIC. IN AN ATTEMPT TO AVERT A UNIT TRIP, CONTROLS FOR THE MAIN FEEDWATER REGULATING VALVES WERE PLACED IN MANUAL. THE UNIT TRIPPED AT 66% FULL POWER (FP) DURING MANUAL FEEDWATER CONTROL. NO POST-TRIP ANOMALIES OR DIFFICULTIES WERE NOTED. INVESTIGATION OF THE CONTROL SYSTEM OSCILLATIONS REVEALED THAT THE MASTER CONTROLLER SETTINGS WERE NOT AT OPTIMUM SETPOINTS FOR MANEUVERING AT REDUCED POWER LEVELS. THESE SETTINGS HAD PREVIOUSLY BEEN TURNED FOR OPTIMUM AUTOMATIC CONTROL ACTION AT 100% POWER.

[ 14]            ARNOLD    DOCKET 50-331            LER 84-016  
 MAIN STEAM ISOLATION VALVE FAILS DUE TO DISC SEPARATION.  
 EVENT DATE: 050284    REPORT DATE: 060184            NSSS: GE            TYPE: BWR  
 VENDOR: ROCKWELL MANUFACTURING COMPANY

(NSIC 190327) DURING REACTOR OPERATION ON MAY 2, 1984 AT APPROX 80% POWER, A DECREASE IN FLOW IN THE 'C' STEAM LINE FROM 1.5 TO 1 MILLION POUNDS PER HR WAS OBSERVED. FOLLOWING SHUTDOWN ON MAY 17, 1984, THE 'C' INBOARD MSIV WAS FOUND TO HAVE THE MAIN DISC SEPARATED FROM THE REST OF THE VALVE ASSEMBLY. THIS IS SIMILAR TO FAILURES PREVIOUSLY DESCRIBED IN IE 81-28 EXCEPT THE DISC WAS LYING ON ITS SIDE IN THE VALVE BODY RATHER THAN BEING SEATED. FURTHER INSPECTION DETERMINED THAT THE FAILURE RESULTED FROM THE DISC NOT BEING TIGHTENED FULLY AGAINST THE PISTON SHOULDER DURING AN EARLIER (1982) VALVE REASSEMBLY. TWO ADDITIONAL VALVES WERE INSPECTED AND SHOWED NO INDICATIONS OF SIMILAR PROBLEMS. IT WAS CONCLUDED THAT THIS IS A ONE-TIME OCCURRENCE AND IS UNLIKELY TO RECUR. THE VENDOR'S UPDATED RECOMMENDATIONS FOR PISTON/DISC TORQUING HAVE BEEN INCORPORATED INTO APPROVED REPAIR PROCEDURES. THE THREE DISASSEMBLED VALVES HAVE BEEN REASSEMBLED USING THE UPDATED PROCEDURE. THIS ITEM, AS IDENTIFIED ABOVE, IS BEING SUBMITTED UNDER THE 'OTHER' REPORTABILITY CATEGORY BECAUSE OF THE CONVENIENT MEANS OF DISSEMINATING INFORMATION IN THIS MANNER AND THE INTEREST IN THE EXPERIENCE EXPRESSED BY THE NRC.

[ 15]           ARNOLD   DOCKET 50-331           LER 84-018  
 RCIC STEAM SUPPLY ISOLATION.  
 EVENT DATE: 050784   REPORT DATE: 060784           NSSS: GE           TYPE: BWR

(NSIC 190435) WHILE OPERATING AT 72% POWER WITH STEAM LINE "C" ISOLATED BECAUSE OF AN INOPERABLE INBOARD MAIN STEAM ISOLATION VALVE, A MONTHLY SURVEILLANCE TEST WAS BEING PERFORMED ON THE RCIC STEAM LINE HIGH DIFFERENTIAL PRESSURE (STEAM LINE BREAK DETECTION) SYSTEM. WHILE REMOVING THE COVER FROM A RCIC STEAM LEAK HIGH DIFFERENTIAL PRESSURE RELAY TO PERFORM ONE OF THE TEST STEPS, THE RELAY WAS INADVERTENTLY JARRED AND THE RELAY ENERGIZED. THIS CAUSED SPURIOUS RCIC ISOLATION AND RCIC TURBINE TRIP SIGNALS AND CLOSED THE RCIC TURBINE INBOARD STEAM ISOLATION VALVE. THE RCIC SYSTEM WAS IN NORMAL STANDBY CONDITION. OPERATORS IMMEDIATELY RESET THE TURBINE TRIP SIGNAL AND OPENED THE TURBINE ISOLATION VALVE. NO CHANGES IN PLANT CONDITIONS WERE OBSERVED.

[ 16]           ARNOLD   DOCKET 50-331           LER 84-019  
 UNPLANNED RWCU ISOLATION.  
 EVENT DATE: 052184   REPORT DATE: 062084           NSSS: GE           TYPE: BWR

(NSIC 190436) AT 0507 HOURS ON MAY 21, 1984, WHILE THE REACTOR WAS IN COLD SHUTDOWN, AN UNPLANNED PARTIAL GROUP V (REACTOR WATER CLEAN-UP INLET LINE) ISOLATION WAS EXPERIENCED DUE TO NOISE IN THE REACTOR WATER CLEAN-UP (RWCU) LEAK DETECTION ELECTRICAL CIRCUITRY. SIMILAR ISOLATIONS OCCURRED ON JUNE 3, JUNE 5, AND JUNE 6 (ALSO WHILE IN COLD SHUTDOWN). EACH OF THE ISOLATIONS WAS INVESTIGATED AND DETERMINED TO BE SPURIOUS. MAINTENANCE PERFORMED TROUBLESHOOTING ACTIVITIES IN AN EFFORT TO DETERMINE THE ROOT CAUSE FOR THESE ISOLATIONS. INSPECTION OF THE ISOLATION LOGIC AND ELECTRICAL COMPONENTS OF THE CIRCUITRY IDENTIFIED NO SPECIFIC PROBLEMS. THE SPURIOUS ISOLATIONS APPEAR TO BE CAUSED BY RANDOM NOISE IN THE CIRCUIT. THE SPURIOUS ISOLATION OF THE RWCU SYSTEM HAS BEEN A RECURRENT PROBLEM. ALTHOUGH PRIMARY CONTAINMENT ISOLATION WAS NOT REQUIRED TO BE OPERABLE, THIS EVENT IS REPORTABLE AS AN ESP ACTUATION (CONTAINMENT ISOLATION).

[ 17]           BEAVER VALLEY 1                                       DOCKET 50-334           LER 84-005  
 SURVEILLANCES FOR VACUUM BREAKER AND SAFETY INJECTION TRANSFER SWITCH MISSED.  
 EVENT DATE: 051784   REPORT DATE: 061484           NSSS: WE           TYPE: PWR

(NSIC 190437) DURING A QUALITY ASSURANCE AUDIT, TWO SURVEILLANCE REQUIREMENTS WERE IDENTIFIED FOR WHICH THE SURVEILLANCE PROCEDURES WERE INADEQUATE. FIRST, THE CLOSED VERIFICATION FOR THE CONTAINMENT VACUUM BREAKER OUTSIDE ISOLATION DAMPER WAS NOT INCLUDED IN THE SURVEILLANCE TEST FOR CONTAINMENT INTEGRITY PENETRATION VERIFICATION AS REQUIRED BY TECH SPEC 4.6.1.1.A.1. SECOND, THE ACTUATION SWITCH FOR THE MANUAL TRANSFER OF SAFETY INJECTION TO THE RECIRCULATION MODE HAD NO SURVEILLANCE PROCEDURE TO VERIFY ITS OPERABILITY AS REQUIRED BY TECH SPEC 4.3.2.1.1, TABLE 4.3-2, ITEM 1.1.A. THESE MISSED SURVEILLANCES ARE NONCONSERVATIVE WITH RESPECT TO TECH SPEC 4.0.3 WHICH STATES THAT FAILURE TO PERFORM A SURVEILLANCE REQUIREMENT WITHIN THE SPECIFIED TIME INTERVAL CONSTITUTES A FAILURE TO MEET THE OPERABILITY REQUIREMENTS FOR A LIMITING CONDITION FOR OPERATION. THE SURVEILLANCES OF THE DAMPER AND MANUAL ACTUATION SWITCH WILL BE INCLUDED IN THE APPROPRIATE PROCEDURES. THESE MISSED SURVEILLANCES WERE DISCOVERED DURING THE DEVELOPMENT OF A COMPUTER PROGRAM THAT WILL REVIEW PROCEDURES WHICH PERFORM TECH SPEC SURVEILLANCE REQUIREMENTS TO ENSURE THAT EACH SURVEILLANCE REQUIREMENT IS INCLUDED IN THE APPROPRIATE PROCEDURE. THIS PROGRAM WILL BE USED AS A CHECK AGAINST OMISSIONS UPON ITS COMPLETION.

[ 18]           BIG ROCK POINT                                       DOCKET 50-155           LER 84-004  
 UPSCALE/DOWNSCALE SCRAM.  
 EVENT DATE: 053084   REPORT DATE: 062984           NSSS: GE           TYPE: BWR

(NSIC 190457) ON MAY 30, 1984, WHILE SHUTTING THE PLANT DOWN TO INVESTIGATE A SUSPECTED CONDENSATE SYSTEM LEAK (SEE BIG ROCK POINT PLANT LER 84-003), CHANNEL NUMBER 1 NEUTRON MONITOR FAILED UPSCALE CAUSING A PARTIAL TRIP SIGNAL TO THE REACTOR PROTECTION SYSTEM. ELECTRICAL NOISE FROM THE UPSCALE FAILURE APPARENTLY CAUSED CHANNEL NUMBER 3 NEUTRON MONITOR TO TRIP DOWNSCALE, RESULTING IN A SCRAM.

[ 19] BIG ROCK POINT DOCKET 50-155 LER 84-005  
UNPLANNED RPS TRIP DUE TO MSIV CLOSURE.  
EVENT DATE: 053184 REPORT DATE: 062984 NSSS: GE TYPE: BWR

(NSIC 190458) ON MAY 31, 1984, WHILE SHUTTING THE PLANT DOWN TO INVESTIGATE A SUSPECTED CONDENSATE SYSTEM LEAK (SEE BIG ROCK POINT PLANT LER 84-003), THE OPERATOR DELIBERATELY CLOSED THE MAIN STEAM ISOLATION VALVE RESULTING IN A REACTOR PROTECTION SYSTEM TRIP. THIS ACTION WAS TAKEN TO PREVENT AIRBORNE CONTAMINATION IN THE TURBINE BUILDING UPON FAILURE OF TWO STEAM JET AIR EJECTOR BYPASS VALVES TO CLOSE. ALL CONTROL RODS WERE INSERTED AT THE TIME OF THE REACTOR PROTECTION TRIP CHALLENGE.

[ 20] BIG ROCK POINT DOCKET 50-155 LER 84-006  
SPURIOUS RPS TRIP OCCURS.  
EVENT DATE: 060184 REPORT DATE: 062984 NSSS: GE TYPE: BWR  
VENDOR: GENERAL ELECTRIC CO.

(NSIC 190409) ON JUN 1, 1984, WHILE THE REACTOR WAS IN COLD SHUTDOWN (ALL CONTROL RODS INSERTED) WITH CHANNEL NUMBER 3 NEUTRON MONITOR MANUALLY TRIPPED FOR REPAIRS (SEE BIG ROCK POINT PLANT LER 84-004), CHANNEL NUMBER 1 NEUTRON MONITOR RECEIVED A SPURIOUS TRIP. THE 2 OUT OF 3 LOGIC FOR REACTOR PROTECTION SYSTEM (RPS) TRIP WAS COMPLETED, RESULTING IN A CHALLENGE TO THE RPS. NO CONTROL ROD DRIVE MOVEMENT OCCURRED.

[ 21] BIG ROCK POINT DOCKET 50-155 LER 84-007  
RPS TRIP OCCURS ON NEUTRON MONITORING CHANNEL RADIO INTERFERENCE.  
EVENT DATE: 061184 REPORT DATE: 062984 NSSS: GE TYPE: BWR  
VENDOR: GENERAL ELECTRIC CO.

(NSIC 190459) ON JUNE 11, 1984 WHILE THE REACTOR WAS IN COLD SHUTDOWN, CHANNEL NUMBER 3 NEUTRON MONITOR EXPERIENCED A RADIO-INDUCED TRIP. CHANNEL NUMBER 1 NEUTRON MONITOR WAS OUT OF SERVICE FOR REPAIRS (REFERENCE LER 84-006). THE TWO OUT OF THREE LOGIC FOR THE REACTOR PROTECTION SYSTEM (RPS) TRIP WAS SATISFIED, RESULTING IN A CHALLENGE TO THE RPS. NO CONTROL ROD DRIVE MOVEMENT OCCURRED.

[ 22] BROWNS FERRY 1 DOCKET 50-259 LER 84-021  
DESIGN BASIS FOR CABLE SEPARATION NOT MET.  
EVENT DATE: 050584 REPORT DATE: 060484 NSSS: GE TYPE: BWR  
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)

(NSIC 190357) BROWNS FERRY'S FINAL SAFETY ANALYSIS REPORT, SECTIONS 10.11 AND 8.9, AND THE BROWNS FERRY FIRE RECOVERY PLAN (PART X, SECTION A, PARAGRAPH 3.1.2) 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 HIGH PRESSURE COOLANT INJECTION 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, PLACING INTO EFFECT ADMINISTRATIVE CONTROLS REGARDING RELIEF VALVE OPERABILITY, AND ISSUING CHANGES TO OPERATING INSTRUCTIONS REGARDING A FIRE IN THE AFFECTED AREAS.

[ 23]           BROWNS FERRY 1   DOCKET 50-259           LER 84-022  
DESIGN OVERSIGHT ON LOAD SHED LOGIC.  
EVENT DATE: 051284   REPORT DATE: 060884           NSSS: GE           TYPE: BWR  
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)

(NSIC 190305) A 10 CFR 50, APPENDIX R EVALUATION INVESTIGATION DETERMINED THAT DURING A DESIGN BASIS ACCIDENT AND A LOSS OF OFFSITE POWER, EQUIPMENT NECESSARY FOR VITAL ELECTRICAL BOARD COOLING COULD BE LOST FROM SERVICE DUE TO A DESIGN OVERSIGHT. AS INTERIM CORRECTIVE MEASURES, OPERATING INSTRUCTIONS HAVE BEEN MODIFIED TO PROVIDE FOR RESTARTING THE NECESSARY EQUIPMENT WITHIN 1 HR BY USING ELECTRICAL JUMPERS AND/OR MECHANICALLY PROVIDING AN EXHAUST AIR PATH. LONG-TERM CORRECTION WILL BE MADE AS PART OF THE NECESSARY 10 CFR 50, APPENDIX R, MODIFICATION.

[ 24]           BROWNS FERRY 1   DOCKET 50-259           LER 84-023  
PRIMARY CONTAINMENT ISOLATION SYSTEM INITIATION.  
EVENT DATE: 051884   REPORT DATE: 061484           NSSS: GE           TYPE: BWR  
OTHER UNITS INVOLVED: BROWNS FERRY 3 (BWR)

(NSIC 190306) DURING REPLACEMENT OF FAILED RELAY 16AK20, AN ADJACENT INTERNAL PANEL WIRE WHICH SUPPLIES POWER TO NUMEROUS PRIMARY CONTAINMENT ISOLATION (PCIS) VALVES CAME LOOSE GIVING INTERMITTENT PCIS SIGNALS, INCLUDING ISOLATION OF THE DRYWELL SUMPS AND CONTINUOUS AIR MONITOR. THE WIRE HAD BEEN INCORRECTLY TERMINATED ON THE GE CR 120A TYPE RELAY (3 WIRES ON ONE TERMINAL DURING A MODIFICATION THAT WAS COMPLETED IN AUGUST, 1981) CAUSING IT TO COME LOOSE. THE WIRE WAS RE-TERMINATED AND THE EVENT ENDED IN 2 HRS. PCIS PANELS IN UNITS 1, 2, AND 3 AUXILIARY INSTRUMENT ROOMS WERE CHECKED FOR SIMILAR WIRING PROBLEMS. PANEL 9-42 IN UNIT 3 WAS FOUND TO HAVE 2 SIMILAR PROBLEMS WHERE 3 WIRES WERE TERMINATED ON A SINGLE TERMINAL. A DESIGN CHANGE WILL BE NECESSARY TO CORRECT THE WIRING. NO OTHER PROBLEMS WERE FOUND IN UNITS 1, 2, AND 3 PCIS PANELS. UNIT 3 IS CURRENTLY IN A REFUELING OUTAGE AND CORRECTIONS ARE EXPECTED BY THE END OF THE OUTAGE. THESE ARE CONSIDERED TO BE ISOLATED EVENTS AND NO FURTHER CORRECTIVE ACTION IS REQUIRED.

[ 25]           BROWNS FERRY 1   DOCKET 50-259           LER 84-024  
REACTOR SCRAM FROM TURBINE GENERATOR TRIP.  
EVENT DATE: 060284   REPORT DATE: 062284           NSSS: GE           TYPE: BWR

(NSIC 190417) INCREASE IN CONDUCTANCE OF THE STATOR COOLING WATER TEFLON INSULATING CONNECTOR TUBING CAUSED A TURBINE GENERATOR TRIP. THIS, IN TURN, CAUSED A REACTOR SCRAM WITH ALL ENGINEERED SAFETY SYSTEMS PERFORMING AS DESIGNED. AN INVESTIGATION GAVE A PROBABLE CAUSE OF INTERIOR SUPERFICIAL DEPOSIT OF IRON AND COPPER ONTO THE TEFLON LINING OF THE CONNECTOR TUBING. INLINE SYSTEM FILTERS ARE RATED FOR 30 MICRONS AND WERE REPLACED WITH 10 MICRON FILTERS. THIS, ALONG WITH A THOROUGH SYSTEM FLUSH, SHOULD REMEDY THIS TYPE OF CONDUCTANCE PROBLEM.

[ 26]           BROWNS FERRY 2   DOCKET 50-260           LER 84-005  
RESIDUAL HEAT REMOVAL (RHR) PUMP STARTS INADVERTENTLY.  
EVENT DATE: 052584   REPORT DATE: 061284           NSSS: GE           TYPE: BWR

(NSIC 190358) DURING NORMAL OPERATION, RESIDUAL HEAT REMOVAL PUMP 2C STARTED INADVERTENTLY WHILE PERFORMING SURVEILLANCE INSTRUCTION 4.2.B.45A. THE PUMP WAS STARTED DUE TO THE IMPROPER INTERPRETATION OF THE PROCEDURE INSTRUCTIONS BY THE

OPERATOR. THE BASIC CAUSE FOR THE MISINTERPRETATION WAS THE LACK OF CLARITY OF THE PROCEDURE. A RELAY WAS INHIBITED FOR LOOP II INSTEAD OF LOOP I ALLOWING THE INCORRECT PUMP START TO BE INITIATED. THE PUMP WAS TRIPPED MANUALLY AND PLACED BACK INTO STANDBY READINESS. CHANGES TO THIS PROCEDURE AS WELL AS SIMILAR SURVEILLANCE INSTRUCTIONS WILL BE IMPLEMENTED TO PREVENT RECURRENCE.

[ 27]        BROWNS FERRY 3                                DOCKET 50-296        LER 84-006  
 JET PUMP INSTRUMENT NOZZLE CRACKING.  
 EVENT DATE: 051784    REPORT DATE: 060884    NSSS: GE            TYPE: BWR

(NSIC 190363) BASED ON INFORMATION RECEIVED FROM A NRC PUBLICATION "INSIDE NRC," THE TENNESSEE VALLEY AUTHORITY (TVA) INSPECTED 10 ADDITIONAL WELDS ON THE JET PUMP INSTRUMENT NOZZLES. OF THESE, 2 WELDS WERE DETERMINED TO NEED REPAIR. 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. THESE ADDITIONAL WELDS WILL BE EXAMINED IN UPCOMING UNITS 1 AND 2 REFUELING OUTAGES.

[ 28]        BRUNSWICK 1                                      DOCKET 50-325        LER 82-005 REV 1  
 UPDATE ON CHLORINE DETECTOR FAILURES.  
 EVENT DATE: 011282    REPORT DATE: 043084    NSSS: GE            TYPE: BWR  
 VENDOR: WALLACE & TIERMAN, INC.

(NSIC 190399) DURING UNIT POWER OPERATION, PERFORMANCE OF THE CONTROL BLDG CHLORINE DETECTION SYSTEM CALIBRATION, PT-46.3PC, REVEALED THAT BOTH SYSTEM DETECTORS, 1-X-AT-2977 AND 2-X-AT-2977, DID NOT PROPERLY RESPOND TO APPLIED TEST SIGNALS. TECH SPECS 3.3.5.5, 6.9.1.9B. AN OUT-OF-TOLERANCE RESPONSE TIME AND NO AS-FOUND DRIP RATE IN THE 1-X DETECTOR AND CORROSION OF THE 2-X DETECTOR ARMATURE CAUSED THE ENCOUNTERED PROBLEMS. THE 1-X DETECTOR WAS REPLACED, THE 2-X DETECTOR WAS CLEANED, AND BOTH, MODEL NO. U24412, WERE SATISFACTORILY TESTED AND RETURNED TO SERVICE. NO FURTHER ACTION IS PLANNED REGARDING THESE EVENTS.

[ 29]        BRUNSWICK 2                                      DOCKET 50-324        LER 84-007  
 SAFETY RELIEF VALVES EXCEEDED SETPOINTS DURING TESTING.  
 EVENT DATE: 052284    REPORT DATE: 062184    NSSS: GE            TYPE: BWR  
 VENDOR: TARGET ROCK CORP.

(NSIC 190432) DURING A UNIT 2 REFUELING/MAINTENANCE OUTAGE, ASME-REQUIRED FUNCTIONAL TESTING OF THE UNIT'S 11 SAFETY RELIEF VALVES (S/RVS), B21-F013A, B, C, D, E, F, G, H, J, K, AND L, REVEALED THAT F013L WOULD NOT LIFT AND F013E, F, J, AND K EACH LIFTED AT PRESSURES ABOVE THEIR SPECIFIED SETPOINT TOLERANCES. TEST DATA PROVIDED BY WYLE LABORATORIES INDICATES THE VALVE TEST FAILURES OCCURRED DUE TO FRICTION IN THE VALVES' LABYRINTH SEAL GUIDE AREAS. ALL 11 VALVES HAVE BEEN REFURBISHED, RECERTIFIED, AND RECEIVED FOR REINSTALLMENT PRIOR TO INITIAL STARTUP OF THE UNIT FOR CYCLE 6 OPERATION. THE BWR OWNERS' GROUP HAS RECOMMENDED IMPROVEMENT IN MAINTENANCE PRACTICES WHICH ARE DIRECTED AT THE SPECIFIC CAUSES OF SETPOINT DRIFT. THESE IMPROVED MAINTENANCE PRACTICES HAVE BEEN IMPLEMENTED AS OF MAY 1984. IT IS FELT THAT THESE IMPROVED MAINTENANCE PRACTICES WILL REDUCE THE FREQUENCY OF RECURRENCE.

[ 30]        CALVERT CLIFFS 1                                      DOCKET 50-317        LER 81-058 REV 1  
 UPDATE ON DIESEL GENERATOR OUTPUT BREAKER INOPERABLE.  
 EVENT DATE: 072181    REPORT DATE: 033084    NSSS: GE            TYPE: PWR  
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 190344) DURING NORMAL STARTUP AT 1630, WHILE TROUBLESHOOTING THE SOURCE OF A SHUTDOWN SEQUENCE INITIATED SIGNAL, MAINTENANCE PERSONNEL REPORTED #12

EMERGENCY DIESEL GENERATOR (EDG) TO #21 4KV BUS OUT OF SERVICE (TECH SPEC 3.8.6.1). DURING THE SUBSEQUENT REPAIR AT 1639, OUTPUT BREAKER TO #14 4KV BUS WAS RACKED OUT, WHICH RESTORED SERVICE TO #21 4KV BUS. #11 AND #21 EDG'S REMAINED OPERABLE DURING THE EVENT. #12 EDG WAS RETURNED TO FULL SERVICE AT 1850. NO SIMILAR EVENTS HAD BEEN REPORTED. #12 EDG OUTPUT BREAKER TO #14 4KV BUS HAD AN AUXILIARY CONTACT STUCK CLOSED. GE CO. DEVICE MJ (GE TYPE SBM 10AX012G3) SHAFT BEARING WAS FOUND BOUND TO SWITCH HOUSING. REPLACED SWITCH WITH LIKE SPARE. PERMANENT FACILITY CHANGE DEENERGIZED HEATERS IN 4KV CUBICLES TO ELIMINATE EXCESSIVE TEMPERATURE BUILDUP. NO FURTHER ACTION IS REQUIRED.

[ 31] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-000E  
SILVER CONCENTRATION IN OYSTERS EXCEEDS LIMIT.  
EVENT DATE: 041283 REPORT DATE: 052323 NSSS: CE TYPE: PWR

(NSIC 190388) BIOACCUMULATION. THIS REPORT IS SUBMITTED TO COMPLY WITH THE REQUIREMENTS OF APPENDIX B ENV. TECH SPEC SECTION 5.6.2.B. OYSTER SAMPLES WERE COLLECTED ON APR 12, 1983 FROM THE CAMP CONOY SAMPLING LOCATION AND ANALYZED FOR GAMMA-EMITTING RADIONUCLIDES AS REQUIRED. THE RESULTS OF THE ANALYSES SHOWED THE PRESENCE OF AG-110M WITH AN AVERAGE CONCENTRATION OF 416 PLUS OR MINUS 24 PCI/KG(WET). THE OYSTER SAMPLES COLLECTED THE SAME DAY FROM THE KENWOOD BEACH SAMPLING LOCATION (THE BACKGROUND LOCATION) SHOWED AG-110M AVERAGE CONCENTRATION OF 24 PLUS OR MINUS 8 PCI/KG(WET). RADIOACTIVE RELEASES DURING THE PERIOD OF INTEREST IN 1983 FOR ALL ISOTOPES HAVE BEEN WITHIN THE ALLOWABLE LIMITS SPECIFIED IN ENV. TECH SPEC. THE NATURAL TENDENCY OF OYSTERS TO HIGHLY CONCENTRATE ENVIRONMENTAL SILVER CONTINUES TO BE THE CAUSE OF THIS EVENT AS WAS THE CAUSE OF SIMILAR EVENTS PREVIOUSLY REPORTED.

[ 32] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-025 REV 1  
UPDATE ON INOPERABLE AUTOMATIC TRIPS FOR REACTOR PROTECTION SYSTEMS.  
EVENT DATE: 060283 REPORT DATE: 050284 NSSS: CE TYPE: PWR  
VENDOR: LAMBDA ELECTRONICS  
ROCHESTER INSTRUMENT SYSTEMS, INC.

(NSIC 190402) AT 1010 DURING NORMAL OPERATIONS T HOT SIGNAL TO CHANNEL 'A' REACTOR PROTECTION SYSTEM (RPS) FAILED LOW, RENDERING AUTOMATIC TRIP UNITS FOR: HIGH POWER, THERMAL MARGIN/LOW PRESSURE AND AXIAL POWER DISTRIBUTION INOPERABLE (TECH SPEC 3.3.1.1). THE T HOT CHANNEL WAS REPAIRED AND RETURNED TO SERVICE AT 1530. DURING THIS EVENT THE ABOVE AUTOMATIC TRIP UNITS WERE BYPASSED. THE OTHER RPS CHANNELS REMAINED OPERABLE. SIMILAR EVENTS: NONE. THE FAILURE OF THE CHANNEL'S POWER SUPPLY (PS) (LAMBDA, MODEL #LCS-A-04-4335) WAS APPARENTLY CAUSED BY THE FAILURE OF THE CHANNEL'S TEMPERATURE TRANSMITTER (TT) (RIS, INC., MODEL #XSC-1372). BOTH THE PS AND TT WERE REPLACED. THE TT'S VENDOR ANALYSIS DETERMINED THAT THIS FAILURE WAS RANDOM; NO FURTHER ACTIONS ARE DEEMED NECESSARY.

[ 33] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-045 REV 1  
UPDATE ON CONTAINMENT ATMOSPHERE RADIATION MONITORS DECLARED INOPERABLE.  
EVENT DATE: 082983 REPORT DATE: 050884 NSSS: CE TYPE: PWR  
VENDOR: ASCO VALVES

(NSIC 190403) AT 2145 DURING NORMAL OPERATION, THE CONTAINMENT (CNMT) ATMOSPHERIC GASEOUS AND PARTICULATE RADIATION MONITORS' DISCHARGE SOLENOID VALVE WAS FOUND TO BE DAMAGED VENTING A PORTION OF THE FLOW TO THE AUXILIARY BLDG. THE RADIATION MONITORS' SAMPLE PUMP WAS SECURED AND THE CNMT ISOLATION VALVE WAS SHUT RENDERING THE RADIATION MONITORS INOPERABLE (TECH SPEC 3.4.6.1). THE CNMT PUMP LEVEL ALARM REMAINED OPERABLE THROUGHOUT THE EVENT. SIMILAR EVENTS: NONE. AN INVESTIGATION WAS UNABLE TO DETERMINE THE CAUSE OF THE DAMAGE TO THE VALVE. THE VALVE WAS REPLACED AND THE SYSTEM RETURNED TO SERVICE. NO FURTHER ACTION REQUIRED.

[ 34] CALVERT CLIFFS 1 DOCKET 50-317 LER 84-004 REV 1  
 UPDATE ON EXCESSIVE CHARGING PUMP PACKING FAILURES.  
 EVENT DATE: 022884 REPORT DATE: 042584 NSSS: CE TYPE: PWR  
 VENDOR: ARMCO STEEL CORP.

(NSIC 190367) DURING MODE 1 OPERATION AT 1025 ON FEB 28, 1984, NO. 12 CHARGING PUMP (CB-P) WAS TAKEN OUT OF SERVICE DUE TO EXCESSIVE PACKING LEAKAGE. AT 1840, NO. 13 CHARGING PUMP (CB-P) WAS TAKEN OUT OF SERVICE FOR THE SAME REASON AND UNIT 1 ENTERED THE ACTION STATEMENT OF TECH SPEC 3.1.2.4. POWER WAS REDUCED TO 88% AND THE UNIT WAS MANUALLY TRIPPED AT 2027 DUE TO THE UNAVAILABILITY OF SPARE CHARGING PUMP PACKING. NO. 11 CHARGING PUMP REMAINED OPERABLE THROUGHOUT THE EVENT. NO SIMILAR EVENTS HAVE OCCURRED. THIS EVENT WAS CAUSED BY THE FAILURE OF NO. 12 AND NO. 13 CHARGING PUMP (CB-P) PLUNGER PACKING AND EXACERBATED BY PREVIOUS PACKING FAILURES WHICH DEPLETED THE STOCK OF PACKING. ADDITIONAL PACKING HAD BEEN PREVIOUSLY ORDERED AND WAS IN SHIPMENT AT THE TIME OF THIS EVENT. AN EVALUATION OF ALTERNATIVE CHARGING PUMP PACKING MATERIALS AND PLUNGER MATERIALS IS IN PROGRESS. THE MINIMUM ORDER POINT FOR PACKING MATERIAL IS BEING INCREASED. A PERFORMANCE SPECIFICATION HAS BEEN WRITTEN AND WILL BE USED FOR FUTURE PACKING PURCHASES.

[ 35] CALVERT CLIFFS 2 DOCKET 50-318 LER 81-053 REV 1  
 UPDATE ON SALTWATER SYSTEM VALVE FAILURE.  
 EVENT DATE: 110581 REPORT DATE: 060484 NSSS: CE TYPE: PWR

(NSIC 190473) AT 1430 DURING NORMAL OPERATION, DISCHARGE PRESSURE ON 22 SALTWATER (SW) PUMP WAS DISCOVERED TO BE HIGH DUE TO THE CLOSURE OF THE SW OUTLET ARTICULATED VALVE, CV-5214, FROM 22 SERVICE WATER HEAT EXCHANGER. THIS RESULTED IN DEGRADED SW FLOW (TECH SPEC 3.7.5.1). THE VALVE WAS REPAIRED, TESTED AND RETURNED TO THE OPEN POSITION AT 1250 ON NOVEMBER 7. THE REDUNDANT SW SUBSYSTEM REMAINED OPERABLE THROUGHOUT THIS EVENT. SIMILAR EVENTS: NONE. THE VALVE MALFUNCTIONED BECAUSE THE KEY WHICH LOCKS THE ACTUATOR TO THE VALVE STEM HAD SLIPPED OUT OF ITS KEYWAY. THE ACTUATORS AND THE VALVE INTERNALS OF CV-5209 AND CV-5214, ON BOTH UNITS 1 AND 2, HAVE BEEN REMOVED. THE WORK WAS PERFORMED IN ACCORDANCE WITH PCR 80-017.

[ 36] CALVERT CLIFFS 2 DOCKET 50-318 LER 82-046 REV 1  
 UPDATE ON REACTOR PROTECTION SYSTEM POWER SUPPLY FAILURE.  
 EVENT DATE: 092082 REPORT DATE: 051084 NSSS: CE TYPE: PWR  
 VENDOR: POWER-MATE

(NSIC 190345) AT 1115, DURING NORMAL OPERATION, REACTOR PROTECTIVE SYSTEM CHANNEL C TRIP UNIT FOR HIGH PRESSURIZER PRESSURE TRIPPED FOR NO APPARENT REASON AND WAS SUBSEQUENTLY BYPASSED (TECH SPEC 3.3.1.1). THE TRIP UNIT'S POWER SUPPLY WAS REPLACED AND THE CHANNEL RETURNED TO SERVICE AT 1330. THE 3 REDUNDANT CHANNELS REMAINED OPERABLE DURING THIS EVENT. SIMILAR EVENTS: 76-7 (U-1). THE CAUSE FOR THIS EVENT WAS A FAILED LOW TRIP BISTABLE POWER SUPPLY (POWERMATE MODEL #DRA15-.750/15-.750B). REPLACED POWER SUPPLY (PS). VENDOR'S ANALYSIS OF FAILED PS DETERMINED THIS FAILURE TO BE ISOLATED. DUE TO REPETITIVE FAILURES, A FACILITY CHANGE REQUEST HAS BEEN WRITTEN TO REPLACE THIS MODEL POWER SUPPLY; NO FURTHER ACTIONS DEEMED NECESSARY.

[ 37] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-039 REV 1  
 UPDATE ON STEAM DRIVEN FEEDWATER PUMP INADVERTENTLY STARTS.  
 EVENT DATE: 081583 REPORT DATE: 053084 NSSS: CE TYPE: PWR  
 VENDOR: FISHER CONTROLS CO.

(NSIC 190471) DURING NORMAL OPERATIONS, 2-CV-4071 MAIN STEAM SUPPLY VALVE TO THE STEAM DRIVEN AUXILIARY FEEDWATER (AFW) PUMPS FAILED OPEN CAUSING 21 AFW PUMP TO



START. TO REPAIR THE VALVE, THE AUTO INITIATE CAPABILITY FOR THE STEAM DRIVEN APW PUMPS WAS DEFEATED (TECH SPEC 3.7.1.2). THE APW SYSTEM WAS RETURNED TO A NORMAL LINEUP 14 HOURS AFTER BEING DECLARED INOPERABLE. THE MOTOR DRIVEN PUMP REMAINED OPERABLE THROUGHOUT THE EVENT. SIMILAR EVENTS: 83-035. THE OPENING OF 2-CV-4071 WAS DUE TO FAILURE OF THE ACTUATOR DIAPHRAGM. DIAPHRAGM WAS REPLACED ON 8-15-83. FURTHER INVESTIGATION REVEALED DIAPHRAGM PLATE NUT SHOULD BE TORQUED TO 400 FT/LB AND COULD CAUSE DIAPHRAGM FAILURE IF IMPROPERLY TORQUED. THE SUBJECT NUT TORQUE WAS CHECKED ON ALL TYPE 657NS ACTUATORS DURING MAY, 1984 SHUTDOWN.

[ 38] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-050 REV 1  
 UPDATE ON STEAM DRIVEN APW PUMP SUPPLY VALVE FAILS.  
 EVENT DATE: 092283 REPORT DATE: 053084 NSSS: CE TYPE: PWR  
 VENDOR: FISHER CONTROLS CO.

(NSIC 190472) DURING NORMAL OPERATIONS, 2-CV-4070 MAIN STEAM SUPPLY VALVE TO THE STEAM DRIVEN AUXILIARY FEEDWATER (APW) PUMPS FAILED TO SHUT FOLLOWING SURVEILLANCE TESTING. TO REPAIR THE VALVE, AUTO INITIATE CAPABILITY FOR THE STEAM DRIVEN APW PUMPS WAS DEFEATED (T.X.3.7.1.2). THE APW SYSTEM WAS RETURNED TO A NORMAL LINEUP 13.5 HOURS AFTER BEING DECLARED INOPERABLE. THE MOTOR DRIVEN PUMP REMAINED OPERABLE THROUGHOUT THE EVENT. SIMILAR EVENTS: 83-035, 83-039. THE VALVE ACTUATOR WAS DISASSEMBLED AND THE SHAFT HOLE IN THE CENTER OF THE DIAPHRAGM WAS FOUND TO BE OVERSIZED. A NEW DIAPHRAGM WITH THE CORRECT SHAFT HOLE SIZE WAS INSTALLED, AND THE ACTUATOR REINSTALLED ON THE VALVE. DURING THE MAY, 1984 SHUTDOWN ALL VALVES WITH THIS TYPE ACTUATOR WERE INSPECTED AND DIAPHRAGMS REPLACED WITH ONES WITH CORRECT HOLE SIZES.

[ 39] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-067  
 CHARGING PUMP DISCHARGE RELIEF VALVE OPENS.  
 EVENT DATE: 120883 REPORT DATE: 011384 NSSS: CE TYPE: PWR  
 VENDOR: CORSBY VALVE & GAGE CO.

(NSIC 190404) AT 0655 DURING NORMAL OPERATION, WITH NUMBER 22 CHARGING PUMP OUT OF SERVICE, 23 CHARGING PUMP DISCHARGE RELIEF VALVE LIFTED. 23 CHARGING PUMP WAS IMMEDIATELY REMOVED FROM SERVICE (TECH SPEC 3.1.2.4). 22 CHARGING PUMP WAS RETURNED TO SERVICE AT 0935. 21 CHARGING PUMP REMAINED OPERABLE DURING THE EVENT. SIMILAR EVENTS: 50-317/82-13. 2-RV-324 WAS TESTED AND FOUND TO LIFT AT 2650 PSIG. DISASSEMBLY OF THE VALVE REVEALED A DAMAGED DISC. THE DISC WAS REPLACED AND FURTHER TESTING ACHIEVED THE CORRECT SETPOINT. THE VALVE WAS INSTALLED AND 23 CHARGING PUMP RETURNED TO SERVICE. CAUSE OF RELIEF VALVE LIFTING WAS A DAMAGED DISC. NO FURTHER CORRECTIVE ACTION IS REQUIRED.

[ 40] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-074 REV 1  
 UPDATE ON AUXILIARY FEEDWATER PUMP STARTS ON VALVE FAILURE.  
 EVENT DATE: 122383 REPORT DATE: 020984 NSSS: CE TYPE: PWR  
 VENDOR: FISHER CONTROLS CO.

(NSIC 190348) DURING NORMAL OPERATION, THE MAIN STEAM SUPPLY VALVE TO THE STEAM DRIVEN AUXILIARY FEEDWATER (APW) PUMPS FAILED OPEN CAUSING 21 APW PUMP TO START. TO REPAIR THE VALVE, THE AUTO INITIATE CAPABILITY FOR THE STEAM DRIVEN APW PUMPS WAS DEFEATED (TECH SPEC 3.7.1.2). THE APW SYSTEM WAS RETURNED TO A NORMAL LINEUP 17.5 HRS AFTER BEING DECLARED INOPERABLE. THE MOTOR DRIVEN PUMP REMAINED OPERABLE THROUGHOUT THE EVENT. SIMILAR EVENTS: 50-318/83-35, 83-39, 83-50. THE DIAPHRAGM'S CASING HOLES WERE ELONGATED BECAUSE OF INSUFFICIENT TORQUE ON SOME OF THE CASING CAP SCREWS. A NEW DIAPHRAGM WAS INSTALLED AND PROPERLY TORQUED. THE VALVE WAS THEN TESTED SATISFACTORILY. UNIT 2 MAINTENANCE PERSONNEL HAVE BEEN INSTRUCTED ON PROPER ACTUATOR MAINTENANCE PER VENDOR'S TECH MANUALS.

[ 41] COOK 1 DOCKET 50-315 LER 83-098 REV 1  
 UPDATE ON INCORE DETECTOR COMPUTER CODE HAD WRONG VALVES.  
 EVENT DATE: 100683 REPORT DATE: 062184 NSSS: WE TYPE: PWR

(NSIC 190347) ON 10-06-83, PLANT PERSONNEL WERE NOTIFIED BY AEPSC THAT THE WRONG VALUES FOR THE EP(Z) WERE USED FOR THE INCORE DETECTOR COMPUTER CODE DURING UNIT 1 CYCLE VII OPERATION. THIS COULD HAVE ALLOWED THE UNIT TO EXCEED ITS FQ LIMIT BETWEEN NORMAL SURVEILLANCE FLUX MAPS AS THE EP(Z) TERM ACCOUNTS FOR THE REDUCTION IN THE FLQ (E L) CURVE DUE TO AN ACCUMULATION OF BURNUP PRIOR TO THE NEXT FLUX MAP. THIS IS THE FIRST OCCURRENCE. THIS REPORT IS BEING SUBMITTED PER REQUIREMENTS OF TECH SPEC 6.9.1.12.F. AEPSC PERSONNEL FAILED TO CHANGE THE INPUT DATA SET CARD NO. Z14E TO REFLECT THE TECH SPEC CHANGES AS PER AMENDMENT NO. 61 THAT WAS ISSUED ON 9-15-82. TO PREVENT RECURRENCE AEPSC HAS REVISED THE APPLICABLE PROCEDURE TO REQUIRE INDEPENDENT VERIFICATION OF ALL TECH SPEC CHANGES.

[ 2] COOK 1 DOCKET 50-315 LER 84-006  
 BLOCKED FIRE DOOR.  
 EVENT DATE: 051084 REPORT DATE: 060784 NSSS: WE TYPE: PWR  
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 190320) ON 5-10-84, AT 2045 HRS WITH UNIT 1 AT 100% POWER, AND UNIT 2 IN REFUELING MODE, OPERATION PERSONNEL DISCOVERED FIRE DOOR 230 INOPERABLE WITHOUT A FIREWATCH PRESENT DUE TO AN AIR HOSE PASSING THROUGH THE DOORWAY, THUS PREVENTING FULL CLOSURE. FIRE DOOR 230 LEADS TO THE HALLWAY TO THE AUXILIARY FEED PUMP ROOMS. THIS DOOR WAS IN ITS NORMAL POSITION, FULL OPEN WITH FUSIBLE LINKS HOLDING THE DOORS OPEN. THIS CONDITION EXISTED FOR APPROX. 4 HRS AND 45 MINS WHICH EXCEEDS THE 1 HR LIMIT OF TECH SPEC 3.7.10.

[ 43] COOK 1 DOCKET 50-315 LER 84-007  
 DISCOVERY OF ERROR IN DETECTOR CODE.  
 EVENT DATE: 052484 REPORT DATE: 062184 NSSS: WE TYPE: PWR

(NSIC 190426) ON 5-22-84, WITH UNIT 1 AT 100% POWER, A DETECTOR CODE PROGRAMMING ERROR WAS DISCOVERED IN THE CALCULATIONAL LOGIC WHILE IN THE PROCESS OF MODIFYING THE CODE. THIS CODE ANALYZES RAW FLUX MAP DATA TO DETERMINE COMPLIANCE WITH POWER DISTRIBUTION TECH SPECS. THIS ERROR WAS PRESENT IN DETECTOR VERSION 23, WHICH WAS USED IN ANALYZING THE FIRST 47 FLUX MAPS TAKEN DURING UNIT 1 CYCLE 8. THESE CHANGES WERE MADE IN AUG 1983 IN ACCORDANCE WITH NUCLEAR MATERIALS AND FUEL MANAGEMENT (NMFM) PROCEDURE NO. 7, "CHANGES TO THE DETECTOR CODE." TESTING OF THIS VERSION OF DETECTOR, WHICH WAS CARRIED OUT AT THE TIME THE CHANGES WERE MADE, DID NOT INDICATE THAT THIS ERROR WAS PRESENT. ALL 47 FLUX MAPS WERE REVIEWED AND IT WAS DETERMINED THAT NO TECH SPECS WERE VIOLATED. TO PREVENT RECURRENCE, A PROCEDURE CHANGE IS BEING MADE WHICH WILL REQUIRE AN INDEPENDENT LINE BY LINE REVIEW OF THE CODING TO BE PERFORMED. SINCE THIS IS BEING MADE IN CONJUNCTION WITH OTHER CHANGES FOR UNIT 2 CYCLE 5, NO FOLLOWUP LER WILL BE SUBMITTED. THIS REPORT IS BEING SUBMITTED AS A VOLUNTARY LER.

[ 44] COOK 2 DOCKET 50-316 LER 84-012  
 UNPLANNED SAFETY INJECTION ACTUATION OCCURS.  
 EVENT DATE: 050884 REPORT DATE: 060784 NSSS: WE TYPE: PWR

(NSIC 190321) ON 5-8-84, AT 1536 HRS AND WITH UNIT 2 IN MODE 6, AN INADVERTENT SAFETY INJECTION (SI) OCCURRED DURING THE PERFORMANCE OF A LOAD SHEDDING SURVEILLANCE TEST ON THE TRAIN B DIESEL GENERATOR. THE SI OCCURRED WHEN TEST PERSONNEL WERE PERFORMING THE NECESSARY STEPS TO RESTORE THE TRAIN A SOLID STATE PROTECTION SYSTEM (SSPS), AND PLACED THE TRAIN A CONTROL SWITCH IN THE OPERATE POSITION PRIOR TO RESETTING THE SI BLOCKS. TO PREVENT RECURRENCE, THE PROCEDURE

FOR D.G. LOAD SHEDDING FOR BOTH UNITS 1 AND 2 ARE BEING MODIFIED TO CLARIFY THE SEQUENCE FOR RESTORATION OF THE SSPS.

[ 45] COOK 2 DOCKET 50-316 LER 84-013  
 UNIT 2 AB BATTERY BELOW THE 80% CAPACITY REQUIREMENT DURING THE 60 MONTH CAPACITY TEST.  
 EVENT DATE: 051684 REPORT DATE: 061484 NSSS: WE TYPE: PWR  
 VENDOR: EXIDE INDUSTRIAL DIV

(NSIC 190366) ON 5-16-84, WHILE IN MODE 5, THE SCHEDULED 60 MONTH CAPACITY DISCHARGE TEST WAS PERFORMED ON THE UNIT 2, AB BATTERY. FINAL TEST RESULTS INDICATED A 71% CAPACITY OF THE MANUFACTURERS RATING, THUS NOT MEETING THE 80% CAPACITY REQUIRED BY TECH SPECS, PARAGRAPH 4.8.2.3.2E. ALTHOUGH THE CAPACITY DURING THE 60 MONTH TEST WAS BELOW THAT REQUIRED, SATISFACTORY TEST RESULTS HAD BEEN OBTAINED ON THE WEEKLY, QUARTERLY, AND 18 MONTH BATTERY SURVEILLANCE TESTS. BASED ON THESE RESULTS IT IS CONCLUDED THAT THE AB BATTERY WAS CAPABLE OF PERFORMING ITS DESIGN FUNCTION IN THE MODES WHEN IT WAS REQUIRED. THE CD BATTERY REMAINED OPERABLE AT ALL TIMES EXCEPT DURING ITS 18 MONTH AND 60 MONTH SURVEILLANCE TESTS. THIS REPORT IS BEING SUBMITTED AS A VOLUNTARY REPORT TO REPORT THE RESULTS OF THE 60 MONTH DISCHARGE TEST REQUIRED BY TECH SPEC 4.8.2.3.2E. THE 2AB BATTERY HAS BEEN REPLACED AND IS PRESENTLY UNDERGOING PERFORMANCE TESTING WHICH WILL BE COMPLETED ON 6/17/84.

[ 46] COOK 2 DOCKET 50-316 LER 84-015  
 MODE 5 SHUTDOWN MARGIN SURVEILLANCE GRACE PERIOD EXCEEDED.  
 EVENT DATE: 060284 REPORT DATE: 070284 NSSS: WE TYPE: PWR

(NSIC 190427) ON JUN 2, 1984, AT 0620 HRS, WITH THE REACTOR COOLANT SYSTEM IN MODE 5, THE MODE 5 SHUTDOWN MARGIN DETERMINATION SURVEILLANCE GRACE PERIOD WAS EXCEEDED AS A RESULT OF A LATE SAMPLE ANALYSIS ON THE REACTOR COOLANT SYSTEM BORON CONCENTRATION. THIS EXCEEDED BY 35 MINS THE GRACE PERIOD OF 3.25 TIMES THE 24 HR SURVEILLANCE PERIOD FOR 3 CONSECUTIVE SURVEILLANCES, AS PER SPEC 4.0.2.B. THIS TECH SPEC VIOLATION OCCURRED WHEN THE SCHEDULED REACTOR COOLANT SYSTEM SAMPLE WAS NOT TAKEN BY CHEMICAL LAB PERSONNEL DURING THE REQUIRED TIME FRAME. THE CAUSE OF THIS PERSONNEL ERROR WAS DETERMINED TO BE INADEQUATE FOLLOWUP WHEN DIFFICULTY WAS ENCOUNTERED WHILE ATTEMPTING TO TAKE THE SCHEDULED SAMPLE. APPROPRIATE ADMINISTRATIVE MEASURES WERE TAKEN, PERSONNEL INVOLVED WERE REINSTRUCTED AND SAMPLE FREQUENCY WAS INCREASED TO PREVENT RECURRENCE. A REACTOR COOLANT SAMPLE TAKEN AT 0655 HRS ON JUN 2, 1984 SHOWED THE BORON CONCENTRATION TO BE 2159 PPM. THE REQUIRED BORON CONCENTRATION FOR SHUTDOWN MARGIN WAS 1620 PPM. THEREFORE, PROPER SHUTDOWN MARGIN WAS MAINTAINED AND THERE WERE NO SAFETY CONSEQUENCES OR IMPLICATIONS RESULTING FROM THIS EVENT.

[ 47] COOK 2 DOCKET 50-316 LER 84-016  
 INOPERABLE FIRE PENETRATIONS.  
 EVENT DATE: 060384 REPORT DATE: 070384 NSSS: WE TYPE: PWR

(NSIC 190428) ON 6-3-84 AT 2100 HRS WITH UNIT 2 IN MODE 5, AND UNIT 1 AT 100% POWER, OPERATIONS PERSONNEL DISCOVERED FIRE SEALS #7091 AND #7500 INOPERABLE WITHOUT A FIREWATCH PRESENT. A CONTINUOUS FIREWATCH WAS ESTABLISHED WITHIN MINS OF THE DISCOVERED INOPERABLE SEALS AND THE SEALS WERE REPAIRED THE FOLLOWING DAY. THESE DAMAGED FIRE SEALS WERE OF A TEMPORARY NATURE SERVING NEW FIRE PROTECTION PIPING BEING INSTALLED FOR APPENDIX 'R.' THIS CONDITION EXISTED FOR AN INDETERMINABLE PERIOD OF TIME BETWEEN MAR 26 AND JUN 3, 1984.

[ 48] CRYSTAL RIVER 3 DOCKET 50-302 LER 82-041 REV 1  
 UPDATE ON BORON INJECTION FLOW CONTROL VALVE FAILS DURING TESTS.  
 EVENT DATE: 060882 REPORT DATE: 060184 NSSS: BW TYPE: PWR  
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 190286) AT 2100, WHILE VERIFYING OPERABILITY OF BORON INJECTION SOURCES AND PUMPS (SP-320), DHV-111 FAILED TO CONTROL FLOW, CONTRARY TO TECH SPEC 3.5.2. THIS SAME EVENT OCCURRED ON JUN 22, 1982. REDUNDANCY WAS PROVIDED BY THE 'A' DECAY HEAT TRAIN IN BOTH CASES. MAINTENANCE WAS INITIATED AND OPERABILITY RESTORED ON JUN 8, 1982 AND JUN 23, 1982, RESPECTIVELY. THIS WAS THE 3RD AND 4TH OCCURRENCES FOR DHV-111 AND THE 19TH REPORT UNDER THIS SPECIFICATION. THE CAUSE OF THESE EVENTS IS ATTRIBUTED TO A STUCK HIGH FLOW SWITCH. THE SWITCH WAS EXERCISED, CALIBRATED, AND FUNCTIONALLY TESTED SATISFACTORILY. AN ENGINEERING EVALUATION HAS DETERMINED THE FOLLOWING ADDITIONAL CORRECTIVE ACTION TO BE IMPLEMENTED: (1) REPLACE EXISTING FLOW SWITCH WITH ELECTRONIC CONTROLS; (2) CHANGE OUT HELICAL GEARS IN VALVE ACTUATOR.

[ 49] CRYSTAL RIVER 3 DOCKET 50-302 LER 82-051 REV 1  
 UPDATE ON LPSI TRAIN INOPERABLE.  
 EVENT DATE: 072882 REPORT DATE: 060184 NSSS: BW TYPE: PWR  
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 190287) AT 0600, WHILE RECIRCULATING THE BWST WITH DHP-1A PER SP-320, DHV-110 WAS DETERMINED INOPERABLE. THIS IS CONTRARY TO TECH SPEC 3.5.2. MAINTENANCE WAS INITIATED AND OPERABILITY RESTORED AT 1500. REDUNDANCY WAS PROVIDED BY 'B' LPI TRAIN. THIS IS THE 10TH OCCURRENCE FOR DHV-110 AND THE 20TH REPORT UNDER THIS SPECIFICATION. THE CAUSE OF THIS EVENT IS ATTRIBUTED TO AIR IN THE DH-43-FIS SENSING LINES. THE LINES WERE VENTED AND DHV-110 WAS FUNCTIONALLY TESTED WITH SATISFACTORY RESULTS. AN ENGINEERING EVALUATION HAS DETERMINED THE FOLLOWING ADDITIONAL CORRECTIVE ACTION TO BE IMPLEMENTED: (1) REPLACE EXISTING FLOW SWITCH WITH ELECTRONIC CONTROLS; (2) CHANGE OUT HELICAL GEARS IN VALVE ACTUATOR.

[ 50] CRYSTAL RIVER 3 DOCKET 50-302 LER 82-059 REV 1  
 UPDATE ON RHR TRAIN INOPERABLE.  
 EVENT DATE: 091582 REPORT DATE: 060184 NSSS: BW TYPE: PWR  
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 190288) AT 0540, ON SEPT 15, 1982, WHILE PERFORMING SURVEILLANCE ON DECAY HEAT LINE 'B', A VALVE (DHV-111) FAILED TO CONTROL FLOW AS INTENDED. THIS IS CONTRARY TO THE REQUIREMENTS OF TECH SPEC 3.5.2. OPERABILITY WAS RESTORED AT 1500 ON SEPT 16, 1982. DECAY HEAT LINE 'A' WAS AVAILABLE TO PROVIDE EMERGENCY CORE COOLING. THIS IS THE 5TH OCCURRENCE FOR DHV-111 AND THE 21ST REPORT UNDER THIS SPECIFICATION. THIS EVENT WAS CAUSED BY AN INOPERABLE FLOW SWITCH. THE SWITCH WAS REPLACED AND CALIBRATED, AND THE DHV-111 WAS FUNCTIONALLY TESTED WITH SATISFACTORY RESULTS. AN ENGINEERING EVALUATION HAS DETERMINED THE FOLLOWING ADDITIONAL CORRECTIVE ACTION TO BE IMPLEMENTED: (1) REPLACE EXISTING FLOW SWITCH WITH ELECTRONIC CONTROLS; (2) CHANGE OUT HELICAL GEARS IN VALVE ACTUATOR.

[ 51] CRYSTAL RIVER 3 DOCKET 50-302 LER 83-039 REV 1  
 UPDATE ON SETPOINT DRIFTS.  
 EVENT DATE: 091383 REPORT DATE: 012784 NSSS: BW TYPE: PWR  
 VENDOR: BAILEY METER COMPANY

(NSIC 190291) ELEVEN PROCESS INSTRUMENTS REQUIRED BY TECH SPEC 3.3 WERE FOUND TO BE OUT OF CALIBRATION DURING MODE 5 SURVEILLANCE TESTING AND ARE BEING REPORTED AS SUGGESTED BY REG GUIDE 1.16. ANY MARGIN REDUCTION WAS NOT CONSIDERED TO SIGNIFICANTLY AFFECT PLANT SAFETY DUE TO MARGIN AVAILABLE FROM OTHER SOURCES.

THIS IS THE 10TH REPORT UNDER REG GUIDE 1.16. THE CAUSE OF THIS OCCURRENCE IS PROCEDURAL INADEQUACY IN THAT EITHER 1) THE STRING ERROR ALLOCATION OR 2) THE COMPONENT TOLERANCE OR 3) BOTH 1 AND 2, REFLECTED IN THE PROCEDURE LIMITS WERE INCORRECT. THE AFFECTED RPS PROCEDURES WERE REVISED TO CONFORM TO MANUFACTURER'S RECOMMENDED TOLERANCES AND TO INCORPORATE OTHER SETPOINT CHANGES RECOMMENDED BY B&W. LONG RANGE PLANS INCLUDE UPGRADING INSTRUMENTS HAVING EXCESSIVE DRIFT, SPECIFICALLY PROCESS TRANSMITTERS.

[ 52] CRYSTAL RIVER 3 DOCKET 50-302 LER 84-0005  
 FIRE SUPPRESSION SYSTEM INOPERABLE.  
 EVENT DATE: 011484 REPORT DATE: 012384 NSSS: BW TYPE: PWR

(NSIC 190386) VALVES CLOSED FOR LEAK TESTING. A PORTION OF THE FIRE SUPPRESSION WATER SYSTEM WAS TAKEN OUT OF SERVICE CONTRARY TO TECH SPEC 3.7.11.1, AND THEREFORE REPORTABLE UNDER TECH SPEC 6.9.2(F). BY OBSERVATION OF WATER INVENTORY, IT WAS DETERMINED THAT A LEAK EXISTED IN THE FIRE SUPPRESSION WATER SYSTEM. PERSONNEL WITH RADIOS WERE STATIONED AT EACH VALVE IN THE FIRE SUPPRESSION SYSTEM WHICH HAD TO BE CLOSED TO CONDUCT THE TEST. THE TEST WAS COMPLETED WHEN THE FIRE SUPPRESSION SYSTEM LEAK WAS LOCATED AND THE SYSTEM WAS RETURNED TO THE NORMAL OPERATING LINEUP. THE FIRE SUPPRESSION WATER SYSTEM WAS "INOPERABLE" FOR A TOTAL OF 1 HR AND 3 MINS. TESTING WAS COMPLETED RESULTING IN LEAK LOCATION DETERMINATION AND THE SYSTEM BEING RETURNED TO NORMAL VALVE LINE-UP.

[ 53] DAVIS-BESSE 1 DOCKET 50-346 LER 83-059 REV 1  
 UPDATE ON AUXILIARY FEEDWATER TRAIN DECLARED INOPERABLE.  
 EVENT DATE: 110383 REPORT DATE: 050984 NSSS: BW TYPE: PWR

(NSIC 190297) (NP-33-83-82) ON 11/3/83 AT 0006 HRS, POSITION INDICATION FOR AUXILIARY FEEDWATER (APW) PUMP 2 STEAM ISOLATION VALVE MS107A WAS LOST IN THE CONTROL ROOM. APW TRAIN 2 WAS THEREBY DECLARED INOPERABLE, PLACING THE UNIT IN THE ACTION STATEMENT OF TECH SPEC 3.7.1.2. APW TRAIN 1 WAS OPERABLE AT ALL TIMES DURING THIS OCCURRENCE. THE CAUSE OF THIS OCCURRENCE WAS A COMPONENT FAILURE ATTRIBUTED TO THE BLOWN CONTROL POWER FUSE IN THE CONTROL CIRCUITRY OF VALVE MS107A. ON 11/3/83 AT 0042 HRS, THE BLOWN FUSE WAS REPLACED UNDER MAINTENANCE WORK ORDER 83-1027. THIS RESTORED THE POSITION INDICATION OF MS107A. APW TRAIN 2 WAS DECLARED OPERABLE, REMOVING THE UNIT FROM THE ACTION STATEMENT.

[ 54] DAVIS-BESSE 1 DOCKET 50-346 LER 83-070 REV 1  
 UPDATE ON HIGH CHLORIDE CONCENTRATION IN REACTOR COOLANT SYSTEM.  
 EVENT DATE: 121083 REPORT DATE: 050984 NSSS: BW TYPE: PWR

(NSIC 190298) (NP-33-83-99) AT 0845 HRS ON 12/10/83, A ROUTINE ANALYSIS OF THE REACTOR COOLANT SYSTEM (RCS) SAMPLE INDICATED 0.20 PPM CHLORIDE (C1) WHICH EXCEEDS TECH SPEC 3.4.7 LIMIT OF 0.15 PPM C1. THE MAXIMUM MEASURED VALUE WAS 0.26 PPM C1 AT 1430 HRS. THE CHLORIDE CONCENTRATION EXCEEDED TECH SPEC LIMITS FOR ONLY APPROX 22 HRS AND WAS BELOW TRANSIENT LIMITS. OPERATION ABOVE STEADY STATE BUT BELOW TRANSIENT LIMITS FOR LESS THAN 24 HRS WILL NOT SIGNIFICANTLY AFFECT THE STRUCTURAL INTEGRITY OF THE RCS. PURIFICATION DEMINERALIZER 1-1 WAS EXHAUSTED ON CHLORIDES. THE TYPE OF RESIN THAT EXHAUSTED WAS ARM-9390. WITH A WEAK-BASE RESIN SUCH AS THIS, DEMINERALIZED WATER HYDROLIZES THE CHLORIDE, AND THE CHLORIDE COMES OFF AS A WEAK-ACID. PURIFICATION DEMINERALIZER 1-2 WAS PLACED IN SERVICE TO REMOVE THE CHLORIDES. THE RCS WAS WITHIN LIMITS BY 0700 HRS ON 12/11/83. RESIN IN PURIFICATION DEMINERALIZER 1-1 WAS REPLACED.

[ 55]           DAVIS-BESSE 1                           DOCKET 50-346           LER 84-005  
 INOPERABLE CONTROL ROOM EMERGENCY VENTILATION SYSTEMS.  
 EVENT DATE: 050784   REPORT DATE: 060684           NSSS: BW           TYPE: PWR

(NSIC 190368) DURING A SURVEILLANCE TEST, IT WAS FOUND THAT BOTH CONTROL ROOM EMERGENCY VENTILATION CHILLER CONTROL SWITCHES IN THE CONTROL ROOM A/C EQUIPMENT ROOM WERE IN THE 'OFF' POSITION. THIS RENDERED BOTH CONTROL ROOM EMERGENCY VENTILATION SYSTEM TRAINS INOPERABLE. THE CAUSE IS BELIEVED TO BE PERSONNEL ERROR; FAILURE TO RETURN THE SWITCHES TO 'ON' AFTER PREVENTIVE MAINTENANCE. AS A RESULT, NAMEPLATES WERE PLACED ABOVE THE SWITCHES TO REQUIRE THAT THE SHIFT SUPERVISOR IS NOTIFIED PRIOR TO TURNING OFF. THE PREVENTIVE MAINTENANCE PROCEDURES WERE MODIFIED TO INFORM THE SHIFT SUPERVISOR THAT THE CONTROL ROOM EMERGENCY VENTILATION SYSTEM UNIT BEING CHECKED WILL BE INOPERABLE AND TO REQUIRE THAT THE SWITCHES ARE VERIFIED TO BE ON AFTER THE PREVENTIVE MAINTENANCE IS PERFORMED. ALSO, PERSONNEL WHO PERFORM MAINTENANCE ON THE SYSTEM WERE COUNSELED ABOUT THIS EVENT.

[ 56]           DAVIS-BESSE 1                           DOCKET 50-346           LER 84-006  
 UNIDENTIFIED REACTOR COOLANT SYSTEM LEAKAGE IN EXCESS OF 1 GPM.  
 EVENT DATE: 051584   REPORT DATE: 061484           NSSS: BW           TYPE: PWR  
 VENDOR: ROCKWELL-INTERNATIONAL

(NSIC 190369) AT 2020 HRS ON MAY 15, 1984, THE CONTROL ROOM OPERATOR NOTED MAKEUP TANK LEVEL DROPPING AT A RATE OF 3 GPM. THIS PLACED THE UNIT IN THE ACTION STATEMENT OF TECH SPEC 3.4.6.2(B). ATTEMPTS TO ISOLATE THE LEAK WERE UNSUCCESSFUL. A CONTAINMENT ENTRY WAS MADE, AND THE LEAK WAS FOUND TO BE IN THE VICINITY OF THE PRESSURIZER SPRAY CONTROL VALVE. AT 0020 HRS ON MAY 16, 1984, A REACTOR SHUTDOWN WAS INITIATED, AND AN UNUSUAL EVENT WAS DECLARED AT 0130 HRS. THE UNIT ENTERED MODE 3, HOT STANDBY, AT 0600 HRS. DURING THE COURSE OF THE REACTOR COOLANT SYSTEM DEPRESSURIZATION ON MAY 16, THE UNIT ENTERED REACTOR PROTECTION SYSTEM SHUTDOWN BYPASS WITHOUT PERFORMING A REQUIRED SURVEILLANCE TEST WHICH WAS THEN DONE LATER THE SAME DAY AFTER THE ERROR WAS CONFIRMED. AT 1515 HRS ON MAY 16, 1984, THE UNIT WAS REMOVED FROM THE UNUSUAL EVENT STATUS AFTER THE DETERMINATION THAT THE LEAKAGE WAS NOT PRESSURE BOUNDARY LEAKAGE. THE LEAKING VALVE, RC4 THE SPRAY VALVE BYPASS, HAD A PACKING LEAK AND WAS REPACKED AND DECLARED OPERABLE AT 1115 HRS ON MAY 17, 1984. DURING THE SUBSEQUENT REPRESSURIZATION A REACTOR PROTECTION SYSTEM ACTUATION WAS RECEIVED FROM REACTOR PROTECTION SYSTEM SHUTDOWN BYPASS HIGH PRESSURE JUST PRIOR TO REMOVING THE UNIT FROM REACTOR PROTECTION SYSTEM SHUTDOWN BYPASS. THIS WAS DUE TO DIFFICULTIES IN PRESSURE CONTROL AT THIS POINT IN THE REPRESSURIZATION.

[ 57]           DAVIS-BESSE 1                           DOCKET 50-346           LER 84-007  
 HIGH NOISE LEVEL IN THE DIESEL FIRE PUMP RIGHT ANGLE DRIVE.  
 EVENT DATE: 051784   REPORT DATE: 062284           NSSS: BW           TYPE: PWR

(NSIC 190370) ON MAY 17, 1984, WHILE PERFORMING DIESEL FIRE PUMP SURVEILLANCE TEST ST 5016.01, OPERATORS HEARD EXCESSIVE NOISE COMING FROM THE RIGHT ANGLE DRIVE GEAR ASSEMBLY. VIBRATION READINGS INDICATED EXCESSIVE VIBRATION IN THE RIGHT ANGLE GEAR ASSEMBLY WHICH HOUSES THE 2 DRIVE SHAFT BEARINGS. THE DIESEL FIRE PUMP WAS REMOVED FROM SERVICE AS A PRECAUTIONARY MEASURE EVEN THOUGH IT WAS MAINTAINING RATED FLOW. AFTER THE RIGHT ANGLE GEAR ASSEMBLY WAS REMOVED, AN INSPECTION REVEALED THAT THE BEARING ROLLERS IN THE SPHERICAL ROLLER BEARING APPEARED TO BE STICKING. AS A PRECAUTIONARY MEASURE, BOTH DRIVE SHAFT BEARINGS WERE REPLACED AND GEAR BACK LASH SET. SURVEILLANCE TEST ST 5016.01 WAS RUN AGAIN AND ADDITIONAL VIBRATION READINGS TAKEN. THE DIESEL FIRE PUMP WAS DECLARED OPERABLE ON MAY 31, 1984. THIS SPECIAL REPORT IS BEING SUBMITTED PURSUANT TO TECH SPEC 6.9.2.

[ 58]           DIABLO CANYON 1                           DOCKET 50-275           LER 84-014  
 INADVERTENT ACTUATION OF THE REACTOR PROTECTION SYSTEM.  
 EVENT DATE: 050684   REPORT DATE: 060584   NSSS: WE           TYPE: PWR  
 VENDOR: HAGAN CONTROLS

(NSIC 190310) WHILE IN MODE 2 (STARTUP) A SIGNAL FROM THE REACTOR PROTECTION SYSTEM (RPS) RESULTED IN A REACTOR TRIP. WITH ONE PROTECTION SET OUT OF SERVICE FOR A FUNCTIONAL TEST, A SPURIOUS SIGNAL FROM A SECOND PROTECTION SET SATISFIED THE MINIMUM RPS LOGIC FOR OVERTEMPERATURE DELTA T AND OVERPOWER DELTA T AND A REACTOR TRIP OCCURRED. SUBSEQUENT INVESTIGATION REVEALED A FAULTY TEMPERATURE MODIFIER IN THE PROTECTION SET II CONTROL CABINET. THE COMPONENT WAS REPLACED, AND PROTECTION SET II RETURNED TO SERVICE.

[ 59]           DIABLO CANYON 1                           DOCKET 50-275           LER 84-015  
 REACTOR TRIP AND SAFETY INJECTION ON HIGH STEAM LINE FLOW.  
 EVENT DATE: 050884   REPORT DATE: 060784   NSSS: WE           TYPE: PWR  
 VENDOR: MACAULAY CONTROLS CO.

(NSIC 190311) WHILE IN MODE 2 (STARTUP) A MALFUNCTION IN THE STEAM DUMP CONTROL SYSTEM ALLOWED SEVERAL 40% STEAM DUMP VALVES TO OPEN, INITIATING A HIGH STEAM FLOW COINCIDENT WITH LOW-LOW TAVG REACTOR TRIP AND SAFETY INJECTION. ALL ASSOCIATED PLANT SYSTEMS AND COMPONENTS RESPONDED NORMALLY. A FAILED PRESSURE CONTROL MODULE WAS REPLACED AND THE STEAM DUMP CONTROL SYSTEM RETURNED TO SERVICE.

[ 60]           DIABLO CANYON 1                           DOCKET 50-275           LER 84-016  
 INADVERTENT ACTUATION OF ESP EQUIPMENT.  
 EVENT DATE: 052184   REPORT DATE: 062084   NSSS: WE           TYPE: PWR

(NSIC 190359) WHILE IN MODE 2 (STARTUP), A CONSTRUCTION ELECTRICIAN WORKING IN AN ELECTRICAL PANEL INADVERTENTLY OPENED THE POWER SUPPLY BREAKER FOR SEVERAL PLANT RADIATION MONITORS, INITIATING AN ACTUATION OF CONTAINMENT VENTILATION ISOLATION. THE AFFECTED BREAKER WAS RECLOSED BY OPERATIONS PERSONNEL AND CONTAINMENT VENTILATION RESTORED TO ITS NORMAL LINEUP. ADDITIONAL CONTROL MEASURES HAVE BEEN INCLUDED IN THE RELEVANT PROJECT INSTRUCTION TO PREVENT A SIMILAR OCCURRENCE.

[ 61]           DRESDEN 2                                       DOCKET 50-237           LER 84-006  
 EAST LPCI CORNER ROOM SUBMARINE DOOR NOT CLOSED.  
 EVENT DATE: 020884   REPORT DATE: 062684   NSSS: GE           TYPE: BWR

(NSIC 190464) DURING NORMAL OPERATION, THE EAST LPCI CORNER ROOM SUBMARINE DOOR TO THE TORUS BASEMENT WAS FOUND OPEN AND UNATTENDED, IN VIOLATION OF THE TECH SPECS. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE OPERABILITY OF LPCI OR CORE SPRAY WAS NOT AFFECTED. THE DOOR WAS PROBABLY LEFT OPEN BY CONTRACTOR PERSONNEL. THE DOOR WAS IMMEDIATELY CLOSED AND SECURED, AND SIGNS WERE HUNG EMPHASIZING THE TECH SPEC REQUIREMENTS. THIS REPORT IS SUBMITTED AS A RESULT OF AN INVESTIGATION WHICH REVEALED THAT THE EVENT IS REPORTABLE PER 10 CFR 50.73 (A)(2)(I)(B). ORIGINALLY THE EVENT WAS MISTAKENLY CLASSIFIED AS NON-REPORTABLE. REVIEW OF THE CIRCUMSTANCES WHICH LED TO THE MISCLASSIFICATION INDICATE THAT STATION PERSONNEL INVOLVED WERE NOT COMPLETELY FAMILIAR WITH THE RECENT CHANGES TO 10 CFR 50.73. ALL PERSONNEL DIRECTLY INVOLVED IN DETERMINING REPORTABILITY WILL RECEIVE ADDITIONAL TRAINING.

[ 62]           DRESDEN 2                                       DOCKET 50-237           LER 84-008  
 CARDOX SYSTEM MASTER VALVE OPERABILITY NOT TESTED.  
 EVENT DATE: 053084   REPORT DATE: 062584   NSSS: GE           TYPE: BWR

(NSIC 190465) DURING AN NRC AUDIT OF DRESDEN STATION'S COMPLIANCE WITH THE FIRE

PROTECTION TECH SPEC IT WAS NOTED THAT THE CARDOX SYSTEM MASTER VALVE WAS NOT BEING TESTED IN THE AUTOMATIC MODE. THE TEST AS WRITTEN ONLY TESTED THE VALVE MANUALLY. THE VALVE WAS IMMEDIATELY TAKEN OUT OF SERVICE PER TECH SPEC AND A TEST OF THE AUTOMATIC FUNCTION WAS CONDUCTED. FOLLOWING THE TEST THE VALVE WAS RETURNED TO SERVICE. THE SURVEILLANCE PROCEDURE WILL BE REVISED TO TEST THE VALVE IN BOTH MANUAL AND AUTOMATIC MODES.

[ 63]            FARLEY 2    DOCKET 50-364            LER 84-006  
DIESEL GENERATOR OUTPUT BREAKER DID NOT OPEN AFTER DIESEL TRIPPED.  
EVENT DATE: 051984    REPORT DATE: 061884    NSSS: WE                TYPE: PWR  
VENDOR: AMOT CONTROL CORP.

(NSIC 190332) ON 5-19-84, A MAINTENANCE RUN OF DIESEL GENERATOR 2B WAS PERFORMED. THIS RUN WAS PERFORMED FOLLOWING SCHEDULED MAINTENANCE DURING THE PRECEDING 6 DAYS AND PRIOR TO RETURNING THE DIESEL TO OPERABLE STATUS. AT 2043, THE DIESEL TRIPPED ON HIGH JACKET WATER TEMPERATURE (NON-ESSENTIAL ENGINE PROTECTION), HOWEVER THE GENERATOR OUTPUT BREAKER DID NOT OPEN AUTOMATICALLY. THE PLANT OPERATOR OBSERVED THIS AND OPENED THE BREAKER REMOTELY. A REVIEW OF THE CIRCUIT DESIGN REVEALED THAT UNDER CERTAIN CIRCUMSTANCES THE GENERATOR OUTPUT BREAKER WOULD NOT HAVE OPENED IF THE DIESEL TRIPPED FOLLOWING A NONEMERGENCY TEST START. A DESIGN CHANGE HAS BEEN IMPLEMENTED TO CORRECT THIS CONDITION. EMERGENCY STARTING AND OPERATION WOULD NOT HAVE BEEN AFFECTED.

[ 64]            FITZPATRICK    DOCKET 50-333            LER 84-012  
SIMULTANEOUS HPCI AND RCIC SYSTEM INOPERABILITY.  
EVENT DATE: 051884    REPORT DATE: 060184    NSSS: GE                TYPE: BWR  
VENDOR: NECI-NUCLEAR ENGINEERING & COMPONENTS INC.  
                 SCHUTTE AND KOERING COMPANY

(NSIC 190328) WHILE OPERATING AT FULL POWER THE RCIC AND HPCI SYSTEMS WERE FOUND TO BE INOPERABLE AT THE SAME TIME. THIS PLACED THE PLANT IN A 24 HR LIMITING CONDITION FOR OPERATING IN ACCORDANCE WITH TECH SPEC SECTIONS 3.5.C AND 3.5.E. RCIC WAS DECLARED INOPERABLE AS THE RESULT OF A MALFUNCTION FOUND IN THE ISOLATION CIRCUITRY. HPCI WAS INOPERABLE DUE TO STOP VALVE STEM CRACKING. CORRECTIVE ACTION WAS TAKEN TO RESTORE THE RCIC SYSTEM TO SERVICE. THE PLANT OPERATED WITH BOTH HPCI AND RCIC INOPERABLE FOR A PERIOD OF 3 HRS. ADS AND LOW PRESSURE EMERGENCY CORE COOLING SYSTEMS WERE OPERABLE. LER 83-049/03X-1 IS A RELATED EVENT.

[ 65]            FT. CALHOUN 1    DOCKET 50-285            LER 84-008  
STEAM GENERATOR TUBE RUPTURE.  
EVENT DATE: 051684    REPORT DATE: 061584    NSSS: CE                TYPE: PWR  
VENDOR: COMBUSTION ENGINEERING, INC.

(NSIC 190423) DURING PLANT STARTUP FROM A REFUELING OUTAGE, THE REACTOR COOLANT SYSTEM (RCS) WAS BEING PRESSURIZED FOR A LEAK TEST. AT APPROX 1,800 PSIA, RCS LEAKAGE APPROACHED 110 GPM WITH INDICATION OF A TUBE RUPTURE IN RC-2B ('B' STEAM GENERATOR). A DEPRESSURIZATION AND COOLDOWN OF THE RCS WAS INITIATED. RC-2B WAS ISOLATED. NOTIFICATION OF AN UNUSUAL EVENT WAS DECLARED. THE UNUSUAL EVENT WAS TERMINATED WHEN THE RCS WAS PLACED IN COLD SHUTDOWN. THE DAMAGED SECTION OF THE STEAM GENERATOR TUBE HAS BEEN REMOVED AND THE FAILURE MECHANISM IDENTIFIED AS INTERGRANULAR STRESS CORROSION CRACKING. THE DISTRICT IS IN THE PROCESS OF COMPLETING THOSE ITEMS IDENTIFIED IN VARIOUS COMMUNICATIONS WITH THE NRC. UPON COMPLETION OF THOSE ITEMS, THE DISTRICT WILL SUBMIT A FINAL REPORT DETAILING THE ACTIVITIES ASSOCIATED WITH THE STEAM GENERATOR TUBE RUPTURE. THE DISTRICT WILL SUBMIT A SUPPLEMENT TO THIS LER AFTER THE FINAL REPORT HAS BEEN SUBMITTED TO THE NRC.



[ 66] GINNA D CKET 50-244 LER 84-005  
 INOPERABLE RESIDUAL HEAT REMOVAL SYSTEM.  
 EVENT DATE: 051484 REPORT DATE: 061384 NSSS: WE TYPE: PWR  
 VENDOR: LIMITORQUE CORP.  
 VELAN VALVE CORP.

(NSIC 190355) ON MAY 14, 1984 WHILE COOLING DOWN THE REACTOR COOLANT SYSTEM (RCS) TO THE COLD SHUTDOWN CONDITION FOR SLUDGE LANCING AND CREVICE CLEANING, MOV-700 (RCS LOOP-A RESIDUAL HEAT REMOVAL SUCTION VALVE) FAILED TO STROKE TO THE OPEN POSITION WHEN ACTUATED FROM THE CONTROL ROOM. FOLLOWING MANUAL UNSEATING OF THE VALVE, MAINTENANCE PERSONNEL PERFORMED AN INSPECTION OF THE VALVE EXTERIOR. THIS INSPECTION REVEALED THAT THE PACKING GLAND FLANGE HAD SHIFTED OUT OF THE VERTICAL POSITION TO A POINT WHERE THE FLANGE WAS IN CONTACT WITH THE VALVE STEM. THIS COULD HAVE CAUSED A MECHANICAL BINDING IN THE STEM AND TORQUE-OUT OF VALVE OPERATOR. THE VALVE WAS THEN STROKED MANUALLY TO VERIFY NO MECHANICAL BINDING. THE VALVE WAS THEN STROKED TWICE ELECTRICALLY. THE VALVE FUNCTIONED SATISFACTORILY WITH PROPER MOTOR CURRENT READINGS, AND ACCEPTABLE OPENING AND CLOSING TIMES, INDICATING NO MECHANICAL BINDING.

[ 67] GINNA DOCKET 50-244 LER 84-007  
 AUTOMATIC ACTUATION OF REACTOR PROTECTION SYSTEM.  
 EVENT DATE: 053084 REPORT DATE: 062984 NSSS: WE TYPE: PWR  
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 190413) ON MAY 30, 1984, WHILE OPERATING AT APPROX 83% POWER, AN ELECTRICAL GENERATOR TRIP OCCURRED WHICH IN TURN CAUSED A TRIP OF THE TURBINE WITH SUBSEQUENT REACTOR TRIP. THE CAUSE OF THE TRIP WAS TRACED BACK TO THE ELECTRICAL GENERATOR EXCITER WHEN A PORTION OF NEOPRENE GASKET USED IN THE EXCITER COOLER WAS SUCKED INTO THE AIR FLOW PATH AND LODGED INTO THE RECTIFIER AREA.

[ 68] GRAND GULF 1 DOCKET 50-416 LER 83-097 REV 2  
 UPDATE ON SPURIOUS ISOLATION OF RWCU.  
 EVENT DATE: 072083 REPORT DATE: 051084 NSSS: GE TYPE: BWR  
 VENDOR: RILEY COMPANY, THE

(NSIC 190299) ON JUL 20, 1983, A RWCU AUTO ISOLATION OCCURRED. AT THE TIME, RWCU WAS BEING USED AS THE ALTERNATE METHOD OF REACTOR COOLANT CIRCULATION PURSUANT TO ACTION (2) OF TECH SPEC 3.4.9.2 DUE TO EQUIPMENT FAILURES IN THE RHR SYSTEM. RWCU WAS BACK IN OPERATION WITHIN 30 MINS BY PLACING THE RWCU ISOL LOGIC 'B' BYPASS SWITCH IN BYPASS. THE CAUSE WAS NOT IMMEDIATELY DETERMINED. THE ROOM TEMPERATURE INDICATED 190 F BUT WAS NORMAL. THE READING CHANGED TO 55 F PRIOR TO THE MAINTENANCE INSPECTION. SUBSEQUENT INSPECTIONS FOUND LOOSE INSTRUMENT CONNECTIONS TO HAVE CAUSED RHR & RWCU TRIPS (LER 83-109) AND IS THE PROBABLE CAUSE FOR THIS EVENT. ALL RILEY INSTRUMENT CONNECTIONS WERE RETIGHTENED.

[ 69] GRAND GULF 1 DOCKET 50-416 LER 83-190 REV 1  
 UPDATE ON SHUTDOWN COOLING INOPERABLE.  
 EVENT DATE: 121483 REPORT DATE: 032184 NSSS: GE TYPE: BWR

(NSIC 190408) ON DEC 14, 1983, WHILE RESTORING DIV 2 POWER FOLLOWING A PLANNED MAINTENANCE OUTAGE, A DIV 2 ISOLATION OCCURRED CAUSING A LOSS OF SHUTDOWN COOLING WHEN PUMP SUCTION VALVE F009 ISOLATED. OTHER ACTUATION INCLUDED REACTOR WATER CLEANUP ISOLATION AND STANDBY GAS TREATMENT B INITIATION. AN LCO WAS ENTERED PURSUANT TO TECH SPEC 3.4.9.2. THE EVENT WAS REPORTED PURSUANT TO 10 CFR 50.72 AND IS ALSO BEING REPORTED PURSUANT TO TECH SPEC 6.9.1.13.B. THE SHUTDOWN COOLING ISOLATION WAS DUE TO AN ERROR IN THE TEMPORARY PROCEDURE BEING USED FOR THE OUTAGE RESTORATION. IT WILL NOT BE USED AGAIN. THE RWCU ISOLATION AND SGTS

INITIATION RESULTED FROM A SPURIOUS ACTUATION SIGNAL IN THE LOGIC WHEN POWER WAS RESTORED. THIS IS A FINAL REPORT.

[ 70] GRAND GULF 1 DOCKET 50-416 LER 84-029  
 PROPER RETEST NOT PERFORMED ON DRYWELL PURGE COMPRESSOR.  
 EVENT DATE: 042284 REPORT DATE: 061384 NSSS: GE TYPE: BWR

(NSIC 190382) WHEN THE PLANT CHANGED OPERATING MODES TO STARTUP ON APR 22, 1984, THE PROPER SURVEILLANCE TO PROVE OPERABILITY OF THE 'B' DRYWELL PURGE COMPRESSOR HAD NOT BEEN COMPLETED AS REQUIRED BY TECH SPECS. THIS OCCURRED DUE TO THE SURVEILLANCE NOT BEING NOTED AS A NECESSARY RETEST FOR MAINTENANCE ACTIVITIES PERFORMED ON THE COMPRESSOR ON MAR 28, 1984. THE EVENT WAS DISCOVERED ON MAY 14, 1984, DURING A SURVEILLANCE REVIEW.

[ 71] GRAND GULF 1 DOCKET 50-416 LER 84-024  
 FORCED SHUTDOWN DUE TO RHR PIPE CRACKS AND SUPPORT DEFICIENCIES.  
 EVENT DATE: 050284 REPORT DATE: 053084 NSSS: GE TYPE: BWR  
 VENDOR: BECHTEL CORP.  
 TEXAS PIPE AND BENDING, INC.

(NSIC 190341) A PLANT SHUTDOWN WAS COMPLETED ON MAY 2, 1984, AS REQUIRED BY THE GGNS TECH SPECS DUE TO THE INOPERABILITY OF BOTH INDEPENDENT CONTAINMENT SPRAY LOOPS OF THE RESIDUAL HEAT REMOVAL (RHR) SYSTEM. THE RHR B LOOP WAS DECLARED INOPERABLE ON APR 30, WHEN TWO CRACKS WERE FOUND IN A 3" DIAMETER BRANCH PIPE OFF THE MAIN RHR B LOOP HEADER. ON MAY 2, PIPE SUPPORT DEFICIENCIES RESULTED IN BOTH RHR LOOPS BEING DECLARED INOPERABLE AND THE SUBSEQUENT SHUTDOWN. THE EVENT WAS DECLARED AN UNUSUAL EVENT AT 1800 HRS ON MAY 2 AND THE NRC WAS NOTIFIED AT 1822 HRS.

[ 72] GRAND GULF 1 DOCKET 50-416 LER 84-028  
 EFFECTS OF STORM.  
 EVENT DATE: 050784 REPORT DATE: 060684 NSSS: GE TYPE: BWR

(NSIC 190497) DURING A STORM, ARCING OCCURRED ACROSS AN OPEN DISCONNECT FOR A 500KV SWITCHYARD BREAKER. THIS CAUSED A GROUND ON THE EAST 500KV SWITCHYARD BUS RESULTING IN A LOSS OF POWER TO IT. THE LOSS OF POWER RESULTED IN A RWCU ISOLATION, AUTO START OF THE DIVISION III DIESEL GENERATOR, AND LOSS OF BOTH REACTOR RECIRC PUMPS. THE "A" RECIRC PUMP WAS RESTARTED WITHIN 6 HOURS BUT THE "B" RECIRC PUMP COULD NOT BE STARTED DUE TO PROBLEMS WITH THE HYDRAULIC POWER UNIT (HPU) FOR IT'S FLOW CONTROL VALVE. THIS REQUIRED THE PLANT TO BE SHUT DOWN. WHILE RESTORING THE DIVISION III DIESEL TO STANDBY IT TRIPPED ON REVERSE POWER. A TORNADO WATCH THEN REQUIRED STARTING ALL THREE DIESEL GENERATORS. WHILE THEY WERE RUNNING, THE DIVISION II DIESEL TRIPPED ON REVERSE POWER DUE TO VOLTAGE FLUCTUATIONS ON THE POWER GRID DUE TO THE STORM AND A TOO CONSERVATIVE REVERSE POWER TRIP SETTING. ADDITIONALLY, ALL SURVEILLANCES ON DIVISION I AND III DIESEL GENERATORS REQUIRED FROM DIVISION II BEING DECLARED INOPERABLE WERE NOT COMPLETED WITHIN THE 3 HOURS ALLOWED BY TECH SPEC.

[ 73] GRAND GULF 1 DOCKET 50-416 LER 84-026  
 GAS TURBINE GENERATOR DAY TANK UNDERSIZED.  
 EVENT DATE: 052484 REPORT DATE: 070284 NSSS: GE TYPE: BWR

(NSIC 190496) AT 1845 HOURS ON JUNE 1, 1984, IT WAS DISCOVERED THAT THE FUEL OIL DAY TANK FOR ONE OF THE 3 GAS TURBINES WOULD ONLY HOLD 270 GALLONS WHILE THE TECH SPEC REQUIRES A 300 GALLON MINIMUM CAPACITY. INTERIM TECH SPEC (FROM A SPECIAL NRC ORDER) FOR THE GAS TURBINES WAS ISSUED TO ALLOW DISMANTLING THE DIVISION I DIESEL FOR INSPECTION. ALTHOUGH THE DAY TANK CAPACITY WAS INCREASED TO OVER 700

GALLONS WITHIN 5 HOURS, THE CONDITION HAD EXISTED SINCE MAY 24, 1984, WHEN THE DIVISION I DIESEL WAS TAGGED OUT.

[ 74] GRAND GULF 1 DOCKET 50-416 LER 84-030  
 REACTOR SCRAM ON LOW WATER LEVEL.  
 EVENT DATE: 052584 REPORT DATE: 061484 NSSS: GE TYPE: BWR  
 VENDOR: CONTROL COMPONENTS  
 WOODWARD GOVERNOR COMPANY

(NSIC 190342) THE REACTOR SCRAMMED ON A LOW WATER LEVEL 3 SIGNAL FOLLOWING CONDENSATE BOOSTER PUMP AND REACTOR FEED PUMP TRIPS. OPERATORS WERE UNABLE TO MANUALLY START RCIC TO RESTORE THE LEVEL PRIOR TO THE SCRAM. A BROKEN POSITION ARM LINKAGE ON THE CONDENSATE MINIMUM FLOW CONTROL VALVE ALLOWED THE VALVE TO OPEN CREATING A FLOW PATH TO THE CONDENSER, BYPASSING THE CONDENSATE BOOSTER PUMPS. THE CONDENSATE PUMP, BOOSTER PUMP, AND FEED PUMP IMMEDIATELY TRIPPED ON LOW SUCTION. THE RCIC TURBINE TRIPPED ON OVERSPEED WHEN OPERATORS ATTEMPTED TO MANUALLY START THE SYSTEM TO RESTORE THE WATER LEVEL. FOLLOWING THE SCRAM RCIC WAS STARTED AND OPERATED PROPERLY. A MODIFICATION WAS MADE TO THE RCIC TURBINE GOVERNOR VALVE TO RESTRICT IT FROM OPENING AND PRODUCING THE TURBINE OVERSPEED TRIP.

[ 75] HATCH 1 DOCKET 50-321 LER 84-003  
 BOWED-TO-CONTACT FUEL ROD.  
 EVENT DATE: 050884 REPORT DATE: 060784 NSSS: GE TYPE: BWR  
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 190430) DURING FUEL INSPECTION ON APPROX 12/16/83 (FOLLOWING UNIT 1 END-OF-CYCLE 7), GE PERSONNEL DETERMINED THAT FUEL ROD P1 (WHICH HAD FAILED IN FUEL BUNDLE LY5169) WAS BOWED TO THE EXTENT THAT IT CONTACTED AN ADJACENT UNFAILED FUEL ROD. THE RESULTS OF THE FUEL INSPECTION WERE TRANSMITTED TO GEORGIA POWER COMPANY (GPC) ON 4/17/84, AT WHICH TIME THE PLANT REVIEW BOARD DETERMINED THE EVENT TO BE NON-REPORTABLE PER 10CFR21 OR 10CFR50.73. AFTER FURTHER STUDY, GPC CORPORATE PERSONNEL ARRANGED A MEETING WITH GE PERSONNEL AND SOUTHERN COMPANY SERVICES INCORPORATED PERSONNEL. AT THE MEETING ON 5/8/84, A SUGGESTION WAS MADE THAT THE EVENT SHOULD BE REPORTED TO THE NRC BECAUSE THE FUEL ROD'S BOW-TO-CONTACT CONDITION WAS OUTSIDE THE GAP CRITERION USED TO CALCULATE THE DESIGN MINIMUM CRITICAL POWER RATIO (MCPR).

[ 76] HATCH 1 DOCKET 50-321 LER 84-006  
 UNPLANNED MANUAL REACTOR SCRAM.  
 EVENT DATE: 060784 REPORT DATE: 062984 NSSS: GE TYPE: BWR

(NSIC 190431) ON 3-11-84 OPERATING PERSONNEL WERE REDUCING REACTOR POWER BY INSERTING CONTROL RODS. DURING THE PROCESS OF INSERTING CONTROL RODS, IT WAS DETERMINED THAT CONTROL ROD 50-31 WAS 3 POSITION NOTCHES AWAY FROM THE POSITION OF CONTROL ROD 02-23. "CONTROL ROD MOVEMENT" PROCEDURE (HNP-1-9207) REQUIRES THAT THE REACTOR BE MANUALLY SCRAMMED IF A CONTROL ROD WITHIN A GROUP SKIPS MORE THAN ONE NOTCH WHEN THE REACTOR IS AT LESS THAN 20% POWER (THE REACTOR WAS AT APPROX 8% POWER). THE MANUAL SCRAM WAS NOT A PREPLANNED EVENT; THEREFORE, IT IS REPORTABLE PER 10 CFR 50.73(A)(2)(IV).

[ 77] HATCH 1 DOCKET 50-321 LER 84-009  
 REQUIRED TEST NOT PERFORMED WITHIN 24 HOURS OF STARTUP.  
 EVENT DATE: 060984 REPORT DATE: 070984 NSSS: GE TYPE: BWR  
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 190474) ON 06-09-84 FOLLOWING COLD SHUTDOWN, THE REACTOR MODE SWITCH WAS

PLACED IN THE STARTUP POSITION AT APPROXIMATELY 1520 CST. AT APPROXIMATELY 1700 CST ON 06-09-84, OPERATING PERSONNEL DETERMINED THAT THE APRM 15% FLUX SCRAM TEST HAD NOT BEEN PERFORMED WITHIN 24 HOURS OF STARTUP PER TECH SPECS TABLE 4.1-1, ITEM 8. THE CONTROL RODS WERE THEN INSERTED, AND APRM TESTING WAS BEGUN AT APPROXIMATELY 1715 CST. AT APPROXIMATELY 1759 CST APRM TESTING HAD BEEN COMPLETED AND REACTOR STARTUP RESUMED. THIS EVENT IS CONTRARY TO TECH SPECS SECTION 4.1.A, AND IS A REPORTABLE EVENT PER 10CFR 50.73(A)(2)(I)(B).

[ 78] HATCH 2 DOCKET 50-366 LER 84-005  
STANDBY LIQUID CONTROL SYSTEM RELIEF VALVE LIFTS TOO EARLY.  
EVENT DATE: 052584 REPORT DATE: 062384 NSSS: GE TYPE: BWR  
VENDOR: LONERGAN, J.E., C.J.

(NSIC 190375) ON 5/25/84 DURING PERFORMANCE OF THE "STANDBY LIQUID CONTROL SYSTEM" PROCEDURE (HNP-2-6310), (WITH THE REACTOR IN COLD SHUTDOWN) PLANT PERSONNEL DETERMINED THAT THE STANDBY LIQUID CONTROL SYSTEM'S PRESSURE RELIEF VALVES LIFTED AT A LOWER THAN EXPECTED PRESSURE WHEN THEY WERE BENCH TESTED. CONSEQUENTLY, IN THE EVENT OF A LOSS OF COOLANT ACCIDENT THE STANDBY LIQUID CONTROL SYSTEM WOULD NOT HAVE INJECTED ITS SODIUM PENTABORATE SOLUTION AGAINST A REACTOR VESSEL PRESSURE IN EXCESS OF 600 PSIG. A DESIGN CHANGE WAS INITIATED WHICH REQUIRES REPLACING THE EXISTING PRESSURE RELIEF VALVES WITH NEW PRESSURE RELIEF VALVES OF A DIFFERENT MODEL. ONE OF THE TWO PRESSURE RELIEF VALVES HAS BEEN SATISFACTORILY REPLACED. THE SECOND RELIEF VALVE WILL BE INSTALLED PRIOR TO LOADING FUEL IN THE VESSEL.

[ 79] INDIAN POINT 2 DOCKET 50-247 LER 84-005  
TWO MSIV'S FAIL TO CLOSE WITHIN REQUIRED TIME LIMIT.  
EVENT DATE: 060284 REPORT DATE: 070284 NSSS: WE TYPE: PWR  
VENDOR: ATWOOD & MORRILL CO., INC.

(NSIC 190414) ON JUN 2, 1984 DURING NORMAL SHUTDOWN OF THE PLANT FOR A SCHEDULED REFUELING OUTAGE THE MAIN STEAM ISOLATION VALVES MS-1-21 AND MS-1-24 FAILED TO CLOSE WITHIN THE 5 SECOND PERIOD REQUIRED BY THE TECH SPECS. THE PLANT PROCEEDED TOWARD COLD SHUTDOWN AS SCHEDULED. OVERHAUL OF THE VALVES IS SCHEDULED FOR THE OUTAGE.

[ 80] KEWAUNEE DOCKET 50-305 LER 84-009  
TURBINE AND REACTOR TRIP DUE TO IMPROPERLY WIRED SWITCH.  
EVENT DATE: 050784 REPORT DATE: 060684 NSSS: WE TYPE: PWR

(NSIC 190316) AT 1917 ON MAY 7, 1984 WITH THE PLANT AT 25% POWER FOLLOWING A REFUELING OUTAGE, A TURBINE AND REACTOR TRIP WAS RECEIVED WHILE PERFORMING PROCEDURE RT-TB-54D, "TURBINE TRIP MECHANISM TEST." THE OPERATORS PERFORMED THE IMMEDIATE ACTIONS IN THE TURBINE AND REACTOR TRIP PROCEDURE AND PLACED THE PLANT IN THE HOT SHUTDOWN OPERATING MODE. THE FOLLOWING EVENING AN ATTEMPT WAS MADE TO REPEAT THE CIRCUMSTANCES OF THE TRIP AT 0% POWER. AGAIN THE RESULT WAS A TURBINE TRIP, BUT NOT A REACTOR TRIP. FURTHER INVESTIGATION REVEALED THE CAUSE OF THE TURBINE TRIP WAS A PRESSURE SWITCH (PS16156) WIRED INCORRECTLY. THE PRESSURE SWITCH WAS MISWIRED DURING THE PERFORMANCE OF INSTRUMENT AND CONTROL PROCEDURE, ICP 54.30, "TURBINE GENERATOR MOTORING PROTECTION PRESSURE SWITCHES." THE SWITCH WAS RETURNED TO ITS NORMAL CONFIGURATION. THE INSTRUMENT AND CONTROL TECHNICIAN WHO PERFORMED THE WORK WAS CAUTIONED ON THE SIGNIFICANCE OF THIS EVENT. THIS IS CONSIDERED AN ISOLATED OCCURRENCE AND NO FURTHER FOLLOWUP ACTION IS REQUIRED. THE REACTOR PROTECTION SYSTEM PERFORMED ITS REQUIRED FUNCTION.

[ 81] KEWAUNEE DOCKET 50-305 LER 84-010  
 REACTOR TRIP ON STEAM GENERATOR LO-LO LEVEL.  
 EVENT DATE: 050784 REPORT DATE: 060684 NSSS: WE TYPE: PWR

(NSIC 190317) ON MAY 7, 1984, A PLANT ESCALATION FROM 10% TO 25% OF FULL POWER WAS UNDERWAY. MAIN FEEDWATER CONTROLS WERE IN MANUAL USING THE FEEDWATER BYPASS CONTROL VALVES. FOLLOWING THE 2300 SHIFT TURNOVER, THE CONTROL OPERATOR WAS CONTROLLING FEEDWATER FLOW TO THE STEAM GENERATORS (SG) TO MATCH THE INCREASING STEAM DEMAND AND MAINTAIN SG NARROW RANGE (NR) LEVELS BETWEEN 35% AND 40%. WHILE THE OPERATOR ATTEMPTED TO STABILIZE A SG LEVEL OSCILLATION, THE LO-LO LEVEL SETPOINT (17% NR LEVEL) WAS REACHED IN SG 1B AND INITIATED A REACTOR TRIP. PLANT OPERATING PROCEDURES WERE FOLLOWED TO PLACE THE PLANT IN THE HOT SHUTDOWN OPERATING MODE. NO EQUIPMENT OR SYSTEM FAILURES CONTRIBUTED TO THIS EVENT. ALTHOUGH NO ADDITIONAL CORRECTIVE ACTIONS ARE NECESSARY AT THIS TIME, THE SENSITIVITY OF STEAM GENERATOR LEVEL CONTROL IN MANUAL IS BEING ADDRESSED AS PART OF THE HUMAN FACTORS ASSOCIATED WITH THE CONTROL ROOM DESIGN REVIEW PROGRAM.

[ 82] KEWAUNEE DOCKET 50-305 LER 84-011  
 UNEXPECTED OPERATION OF 1A SHIELD BUILDING VENT SYSTEM RECIRCULATION FAN AND DAMPERS.  
 EVENT DATE: 051084 REPORT DATE: 061084 NSSS: WE TYPE: PWR

(NSIC 190318) ON 2 DIFFERENT OCCASIONS, MAY 10, 1984 AND MAY 11, 1984, THE 1A SHIELD BLDG RECIRCULATION FAN WAS FOUND BY THE CONTROL ROOM OPERATOR TO BE OPERATING WITH ITS ASSOCIATED DAMPERS OPEN. NO APPARENT CAUSE FOR THIS FAN ACTUATION WAS EVIDENT. AN AUXILIARY CONTACT ON THE FAN MOTOR STARTER WAS REPLACED AND THE EVENT HAS NOT RECURRED. SAFETY IMPLICATIONS WERE MINIMAL SINCE THE UNIT WAS OPERATING IN ITS ENGINEERED SAFEGUARD MODE. NO ABNORMAL RELEASE LEVELS WERE SEEN ON THE REACTOR BLDG VENT DISCHARGE MONITOR. THE INCIDENT REPORTS ARE BEING CIRCULATED TO OPERATIONS PERSONNEL TO ALERT THEM OF THE POTENTIAL FOR THIS EVENT. DUE TO THE NATURE OF THIS SYSTEM AND THE EVENT, ADDITIONAL ACTIONS ARE NOT REQUIRED AT THIS TIME.

[ 83] LA SALLE 1 DOCKET 50-373 LER 84-028  
 RCIC ISOLATES.  
 EVENT DATE: 051384 REPORT DATE: 061184 NSSS: GE TYPE: BWR  
 VENDOR: RILEY COMPANY, THE - PANALARM DIVISION

(NSIC 190336) ON MAY 13, 1984, AT 1640, A SPURIOUS CLOSURE OF A DIV II REACTOR CORE ISOLATION COOLING (RCIC) STEAM LINE HIGH TEMPERATURE ISOLATION SWITCH CAUSED THE RCIC STEAM LINE TO ISOLATE AND THE RCIC TURBINE TO TRIP. THE RCIC STEAM LINE HIGH TEMPERATURE ALARM RESET AUTOMATICALLY. AS REQUIRED, THE RCIC STEAM SUPPLY INBOARD ISOLATION VALVE AUTOMATICALLY CLOSED. THE 4 TEMPERATURE SWITCHES THAT COULD HAVE CAUSED THE ISOLATION WERE RECALIBRATED AND THERE HAVE BEEN NO SUBSEQUENT OCCURRENCES.

[ 84] LA SALLE 1 DOCKET 50-373 LER 84-025  
 LACK OF POSITIVE CONTROL ON ENTRY INTO HIGH RADIATION AREA.  
 EVENT DATE: 051784 REPORT DATE: 060884 NSSS: GE TYPE: BWR

(NSIC 190377) ON MAY 17, 1984, AT APPROX 1130 HRS, HEALTH PHYSICS SUPERVISION WAS NOTIFIED BY A NUCLEAR STATION OPERATOR THAT A TRAPDOOR ON THE AUXILIARY BUILDING ROOF, WHICH ALLOWS ENTRY INTO A HIGH RADIATION AREA (RADWASTE PIPE TUNNEL), WAS NEITHER POSTED AS A HIGH RADIATION AREA NOR SECURED IN ANY MANNER TO PREVENT UNAUTHORIZED ENTRY. UPON INVESTIGATING THE REPORT, THE ABOVE DETAILS WERE CONFIRMED. THE ENTRANCE WAS POSTED AS A HIGH RADIATION AREA AND ACCESS WAS CONTROLLED, UTILIZING A RADIATION PROTECTION TECHNICIAN AND SUBSEQUENTLY A SECURITY GUARD. A WORK REQUEST WAS INITIATED TO ALLOW SECURING OF THE DOOR.

THIS WORK WAS COMPLETED ON THE EVENING SHIFT BY THE MECHANICAL MAINTENANCE DEPARTMENT.

[ 85] LA SALLE 1 DOCKET 50-373 LER 84-026  
ELECTRICAL CABLE PENETRATIONS INOPERABLE.  
EVENT DATE: 051784 REPORT DATE: 060884 NSSS: G TYPE: BWR  
OTHER UNITS INVOLVED: LA SALLE 2 (BWR)

(NSIC 190335) ON MAY 17, 1984, AT APPROX 1300, TRAIJCO PERSONNEL WERE PERFORMING REPAIRS ON ELECTRICAL FIRE PENETRATIONS IN THE UNIT 1 AUXILIARY ELECTRICAL EQUIPMENT ROOM WHEN THEY IDENTIFIED AN UNSEALED CONDUIT PENETRATING A FIRESTOP. AFTER FURTHER INVESTIGATION, A TOTAL OF 18 CABINETS/PANELS IN THE AUXILIARY ELECTRICAL EQUIPMENT ROOM WERE IDENTIFIED AS HAVING UNSEALED CONDUIT PENETRATING THE FIELD OF THE FIRESTOP. THE TECHNICAL STAFF NOTIFIED THE STATION FIRE MARSHAL. AN HOURLY FIRE WATCH WAS IN EFFECT. REPAIRS WERE INITIATED BY THE TECHNICAL STAFF. REPAIRS WERE COMPLETED ON MAY 22, 1984 UNDER WORK REQUEST L36892. THE TECHNICAL STAFF ALSO PERFORMED A REINSPECTION OF CABINETS/PANELS IN THE UNITS 1 AND 2 CONTROL ROOMS AND AUXILIARY ELECTRICAL EQUIPMENT ROOMS (SPECIAL TEST LST 84-127). THE REINSPECTION IDENTIFIED 6 OTHER CABINETS IN THE CONTROL ROOM WITH UNSEALED CONDUIT. THESE PENETRATIONS WERE SEALED ON JUN 1, 1984 UNDER WORK REQUEST L37240.

[ 86] LA SALLE 1 DOCKET 50-373 LER 84-027  
OFF-GAS HYDROGEN SAMPLE NOT TAKEN ON TIME.  
EVENT DATE: 052084 REPORT DATE: 060884 NSSS: GE TYPE: BWR

(NSIC 190378) ON MAY 19, 1984, AT 2300 HRS, A REACTOR POWER DECREASE FROM 1115 MWE TO 900 MWE WAS BEGUN TO PERFORM TURBINE CONTROL VALVE AND TURBINE BYPASS VALVE TESTING. '1A' AND '1B' OFF-GAS HYDROGEN ANALYZERS (WF) WERE INOPERABLE, WITH RAD/CHEM SAMPLING EVERY 8 HRS PER TECH SPEC TABLE 3.3.7.11.1 ACTION 111. RAD/CHEM WAS NOT INFORMED TO START 4 HR SAMPLING REQUIRED BY TECH SPEC 3.3.7.11 UPON POWER LEVEL CHANGES UNTIL 0400 ON MAY 20, 1984. HYDROGEN SAMPLING WAS PERFORMED AT 0430 ON MAY 20, 1984, 5.5 HRS AFTER POWER DROP, RESULTING IN 0% H2 DETECTED. SAMPLING WAS THEN PERFORMED EVERY 4 HRS UNTIL STEADY STATE POWER CONDITIONS RESUMED.

[ 87] LA SALLE 1 DOCKET 50-373 LER 84-029  
REACTOR SCRAMS FROM LOW VACUUM TRIP OF TURBINE GENERATOR.  
EVENT DATE: 053184 REPORT DATE: 061384 NSSS: GE TYPE: BWR

(NSIC 190487) AT 1615 ON 5/31/84 A LOW VACUUM TURBINE-GENERATOR TRIP OCCURRED AT 55% REACTOR THERMAL POWER WHICH SUBSEQUENTLY RESULTED IN A SCRAM FROM THE TURBINE STOP VALVE CLOSURE. THE REACTOR WATER LEVEL AND PRESSURE TRANSIENTS WERE MINOR, NOT REQUIRING ECCS, RCIC OR SRV ACTUATION. CONDENSER VACUUM RECOVERED AFTER THE TRIP; CONSEQUENTLY THE TURBINE BYPASS VALVES AND A TURBINE DRIVEN REACTOR FEED PUMP WERE USED TO CONTROL PRESSURE AND WATER LEVEL. ANALYSIS OF THE EVENT REVEALED THE VACUUM LOSS WAS PROBABLY THE RESULT OF A TEMPERATURE TRANSIENT THAT OCCURRED WHILE TURBINE BUILDING VENTILATION WAS SHUT DOWN AND A SURVEILLANCE THAT WAS PERFORMED TO FILL OFF GAS (OG) LOOP SEALS WHICH MAY ACTUALLY HAVE BLOWN ONE OR MORE LOOP SEALS. A COMBINATION OF THE TWO CAUSED INCREASED AIR INLEAKAGE AND HIGH CONDENSATE TEMPERATURE WHICH OVERLOADED THE SJAE'S RESULTING IN LOW VACUUM. THE ONLY COMPONENT FAILURE IDENTIFIED WAS A STUCK PEN ON THE OG FLOW RECORDER IN THE CONTROL ROOM - LOCAL INDICATION SHOWED A HIGH FLOWRATE. CORRECTIVE ACTION INCLUDED INCORPORATION OF THE LOCAL OG FLOW INDICATOR INTO THE EQUIPMENT ATTENDANT ROUNDS FOR COMPARISON WITH THE FLOW RECORDER, REPAIR OF THE OG FLOW RECORDER AND A REVISION TO THE LOOP SEAL FILL SURVEILLANCE TO INCORPORATE CAUTIONS TO PREVENT LOOP SEAL LOSS DURING FILLING OPERATIONS.

[ 88] LA SALLE 1 DOCKET 50-373 LER 84-030  
 REACTOR WATER CLEAN-UP HIGH DIFFERENTIAL FLOW ISOLATION.  
 EVENT DATE: 053184 REPORT DATE: 061884 NSSS: GE TYPE: BWR

(NSIC 190444) ON MAY 31, 1984, AT 1825 HOURS WITH UNIT 1 AT 0% POWER AND REACTOR PRESSURE AT 750 PSIG AN ISOLATION OF REACTOR WATER CLEANUP (CE, RWCU) OCCURRED DUE TO HIGH DIFFERENTIAL FLOW ON DIVISIONS 1 AND 2. AT THE TIME OF THIS ISOLATION THE TURBINE DRIVEN REACTOR FEEDWATER PUMP FLOW WAS BEING REDUCED AND THE MAIN STEAM BYPASS VALVES WERE BEING ADJUSTED TO CONTROL PRESSURE. ON JUNE 1, 1984, AT 1733 HOURS WITH UNIT 1 AT 0% POWER AND REACTOR PRESSURE AT 250 PSIG AN ISOLATION OF RWCU OCCURRED DUE TO HIGH DIFFERENTIAL FLOW ON DIVISION 1. AT THE TIME OF THIS ISOLATION THE "C" REACTOR WATER CLEANUP FILTER DEMINERALIZER WAS BEING PLACED IN SERVICE AND THE BLOWDOWN FLOW TO THE CONDENSER WAS BEING ADJUSTED. THESE TWO ISOLATIONS WERE THE RESULT OF THE DENSITY DIFFERENCES BETWEEN THE INFLUENTS TO AND THE EFFLUENTS FROM THE RWCU SYSTEM. IN BOTH CASES THE RWCU SYSTEM'S ISOLATION VALVES CLOSED AS REQUIRED AND PLACED THE PLANT IN A SAFE CONDITION.

[ 89] LA SALLE 2 DOCKET 50-374 LER 84-019  
 HYDROGEN SAMPLING OF OFF-GAS SYSTEM MISSED.  
 EVENT DATE: 050984 REPORT DATE: 060584 NSSS: GE TYPE: BWR

(NSIC 190379) AT 0001, 0400, AND 0800 ON MAY 9, 1984, HYDROGEN SAMPLES TAKEN BECAUSE THE OFF-GAS HYDROGEN ANALYZERS WERE INOPERABLE WERE TAKEN OFF THE VALVED OUT PREFILTER, THEREFORE, NOT PROVIDING A VALID SAMPLE. THE EVENT OCCURRED BECAUSE THE RADIATION/CHEMISTRY TECHNICIAN FAILED TO DETERMINE THE STATUS OF THE SAMPLE POINT PRIOR TO SAMPLING. THIS ACTION IS CONTRARY TO THE PROCEDURE. NO HYDROGEN WAS FOUND IN SAMPLES PRIOR TO OR AFTER THE EVENT, AND THE HYDROGEN RECOMBINER TEMPERATURE REMAINED CONSTANT. THE PROCEDURE WILL BE REVISED TO INCLUDE A SIGN-OFF FOR VERIFICATION OF THE CORRECT SAMPLE POINT TO ENSURE TECHNICIAN PROPERLY VERIFIES WHICH TRAIN IS IN OPERATION.

[ 90] LA SALLE 2 DOCKET 50-374 LER 84-020  
 GENERATOR LOCKOUT AND REACTOR SCRAM.  
 EVENT DATE: 052184 REPORT DATE: 060784 NSSS: GE TYPE: BWR

(NSIC 190337) ON MAY 21, 1984, THE MAIN POWER TRANSFORMER BACKUP DIFFERENTIAL OVERCURRENT RELAY TRIPPED THE MAIN GENERATOR. THIS CAUSED A MAIN TURBINE TRIP AND A RESULTANT REACTOR SCRAM AS THE REACTOR WAS GREATER THAN 30% POWER. THE INVESTIGATION REVEALED THE CURRENT TRANSFORMER INPUTS TO THE RELAY FROM THE OUTPUT CIRCUIT BREAKERS WERE WIRED IN A "WYE" CONFIGURATION AS OPPOSED TO THE REQUIRED "DELTA" ARRANGEMENT. THE CURRENT TRANSFORMERS WERE RE-WIRED AND ALL SIMILAR CURRENT TRANSFORMER'S ARRANGEMENTS VERIFIED CORRECT.

[ 91] LA SALLE 2 DOCKET 50-374 LER 84-022  
 LOSS OF POSITIVE CONTROL ON HIGH RADIATION GATE.  
 EVENT DATE: 052184 REPORT DATE: 060784 NSSS: GE TYPE: BWR

(NSIC 190380) DOOR 213, CONTROLLING ACCESS TO AREA BEHIND THE UNIT 2 TURBINE SHIELD WALLS (HIGH RADIATION AREA), WAS FOUND TO BE OPEN. THIS DOOR IS THE SOUTHEAST ENTRANCE WIRE MESH GATE. THIS LOSS OF POSITIVE CONTROL IS CONTRARY TO TECH SPEC 6.1.1. AND 10 CFR 20.203. THE GATE WAS SECURED 1724 HRS AT THE TIME OF DISCOVERY.

[ 92] LA SALLE 2 DOCKET 50-374 LER 84-024  
 RCIC CONTROL AND INSTRUMENT POWER LOST.  
 EVENT DATE: 053184 REPORT DATE: 060984 NSSS: GE TYPE: BWR

(NSIC 190338) AT 0230 AND AGAIN AT 1650 ON MAY 31, 1984, THE NORMAL AND REMOTE SHUTDOWN PANEL CONTROL AND INSTRUMENTATION POWER SUPPLIES FOR THE REACTOR CORE ISOLATION COOLING SYSTEM (BN) WERE LOST. THE REASON FOR THE LOSS WAS THE PROTECTIVE HIGH VOLTAGE TRIP SETPOINTS FOR THE TOPAZ INVERTERS HAD DRIFTED DOWN, AND BATTERY BUS (211Y) VOLTAGE WAS HIGHER THAN NORMAL DUE TO A BATTERY CHARGE. WHEN BUS VOLTAGE EXCEEDED THE TRIP SETPOINT, THE INVERTERS TURNED OFF. THE BUS VOLTAGE WAS LOWERED AND THE INVERTER TRIP SETPOINTS WERE RESET TO 147V DC AS REQUIRED. LASALLE UNIT 2 WAS MAINTAINED IN A SAFE OPERATING CONDITION BECAUSE HPCS AND THE OTHER ECCS SYSTEMS WERE MAINTAINED OPERABLE.

[ 93] LA SALLE 2 DOCKET 50-374 LER 84-028  
 REACTOR WATER CLEANUP ISOLATES ON HIGH AMBIENT TEMPERATURE.  
 EVENT DATE: 061784 REPORT DATE: 070584 NSSS: GE TYPE: BWR  
 VENDOR: RILEY-BEAIRD, INC.

(NSIC 190488) ON JUNE 17, 1984 AT 1202 HOURS WITH UNIT 2 OPERATING AT ABOUT ONE PERCENT POWER, THE REACTOR WATER CLEANUP (RWCU) INBOARD ISOLATION VALVE 2G33-F001 CLOSED AND THE REACTOR WATER CLEANUP PUMPS TRIPPED. THE CONTROL ROOM PANEL ALARMS INDICATED THAT THE SYSTEM HAD ISOLATED ON A SPURIOUS HIGH AMBIENT TEMPERATURE FROM THE RILEY LEAK DETECTION ISOLATION SYSTEM. AFTER VERIFYING THAT NO ABNORMAL CONDITION EXISTED THE RWCU SYSTEM WAS RESTARTED.

[ 94] LACROSSE DOCKET 50-409 LER 84-007  
 REACTOR SCRAM DUE TO HIGH POWER/RECIRCULATION FLOW SIGNAL.  
 EVENT DATE: 052984 REPORT DATE: 062784 NSSS: AC TYPE: BWR  
 VENDOR: JORDON CONTROLS CO.

(NSIC 190495) WHILE THE REACTOR WAS OPERATING AT 96% POWER, THE 1A FORCED CIRCULATION PUMP'S FLOW DECREASED WITHOUT OPERATOR ACTION. THE FLOW THROUGH THE 1B FORCED CIRCULATION PUMP THEN INCREASED, THOUGH NOT BY AS MUCH AS THE 1A PUMP FLOW DECREASE. A SPIKE OCCURRED ON NUCLEAR INSTRUMENTATION CHANNEL NO. 8, WHICH AT THE LOWER TOTAL RECIRCULATION FLOW, WAS HIGH ENOUGH TO CAUSE THE POWER/RECIRCULATION FLOW SIGNAL TO EXCEED THE SCRAM SETPOINT. THE REACTOR AUTOMATICALLY SHUTDOWN. TROUBLESHOOTING WAS PERFORMED ON THE 1A FORCED CIRCULATION PUMP SPEED CONTROL CIRCUIT. A PINION GEAR ON THE JORDAN SPEED CONTROL UNIT WAS FOUND TO BE ALLOWING SOME END PLAY, WHICH COULD HAVE AFFECTED THE PUMP SPEED. A NEW BUSHING WAS INSTALLED. THE 1B FORCED CIRCULATION PUMP JORDAN SPEED CONTROL UNIT WAS INSPECTED AND DETERMINED TO BE IN SATISFACTORY CONDITION.

[ 95] MAINE YANKEE DOCKET 50-309 LER 84-007  
 THREE INADVERTENT SIAS ACTUATIONS DURING AC VITAL BUS TRANSFERS WHILE SHUTDOWN FOR REFUELING.  
 EVENT DATE: 041384 REPORT DATE: 051484 NSSS: CE TYPE: PWR

(NSIC 190365) ON APR 13, WHILE IN A REFUELING SHUTDOWN CONDITION, 3 INADVERTENT ACTUATIONS OF SAFEGUARDS SYSTEMS OCCURRED. THE FIRST EVENT OCCURRED WHEN OPERATORS WERE REMOVING AN INVERTER FROM SERVICE AFTER 2 OF THE AC VITAL BUSES HAD BEEN INCORRECTLY CROSS-TIED TO THE INVERTER. WHEN THE INVERTER DE-ENERGIZED, SAFETY INJECTION AUTOMATICALLY UNBLOCKED CAUSING THE ACTUATION OF SAFETY INJECTION, RECIRCULATION AND THE FIRST PHASE OF CONTAINMENT ISOLATION. THE SECOND EVENT OCCURRED AFTER THE INVERTERS WERE PROPERLY CROSS-TIED AND THE FINAL EVENT OCCURRED WHILE RETURNING TO NORMAL ALIGNMENT. THE LATTER 2 EVENTS WERE



MOST LIKELY CAUSED BY VOLTAGE SPIKES ASSOCIATED WITH TRANSFERRING BUSES, HOWEVER, THE ACTUAL CAUSES ARE NOT KNOWN. THE PLANT WAS IN A REFUELING SHUTDOWN CONDLITION.

[ 96] MCGUIRE 1 DOCKET 50-369 LER 84-015  
 ONE CONTROL ROD POSITION INDICATION LOST.  
 EVENT DATE: 042684 REPORT DATE: 052984 NSSS: WE TYPE: PWR  
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 190376) ON APR 26, 1984 THE "PROCEDURE FOR FULL LENGTH ROD CONTROL CLUSTER ASSEMBLY DROP TIMING" WAS PERFORMED TO VERIFY DIGITAL ROD POSITION INDICATION (DRPI) ACCURACY AND PROPER OPERATION OF THE CONTROL ROD DRIVE SYSTEM. AT 0830 THE CONTROL OPERATOR OPENED THE REACTOR TRIP BREAKERS IN ACCORDANCE WITH THE ACTION STATEMENT OF TECH SPEC 3.1.3.3 WHEN ROD B-12, IN SHUTDOWN BANK A, FAILED TO INDICATE ITS CORRECT POSITION. UNIT 1 WAS IN MODE 3 WITH THE CONTROL AND SHUTDOWN BANKS INSERTED EXCEPT SHUTDOWN BANK A, WHICH WAS 18 STEPS WITHDRAWN. THIS EVENT IS ATTRIBUTED TO COMPONENT FAILURE BECAUSE A CIRCUIT ON THE DETECTOR/ENCODER CARD FAILED. THIS CARD FAILURE GAVE AN INCORRECT INDICATION FOR THE LOCATION OF ROD B-12. THE FAULTY CARD WAS REPLACED WITH A SPARE AND THE DROP TIMING PROCEDURE WAS SUCCESSFULLY COMPLETED. THE REACTOR REMAINED SUBCRITICAL THROUGHOUT THE EVENT.

[ 97] MCGUIRE 2 DOCKET 50-370 LER 84-010  
 REACTOR TRIP DUE TO LOSS OF BOTH MAIN FEEDWATER PUMPS.  
 EVENT DATE: 041984 REPORT DATE: 052184 NSSS: WE TYPE: PWR  
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 190334) ON APR 19, 1984, THE AUXILIARY AC ELECTRICAL POWER SYSTEM WAS BEING ALIGNED IN PREPARATION TO PERFORM THE "6.9 KV NORMAL AUXILIARY POWER AUTOMATIC TRANSFER TEST." (THE TEST WAS TO BE DONE ON UNIT 1.) IN ORDER TO BETTER CONTROL AND PROTECT THE UNIT 2 LOADS BEING SUPPLIED BY UNIT 1 SOURCES, THEY WERE BEING TRANSFERRED TO UNIT 2 SOURCES. THE TRANSFERS WERE DONE BY THE 'DEAD BUS' METHOD, AND OPERATIONS PERSONNEL ANTICIPATED A SLIGHT DECREASE OF FEEDWATER (CF) PUMP 2B SPEED DURING THE TRANSFER. THE TRANSFER WAS INITIATED, AND CF PUMP 2B SPEED BEGAN TO DECREASE AS EXPECTED. THE TRANSFER WAS COMPLETED APPROX 1 SEC LATFR, AND CF PUMP 2B SHOULD HAVE RETURNED TO SPEED; HOWEVER, IT DID NOT. AFTER APPROX 38 SECS, THE OPERATOR ATTEMPTED TO TRIP THE AFFECTED CF PUMP TO INITIATE A 50% TURBINE/GENERATOR (T/G) RUNBACK. HE INADVERTENTLY TRIPPED CF PUMP 2A INSTEAD OF CF PUMP 2B. COINCIDENTLY, THE RUNBACK WAS NOT INITIATED (ON 1 OUT OF 2 CF PUMPS TRIP LOGIC) BECAUSE OF A DEFECTIVE SIGNAL CONDITIONING CIRCUIT CARD IN THE DIGITAL ELECTRO-HYDRAULIC TURBINE CONTROL (DEH) CABINET. THE TURBINE AND REACTOR TRIPPED AT 1047, DUE TO LOW SG LEVEL. THIS EVENT IS ATTRIBUTED TO COMPONENT FAILURE/MALFUNCTION DUE TO THE CF PUMP CONTROL OIL ORIFICE BECOMING BLOCKED AND THE SIGNAL CONDITIONING CIRCUIT CARD FAILING. ALSO CONTRIBUTING WAS PERSONNEL ERROR, DUE TO OPERATOR INADVERTENTLY TRIPPING THE OPERATING CF PUMP 2A.

[ 98] MCGUIRE 2 DOCKET 50-370 LER 84-012  
 REACTOR TRIP DUE TO FEEDWATER TRANSIENT.  
 EVENT DATE: 051084 REPORT DATE: 061184 NSSS: WE TYPE: PWR  
 VENDOR: BAILEY METER COMPANY  
 COPES-VULCAN, INC.

(NSIC 190443) ON MAY 10, 1984 A REACTOR TRIP (AND SUBSEQUENT TURBINE TRIP) OCCURRED AT 1252 WHEN STEAM GENERATOR (S/G) C LEVEL DROPPED BELOW THE S/G LOW-LOW REACTOR TRIP SETPOINT. THE S/G LOW-LOW LEVEL CONDITION WAS CAUSED BY A MAIN FEEDWATER TRANSIENT. THE FEEDWATER TRANSIENT WAS SUSPECTED TO BE THE RESULT OF D FEEDWATER REGULATOR VALVE CLOSING ABRUPTLY. ONCE THE TRANSIENT BEGAN, THE FOUR FEEDWATER REGULATOR VALVE CONTROLLERS WERE PLACED IN "MANU/L" TO AID OPERATORS IN THE CONTROL OF S/G LEVELS. AN ATTEMPT WAS MADE TO AVERT A REACTOR TRIP BY

INCREASING S/G WATER LEVELS BUT FAILED WHEN S/G C REACHED ITS LOW-LOW LEVEL TRIP SETPOINT. UNIT 2 WAS IN MODE 1 AT 100% POWER AT THE TIME OF THIS EVENT. THIS EVENT IS ATTRIBUTED TO COMPONENT MALFUNCTION, ALTHOUGH THE EXACT CAUSE OF D FEEDWATER REGULATOR VALVE CLOSING ABRUPTLY CAN NOT BE REASONABLY ASCERTAINED. THE REACTOR TRIPPED AS DESIGNED, AND THE AUXILIARY FEEDWATER PUMPS STARTED ON LOW-LOW S/G LEVELS TO ENSURE THAT THE REACTOR COOLANT SYSTEM COULD BE COOLED DOWN TO LESS THAN 350F. THE D FEEDWATER REGULATOR PILOT VALVE STEM WAS CLEANED, AND THE UNIT WAS BACK ON LINE AT APPROXIMATELY 2100 ON MAY 10, 1984.

[ 99] MILLSTONE 1 DOCKET 50-245 LER 84-011  
 PARTIAL FAILURE OF THE CONDENSER BAY FIRE PROTECTION SYSTEM.  
 EVENT DATE: 052084 REPORT DATE: 062684 NSSS: GE TYPE: BWR  
 VENDOR: AUTOMATIC SPRINKLER CORPORATION

(NSIC 190466) ON MAY 20, 1984, WHILE PERFORMING FIRE DETECTION SYSTEM DELUGE VALVE FUNCTIONAL TEST, TWO OF SIX FIRE DETECTOR STRINGS IN THE CONDENSER BAY FAILED TO ACTUATE. FURTHER INVESTIGATION REVEALED THE THERMAL SUPERVISORY AIR PRESSURE FOR THE CONDENSER BAY HEAT ACTUATED DEVICES (HAD'S) WAS BELOW SPECIFICATION AT 11 OUNCES/IN. SQUARED. THIS PREVENTED THE HAD'S FROM PERFORMING THEIR INTENDED FUNCTION. A THERMAL SUPERVISORY AIR PRESSURE OF 20 TO 24 OUNCES/IN. SQUARED IS REQUIRED FOR PROPER OPERATION OF THE SYSTEM. THE THERMAL SUPERVISORY AIR PRESSURE FOR THE CONDENSER BAY HAD'S WAS INCREASED TO WITHIN THE REQUIRED AIR PRESSURE AND THE FIRE DETECTOR STRINGS RETESTED SATISFACTORILY. TO PREVENT A REOCCURRENCE, THIS SURVEILLANCE AND THE WEEKLY FIRE PROTECTION SYSTEM LINE UP CHECK WILL BE REVISED TO CHECK THE SUPERVISORY AIR PRESSURES AND ENSURE THEY ARE WITHIN THE REQUIRED SPECIFICATION. THESE CHANGES WILL BE INCORPORATED INTO THE PROCEDURES PRIOR TO THE NEXT REFUEL OUTAGE.

[100] MILLSTONE 2 DOCKET 50-336 LER 81-022 REV 1  
 UPDATE ON THROUGH WALL CRACK IN SI TEST HEADER.  
 EVENT DATE: 061781 REPORT DATE: 032984 NSSS: CE TYPE: PWR  
 VENDOR: BECHTEL CORP.

(NSIC 190285) DURING STEADY STATE OPERATIONS A LEAK WAS EVIDENT INSIDE CONTAINMENT. CONTAINMENT ENTRY VERIFIED A THROUGH WALL CRACK IN THE SAFETY INJECTION TEST HEADER (1-1/2"-GCB-14) JUST UPSTREAM OF RELIEF VALVE 2-S1-466. SIMILAR EVENTS: 81-2 (1/30/81), 80-27 (8/25/80), 77-39 (9/17/77), 77-10 (3/21/77). PRESSURE WAVES FROM CYCLING OF RELIEF VALVE 2-S1-466 CAUSES ABNORMAL STRESSES IN THE PIPING. A SECTION OF PIPE AND A FLANGE WERE REPLACED. A DESIGN CHANGE HAS BEEN RECOMMENDED; DUE TO PARTS AVAILABILITY IT WILL NOT BE IMPLEMENTED UNTIL THE NEXT REFUEL OUTAGE. OPERATIONS PROCEDURES HAVE BEEN REVISED AS AN INTERIM MEASURE TO PREVENT RECURRENCE.

[101] MILLSTONE 2 DOCKET 50-336 LER 82-023 REV 1  
 UPDATE ON LEAKS IN SAFETY INJECTION HEADER.  
 EVENT DATE: 061782 REPORT DATE: 032984 NSSS: CE TYPE: PWR  
 VENDOR: BECHTEL CORP.

(NSIC 190290) DURING A CONTAINMENT ENTRY FOR ROUTINE SURVEILLANCE A LEAK WAS NOTICED IN THE SAFETY INJECTION TEST HEADER AT 2 PLACES UPSTREAM OF RELIEF VALVE 2-S1-466. THERE ARE NO PROBABLE CONSEQUENCES AS A RESULT OF THIS EVENT. SIMILAR EVENTS: 81-022, 81-2, 80-27, 77-3, 77-10. PRESSURE WAVES FROM CYCLING OF RELIEF VALVE 2-S1-466 CAUSES ABNORMAL STRESSES IN THE SAFETY INJECTION TEST HEADER. THE CRACKS WERE WELD REPAIRED AND A SECTION OF PIPE WAS REPLACED. A DESIGN CHANGE HAS BEEN RECOMMENDED; DUE TO PARTS AVAILABILITY IT WILL NOT BE IMPLEMENTED UNTIL THE NEXT REFUEL OUTAGE. OPERATIONS PROCEDURES HAVE BEEN REVISED IN THE INTERIM.

[102] MILLSTONE 2 DOCKET 50-336 LER 82-036 REV 2  
 UPDATE ON CHARGING PUMP CRACKS.  
 EVENT DATE: 082582 REPORT DATE: 052384 NSSS: CE TYPE: PWR

(NSIC 190476) WITH THE PLANT AT 100 PER CENT POWER LEVEL AND DURING ROUTINE PACKING REPLACEMENT OF THE 'A' CHARGING PUMP, A CRACK WAS DISCOVERED IN THE 'A' CHARGING PUMP BLOCK. ON 2/27/84, WITH THE PLANT AT 100 PER CENT POWER, WHILE INVESTIGATING UNIDENTIFIED LEAKAGE IN THE 'B' CHARGING PUMP A CRACK WAS DISCOVERED INSIDE THE PUMP BORES. ON APRIL 4, 1984 AGAIN AT 100 PER CENT POWER A CRACK WAS DISCOVERED IN THE REPLACEMENT 'A' CHARGING PUMP BLOCK DURING A ROUTINE PACKING REPLACEMENT. TWO CHARGING PUMPS WERE ALWAYS AVAILABLE, THEREFORE NO LIMITING CONDITIONS OF OPERATION WERE ENTERED. SIMILAR LER'S: 79-14. AN INDEPENDENT DESTRUCTIVE EVALUATION OF THE ORIGINAL 'A' CHARGING PUMP DISCOVERED A SUBSURFACE INCLUSION IN THE PUMP BORE. THE CRACK STARTED AT THIS INCLUSION DUE TO HIGH LOCAL STRESSES AND PROPAGATED DUE TO FATIGUE. THE EXACT CAUSE OF THE CRACKING OF THE 'B' AND REPLACEMENT 'A' CHARGING PUMPS IS UNKNOWN AT THIS TIME. INCLUSIONS SIMILAR TO THE ONE THAT CRACKED THE ORIGINAL 'A' PUMP IN AUGUST 1982 ARE SUSPECTED.

[103] MILLSTONE 2 DOCKET 50-336 LER 82-049 REV 1  
 UPDATE ON LOW LEVELS IN FIREWATER STORAGE TANKS.  
 EVENT DATE: 120782 REPORT DATE: 040284 NSSS: CE TYPE: PWR  
 VENDOR: WOOSTER ELECTRIC COMPANY

(NSIC 190346) ON DEC 7, 1982, AT 0855 HRS, WHILE PERFORMING ROUTINE ROUNDS, FIRE WATER STORAGE TANK A AND B LEVELS WERE FOUND TO BE AT 190,153 GALLONS AND 190,074 GALLONS, RESPECTIVELY. THE TANKS WERE IMMEDIATELY FILLED TO ABOVE THE TECH SPEC LIMIT. TECH SPEC 3.12.A.1.A REQUIRES TWO FIRE SUPPRESSION WATER SUPPLIES, EACH WITH A MINIMUM CONTAINED VOLUME OF 200,000 GALLONS. THERE WERE NO CONSEQUENCES. DISASSEMBLY OF 'A' MAKE-UP VALVE OPERATOR REVEALED A STRIPPED GEAR. 'B' MOTOR OPERATOR WAS FOUND TO HAVE A STICKING BRAKE. ADDITIONALLY 'B' VALVE WAS BINDING. THE GEAR IN 'A' MAKE-UP VALVE OPERATOR WAS ROTATED AWAY FROM THE STRIPPED TEETH AND LUBRICATED. THE STICKING BRAKE IN 'B' VALVE OPERATOR WAS REMOVED AND THE VALVE LUBRICATED.

[104] MILLSTONE 2 DOCKET 50-336 LER 83-012 REV 1  
 UPDATE ON LOW OIL PRESSURE.  
 EVENT DATE: 032283 REPORT DATE: 031284 NSSS: CE TYPE: PWR  
 VENDOR: GAULIN CORP.

(NSIC 190296) DURING ROUTINE STEADY STATE POWER OPERATION WITH THE A CHARGING PUMP TAGGED OUT FOR MAINTENANCE AND THE B+C PUMPS IN SERVICE, OIL PRESSURE WAS LOST ON THE C PUMP AND IT WAS SHUT DOWN; SUBSEQUENTLY 4 DAYS LATER, THE C PUMP WAS SHUT DOWN AGAIN DUE TO LOW OIL PRESSURE. THE PLANT WAS OPERATED PER TECH SPEC 3.1.2.2, 3.1.2.4, AND 3.5.2 FOR 3 HRS 33 MINS IN THE FIRST CASE AND 2 HRS AND 8 MINS IN THE SUBSEQUENT CASE. SIMILAR LER'S: NONE. C CHARGING PUMP OIL PRESSURE WAS LOST DUE TO FAILURE OF THE DRIVE COUPLING FOR THE INTEGRAL OIL PUMP. SUBSEQUENTLY, AFTER REPAIRS WERE MADE, THE DRIVE COUPLING SET SCREW BACKED-OUT, DISENGAGING THE COUPLING, AND THE PUMP WAS AGAIN SHUT DOWN. REINSTALLATION WAS DONE AND THE SET SCREW WAS STAKED TO PREVENT LOOSENING.

[105] MILLSTONE 2 DOCKET 50-336 LER 83-013 REV 1  
 UPDATE ON LONG RESPONSE TIME OF RCS TEMPERATURE DETECTOR.  
 EVENT DATE: 032983 REPORT DATE: 040284 NSSS: CE TYPE: PWR  
 VENDOR: ROSEMOUNT, INC.

(NSIC 190349) THE PLANT WAS IN STEADY STATE OPERATION AT 100% POWER. DURING A SURVEILLANCE TEST OF A NEWLY INSTALLED RESISTANCE TEMPERATURE DETECTOR (RTD) THE

RESPONSE TIME FOR THE LOOP #1 HOT LEG, ON CHANNEL D, WAS FOUND TO BE OUT OF SPECIFICATION IN A NONCONSERVATIVE DIRECTION. THE PLANT WAS OPERATED IN ACCORDANCE WITH ACTION STATEMENT 2B OF TECH SPECS 3.3.1.1. SIMILAR OCCURRENCES: NONE. THE CAUSE OF THE OUT OF SPECIFICATION SETPOINT WAS RTD FAILURE. THE RTD WAS REMOVED AS A REACTOR PROTECTION SYSTEM INPUT VIA THE BYPASS/JUMPER SYSTEM. THE ROSEMOUNT, MODEL 104AFC-1 RTD WAS REPLACED DURING THE 1983 REFUEL OUTAGE. THE REPLACEMENT RTD (WEED, MODEL 612) WILL ENHANCE THE RELIABILITY OF THE REACTOR PROTECTION SYSTEM.

[106] MILLSTONE 2 DOCKET 50-336 LER 83-018 REV 1  
 UPDATE ON SETPOINT DRIFT OF STEAM GENERATOR PRESSURE BISTABLE.  
 EVENT DATE: 050683 REPORT DATE: 040284 NSSS: CE TYPE: PWR  
 VENDOR: GULF GENERAL ATOMIC

(NSIC 190350) DURING A MONTHLY SURVEILLANCE TEST, THE REACTOR PROTECTION SYSTEM CHANNEL A LOW STEAM GENERATOR PRESSURE BYPASS REMOVAL SETPOINTS WERE FOUND TO BE OUT OF SPECIFICATION IN A NONCONSERVATIVE DIRECTION. THE BISTABLE SETPOINTS WERE IMMEDIATELY ADJUSTED IN ACCORDANCE WITH TECH SPECS 2.2.1, TABLE 2.2.1, ITEM 7, NOTE 2 AND OPERATION CONTINUED. THERE WERE NO CONSEQUENCES OF THIS EVENT BECAUSE THE SETPOINTS WERE FOUND TO BE CORRECT IN THE PREVIOUS MONTHLY CHECK AND THERE WERE NO OPERATIONS REQUIRING BISTABLE FUNCTIONING. PREVIOUS OCCURRENCES: 75-36, 80-16, 82-15. THE CAUSE OF THE HIGH SETPOINTS WAS INSTRUMENT SHIFT CAUSED BY HIGH SENSITIVITY TO CHANGES IN INPUT RESISTANCE WITHIN THE AUCTIONEERED INPUT BISTABLE TRIP UNITS. THE BISTABLE TRIP UNIT (GULF ATOMIC, MODEL ELD-240) WAS REPLACED DURING THE 1983 REFUEL OUTAGE. THE NEW BISTABLE TRIP UNIT (ELECTRO-MECHANICS, MODEL 34860) WILL ENHANCE THE RELIABILITY OF THE AUCTIONEERED PROCESS LOOP SIGNALS.

[107] MONTICELLO DOCKET 50-263 LER 84-020  
 SBGTS INITIATION FROM REACTOR BUILDING VENTILATION WIDE RANGE GAS MONITOR TRIP.  
 EVENT DATE: 053084 REPORT DATE: 062984 NSSS: GE TYPE: BWR

(NSIC 190469) ON MAY 30, 1984, A REACTOR BUILDING ISOLATION AND INITIATION OF STANDBY GAS TREATMENT OCCURRED WHEN TWO INOP TRIP SIGNALS WERE RECEIVED FROM THE REACTOR BUILDING VENTILATION WIDE RANGE GAS MONITORS.

[108] NINE MILE POINT 1 DOCKET 50-220 LER 81-055  
 REACTOR BUILDING EMERGENCY VENTILATION SYSTEM FILTERS NOT TESTED.  
 EVENT DATE: 060581 REPORT DATE: 062584 NSSS: GE TYPE: BWR  
 VENDOR: CAMBRIDGE FILTER CORP.

(NSIC 190463) DURING A REFUELING OUTAGE, A Q.A. REVIEW DISCOVERED ON MAY 21, 1984 THAT DOCUMENTATION OF A SURVEILLANCE TEST PERFORMED ON THE REACTOR BUILDING EMERGENCY VENTILATION SYSTEM ON JUNE 5, 1981, INDICATED THAT, ALTHOUGH VISUAL INSPECTION OF DOORS AND ACCESS OPENINGS FOR ADEQUACY OF SEALING WAS DOCUMENTED, NO RECORD WAS MADE TO VERIFY THAT A TEST WAS ALSO CONDUCTED USING DOP OR FREON AS A PART OF THE CORRESPONDING FILTER TEST. TECH SPEC 4.4.4.F STATES "TEST SEALING OF GASKETS FOR HOUSING DOORS DOWNSTREAM OF THE HEPA FILTERS AND CHARCOAL ABSORBERS SHALL BE PERFORMED AT AND IN CONFORMANCE WITH EACH TEST PERFORMED FOR COMPLIANCE WITH SPECIFICATION 4.4.4.B AND SPECIFICATION 3.4.4.B." SINCE THE INTEGRITY OF THIS SYSTEM WAS VERIFIED THROUGH THE SUCCESSFUL COMPLETION OF OPERATIONS SURVEILLANCE TEST N1-ST-M8, "EMERGENCY VENTILATION SYSTEM OPERABILITY TEST" (WHICH VERIFIES ACCEPTABLE REACTOR BUILDING LEAKAGE AND NEGATIVE PRESSURE ON THE REACTOR BUILDING), THE OVERALL SAFETY CONSEQUENCES ARISING OUT OF THIS EVENT WERE MINIMAL.

[109] NINE MILE POINT 1 DOCKET 50-220 LER 82-024  
 REACTOR BUILDING EMERGENCY VENTILATION SYSTEM FILTERS NOT TESTED.  
 EVENT DATE: 101982 REPORT DATE: 062584 NSSS: GF TYPE: BWR  
 VENDOR: CAMBRIDGE FILTER CORP.

(NSIC 190462) DURING A REFUELING OUTAGE, A Q.A. REVIEW DISCOVERED ON MAY 21, 1984 THAT DOCUMENTATION OF A SURVEILLANCE TEST PERFORMED ON THE REACTOR BUILDING EMERGENCY VENTILATION SYSTEM ON OCTOBER 19, 1982, INDICATED THAT, ALTHOUGH VISUAL INSPECTION OF DOORS AND ACCESS OPENINGS FOR ADEQUACY OF SEALING WAS DOCUMENTED, NO RECORD WAS MADE TO VERIFY THAT A TEST WAS ALSO CONDUCTED USING DOP OR FREON AS PART OF THE CORRESPONDING FILTER TEST. TECH SPEC STATES THAT "TEST SEALING OF GASKETS FOR HOUSING DOORS DOWNSTREAM OF THE HEPA FILTERS AND CHARCOAL ABSORBERS SHALL BE PERFORMED AT AND IN CONFORMANCE WITH EACH TEST PERFORMED FOR COMPLIANCE WITH SPECIFICATION 4.4.4.B AND SPECIFICATION 3.4.4.B." SINCE THE INTEGRITY OF THIS SYSTEM WAS VERIFIED THROUGH THE SUCCESSFUL COMPLETION OF OPERATIONS SURVEILLANCE TEST N1-ST-M8, "EMERGENCY VENTILATION SYSTEM OPERABILITY TEST" (WHICH VERIFIES ACCEPTABLE REACTOR BUILDING LEAKAGE AND NEGATIVE PRESSURE ON THE REACTOR BUILDING), THE OVERALL SAFETY CONSEQUENCES ARISING OUT OF THIS EVENT WERE MINIMAL. THIS EVENT RESULTED FROM A VAGUENESS IN PROCEDURE N1-RTP-38, REV. 0 AND REV. 1, "TEST AND ANALYSIS OF HEPA AND CHARCOAL BED FILTERS," WHICH REQUIRED THAT THE TEST RESULTS FOR THE HOUSING DOORS GASKET SEAL BE RECORDED IN THE "REMARKS" SECTION OF THE CONTRACTOR'S NCS FORM #4.

[110] NINE MILE POINT 1 DOCKET 50-220 LER 84-005  
 SCRAM RESULTING FROM SPURIOUS IRM TRIPS ON DIFFERENT CHANNELS OF RPS.  
 EVENT DATE: 050984 REPORT DATE: 060884 NSSS: GE TYPE: BWR

(NSIC 190354) WHILE IN A REFUELING OUTAGE, SPURIOUS TRIPS OF THE INTERMEDIATE RANGE MONITORS (IRM), ONE ON EACH CHANNEL OF THE REACTOR PROTECTION SYSTEM (RPS), OCCURRED. AS A DIRECT RESULT OF THIS, A FULL SCRAM SIGNAL WAS PRODUCED. THE CAUSE OF THESE TRIPS HAS BEEN ATTRIBUTED TO ELECTROMAGNETIC INTERFERENCE CAUSED BY WELDING IN THE DRYWELL AT THE TIME OF THIS EVENT. NO CORRECTIVE ACTIONS WERE TAKEN FOR THIS EVENT SINCE THE CONDITIONS WHICH CAUSED THIS EVENT TO OCCUR WOULD NOT BE PRESENT DURING NORMAL REACTOR OPERATION.

[111] NINE MILE POINT 1 DOCKET 50-220 LER 84-007  
 REACTOR SCRAMS ON HIGH PRESSURE.  
 EVENT DATE: 052184 REPORT DATE: 062184 NSSS: GE TYPE: BWR

(NSIC 190461) DURING A REFUELING OUTAGE, SHORTLY AFTER CONTROL ROD SCRAM TIME TESTING WAS PERFORMED, TWO HIGH PRESSURE REACTOR SCRAMS OCCURRED WITHIN 9 MINUTES OF EACH OTHER. THE REACTOR VESSEL WAS UNDER POST-HYDROSTATIC TESTING CONDITIONS WITH THE REACTOR VESSEL WATER SOLID. THE REACTOR VESSEL PRESSURE WAS BEING MANUALLY CONTROLLED BY A "FEED AND BLEED" PROCESS. PRESSURE OSCILLATIONS DUE TO CONTROL ROD SCRAM TIME TESTING PERFORMED JUST PRIOR TO THE INITIAL EVENT COMPOUNDED THE DIFFICULTY IN MAINTAINING THE REACTOR VESSEL PRESSURE. AS A DIRECT RESULT OF THESE CONDITIONS, HIGH PRESSURE FLUCTUATIONS OCCURRED WHICH INITIATED AUTOMATIC HIGH PRESSURE REACTOR SCRAMS. PROCEDURAL CHANGES WILL BE INCORPORATED SO AS TO PREVENT THIS TYPE OF EVENT FROM OCCURRING IN THE FUTURE.

[112] NINE MILE POINT 1 DOCKET 50-220 LER 84-008  
 REACTOR SCRAMS DUE TO LOW INSTRUMENT AIR HEADER PRESSURE.  
 EVENT DATE: 052484 REPORT DATE: 062584 NSSS: GE TYPE: BWR

(NSIC 190412) DURING A REFUELING OUTAGE, A CYCLIC SURVEILLANCE TEST OF THE CONTAINMENT SPRAY AIR FLOW WAS BEING PERFORMED. DUE TO AN OPERATOR ERROR, A BLOCKING VALVE WAS NOT CLOSED PRIOR TO STARTING THE TEST. THIS CAUSED LOW INSTRUMENT AIR PRESSURE THROUGHOUT THE PLANT, WHICH LED TO A REACTOR SCRAM. THE

SCRAM WAS RESET, SCRAM DISCHARGE VOLUME WAS DRAINED, THE BLOCKING VALVE WAS CLOSED, INSTRUMENT AIR PRESSURE WAS RETURNED TO NORMAL, AND THE TEST WAS SUCCESSFULLY RESUMED AND COMPLETED. THE OPERATOR INVOLVED WITH THE ERROR WAS REINSTRUCTED BY THE OPERATIONS SUPERVISOR ON THE IMPORTANCE OF STRICT COMPLIANCE WITH ALL OPERATING PROCEDURES.

[113] NORTH ANNA 1 DOCKET 50-338 LER 83-048 REV 1  
 UPDATE ON SERVICE WATER LEAKS.  
 EVENT DATE: 070983 REPORT DATE: 080883 NSSS: WE TYPE: PWR  
 OTHER UNITS INVOLVED: NORTH ANNA 2 (PWR)  
 VENDOR: GUYON ALLOYS

(NSIC 190405) ON JULY 9, 1983, THE 'A' SERVICE WATER SUPPLY HEADER TO THE UNIT 1 AND 2 CHARGING PUMP LUBE OIL COOLERS AND AIR COMPRESSORS WAS ISOLATED TO INSTALL A TEMPORARY PATCH TO A PINHOLE LEAK. THE REDUNDANT 'B' HEADER WAS AVAILABLE DURING THE EVENT. THIS EVENT IS WITHIN THE ACTION STATEMENT OF TECH SPEC 3.7.4.1 AND REPORTABLE PURSUANT TO TECH SPEC 6.9.1.9.B. A STUDY COMPLETED BY LEHIGH UNIV. DETERMINED THE CAUSE OF THE PINHOLE LEAKS TO BE AGGRESSIVE WATER AND, TO A LESSER DEGREE, BACTERIAL REDUCTION OF THE MILD STEEL PIPING. ON JULY 9, 1983, THE PIPING WAS ISOLATED AND A TEMPORARY PATCH WAS INSTALLED. AFFECTED PIPING TO THE CHARGING PUMP LUBE OIL COOLERS WAS REPLACED WITH STAINLESS STEEL PIPING VIA DESIGN CHANGE 82-08, COMPLETED DEC 16, 1983.

[114] OCONEE 1 DOCKET 50-269 LER 84-002  
 REACTOR TRIP ON HIGH RCS PRESSURE FOLLOWING FEEDWATER BTU LIMIT RUNBACK.  
 EVENT DATE: 051284 REPORT DATE: 061184 NSSS: BW TYPE: PWR  
 VENDOR: POTTER & BRUMFIELD

(NSIC 190308) ON MAY 12, 1984, AT APPROX. 0203 HRS, A UNIT 1 REACTOR TRIP WAS INITIATED BY THE REACTOR PROTECTION SYSTEM WHEN THE HIGH REACTOR COOLANT SYSTEM (RCS) PRESSURE SETPOINT WAS REACHED. THE REACTOR WAS OPERATING AT 100% FULL POWER AT THE TIME OF THE TRIP. THIS EVENT IS ATTRIBUTED TO THE FAILURE OF THE KEY SELECTOR SWITCH AND RELAY FOR THE RC OUTLET TEMPERATURE (THOT), WHICH CAUSED A FEEDWATER RUNBACK DUE TO BTU LIMITS AND LOW THOT INDICATION, INCREASING THE RCS PRESSURE TO THE TRIP SETPOINT. DIRTY RELAY CONTACTS ARE THE APPARENT CAUSE OF THE FAILURE OF THE KEY SELECTOR SWITCH AND RELAY FOR THOT. THE UNIT WAS IMMEDIATELY STABILIZED AT HOT SHUTDOWN AND THE FAILED COMPONENT WAS IDENTIFIED. THE RELAY FOR THOT INDICATION AND ASSOCIATED KEY SWITCH WERE REPLACED BY 0500 HRS ON MAY 12, 1984. THE PLANT RESPONSE WAS AS EXPECTED. THE UNIT WAS RESTARTED AND REACHED 100% FP ABOUT 34 HRS AFTER THE TRIP.

[115] OYSTER CREEK DOCKET 50-219 LER 84-008  
 NEUTRON MONITORING INSTRUMENT DRY TUBES HAVE CRACKS.  
 EVENT DATE: 032684 REPORT DATE: 060884 NSSS: GE TYPE: BWR  
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 190353) WHILE PERFORMING LOCAL POWER RANGE MONITOR (LPRM) REPLACEMENT WORK DURING THE CURRENT REFUELING/MAINTENANCE OUTAGE, OPERATORS VISUALLY NOTICED THAT THE DRY TUBE ASSOCIATED WITH INTERMEDIATE RANGE MONITOR (IRM) 12 APPEARED TO BE BENT NEAR THE UPPER CORE GRID. AN UNDERWATER TV CAMERA INSPECTION PERFORMED ON THE DRY TUBE IN FEB 1984, SHOWED A SIGNIFICANT AMOUNT OF CRACKING IN THE TOP PORTION OF THE TUBE. A MORE DETAILED INSPECTION CONDUCTED BY THE QUALITY ASSURANCE DEPARTMENT REVEALED THAT A TOTAL OF 7 IRM AND 1 SOURCE RANGE MONITOR (SRM) DRY TUBES WERE CRACKED. THE VIDEOTAPES OF THIS INSPECTION WERE SUBMITTED TO THE VENDOR AND TO THE TECHNICAL FUNCTIONS DIVISION FOR ANALYSIS. BASED ON THEIR RECOMMENDATIONS, IT WAS DECIDED THAT ALL 12 DRY TUBE ASSEMBLIES (8 IRMS AND 4 SRMS) WILL BE REPLACED PRIOR TO REACTOR STARTUP.

[116] OYSTER CREEK DOCKET 50-219 LER 84-010  
 FUEL POOL GATE MOVED ABOVE IRRADIATED FUEL.  
 EVENT DATE: 051084 REPORT DATE: 060884 NSSS: GE TYPE: BWR

(NSIC 190301) FOR AN UNDETERMINED NUMBER OF ITERATIONS THE FUEL POOL GATES HAVE BEEN MOVED OVER IRRADIATED FUEL BUNDLES IN THE FUEL POOL. THIS VIOLATES THE TECH SPEC REQUIRING THAT NO OBJECT IN EXCESS OF THE WEIGHT OF ONE FUEL ASSEMBLY (APPROX. 485 LBS.) BE MOVED OVER STORED IRRADIATED FUEL. THE HANDLING PROCEDURE FOR THE FUEL POOL GATES WILL BE REVISED TO PREVENT LIFTING THE GATES ABOVE IRRADIATED FUEL. ADDITIONALLY, MAINTENANCE PERSONNEL WILL BE INSTRUCTED FURTHER AS TO THE RESTRICTIONS FOR MOVEMENT OF THE FUEL POOL GATES.

[117] OYSTER CREEK DOCKET 50-219 LER 84-014  
 REACTOR LOW WATER LEVEL SURVEILLANCE PERFORMED LATE.  
 EVENT DATE: 053084 REPORT DATE: 052784 NSSS: GE TYPE: BWR

(NSIC 190460) THE TEST OF THE REACTOR LOW LEVEL INSTRUMENTATION WAS NOT PERFORMED WITHIN THE TIME PERIOD REQUIRED IN THE TECH SPECS. IT WAS SCHEDULED TO BE PERFORMED ON APRIL 9, 1984 AND MAY 7, 1984. IT WAS PERFORMED EARLY IN APRIL (APRIL 4) AND LATE IN MAY (MAY 15). THIS EVENT WAS DISCOVERED ON MAY 30, 1984 DURING THE COURSE OF NORMAL REVIEW OF SURVEILLANCES WITHIN THE MAINTENANCE ORGANIZATION. THE EVENT IS ATTRIBUTED TO PERSONNEL ERROR. THE INVOLVED PERSONNEL HAVE BEEN INSTRUCTED ON THEIR RESPONSIBILITIES AS OUTLINED IN THE PROCEDURE WHICH IMPLEMENTS THE SURVEILLANCE TEST PROGRAM.

[118] OYSTER CREEK DOCKET 50-219 LER 84-012  
 BOTH EMERGENCY DIESEL GENERATORS SIMULTANEOUSLY INOPERABLE.  
 EVENT DATE: 060484 REPORT DATE: 062984 NSSS: GE TYPE: BWR

(NSIC 190410) DURING A SCHEDULED LOAD TEST ON EMERGENCY DIESEL GENERATOR NO. 1 (EDG-1), A DIESEL FUEL OIL DAY TANK LOW LEVEL ALARM FOR UNIT ONE WAS RECEIVED IN THE CONTROL ROOM. SUBSEQUENT INVESTIGATION REVEALED THAT THE DIESEL FUEL OIL TRANSFER PUMP CONTROL SWITCH FOR EDG-1 WAS IN THE OFF POSITION. IN THE OFF POSITION, FUEL OIL IS NOT AUTOMATICALLY TRANSFERRED TO THE DIESEL DAY TANK FROM THE MAIN FUEL STORAGE TANK. THIS RESULTED IN EDG-1 BEING CONSIDERED INOPERABLE. SINCE EDG-2 WAS OUT OF SERVICE FOR GOVERNOR REPAIRS, BOTH EMERGENCY DIESEL GENERATORS WERE SIMULTANEOUSLY INOPERABLE. A VIOLATION OF THE TECH SPECS RESULTED, WHICH REQUIRE THAT AT LEAST ONE EDG BE OPERABLE IN ORDER FOR THE STANDBY GAS TREATMENT, CORE SPRAY AND THE STANDBY LIQUID CONTROL SYSTEMS TO BE CONSIDERED OPERABLE. EDG-1 WAS RETURNED TO SERVICE BY PLACING THE DIESEL FUEL TRANSFER PUMP CONTROL SWITCH IN THE ON POSITION. THE CONTROL SWITCH WAS LAST DEMONSTRATED TO BE IN THE ON POSITION DURING A LOAD RUN CONDUCTED ON MAY 28, 1984. REQUIREMENTS FOR CHECKING THE CONTROL SWITCH WILL BE ADDED TO PLANT TOUR SHEETS.

[119] OYSTER CREEK DOCKET 50-219 LER 84-013  
 LOSS OF PRIMARY FIRE WATER SUPPRESSION SYSTEM.  
 EVENT DATE: 060684 REPORT DATE: 062984 NSSS: GE TYPE: BWR

(NSIC 190411) ON JUN 6, 1984 AT APPROX 1330 HRS, POST INDICATING VALVE V-9-12, WHICH BRANCHES OFF THE 14 INCH FIRE WATER MAIN WAS DAMAGED BY A MAINTENANCE VEHICLE. THIS RESULTED IN A LOSS OF THE FIRE SUPPRESSION WATER SYSTEM. THIS 14 INCH LINE IS FED BY THE 2 DIESEL DRIVEN FIRE PUMPS AND SUPPLIES AN UNDERGROUND LOOP WHICH FEEDS THE FIRE SUPPRESSION WATER SYSTEM. IMMEDIATE ACTIONS PERFORMED CONSISTED OF ISOLATING THE LINE WHICH CONTAINED THE DAMAGED VALVE. THE REDUNDANT FIRE PROTECTION WATER SYSTEM WAS THEN TESTED FOR OPERABILITY AND ALIGNED TO SUPPLY THE UNDERGROUND LOOP WHICH FEEDS THE FIRE SUPPRESSION WATER SYSTEM. THE REDUNDANT FIRE PROTECTION SYSTEM IS A MANUALLY INITIATED SYSTEM CONSISTING OF A

TANK, PUMP, MOTOR, CONTROLS AND INTERCONNECTING PIPING. THE IMMEDIATE CORRECTIVE ACTION WAS TO REPAIR THE DAMAGED POST INDICATING VALVE AND RESTORE THE INTEGRITY OF THE PRIMARY FIRE WATER SYSTEM. THIS WAS ACCOMPLISHED IN APPROX NINE AND ONE-HALF HRS. AS A RESULT OF THIS INCIDENT ALL POST INDICATING VALVES IN SIMILAR HIGH TRAFFIC AREAS WERE INSPECTED FOR ADEQUATE PHYSICAL PROTECTION.

[120] PALISADES DOCKET 50-255 LER 83-068 REV 1  
 UPDATE ON TWO FIRE INSPECTION TOURS NOT MADE ON TIME.  
 EVENT DATE: 100383 REPORT DATE: 052984 NSSS: CE TYPE: PWR

(NSIC 190468) ON TWO OCCASIONS, FIRE INSPECTION TOURS OF THE ENGINEERED SAFEGUARDS ROOMS WERE NOT COMPLETED WITHIN THE REQUIRED HOURLY PERIOD. IN A SEPARATE OCCURRENCE, A FIRE INSPECTION TOUR OF CABLE PENETRATION ROOM WAS NOT COMPLETED WITHIN THE REQUIRED HOURLY PERIOD. THE FIRE TOURS WERE BEING CONDUCTED AS COMPENSATORY MEASURES FOR THE LOSS OF FIRE BARRIER GENERATION INTEGRITY PER TECH SPEC 3.22.5.1. REPORTABLE PER TECH SPEC 6.9.2.B(2). THE PLANT IS SHUT DOWN FOR REFUELING. THE FIRST OCCURRENCE WAS CAUSED BY THE FAILURE TO ADEQUATELY COMMUNICATE THE SIGNIFICANCE OF TIMELY COMPLETION OF FIRE TOURS. THE SECOND OCCURRENCE WAS CAUSED BY PERSONNEL ERROR. PROCEDURES HAVE BEEN REVISED TO EMPHASIZE TIMELY FIRE TOUR COMPLETION. ADDITIONALLY, START AND COMPLETION TIMES OF TOURS WILL BE COMMUNICATED VIA RADIO FOR IMPROVED MONITORING.

[121] PALISADES DOCKET 50-255 LER 84-005  
 ENGINEERED SAFETY FEATURE ACTUATION.  
 EVENT DATE: 051284 REPORT DATE: 061184 NSSS: CE TYPE: PWR

(NSIC 190416) ON MAY 12, 1984, WHILE OPERATIONS PERSONNEL WERE REPLACING FUSES IN SAFETY RELATED ELECTRICAL CIRCUITRY, THE USE OF AN INADEQUATE PROCEDURE RESULTED IN THE SPURIOUS ACTUATION OF A SAFETY INJECTION SIGNAL (SIS), CONTAINMENT ISOLATION SIGNAL AND A CONTAINMENT SPRAY SIGNAL. THE PLANT WAS SHUTDOWN AT THE TIME OF THE OCCURRENCE. THE APPLICABLE PROCEDURES HAVE BEEN REVISED AS NECESSARY TO PRECLUDE INADVERTENT SIGNAL ACTUATION AND EQUIPMENT OPERATION.

[122] PEACH BOTTOM 2 DOCKET 50-277 LER 84-008  
 STANDBY GAS TREATMENT SYSTEM TRAIN DAMPERS FAIL TO OPEN.  
 EVENT DATE: 042784 REPORT DATE: 052984 NSSS: GE TYPE: BWR  
 OTHER UNITS INVOLVED: PEACH BOTTOM 3 (BWR)  
 VENDOR: ASCO VALVES

(NSIC 190360) ON APR 27, 1984, THE STANDBY GAS TREATMENT (SBGT) SYSTEM WAS MANUALLY STARTED TO DEINERT THE UNIT 2 DRYWELL. SOLENOID VALVE, SV-00009, FAILED TO PROPERLY OPERATE PREVENTING THE 'A' FAN INLET AND OUTLET DAMPERS FROM OPENING. THE FAILED SOLENOID ON THE 'A' FAN WAS REPLACED AND THE SBGT SYSTEM WAS PLACED IN SERVICE TO CONTINUE DEINERTING OPERATIONS.

[123] PEACH BOTTOM 2 DOCKET 50-277 LER 84-009  
 ECCS (HPCI, RCIC) ACTUATION SIGNAL.  
 EVENT DATE: 051684 REPORT DATE: 061584 NSSS: GE TYPE: BWR

(NSIC 190420) ON MAY 16, 1984, DURING THE PRESENT REFUELING OUTAGE WHILE APPLYING A BLOCK FOR THE UNIT 2 MAIN STEAM RELIEF VALVE VACUUM BREAKERS, BOTH POWER SUPPLIES FOR THE 'A' ECCS CHANNEL LOGIC HAD THEIR FEEDS REMOVED. AS A RESULT, A FALSE LOW-LOW REACTOR LEVEL INITIATION SIGNAL CAUSED HPCI AND RCIC TO TRY TO START. BOTH POWER SUPPLY FEEDS WERE RESTORED AND THE BLOCK WAS REVISED.



[124] PEACH BOTTOM 3 DOCKET 50-278 LER 84-006  
 INOPERABLE MAIN STEAM LINE TUNNEL EXHAUST DUCT TEMPERATURE ELEMENTS.  
 EVENT DATE: 042684 REPORT DATE: 052584 NSSS: GE TYPE: BWR  
 VENDOR: BURNS ENGINEERING

(NSIC 190421) ON APR 26, 1984, AT APPROX 7:00 A.M., WITH UNIT 3 AT 100% POWER LEVEL, AN INCONSISTENCY IN THE TEMPERATURE INDICATIONS (TS-5931A AND B) FOR THE MAIN STEAM LINE TUNNEL EXHAUST DUCT WAS OBSERVED BY THE SHIFT TECHNICAL ADVISOR ON ST 9.1-3Z, "Z SHIFT SURVEILLANCE LOG." AT 10:40 A.M., INVESTIGATION REVEALED THAT TEMPERATURE ELEMENTS, TE-5931A AND TE-5931B WERE PULLED OUT OF THE EXHAUST DUCT. THIS DEFEATED ONE OF TWO INSTRUMENT CHANNELS IN EACH OF TWO TRIP SYSTEMS RESPONSIBLE FOR INITIATING A GROUP I ISOLATION OF THE PRIMARY CONTAINMENT ISOLATION SYSTEM. AS A RESULT, AT 11:06 A.M., A CONTROLLED REACTOR SHUTDOWN WAS INITIATED IN ACCORDANCE WITH TECH SPEC TABLE 3.2.A AND AN UNUSUAL EVENT WAS DECLARED. THE CAUSE WAS THE RESULT OF IMPROPER SCAFFOLDING INSTALLATION IN THE AREA OF THE TEMPERATURE ELEMENTS. THE TEMPERATURE ELEMENTS WERE REINSTALLED IN THE DUCT, VERIFIED AS OPERABLE, AND THE UNUSUAL EVENT WAS TERMINATED AT 11:14 A.M. ON APR 26, 1984. LIKewise, THE SCAFFOLDING WAS ALSO REMOVED FROM THE AREA.

[125] PEACH BOTTOM 3 DOCKET 50-278 LER 84-008  
 JET PUMP INSTRUMENTATION LINE CRACKS INDICATIONS.  
 EVENT DATE: 061084 REPORT DATE: 070984 NSSS: GE TYPE: BWR  
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 190470) ON JUNE 10, 1984, WITH UNIT 3 SHUT DOWN FOR ROUTINE MAINTENANCE, THREE THROUGH-WALL CRACKS WERE DISCOVERED IN THE "B" LOOP JET PUMP INSTRUMENTATION PENETRATION REDUCER TO SAFE END WELD. ULTRASONIC EXAMINATIONS WERE PERFORMED ON FIVE WELDS ASSOCIATED WITH EACH JET PUMP INSTRUMENTATION PENETRATION. CRACK-LIKE INDICATIONS ORIENTED CIRCUMFERENTIALLY WERE DISCOVERED IN THE NUMBER 2 WELD ON BOTH THE "A" AND "B" LOOP JET PUMP INSTRUMENTATION PENETRATIONS. WELD REPAIRS DESIGNED AS FULL STRUCTURAL OVERLAYS WERE PERFORMED ON BOTH PENETRATIONS PRIOR TO RETURNING THE UNIT TO SERVICE.

[126] PILGRIM 1 DOCKET 50-293 LER 84-007  
 DEGRADED FIRE BARRIER PENETRATION SEALS.  
 EVENT DATE: 051584 REPORT DATE: 061584 NSSS: GE TYPE: BWR

(NSIC 190314) ON 5/15/84, WHILE SHUT DOWN FOR REFUELING AND DURING A ONCE/CYCLE FIRE BARRIER PENETRATION SEAL SURVEILLANCE TEST, A BREACH OF A 3-HR FIRE BARRIER WAS IDENTIFIED. A CONTINUOUS FIRE PATROL WAS ESTABLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF TECH SPEC SECTION 3.12.F, AND A MAINTENANCE REQUEST WAS INITIATED TO REPAIR THE SEAL. A TOTAL OF 38 PENETRATION SEALS WHICH DID NOT MEET THE SURVEILLANCE TEST ACCEPTANCE CRITERIA WERE IDENTIFIED. A CONTINUOUS FIRE PATROL WAS ESTABLISHED FOR EACH OF THE AFFECTED AREAS. MAINTENANCE REQUESTS HAVE BEEN INITIATED TO REPAIR EACH OF THE SEALS.

[127] PILGRIM 1 DOCKET 50-293 LER 84-008  
 HFA RELAY PROBLEM.  
 EVENT DATE: 052184 REPORT DATE: 062184 NSSS: GE TYPE: BWR  
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 190424) ON 5/21/84, DURING A REFUELING OUTAGE, AN HFA RELAY IN THE REACTOR PROTECTION SYSTEM WAS FOUND TO BE HOT AND SMOKING. THE RELAY IS A GE 51 SERIES AC TYPE AND IS NORMALLY ENERGIZED. THERE WAS NO FUEL IN THE REACTOR VESSEL AT THE TIME OF THE EVENT. THE RELAY WAS IMMEDIATELY DE-ENERGIZED AND REPLACED WITH A GE "CENTURY" SERIES RELAY. THE RELAY, ALTHOUGH SMOKING, REMAINED OPERABLE. CAUSE IS ATTRIBUTED TO PREVIOUSLY IDENTIFIED GENERIC HFA RELAY PROBLEMS. LONG-TERM CORRECTIVE ACTION IS BEING DEVELOPED AND WILL BE INCLUDED IN THE

RESPONSE TO IE BULLETIN NO. 84-02 ENTITLED "FAILURES OF GENERAL ELECTRIC TYPE HFA RELAYS IN USE IN CLASS IE SAFETY SYSTEMS."

[128] POINT BEACH 2 DOCKET 50-301 LER 84-003  
 INADVERTENT ACTUATION OF EMERGENCY SAFEGUARDS.  
 EVENT DATE: 051984 REPORT DATE: 062184 NSSS: WE TYPE: PWR

(NSIC 190315) WHILE PERFORMING A REACTOR SHUTDOWN AND PARTIAL COOLDOWN, AN INADVERTENT SAFETY INJECTION (SI) ACTUATION OCCURRED WHILE DECREASING REACTOR COOLANT SYSTEM PRESSURE. THE OPERATOR FAILED TO BLOCK SI PRIOR TO THE ACTUATION SETPOINT. THE REACTOR WAS SHUT DOWN PRIOR TO THE ACTUATION.

[129] PRAIRIE ISLAND 1 DOCKET 50-282 LER 84-002  
 BOTH SHIELD BUILDING DOORS OPENED DURING AIRLOCK TEST.  
 EVENT DATE: 052184 REPORT DATE: 062084 NSSS: WE TYPE: PWR

(NSIC 190312) DURING NORMAL OPERATION, THE MAINTENANCE AIRLOCK LEAKAGE TEST WAS BEGUN. THE TEST CALLS FOR PRESSURIZATION OF THE AIRLOCK WITH STATION AIR. AN AIR HOSE WAS ROUTED THRU BOTH SHIELD BLDG VENTILATION DOORS, CAUSING A BREACH IN SHIELD BLDG INTEGRITY. PROCEDURES AND AIR SUPPLY ROUTING WILL BE CHANGED.

[130] PRAIRIE ISLAND 1 DOCKET 50-282 LER 84-003  
 POWER IS REDUCED BECAUSE CAUSTIC ADDITION STANDPIPE LEVEL IS BELOW SPEC.  
 EVENT DATE: 053184 REPORT DATE: 062984 NSSS: WE TYPE: PWR  
 VENDOR: CARBORUNDUM CO.

(NSIC 190422) WHILE RECIRCULATING THE CAUSTIC ADDITION STANDPIPE FOR A MONTHLY SAMPLE, A FILTER HOUSING FAILED, CAUSING A SPILL OF THE CONTENTS OF THE STANDPIPE. A DESIGN CHANGE WILL BE COMPLETED.

[131] QUAD CITIES 1 DOCKET 50-254 LER 84-010  
 REACTOR SCRAMS FROM IRM SPIKE.  
 EVENT DATE: 050384 REPORT DATE: 062584 NSSS: GE TYPE: BWR

(NSIC 190415) ON MAY 30, 1984, A TPIP OF THE REACTOR PROTECTION SYSTEM (RPS) WAS EXPERIENCED ON UNIT ONE DUE TO IRMS 11, 14, 15, AND 17 GOING HI-HI. THERE WAS NO APPARENT ROOT CAUSE FOR THE TRIP. SAFETY IMPLICATIONS DUE TO THE TRIP WERE MINIMAL AS THERE WAS NO FUEL IN THE VESSEL AT THE TIME OF THE OCCURRENCE.

[132] QUAD CITIES 1 DOCKET 50-254 LER 84-007  
 RHR SERVICE WATER VAULT PENETRATIONS LEAK.  
 EVENT DATE: 050784 REPORT DATE: 053084 NSSS: GE TYPE: BWR

(NSIC 190356) WHILE PERFORMING LEAK RATE TESTS ON THE RHR SERVICE WATER VAULT PENETRATIONS, 11 PENETRATIONS WERE FOUND TO BE LEAKING. THE LEAK RATES ENCOUNTERED WERE SMALL. THE RHR SERVICE WATER VAULT SUMP PUMPS WOULD HAVE ADEQUATELY DISCHARGED ANY WATER WHICH MIGHT HAVE LEAKED INTO THE VAULTS HAD A CONDENSATE PUMP AREA FLOOD OCCURRED. PIPING VIBRATION IS ATTRIBUTED AS THE CAUSE OF THESE LEAKS DUE TO LOOSENING OF THE SEALS. THE 2 SEALS ON THE 'B' RHR SERVICE WATER VAULT, CONTAINING THE 1/2 DIESEL GENERATOR COOLING WATER PUMP, WERE TIGHTENED IMMEDIATELY. THE REMAINING SEAL BOLTS WILL BE TIGHTENED AND THE PENETRATIONS RETESTED BEFORE UNIT STARTUP.

[133] QUAD CITIES 1 DOCKET 50-254 LER 84-008  
 125 VOLT DC BATTERY CAPABILITY RE-EVALUATION.  
 EVENT DATE: 051184 REPORT DATE: 060884 NSSS: GE TYPE: BWR  
 OTHER UNITS INVOLVED: QUAD CITIES 2 (BWR)  
 VENDOR: GOULDS INC. (INDUSTRIAL BATTERY DIV)

(NSIC 190467) IN LIGHT OF EXPERIENCE GAINED DURING PERFORMANCE OF THE 125 VDC BATTERY DISCHARGE TEST ON UNIT ONE, THE STATION RAISED A CONCERN ABOUT THE ADEQUACY OF THE DESIGN OF THE 125 VDC BATTERY. THE NRC SHARED THE CONCERN, AND ISSUED A CONFIRMATORY ACTION LETTER TO THE COMPANY TO, IN PART, DEMONSTRATE SAFE OPERATION BASED ON A BATTERY LOAD PROFILE ANALYSIS WHICH DEMONSTRATED ACTUAL BATTERY CAPABILITIES FOR ASSUMED ACCIDENT ANALYSIS. FOR THE SCENARIO OF A LOSS OF OFF-SITE POWER WITH LOSS OF AC TO THE BATTERY CHARGERS, AND WITH THE UNIT AT FULL POWER WITH NO OTHER ACCIDENT PRESENT, IT WAS RECOMMENDED TO THE STATION THAT A PROCEDURE BE PREPARED TO SHED BATTERY LOADS WITHIN 30 MINUTES TO REDUCE TOTAL LOAD ON THE BATTERY TO LESS THAN 62 AMPERES, AND REQUIRE THE PLANT TO REACH COLD SHUTDOWN WITHIN FOUR HOURS. CORRECTIVE ACTION TAKEN WAS TO IMPLEMENT THE ABOVE MENTIONED PROCEDURE WITH LONG-TERM CORRECTIVE ACTION ENCOMPASSING THE REPLACEMENT OF EXISTING BATTERY CHARGERS WITH LARGER CAPACITY CHARGERS AND REPLACE EXISTING STATION 125 VOLT BATTERIES WITH BATTERIES OF GREATER CAPACITY.

[134] QUAD CITIES 1 DOCKET 50-254 LER 84-009  
 UNINTENTIONAL REACTOR SCRAM DURING TESTS.  
 EVENT DATE: 051984 REPORT DATE: 061184 NSSS: GE TYPE: BWR

(NSIC 190304) ON MAY 19, 1984, UNIT ONE RECEIVED AN UNPLANNED REACTOR SCRAM. THE SCRAM TOOK PLACE WHILE PERFORMING AN INSTRUMENT SCRAM RESPONSE TEST. THE TEST INITIATED A ONE-HALF SCRAM ON REACTOR PROTECTION SYSTEM CHANNEL 'A' AND, SIMULTANEOUSLY, A ONE-HALF SCRAM ON REACTOR PROTECTION SYSTEM CHANNEL 'B' WAS RECEIVED FROM A SPURIOUS IRM HI-HI SIGNAL. UNIT ONE WAS IN A REFUELING OUTAGE WITH NO FUEL IN THE VESSEL AT THE TIME. THE CHANNEL 'B' IRM SCRAM SIGNAL IS ATTRIBUTED TO WORKERS BUMPING AN IRM SIGNAL CABLE UNDER THE REACTOR VESSEL WHILE PERFORMING CRD MAINTENANCE. THE SAFETY SIGNIFICANCE OF THIS EVENT IS MINIMAL.

[135] QUAD CITIES 2 DOCKET 50-265 LER 84-006  
 WEEKLY POWER OPERATION SURVEILLANCE INTERVAL EXCEEDED.  
 EVENT DATE: 060184 REPORT DATE: 062584 NSSS: GE TYPE: BWR

(NSIC 190419) ON JUN 1, 1984, IT WAS DISCOVERED THAT THE WEEKLY POWER OPERATION SURVEILLANCE, QIS 60, HAD NOT BEEN EXECUTED WITHIN TECH SPEC LIMIT OF 7 DAYS, +/-25%. THE SURVEILLANCE WAS THEN PERFORMED IMMEDIATELY. TO PREVENT THIS FROM HAPPENING IN THE FUTURE, A WEEKLY SUMMARY SHEET WILL BE DISPLAYED IN A PROMINENT POSITION IN THE INSTRUMENT MAINTENANCE FOREMAN'S OFFICE.

[136] RANCHO SECO DOCKET 50-312 LER 83-003 REV 1  
 UPDATE ON MASTER REACTOR TRIP RELAY NOT TESTED.  
 EVENT DATE: 011183 REPORT DATE: 051584 NSSS: RW TYPE: PWR

(NSIC 190292) THE MASTER REACTOR TRIP RELAY WAS NOT BEING TESTED MONTHLY, AS REPORTED TO STATION MANAGEMENT BY THE SHIFT TECHNICAL ADVISOR GROUP, ON JAN 11, 1983. HOWEVER, THIS RELAY WAS TESTED ON A REFUELING INTERVAL BASIS. THE ORIGINAL LER SUBMITTED TO THE NRC INDICATED THAT A TECH SPEC CHANGE WOULD BE SUBMITTED TO CHANGE THIS TEST TO A REFUELING INTERVAL BASIS SINCE TESTING THESE RELAYS WOULD RESULT IN A HIGH LIKELIHOOD OF TRIPPING THE UNIT. SINCE THAT DATE, THE DISTRICT HAS DEVELOPED A TECHNIQUE THAT WILL ALLOW TESTING ON THE REQUIRED MONTHLY INTERVAL AT AN ACCEPTABLE PROBABILITY OF TRIPPING. THIS PROCEDURE IS NOW IN PLACE AND THE TECH SPECS WILL NOT BE REVISED.

[137] ROBINSON 2 DOCKET 50-261 LER 84-003  
 STEAM GENERATOR SNUBBERS FAIL FUNCTIONAL TESTS.  
 EVENT DATE: 052184 REPORT DATE: 062184 NSSS: WE TYPE: PWR

(NSIC 190418) THE 12 STEAM GENERATOR SNUBBERS WERE SENT OFF-SITE FOR FUNCTIONAL TESTING. TWO SNUBBERS WERE LOW ON FLUID. A REAR MONOBALL BEARING FAILED AT LESS THAN DESIGN LOAD. IT WAS LEARNED THAT THE BEARING HAD BEEN DERATED AFTER MANUFACTURING TO LESS THAN THE SNUBBER'S DESIGN LOAD. THE SNUBBER MANUFACTURER HAS SUBMITTED A 10CFR21 REPORT ON THE BEARING FAILURE.

[138] SALEM 1 DOCKET 50-272 LER 84-011  
 NO. 2 FIRE SUPPRESSION PUMP INOPERABLE FOR GREATER THAN SEVEN DAYS.  
 EVENT DATE: 050984 REPORT DATE: 060884 NSSS: WE TYPE: PWR  
 VENDOR: SMITH VALVE CORP.

(NSIC 190309) ON MAY 3, 1984, NO. 2 FIRE SUPPRESSION PUMP WAS REMOVED FROM SERVICE FOR 18 MONTH SURVEILLANCE REQUIREMENTS. ON MAY 9, 1984, WHILE RETURNING THE PUMP TO SERVICE FOLLOWING THE REQUIRED SURVEILLANCE, THE PUMP DISCHARGE VALVE (2FP13) COULD NOT BE OPENED. INVESTIGATION REVEALED THAT THE DISC WAS SEPARATED FROM THE STEM. THIS VALVE IS A NORMALLY OPEN VALVE, SHUT ONLY FOR PUMP MAINTENANCE. THE CAUSE WAS A BROKEN STEM, WHICH WAS WEAKENED, POSSIBLY BY AN OVERTORQUE SITUATION AT SOME TIME. THE VALVE APPARENTLY FAILED WHEN IT WAS SHUT ON MAY 3, 1984, FOR THE PUMP SURVEILLANCE. 2FP13 WAS THOROUGHLY INSPECTED; THE SEATS WERE SATISFACTORY. THE VALVE WAS REPAIRED UTILIZING A NEW STEM AND DISC, AND RETURNED TO SERVICE ON MAY 10, 1984. ALTHOUGH THIS WAS THE FIRST FAILURE OF 2FP13, SIMILAR FAILURES HAVE BEEN EXPERIENCED WITH THIS PARTICULAR TYPE OF VALVE. AS A RESULT, AN ENGINEERING REVIEW HAS BEEN REQUESTED TO DETERMINE THE FAILURE MECHANISM, AND POSSIBLE GENERIC PROBLEMS WITH THIS TYPE OF VALVE. APPROPRIATE ACTION WILL BE TAKEN, BASED ON THE RESULTS OF THE REVIEW. THE REDUNDANT FIRE SUPPRESSION POOL REMAINED OPERABLE THROUGHOUT THE OCCURRENCE. THIS SPECIAL REPORT IS BEING SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF TECH SPEC ACTION STATEMENT 3.7.10.1.A.

[139] SALEM 2 DOCKET 50-311 LER 84-013  
 REACTOR TRIPS DUE TO PERSONNEL ERROR WHILE TESTING.  
 EVENT DATE: 051184 REPORT DATE: 060884 NSSS: WE TYPE: PWR

(NSIC 190319) ON MAY 11, 1984, A REACTOR TRIP OCCURRED DUE TO STEAM FLOW/FEED FLOW MISMATCH, COINCIDENT WITH NO. 22 STEAM GENERATOR LOW WATER LEVEL. THE TRIP OCCURRED WHILE TROUBLESHOOTING AND CALIBRATING NO. 22 STEAM GENERATOR NARROW RANGE LEVEL RECORDER. A TEST SIGNAL WAS INJECTED INTO NO. 22 STEAM GENERATOR LEVEL CONTROL CIRCUITRY, WHICH SIMULATED A HIGH STEAM GENERATOR LEVEL. THIS CAUSED NO. 22 FEEDWATER CONTROL VALVE TO CLOSE, RESULTING IN A LOW STEAM GENERATOR LEVEL, AND THE REACTOR TRIP. THE REACTOR TRIP WAS ATTRIBUTED TO PERSONNEL ERROR, DUE TO THE FAILURE OF THE INDIVIDUAL PERFORMING THE TASK TO LIFT THE FIELD LEADS FROM THE SIGNAL ISOLATOR INPUT FOR NO. 22 STEAM GENERATOR NARROW RANGE LEVEL RECORDER PRIOR TO INJECTING THE TEST SIGNAL. THE ROOT CAUSE WAS ATTRIBUTED TO INADEQUATE PROCEDURAL GUIDANCE. THE INDIVIDUALS INVOLVED WERE COUNSELED CONCERNING THEIR RESPONSIBILITY FOR THE INCIDENT. THE APPROPRIATE PROCEDURES WILL BE MODIFIED TO PROVIDE THE NECESSARY PROCEDURAL GUIDANCE. IN ADDITION, THE INCIDENT WILL BE ADDRESSED IN THE RESPONSIBLE DEPARTMENT'S TRAINING PROGRAM. THE REACTOR PROTECTION SYSTEM FUNCTIONED AS DESIGNED. DUE TO THE AUTOMATIC ACTUATION OF THE REACTOR PROTECTION SYSTEM, THE EVENT IS REPORTABLE IN ACCORDANCE WITH 10 CFR 50.73(A)(2)(IV).

[140] SAN ONOPRE 2 DOCKET 50-361 LER 83-143  
 ENGINEERING EVALUATION NOT PERFORMED ON SNUBBER FAILURE.  
 EVENT DATE: 031683 REPORT DATE: 022884 NSSS: CE TYPE: PWR  
 VENDOR: PACIFIC SCIENTIFIC COMPANY

(NSIC 190406) ON 1/26/84, IT WAS DETERMINED THAT ON 3/16/83, SNUBBER S2-PW-301-H-003, LOCATED ON THE 8" DEMINERALIZED WATER MAKEUP AND TRANSFER LINE BETWEEN CONDENSATE STORAGE TANKS (CST'S), HAD BEEN DISCOVERED FROZEN. IT IS BELIEVED THAT THE SNUBBER WAS INOPERABLE AS A RESULT OF INTERNAL DAMAGE. THE SNUBBER WAS REPLACED AND DECLARED OPERABLE ON MAR 28, 1983. AS CORRECTIVE ACTION, TO PREVENT UNTIMELY ENGINEERING EVALUATIONS AND REPORTABILITY DETERMINATIONS, ADMINISTRATIVE CONTROLS FOR DISPOSITIONING NCR'S HAVE BEEN MODIFIED AS DISCUSSED IN PREVIOUS LER'S INCLUDING 83-153 (DOCKET NO. 50-361).

[141] SAN ONOPRE 2 DOCKET 50-361 LER 84-027  
 WASTE GAS PROCESSING SYSTEM VALVE FAILURE CAUSES STACK RELEASE.  
 EVENT DATE: 050284 REPORT DATE: 060184 NSSS: CE TYPE: PWR  
 OTHER UNITS INVOLVED: SAN ONOPRE 3 (PWR)  
 VENDOR: KEROTEST MANUFACTURING CORP.

(NSIC 190330) ON 5/2/84, AT 0114, WITH UNITS 2 AND 3 IN MODE 1 AT 100% POWER, BACKLEAKAGE OF FLOW FROM THE WASTE GAS COMPRESSOR (WGC) C010 THROUGH DISCHARGE CHECK VALVE SA1902MU003 INTO STANDBY WGC C011 RESULTED IN A RELEASE VIA THE WGC C011 RUPTURE DISC. THE WASTE GAS RELEASED THROUGH THE RUPTURE DISC WAS ROUTED BY THE RADWASTE HVAC SYSTEM TO THE PLANT VENT STACK CAUSING PLANT VENT MONITOR 2RE-7865 TO ALARM. AT 0129 AN UNUSUAL EVENT WAS DECLARED PER TAB A1-1 OF THE EMERGENCY PLAN BECAUSE THE ALARM ON 2RE-7865 CONTINUED FOR MORE THAN 15 MINS AND THE RELEASE HAD NOT BEEN TERMINATED. THE RELEASE WAS ISOLATED AT 0136 BY MANUALLY VALVING OUT WGC C011 WHICH TERMINATED THE UNUSUAL EVENT. THE RELEASE WAS CALCULATED TO HAVE BEEN APPROX 107 CURIES OF XE-133. THE CONCENTRATION IN UNRESTRICTED AREAS, WHEN AVERAGED OVER ONE HOUR, WAS  $7.14E-7$  MICROCURIES PER CUBIC CENTIMETER (2.38 TIMES THE APPLICABLE CONCENTRATION IN APPENDIX B, TABLE II OF 10 CFR 20 IN UNRESTRICTED AREAS, WHEN AVERAGED OVER 1 HR). CORRECTIVE ACTION TAKEN WAS REPLACEMENT OF THE RUPTURE DISC. ADDITIONAL CORRECTIVE ACTION WILL BE TO REPAIR CHECK VALVE SA1902MU003 DURING THE NEXT COLD SHUTDOWN OF BOTH UNITS 2 AND 3. ALSO, THE NEED FOR A DESIGN MODIFICATION IS BEING EVALUATED.

[142] SAN ONOPRE 2 DOCKET 50-361 LER 84-028  
 WASTE GAS SAMPLING SYSTEM VALVE FAILS.  
 EVENT DATE: 050584 REPORT DATE: 060484 NSSS: CE TYPE: PWR  
 OTHER UNITS INVOLVED: SAN ONOPRE 3 (PWR)  
 VENDOR: FISHER FLOW CONTROL DIV (ROCKWELL INT)

(NSIC 190372) ON 5/5/84, AT APPROX 1530, WITH UNIT 2 IN MODE 1 AT 100% POWER, AND UNIT 3 IN MODE 3, WASTE GAS SAMPLING SYSTEM PRESSURE CONTROL VALVE 2/3PCV0582 FAILED OPEN, RESULTING IN FLOW THROUGH SAMPLE PUMP DISCHARGE RELIEF VALVE 2/3PSV0580 INTO THE WASTE GAS DISCHARGE HEADER. FLOW WAS ROUTED TO THE PLANT VENT STACK FROM THE WASTE GAS DISCHARGE HEADER CAUSING PLANT VENT MONITOR 2RE7808C TO ALARM. AT 1840, AN UNUSUAL EVENT WAS DECLARED BECAUSE OF THE ALARM ON 2RE7808C AND THE FACT THAT THE RELEASE HAD NOT BEEN TERMINATED. AT 1845, THE RELEASE WAS TERMINATED BY ISOLATING THE WASTE GAS DECAY TANK AND THE UNUSUAL EVENT WAS TERMINATED. THE RELEASE WAS CALCULATED TO HAVE BEEN APPROX 405 CURIES OF XE-133. THE CONCENTRATION IN UNRESTRICTED AREAS, WHEN AVERAGED OVER ONE HR, WAS  $8.4E-7$  MICROCURIES PER CUBIC CENTIMETER (2.8 TIMES THE APPLICABLE CONCENTRATION IN APPENDIX B, TABLE II OF 10 CFR 20 IN UNRESTRICTED AREAS, WHEN AVERAGED OVER 1 HR). THE WASTE GAS SAMPLING SYSTEM PRESSURE CONTROL VALVE WAS REPLACED. IN ADDITION, ALARM RESPONSE PROCEDURES HAVE BEEN REVISED TO ENSURE PROMPT IDENTIFICATION OF CONDITIONS WARRANTING DECLARATION OF AN UNUSUAL EVENT

AND ADDITIONAL TRAINING ON THE RADIATION MONITOR ALARM RESPONSE WILL BE PROVIDED TO OPERATIONS PERSONNEL.

[143] SAN ONOFRE 2 DOCKET 50-361 LER 84-023  
 AUTOMATIC CONTROL ROOM ISOLATION SYSTEM ACTUATIONS.  
 EVENT DATE: 052484 REPORT DATE: 062184 NSSS: CE TYPE: PWR  
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 190371) ON MAY 24, 1984, AT 0952, WITH UNITS 2 AND 3 IN MODE 1 AT 100% AND 90% POWER, RESPECTIVELY, THE CONTROL ROOM ISOLATION SYSTEM (CPIS) (EIIIS SYSTEM CODE VA) TRAIN 'B' WAS SPURIOUSLY ACTUATED FROM A NOISE SPIKE ON CONTROL ROOM AIRBORNE RADIATION MONITOR 2/3RE-7825 (EIIIS COMPONENT CODE RIT). ON MAY 27, 1984, AT 0102 AND AGAIN AT 0159, WITH BOTH UNITS IN MODE 1 AT 100% POWER, THE CRIS TRAIN 'B' WAS SPURIOUSLY ACTUATED FROM SPIKES ON MONITOR 2/3RE-7825. ON JUN 20, 1984, AT 1606, AND JUNE 21 AT 1130, THE CRIS TRAIN 'A' WAS SPURIOUSLY ACTUATED FROM SPIKES ON MONITOR 2/3 RE-7824. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) (EIIIS SYSTEM CODE VI) ACTUATED AS REQUIRED. OPERATORS USED THE RESPECTIVE REDUNDANT CONTROL ROOM AIRBORNE RADIATION MONITORS AND AIR GRAB SAMPLES TO VERIFY THAT ACTUAL CONTROL ROOM RADIATION LEVELS WERE BELOW THE CRIS ACTUATION SETPOINTS BEFORE RESETTING THE CRIS AND SECURING THE CREACUS. SEE ALSO LER 84-022 (DOCKET NO. 50-361). THE SPURIOUS ACTUATIONS WERE CAUSED BY ELECTRICAL NOISE SPIKES OF UNKNOWN ORIGIN. AN ENGINEERING EVALUATION WILL BE PERFORMED TO DETERMINE THE CAUSE OF THESE SPIKES. THE RESULTS OF THE EVALUATION AND ANY PLANNED CORRECTIVE ACTION WILL BE REPORTED IN A REV. TO THIS LER. THERE ARE NO CREDIBLE CIRCUMSTANCES THAT WOULD HAVE INCREASED THE SEVERITY OF THESE INCIDENTS.

[144] SAN ONOFRE 2 DOCKET 50-361 LER 84-030  
 FIRE PROTECTION PROGRAM DISCREPANCIES.  
 EVENT DATE: 052584 REPORT DATE: 052984 NSSS: CE TYPE: PWR  
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 190439) AS REPORTED ON MAY 25, 1984, PURSUANT TO 10 CFR 50.36 AND 50.72(B)(1)(II)(B) AND LICENSE CONDITION 2.G., DISCREPANCIES HAVE BEEN DISCOVERED DURING THE CONTINUING REVIEW (SEE LER 84-001, DOCKET NO. 50-361) ASSOCIATED WITH THE PREPARATION OF THE UPDATED FIRE HAZARDS ANALYSIS (PHA). THESE CONDITIONS HAVE BEEN DOCUMENTED IN THREE NONCONFORMANCE REPORTS (NCR'S). TWO NCR'S REPRESENT ADDITIONAL EXAMPLES OF DEFICIENCIES REPORTED PREVIOUSLY IN LER 84-024 AND CORRECTIVE ACTIONS, DESCRIBED IN LER 84-024, WILL BE IMPLEMENTED FOR THESE TWO NCRS. THE THIRD NCR DOCUMENTS DEFICIENT CONDITIONS INVOLVING THE STORAGE OF COMBUSTIBLE MATERIALS. COMPENSATORY FIRE WATCHES HAVE BEEN ESTABLISHED IN THE AFFECTED AREAS. THIS REPORT IS ALSO SUBMITTED TO FULFILL THE REQUIREMENTS OF LICENSE CONDITION 2.G. RELATING TO LICENSE CONDITIONS 2.C.(14)A AND 2.C.(12)A OF OPERATING LICENSES NFP-10 AND NFP-15 FOR UNITS 2 AND 3, RESPECTIVELY.

[145] SAN ONOFRE 2 DOCKET 50-361 LER 84-031  
 EMERGENCY CHILLER MICROSWITCH MALFUNCTION.  
 EVENT DATE: 052584 REPORT DATE: 062584 NSSS: CE TYPE: PWR

(NSIC 190440) AT 1410 ON 5/25/84, WITH UNITS 2 AND 3 AT 100% POWER, DURING PERFORMANCE OF A ROUTINE SURVEILLANCE ON THE TOXIC GAS ISOLATION SYSTEM (TGIS), EMERGENCY CHILLER E-336 WAS INADVERTENTLY STARTED. E-336 SUBSEQUENTLY TRIPPED AND COULD NOT BE IMMEDIATELY RESTARTED. LOSS OF AN EMERGENCY CHILLER RENDERS EQUIPMENT INOPERABLE ON BOTH UNITS IN ROOMS WHERE CHILLED WATER IS PROVIDED TO COOL AMBIENT AIR. THUS, THE LOSS OF E-336 RENDERS TWO INVERTERS INOPERABLE IN EACH UNIT, AND SINCE THE ASSOCIATED ACTION STATEMENT FOR MODES 1 THROUGH 4 ADDRESSES ONLY THE LOSS OF ONE INVERTER, LCO 3.0.3 WAS INVOKED. E-336 WAS RETURNED TO SERVICE AT 1447 ON 5/25/84, AND LCO 3.0.3 WAS EXITED. E-336 TRIPPED

AND FAILED TO RESTART DUE TO A STUCK MICROSWITCH IN THE PROGRAM TIMER. THE TIMER WAS MANUALLY CYCLED, AND THE MICROSWITCH WAS RELEASED. E-336 HAS BEEN SUCCESSFULLY STARTED SEVERAL TIMES WITH NO FURTHER MALFUNCTION OF THE MICROSWITCH OR PROGRAM TIMER. HOWEVER, AS A PRECAUTION, THE PROGRAM TIMER AND THE MICROSWITCH WILL BE REPLACED. TO PREVENT INADVERTENT CHILLER STARTS DURING SURVEILLANCES, THE TGIS SURVEILLANCE PROCEDURE WAS REVISED TO IMPROVE CLARITY.

[146] SAN ONOFRE 3 DOCKET 50-362 LER 83-112  
CEA'S EXCEED TIME ALLOWED BELOW INSERTION LIMITS.  
EVENT DATE: 113083 REPORT DATE: 123083 NSSS: CE TYPE: PWR

(NSIC 190351) REGULATING GROUP 6 CONTROL ELEMENT ASSEMBLIES (CEA'S) EXCEEDED THE TIME ALLOWED BELOW THE LONG TERM STEADY STATE INSERTION LIMIT (LTSSIL) AT 1640 ON 11/30/83, AT 1150 ON 12/11/83, AND AT 1250 ON 12/21/83. THE REQUIREMENTS OF LCO 3.1.3.6, ACTION STATEMENT 'B.1' WERE MET IN EACH CASE. THE ACTION STATEMENT WAS EXITED AT 0549 ON 12/1/83, AT 1430 ON 12/12/83, AND AT 0323 ON 12/22/83. SEE ALSO LER 83-075 (DOCKET NO. 50-361). THESE EVENTS OCCURRED BECAUSE THE TECH SPECS IMPOSE A 4 HR LIMIT ON THE LENGTH OF TIME THAT REGULATING GROUP CEA'S MAY BE INSERTED BEYOND THE LTSSIL, ALTHOUGH REGULATING GROUP 6 CEA'S MUST BE USED TO CONTROL AXIAL SHAPE INDEX OSCILLATIONS UNDER CERTAIN INFREQUENT CIRCUMSTANCES. AS CORRECTIVE ACTION, WE ARE CONSIDERING ALTERING LCO 3.1.3.6.A.

[147] SAN ONOFRE 3 DOCKET 50-362 LER 84-010  
CONTAINMENT PURGE ISOLATION SYSTEM ACTUATIONS.  
EVENT DATE: 042484 REPORT DATE: 052284 NSSS: CE TYPE: PWR

(NSIC 190373) ON APR 24, 1984, AT 1035, WITH UNIT 3 IN MODE 1 AT 100% POWER, THE TRAIN 'A' CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) (EIS SYSTEM IDENTIFIER VA) WAS SPURIOUSLY ACTUATED BY ELECTRICAL NOISE SPIKES FROM CONTAINMENT AREA RADIATION MONITOR 3RT-7804 (EIS COMPONENT IDENTIFIER RT). SUBSEQUENT TO THIS DATE, SPURIOUS ACTUATIONS ALSO OCCURRED ON MAY 2, 9, 10 AND 12. DURING EACH EVENT, AIRBORNE ACTIVITY WAS BELOW THE RADIATION MONITOR 3RT-7804 ALARM SETPOINT. ALL TRAIN 'A' CPIS ACTUATED VALVES FUNCTIONED PROPERLY. THEREFORE, THERE ARE NO REASONABLE OR CREDIBLE CIRCUMSTANCES WHICH WOULD HAVE INCREASED THE SEVERITY OF THESE EVENTS. THE CAUSE OF THE ELECTRICAL SPIKES IS UNDER INVESTIGATION AS REPORTED PREVIOUSLY IN LICENSEE EVENT REPORT (LER) 84-002 (DOCKET 50-361). INCLUDED IN THIS INVESTIGATION WILL BE THE FEASIBILITY OF ADDING ELECTRICAL SPIKE SUPPRESSION CIRCUITS TO THE CONTAINMENT AIRBORNE RADIATION MONITORS FOR UNITS 2 AND 3. THE RESULTS OF THIS INVESTIGATION WILL BE SUBMITTED IN A SUPPLEMENTAL REPORT FOR LER 84-002.

[148] SAN ONOFRE 3 DOCKET 50-362 LER 84-016  
REACTOR TRIP BREAKER UNDERVOLTAGE DEVICE ANOMALY.  
EVENT DATE: 042884 REPORT DATE: 052384 NSSS: CE TYPE: PWR

(NSIC 190331) THIS REPORT IS SUBMITTED TO PROVIDE INFORMATION CONCERNING OPERATION OF REACTOR TRIP BREAKERS (RTB'S) ON THEIR UNDERVOLTAGE (UV) TRIP DEVICES. (AS IN THE PAST, THE BREAKERS CONTINUE TO FUNCTION ACCEPTABLY USING THE SHUNT TRIP DEVICE.) ALTHOUGH THIS OCCURRENCE WAS DETERMINED TO BE NOT REPORTABLE UNDER THE UNIT 3 TECH SPECS OR 10 CFR 50.73, WE ARE SUBMITTING THIS REPORT TO INFORM YOU OF THE CIRCUMSTANCES INVOLVED AND CORRECTIVE ACTIONS TAKEN. ON APR 28, 1984, WITH UNIT 3 IN MODE 1 AT 100% POWER AND SURVEILLANCE TESTING IN PROGRESS, THE UV TRIP DEVICE FOR RTB SERIAL NO. 256A4002-656-29 EXHIBITED A PROCEDURALLY UNACCEPTABLE RESPONSE TIME. THE BREAKER WAS LEFT IN THE OPEN POSITION PENDING INVESTIGATION. THE BREAKER'S MEASURED TRIP SHAFT TORQUE EXCEEDED THE ACCEPTANCE CRITERION. FOLLOWING MAINTENANCE, THE TRIP SHAFT TORQUE WAS FOUND TO BE WITHIN THE ACCEPTANCE CRITERION. POST-MAINTENANCE SURVEILLANCE OF THE BREAKER YIELDED ACCEPTABLE UV RESPONSE TIMES AND THE BREAKER WAS RETURNED

TO SERVICE IN THE CROSS-TIE POSITION (RTB #9) ON MAY 8, 1984. THE BREAKER WAS LOCATED IN THE NONSAFETY-RELATED CROSS-TIE POSITION WHICH DOES NOT OPEN ON A REACTOR TRIP. FURTHERMORE, THE BREAKER CONTINUES TO FUNCTION PROPERLY USING THE SHUNT TRIP DEVICE.

[149] SAN ONOFRE 3 DOCKET 50-362 LER 84-019  
CONTAINMENT ISOLATION VALVES SURVEILLANCE MISSED.  
EVENT DATE: 050584 REPORT DATE: 053184 NSSS: CE TYPE PWR

(NSIC 190374) ON 5/6/84 AND 5/7/84, IT WAS DETERMINED THAT POST MAINTENANCE TESTING WAS NOT PERFORMED ON 5/5/84 FOLLOWING PACKING ADJUSTMENT TO REDUCE LEAKAGE ON CONTAINMENT ISOLATION VALVES 3HV9205 AND 3HV9218, RESPECTIVELY, AS REQUIRED BY TECH SPEC SURVEILLANCE REQUIREMENT 4.6.3.1. POST MAINTENANCE TESTING HAD NOT BEEN SPECIFIED WHEN THE PACKING ADJUSTMENT HAD BEEN REQUESTED BASED ON THE ERRONEOUS BELIEF THAT PACKING ADJUSTMENT COULD NOT AFFECT OPERABILITY OF THE VALVES. 3HV9205 AND 3HV9218 WERE RETESTED SATISFACTORILY ON 5/6/84 AT 1015, AND ON 5/7/84 AT 1555, RESPECTIVELY. AS CORRECTIVE ACTION, ALL OPERATIONS PERSONNEL WILL BE BRIEFED ON THE CIRCUMSTANCES OF THIS EVENT. THIS BRIEFING WILL EMPHASIZE THE NEED FOR RETESTING FOLLOWING ANY MAINTENANCE ON SAFETY-RELATED EQUIPMENT.

[150] SAN ONOFRE 3 DOCKET 50-362 LER 84-018  
REACTOR TRIP BREAKER UNDERVOLTAGE DEVICE ANOMALY.  
EVENT DATE: 052584 REPORT DATE: 062184 NSSS: CE TYPE: PWR

(NSIC 190478) THIS REPORT IS SUBMITTED TO PROVIDE INFORMATION CONCERNING OPERATION OF REACTOR TRIP BREAKERS (RTB'S) ON THEIR UNDERVOLTAGE (UV) TRIP DEVICES. (AS IN THE PAST, THE BREAKERS CONTINUE TO FUNCTION ACCEPTABLY USING THE SHUNT TRIP DEVICE.) ALTHOUGH THIS OCCURRENCE WAS DETERMINED TO BE NOT REPORTABLE UNDER THE UNIT 3 TECH SPECS OR 10 CFR 50.73, WE ARE SUBMITTING THIS REPORT TO INFORM YOU OF THE CIRCUMSTANCES INVOLVED AND CORRECTIVE ACTIONS TAKEN. ON MAY 25, 1984, WITH UNIT 3 IN MODE 1 AT 100% POWER, SURVEILLANCE TESTING IN ACCORDANCE WITH S023-II-11.161, "REACTOR BREAKER UNDERVOLTAGE RESPONSE TIME TESTING," PRIOR TO THE SCHEDULED RTB MAINTENANCE, WAS IN PROGRESS. DURING THIS SURVEILLANCE, THE UV TRIP DEVICE FOR RTB SERIAL NO. 256A4002-656-29 EXHIBITED A PROCEDURALLY UNACCEPTABLE RESPONSE TIME. THE BREAKER WAS REPLACED WITH A SPARE. THE BREAKER WILL BE REFURBISHED (SEE LER 2-84-025, DOCKET NO. 50-361). THE BREAKER WAS LOCATED IN THE NONSAFETY-RELATED CROSS-TIE POSITION (RTB #9) WHICH DOES NOT OPEN ON A REACTOR TRIP. FURTHERMORE, THE BREAKER CONTINUES TO FUNCTION PROPERLY USING THE SHUNT TRIP DEVICE.

[151] SAN ONOFRE 3 DOCKET 50-362 LER 84-020  
MISSED CONDENSER EVACUATION SYSTEM SAMPLE.  
EVENT DATE: 052784 REPORT DATE: 062684 NSSS: CE TYPE: PWR

(NSIC 190479) ON 5/27/84, WITH UNIT 3 IN MODE 1 AT 100% POWER AND CONDENSER EVACUATION SYSTEM RADIATION MONITORS 3RT-7818 AND 3RT-7870 OUT OF SERVICE, 8-HOUR GRAB SAMPLES WERE BEING TAKEN IN ACCORDANCE WITH LIMITING CONDITION FOR OPERATION 3.3.3.9, ACTION 37. HOWEVER, THE GRAB SAMPLE DUE AT 0800 WAS NOT TAKEN UNTIL 0945. SUBSEQUENT INVESTIGATION DETERMINED THAT THE SAMPLE WAS NOT TAKEN BECAUSE THE SAMPLE PUMP WAS ISOLATED. OUR INVESTIGATION IS CONTINUING IN AN EFFORT TO DETERMINE WHY THE SAMPLE PUMP WAS ISOLATED AND TO IDENTIFY APPROPRIATE CORRECTIVE ACTION. THE CAUSE AND CORRECTIVE ACTIONS WILL BE REPORTED IN A REVISION TO THIS LER BY AUGUST 1, 1984.



[152] SAN ONOPRE 3 DOCKET 50-362 LER 84-023  
DOSE EQUIVALENT IODINE LIMITS EXCEEDED.  
EVENT DATE: 060184 REPORT DATE: 062884 NSSS: CE TYPE: PWR

(NSIC 190441) PURSUANT TO LIMITING CONDITION FOR OPERATION (LCO) 3.4.7, ACTION STATEMENT 'D' OF APPENDIX A, TECH SPECS TO FACILITY OPERATING LICENSE NPF-15 FOR SAN ONOPRE UNIT 3, THIS SUBMITAL PROVIDES THE REQUIRED 30-DAY WRITTEN LICENSEE EVENT REPORT (LER) FOR TWO OCCURRENCES INVOLVING THE REACTOR COOLANT SYSTEM SPECIFIC ACTIVITY. ON JUNE 1, 1984, THE REACTOR TRIPPED AT 0417 DURING THE MONTHLY TURBINE OVERSPEED PROTECTION TEST. FOLLOWING THE REACTOR TRIP, AT 0620, ANALYSIS OF A REACTOR COOLANT SYSTEM (RCS) SAMPLE INDICATED THAT RCS SPECIFIC ACTIVITY EXCEEDED 1.0 MICROCURIE/GRAM DOSE EQUIVALENT (DE) I-131. RCS SPECIFIC ACTIVITY WAS REDUCED TO LESS THAN 1.0 MICROCURIE/GRAM DE I-131 BY PURIFICATION FLOW AT 0130 ON JUNE 3, 1984. ON JUNE 11, 1984, THE REACTOR TRIPPED AT 1817 DUE TO A CORE PROTECTION CALCULATOR GENERATED LOW DEPARTURE FROM NUCLEATE BOILING RATIO (DNBR). FOLLOWING THE REACTOR TRIP, AT 2100, RCS SAMPLE ANALYSIS INDICATED THAT RCS SPECIFIC ACTIVITY EXCEEDED 1.0 MICROCURIE/GRAM DE I-131. RCS SPECIFIC ACTIVITY WAS REDUCED TO LESS THAN 1.0 MICROCURIE/GRAM DE I-131 BY PURIFICATION FLOW AT 0230 ON JUNE 13, 1984. THE TWO EVENTS WERE INDICATIONS OF IODINE SPIKING. WE WILL CONTINUE TO MONITOR AND EVALUATE PRIMARY COOLANT ACTIVITY. NO FURTHER CORRECTIVE ACTION IS PLANNED.

[153] SEQUOYAH 1 DOCKET 50-327 LER 84-034  
CONTAINMENT SPRAY HEAT EXCHANGER 1B INOPERABLE.  
EVENT DATE: 050984 REPORT DATE: 060884 NSSS: WE TYPE: PWR

(NSIC 190323) ON MAY 9, 1984 WITH UNIT 1 IN MODE 4 OPERATION WITH RCS TEMPERATURE AT 325 DEGREES F, SI-566, "ERCW FLOW VERIFICATION TEST," WAS IN PROGRESS. THE UNIT OPERATOR WAS REQUESTED TO OPEN 1-FCV-67-123 AND 1-FCV-67-124 (INLET AND OUTLET ERCW MOVES FOR 1B CONTAINMENT SPRAY HEAT EXCHANGER). THE OPERATOR OBSERVED NO FLOW INDICATION ON 1-FI-67-1 OR A DECREASE IN 'B' ERCW HEADER PRESSURE AS WOULD BE EXPECTED. TWO ASSISTANT UNIT OPERATORS WERE DISPATCHED TO THROTTLE VALVE 1-67-537B CLOSED. THE VALVE WAS IMMEDIATELY THROTTLED TO PROPER POSITION PER SI-682. INVESTIGATION REVEALED THAT THE VALVE WAS APPARENTLY CLOSED SINCE APR 24, 1984, A TIME PERIOD WHICH INCLUDED MODE CHANGES FROM 5 TO 4 AT 2040C ON 5/4/84, MODE 4 TO MODE 3 AT 0526C ON 5/5/84, AND MODE 3 TO MODE 4 AT 0010C ON 5/9/84. THESE THREE MODE CHANGES WERE MADE WITH 1-67-532B APPARENTLY CLOSED. TECH SPEC 3.6.2 REQUIRES TWO INDEPENDENT CONTAINMENT SPRAY SYSTEMS OPERABLE DURING MODE 4 OPERATION.

[154] SEQUOYAH 1 DOCKET 50-327 LER 84-033  
REACTOR TRIPS ON LOW STEAM GENERATOR LEVEL.  
EVENT DATE: 051184 REPORT DATE: 060584 NSSS: WE TYPE: PWR  
VENDOR: COPES-VULCAN, INC.

(NSIC 190322) DURING A NORMAL STARTUP ON 5/11/84 AT 1400 CST, UNIT 1 EXPERIENCED AN AUTOMATIC REACTOR TRIP ON LOW-LOW LEVEL IN THE NUMBER 2 STEAM GENERATOR FOLLOWING A TURBINE TRIP. JUST PRIOR TO THE EVENT, UNIT 1 WAS IN MODE 1 (554 DEGRFES F, 2235 PSIG) AT 21% REACTOR POWER.

[155] SEQUOYAH 1 DOCKET 50-327 LER 84-039  
CONTROL ROOM ISOLATIONS.  
EVENT DATE: 052784 REPORT DATE: 062584 NSSS: WE TYPE: PWR  
VENDOR: CAST MANUFACTURING CORP.

(NSIC 190324) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED A CONTROL ROOM VENTILATION ISOLATION (CRI) TO OCCUR. INVESTIGATION REVEALED THAT IN ONE INCIDENT, A VACUUM PUMP FAILED AND GENERATED A SPURIOUS HIGH RADIATION SPIKE

WHICH ACTUATED THE ALARM. IN ANOTHER INCIDENT, WHILE THE CHART PAPER IN THE RECORDER WAS BEING CHANGED, A SPURIOUS SPIKE (ELECTROMAGNETIC INTERFERENCE - EMI) WAS INADVERTENTLY GENERATED WHICH CAUSED THE HIGH RADIATION ALARM TO ACTUATE. RADIATION LEVELS WERE NOT ABOVE NORMAL DURING THIS TIME.

[156] SEQUOYAH 1 DOCKET 50-327 LER 84-037  
 AUXILIARY BUILDING VENTILATION ISOLATION.  
 EVENT DATE: 053184 REPORT DATE: 062684 NSSS: WE TYPE: PWR  
 OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 190433) A HIGH RADIATION ALARM WAS ACTUATED WHICH CAUSED AN AUXILIARY BUILDING VENTILATION ISOLATION (ABI) TO OCCUR. INVESTIGATION REVEALED THAT A SPIKE OCCURRED ON THE SPENT FUEL POOL (SFP) RADIATION MONITOR. THE BACKGROUND RADIATION LEVEL IS SO CLOSE TO THE SETPOINT THAT NORMAL FLUCTUATIONS OF THE DETECTOR CAN TRIP THE ALARM. RADIATION LEVELS WERE NOT ABOVE NORMAL DURING THIS TIME.

[157] SEQUOYAH 1 DOCKET 50-327 LER 84-040  
 STANDBY DIESEL GENERATOR NOT TESTED WITHIN TIME LIMIT.  
 EVENT DATE: 060884 REPORT DATE: 070584 NSSS: WE TYPE: PWR

(NSIC 190434) A TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENT (SR) FOR A STANDBY DIESEL GENERATOR WAS NOT PERFORMED WITHIN THE REQUIRED TIME. THE SR WAS TO BE PERFORMED EVERY 18 MONTHS TO CHECK THE DIESEL OVERSPEED TRIP LOCKOUT CIRCUIT. THE PART OF THE PROCEDURE THAT PERFORMED THIS SR HAD BEEN REVISED TO MAKE THIS SR A FIVE-YEAR REQUIREMENT. THE PROCEDURE WAS IMMEDIATELY REVISED AND THE SURVEILLANCE WAS PERFORMED. THE DIESEL PASSED THE SURVEILLANCE, AND IT WAS RETURNED TO SERVICE.

[158] SEQUOYAH 2 DOCKET 50-328 LER 83-149 REV 1  
 UPDATE ON PRESSURIZER POWER OPERATED RELIEF VALVE LEAKS.  
 EVENT DATE: 110983 REPORT DATE: 051884 NSSS: WE TYPE: PWR  
 VENDOR: TARGET ROCK CORP.

(NSIC 190475) WITH UNIT 2 IN MODE 1 (30% RX POWER), AT 2357C ON 11/09/83, PRESSURIZER POWER OPERATED RELIEF VALVE (PORV) 2-FCV-68-340 WAS FOUND TO BE LEAKING THROUGH. THIS EVENT REQUIRED ENTRY INTO ACTION STATEMENT 'A' OF LCO 3.4.3.2. PREVIOUS OCCURRENCES - ONE (SQRO-50-327/81128). THE ASSOCIATED BLOCK VALVE (2-FCV-68-332) WAS CLOSED AND POWER REMOVED. AT THE NEXT OUTAGE OF SUFFICIENT DURATION, THE VALVE WAS DISASSEMBLED AND INSPECTED BY A VENDOR REPRESENTATIVE. A CRACK WAS DISCOVERED IN THE VALVE SEAT, AND THE VALVE WAS RETURNED TO THE VENDOR FOR SEAT REPLACEMENT.

[159] SEQUOYAH 2 DOCKET 50-328 LER 84-007  
 BUS UNDERVOLTAGE ALARM ON REACTOR COOLANT PUMP #2.  
 EVENT DATE: 051984 REPORT DATE: 061384 NSSS: WE TYPE: PWR  
 VENDOR: AUTOMATIC TIMING AND CONTROL INC.

(NSIC 190325) THE BUS UNDERVOLTAGE TIMING RELAY FOR REACTOR COOLANT PUMP (RCP) NUMBER 2 WAS DISCOVERED FAILED AFTER THE UNDERVOLTAGE ALARM WAS INVESTIGATED. TECH SPECS REQUIRE THE UNDERVOLTAGE BISTABLE TO BE TRIPPED WITHIN 1 HR, BUT IT WAS NOT. THE "MOTHERHOOD CLAUSE" WAS ENTERED 1 HR AFTER THE RELAY FAILED. THE BISTABLE WAS TRIPPED 50 MINS AFTER THE "MOTHERHOOD CLAUSE" WAS ENTERED. THE "MOTHERHOOD CLAUSE" WAS EXITED AND THE UNIT DID NOT HAVE TO BE SHUT DOWN DUE TO THE FAILED RELAY. THE BUS WAS NOT ACTUALLY IN AN UNDERVOLTAGE CONDITION DURING THIS EVENT.

[160] SEQUOYAH 2 DOCKET 50-326 LER 84-008  
 REACTOR TRIP DUE TO LOSS OF BOTH FEEDWATER PUMPS.  
 EVENT DATE: 051984 REPORT DATE: 061584 NSSS: WE TYPE: PWR

(NSIC 190326) ON 5/19/84, UNIT 2 WAS IN MODE 1 (556 DEGREES F, 2235 PSIG) AT 30% REACTOR POWER WITH VARIOUS MAINTENANCE ACTIVITIES UNDERWAY WHILE THE UNIT WAS AT REDUCED POWER. A REACTOR TRIP OCCURRED AT 1157 CST WHEN THE BALANCE OF PLANT REACTOR OPERATOR INTENDED TO STOP THE 2B MAIN FEEDWATER PUMP OIL PUMPS BUT INADVERTENTLY STOPPED THE 2A MAIN FEEDWATER PUMP OIL PUMPS. THIS EVENT RESULTED IN A REACTOR TRIP ON LOW-LOW STEAM GENERATOR LEVEL.

[161] ST. LUCIE 1 DOCKET 50-335 LER 84-003  
 REACTOR TRIP DUE TO PARALLELING MG SET.  
 EVENT DATE: 051484 REPORT DATE: 061484 NSSS: CE TYPE: PWR

(NSIC 190329) DURING STARTUP, AFTER REFUELING, WHILE AT 10(-2)% POWER, AN OPERATIONS TRAINEE PERSON IMPROPERLY PARALLELED THE 1B MOTOR GENERATOR (MG) SET. THE OUT-OF-PHASE PARALLELING OF THE 1B MG-SET CAUSED AN OVERCURRENT CONDITION IN THE 1A MG-SET. THE 1A MG-SET SUBSEQUENTLY TRIPPED OFF OF THE BUS SUPPLYING POWER TO 4 OF THE CEA TRIP CIRCUIT BREAKERS (TCBS). SINCE THE 4 TCBS OPENED (DEENERGIZED) BEFORE THE 1B MG-SET BREAKER CLOSED IN, ONE-HALF OF THE CEAS DROPPED INTO THE CORE. THE REACTOR OPERATOR MANUALLY TRIPPED THE REACTOR. THE TRAINEE WAS PROPERLY INSTRUCTED BUT CLOSED THE BREAKER OUT-OF-PHASE IN ERROR. HE IS AWARE OF THE SIGNIFICANCE OF THE ERROR. THIS IS THE FIRST OCCURRENCE OF THIS TYPE.

[162] SUMMER 1 DOCKET 50-395 LER 84-013 REV 1  
 UPDATE ON SMOKE DETECTORS TEMPORARILY INOPERABLE.  
 EVENT DATE: 030984 REPORT DATE: 041984 NSSS: WE TYPE: PWR

(NSIC 190447) ON MARCH 9, 1984, AT 2100 HOURS, THE PLANT INTEGRATED FIRE AND SECURITY SYSTEM WAS MODIFIED WITH NEW SOFTWARE. DURING AN ADMINISTRATIVE OVERVIEW OF THE POST SOFTWARE DOCUMENTATION ON MARCH 13, 1984, IT WAS IDENTIFIED THAT THE MODIFICATION HAD DISABLED THE CONTROL ROOM OPERATORS' ABILITY TO RECEIVE AN ALARM UPON ACTUATION OF THE SMOKE DETECTORS LOCATED ON ZONES PFF AND MMM OF THE INTERMEDIATE BUILDING. THE LICENSEE IMMEDIATELY INITIATED ACTION AS REQUIRED BY TECH SPEC 3.3.3.7, "FIRE DETECTION INSTRUMENTATION." THE BALANCE OF THE SYSTEM REMAINED OPERABLE, AND ALL AFFECTED AREAS WERE ENTERED ON AT LEAST A 24 HOUR BASIS FOR THE SURVEILLANCE OF PLANT FIRE DOORS. THE ABILITY TO SHUT DOWN AND MAINTAIN THE PLANT IN A SAFE SHUTDOWN CONDITION WAS NOT AFFECTED. SAFE SHUTDOWN EQUIPMENT WITHIN THE AFFECTED AREAS WAS SEPARATED BY APPROPRIATE FIRE RATED ASSEMBLIES OR SEPARATED BY A DISTANCE OF 20 FEET OR MORE. DUE TO THE FIRE LOADING IN THESE AREAS, THE HIGHEST BEING 20,600 BTU PER SQUARE FOOT, THE PROBABILITY OF A FIRE WAS MINIMAL. THE DISCREPANCY WAS CORRECTED, TESTED, AND VERIFIED OPERABLE PRIOR TO 1200 HOURS, MARCH 13, 1984. THE LICENSEE PLANS NO FURTHER CORRECTIVE ACTION OTHER THAN NORMAL SURVEILLANCE TESTING.

[163] SURRY 1 DOCKET 50-280 LER 83-037 REV 1  
 UPDATE ON NONCONSERVATIVE ROD DROP ACCIDENT ANALYSIS.  
 EVENT DATE: 090283 REPORT DATE: 051084 NSSS: WE TYPE: PWR

(NSIC 190401) WESTINGHOUSE HAS NOTIFIED VEP CO THAT THE ROD DROP ACCIDENT ANALYSIS, AS PRESENTED IN THE UPSAR; MAY NOT REPRESENT THE LIMITING CASE. THIS IS BEING REPORTED PER TECH SPEC 6.6.2.A.(8). AN ANALYSIS USING THE CURRENT FUEL CYCLE PARAMETERS, HAS BEEN MADE AND RESULTS INDICATE THAT THE DESIGN DNB LIMIT OF 1.3 WOULD NOT BE VIOLATED. THE MOST LIMITING CASE, WITH RESPECT TO REACTIVITY FEEDBACK, WAS NOT EVALUATED IN THE ORIGINAL ANALYSIS. FOR THE PRESENT FUEL

CYCLE, THE DNB LIMITS CAN BE MAINTAINED. A DETAILED EVALUATION WAS MADE WHICH DETERMINED THAT THE ASSUMPTIONS OF THE UFSAR REMAIN BOUNDING FOR ALL SURRY CORES.

[164] SURRY 1 DOCKET 50-280 LER 84-012  
 IODINE SPIKE.  
 EVENT DATE: 052684 REPORT DATE: 062284 NSSS: WE TYPE: PWR

(NSIC 190361) ON MAY 26, 1984, AT 0515 HRS FOLLOWING A UNIT SHUTDOWN FROM 100% POWER, THE SPECIFIC ACTIVITY SAMPLE OF THE REACTOR COOLANT SHOWED A PEAK DOSE EQUIVALENT I-131 LEVEL OF 1.57 MICROCURIES/CC. THIS EXCEEDS THE DOSE EQUIVALENT I-131 LIMIT OF LESS THAN OR EQUAL TO 1.0 MICROCURIES/CC SPECIFIED IN TECH SPEC 3.1.D.2 AND IS BEING REPORTED IN ACCORDANCE WITH THE SPECIAL REPORTING REQUIREMENTS OUTLINED IN TECH SPEC 3.1.D.4.

[165] SURRY 1 DOCKET 50-280 LER 84-014  
 IODINE SPIKE.  
 EVENT DATE: 061384 REPORT DATE: 062284 NSSS: WE TYPE: PWR

(NSIC 190362) ON JUN 13, 1984, AT 1800 HRS FOLLOWING A UNIT TRIP FROM 100% POWER, THE SPECIFIC ACTIVITY SAMPLE OF THE REACTOR COOLANT SHOWED A PEAK DOSE EQUIVALENT I-131 LEVEL OF 1.99 MICROCURIES/CC. THIS EXCEEDS THE DOSE EQUIVALENT I-131 LIMIT OF LESS THAN 1.0 MICROCURIES/CC SPECIFIED IN TECH SPEC 3.1.D.2 AND IS BEING REPORTED IN ACCORDANCE WITH THE SPECIAL REPORTING REQUIREMENTS OUTLINED IN TECH SPEC 3.1.D.4.

[166] SUSQUEHANNA 1 DOCKET 50-387 LER 83-166 REV 1  
 UPDATE ON SETPOINT DRIFT ON REACTOR LEVEL SWITCH.  
 EVENT DATE: 112983 REPORT DATE: 012384 NSSS: GE TYPE: BWR

(NSIC 190407) DURING SURVEILLANCE TESTING, LIS 14221D'S SETPOINT WAS FOUND TO BE OUT OF CALIBRATION BY 1.2 INCHES (REFERENCE LEG INDICATION WAS 209.5 INCHES H2O VERSUS A SETPOINT OF 208.3 INCHES) RESULTING IN AN LCO PER TECH SPEC 3.3.2. LIS 14221D PROVIDES SIGNALS ON LOW-LOW REACTOR VESSEL WATER LEVEL TO ISOLATED VALVES IN VARIOUS CONTAINMENT SYSTEMS. THE LIS WAS RECALIBRATED AND THE LCO CLEARED IN 1 HR. DURING THIS EVENT REDUNDANT LEVEL INDICATION REMAINED AVAILABLE TO PERFORM THE SAME FUNCTIONS SERVED BY LIS 14221D. THE INDICATED TRIP SETPOINT FOR LIS 14221D FOUND DURING SURVEILLANCE INDICATED SETPOINT DRIFT HAD OCCURRED. THE PERFORMANCE OF LIS 14221D WILL BE MONITORED AND SHOULD SETPOINT DRIFT BE EVIDENCED DURING THE NEXT 18 MONTH SURVEILLANCE, LIS 14221D WILL BE REPLACED.

[167] SUSQUEHANNA 1 DOCKET 50-387 LER 84-026  
 CORE SPRAY TEST ISOLATION VALVE NOT BUILT TO CLOSE ON HIGH DRYWELL PRESSURE.  
 EVENT DATE: 051684 REPORT DATE: 061584 NSSS: GE TYPE: BWR  
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)

(NSIC 190490) A TECH SPEC REVIEW REVEALED THE CURRENT PLANT DESIGN TO THE CORE SPRAY VALVE FULL FLOW TEST ISOLATION SIGNAL IS NOT IN AGREEMENT WITH THE ISOLATION SIGNAL SPECIFIED BY THE TECH SPEC OR THE FSAR. THE AS BUILT CONDITION IS PRESENTLY BEING MODIFIED TO AGREE WITH THE TECH SPEC AND FSAR.

[168] SUSQUEHANNA 1 DOCKET 50-387 LER 84-027  
 TURBINE BUILDING AND RHR SW SAMPLES MISSED.  
 EVENT DATE: 052584 REPORT DATE: 062284 NSSS: GE TYPE: BWR  
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)

(NSIC 190489) TWO GRAB SAMPLES REQUIRED BY TECH SPEC ACTION STATEMENTS WERE NOT

TAKEN WITHIN THE REQUISITE TIME LIMITS DUE TO PERSONNEL OVERSIGHT. SEVERAL ADMINISTRATIVE ACTIONS WILL BE COMPLETED TO PREVENT RECURRENCE OF THIS EVENT.

[169] SUSQUEHANNA 2 DOCKET 50-388 LER 84-004  
UNPLANNED ESF ACTUATIONS DUE TO MAINTENANCE PERSONNEL ERROR.  
EVENT DATE: 050184 REPORT DATE: 053184 NSSS: GE TYPE: BWR

(NSIC 190445) WITH THE UNIT IN A SHUTDOWN CONDITION WITH NON-IRRADIATED FUEL, UNPLANNED UNIT 2 ENGINEERED SAFETY FEATURES (ESF) ACTUATIONS OCCURRED WHILE INSTALLING TEST EQUIPMENT IN THE DIVISION II PRIMARY CONTAINMENT ISOLATION SYSTEM CIRCUITRY. THE ISOLATION OCCURRED WHEN THE TEST EQUIPMENT LEADS WERE INADVERTENTLY GROUNDED DURING INSTALLATION OF A RECORDER. THE GROUNDING BLEW A CIRCUIT FUSE. THE CONDITION WAS QUICKLY IDENTIFIED BY INVOLVED PERSONNEL. THE FUSE WAS REPLACED, AND SYSTEMS RESTORED. THE ESF SYSTEMS ISOLATED, OR WERE INITIATED, AS DESIGNED DURING THE ISOLATION. THE GROUNDING OF THE LEAD WAS ACCIDENTAL. THERE ARE NO CORRECTIVE ACTIONS PLANNED REGARDING THIS EVENT. THIS IS REPORTABLE PER 10CFR50.73(A)(2)(IV) SINCE THE EVENT INVOLVED THE UNPLANNED ACTUATION OF ENGINEERED SAFETY FEATURES (ESF) SYSTEMS.

[170] SUSQUEHANNA 2 DOCKET 50-388 LER 84-005  
INADVERTENT ESF ACTUATION (RWCU VALVE).  
EVENT DATE: 051584 REPORT DATE: 061284 NSSS: GE TYPE: BWR

(NSIC 190339) DURING THE PERFORMANCE OF THE MONTHLY FUNCTIONAL TEST OF THE REACTOR WATER CLEANUP SYSTEM AREA VENTILATION DIFFERENTIAL TEMPERATURE CHANNELS, AN ERROR BY THE INSTRUMENTATION AND CONTROLS (I&C) PERSONNEL PERFORMING THE TEST CAUSED THE INADVERTENT CLOSURE OF A VALVE THAT IS PART OF THE PRIMARY CONTAINMENT ISOLATION SYSTEM (AN ENGINEERED SAFETY FEATURE). THE VALVE WAS RESTORED TO ITS NORMAL POSITION WITHIN 10 MINS. THE I&C PERSONNEL RECEIVED FORMAL INSTRUCTION STRESSING VERBATIM COMPLIANCE WITH PROCEDURES.

[171] SUSQUEHANNA 2 DOCKET 50-388 LER 84-007  
LCO ACTION NOT MET, REACTOR WATER CLEANUP SYSTEM WAS NOT ISOLATED.  
EVENT DATE: 052584 REPORT DATE: 062284 NSSS: GE TYPE: BWR

(NSIC 190446) ON MAY 25, 1984, A REACTOR WATER CLEANUP DIFFERENTIAL PRESSURE SWITCH WAS JUMPED OUT FOR A CALIBRATION CHECK. DUE TO A PERSONNEL OVERSIGHT, WHEN THE ASSOCIATED TECH SPEC TIME LIMIT EXPIRED, THE REQUIRED ACTION (CLOSE THE AFFECTED SYSTEM ISOLATION VALVES) WAS NOT COMPLETED. THE ACTION WAS TAKEN APPROXIMATELY ONE HOUR LATE. SHIFT SUPERVISION HAS BEEN COUNSELED ON THIS OCCURRENCE.

[172] THREE MILE ISLAND 1 DOCKET 50-289 LER 84-001  
FIRE BARRIER PENETRATION SEALS MISSING.  
EVENT DATE: 042784 REPORT DATE: 052584 NSSS: BW TYPE: PWR

(NSIC 190313) AT 1420 HRS ON APR 27, 1984, RELAY ROOM FLOOR FIRE BARRIER PENETRATION SEAL 735 WAS IDENTIFIED TO BE IN DEFICIENT CONDITION. NO SEAL MATERIAL HAD BEEN INSTALLED IN THE CONDUIT. A FIRE WATCH HAD NOT BEEN ESTABLISHED WITHIN 1 HR OF THE ONSET OF THE DEFICIENT CONDITION, THUS VIOLATING TECH SPEC 3.18.7.2. THIS EVENT IS REPORTABLE PURSUANT TO 10 CFR 50.73 (A)(2)(I)(B). THE DEFICIENT CONDITION OF SEAL 735 IS POTENTIALLY APPLICABLE TO SIMILAR FIRE SEALS THAT WERE REQUIRED TO BE INSTALLED BETWEEN APR 1979 AND NOV 7, 1983. THIS IS EVIDENCED BY THE IDENTIFICATION OF THE SAME DEFICIENT CONDITION IN 2 SEALS SUBSEQUENT TO THE IDENTIFICATION OF SEAL 735. ALL FIRE SEALS IN NEW CONDUITS INSTALLED BETWEEN APR 1979 AND NOV 7, 1983 WILL BE INSPECTED AND REPAIRED UPON DISCOVERY. A FOLLOW-UP REPORT WILL BE SUBMITTED AT THE COMPLETION

OF THE INSPECTION BY JUN 29, 1984. THE SAFETY CONSEQUENCES AND IMPLICATION OF THE DEFICIENCY IN THE SEALS ALREADY IDENTIFIED AND OTHERS WHICH MAY BE IDENTIFIED DURING THE INSPECTION ARE SIMILAR.

[173] THREE MILE ISLAND 2 DOCKET 50-320 LER 84-007  
OPERATION OF THE REACTOR BUILDING PURGE SYSTEM OUTSIDE BOUNDS OF TECH SPEC  
3.6.1.1.  
EVENT DATE: 051184 REPORT DATE: 062284 NSSS: BW TYPE: PWR  
VENDOR: BETTIS CORPORATION

(NSIC 190429) ON MAY 25, 1984, A CONDITION CONSIDERED REPORTABLE PURSUANT TO 10 CFR 50.73 WAS DETERMINED TO EXIST. AT 0230 HRS ON MAY 11, 1984, DURING PERFORMANCE OF SURVEILLANCE PROCEDURE 4333-SA1, "FIRE SYSTEM DETECTOR INSTRUMENT FUNCTIONAL TEST," VALVE AH-V-4A FAILED TO CLOSE. VALVE AH-V-4A IS A PNEUMATICALLY CONTROLLED (AIR OPENED/SPRING CLOSED) CONTAINMENT ISOLATION VALVE IN THE REACTOR BLDG (RB) PURGE/VENTILATION SYSTEM (IEEE CODE - VA). DUE TO A MISINTERPRETATION OF THE TECH SPECS, THE 'A' TRAIN OF THE RB PURGE SYSTEM, INCLUDING AH-V-4A, WAS SUBSEQUENTLY OPERATED ALMOST CONTINUOUSLY UNTIL 0920 HRS ON MAY 19, 1984, WHEN AH-V-4A WAS REMOVED FROM SERVICE FOR MAINTENANCE. OPERATION OF THIS TRAIN AFTER DETERMINING AH-V-4A WOULD NOT CLOSE WAS IN VIOLATION OF TECH SPEC 3.6.1.1 REQUIREMENTS AND IS, THEREFORE, REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I).

[174] TROJAN DOCKET 50-344 LER 84-010  
TEMPORARY LOSS OF RHR COOLING IN MODE 5.  
EVENT DATE: 050484 REPORT DATE: 060184 NSSS: WE TYPE: PWR

(NSIC 190438) DURING A ROUTINE REACTOR COOLANT SYSTEM (RCS) DRAIN DOWN TO SUPPORT REFUELING OPERATIONS AT 1650 ON MAY 4, 1984, RESIDUAL HEAT REMOVAL (RHR) COOLING WAS LOST DUE TO AIR ENTRAINMENT IN THE SUCTION OF THE 'A' RHR PUMP AND 30 MINUTES ELAPSED WHILE THE RCS WATER INVENTORY WAS INCREASED. THE 'B' RHR PUMP WAS THEN STARTED, RCS TEMPERATURE RISE WAS TERMINATED. THE HIGHEST INDICATED RCS HOT LEG TEMPERATURE REACHED ABOUT 201F. BOTH RHR PUMPS HAD BEEN STOPPED FOR 10 MINUTES PRIOR TO THIS EVENT FOR A ROUTINE TEST, THEREFORE, ALL RHR COOLING FLOW HAD BEEN SUSPENDED FOR 40 MINUTES. THIS EVENT IS REPORTABLE IN ACCORDANCE WITH 10CFR50.73 (A)(2)(V)(B) AS A CONDITION WHICH COULD HAVE PREVENTED THE FULFILLMENT OF THE SAFETY FUNCTION OF A SYSTEM NEEDED TO REMOVE CORE RESIDUAL HEAT. AT THE TIME OF THE EVENT THE PLANT WAS IN MODE 5 WITH RCS OPEN TO ATMOSPHERIC PRESSURE AND AVERAGE COOLANT TEMPERATURE AT 105F. THE AVERAGE COOLANT TEMPERATURE WAS BELOW 200F DURING THE TEMPORARY LOSS OF RHR COOLING.

[175] TURKEY POINT 3 DOCKET 50-250 LER 83-005  
SHORT CAUSES TWO CONTROL ROD ASSEMBLIES TO DROP.  
EVENT DATE: 030983 REPORT DATE: 032383 NSSS: WE TYPE: PWR  
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 190400) ON 3/9/83, ROD CONTROL CLUSTERS D8 AND M8 OF CONTROL BANK D SIMULTANEOUSLY DROPPED WHILE UNIT 3 WAS OPERATING AT 100% POWER. AS PER TECH SPEC 3.2.4.A, SUSTAINED POWER OPERATION OF THE UNIT SHALL NOT BE PERMITTED WITH MORE THAN ONE INOPERABLE CONTROL ROD. THIS IS REPORTABLE UNDER TECH SPEC 6.9.A.2. THIS IS THE FIRST OCCURRENCE OF THIS TYPE. APPROX 15 MINS AFTER THE AUTOMATIC TURBINE RUNBACK AND MANUAL POWER REDUCTION TO HOT SHUTDOWN WAS INITIATED, THE 2 DROPPED RODS WERE RETRIEVED. A FLUX MAP VERIFIED PROPER POSITION OF THE RODS. THE CAUSE WAS A MOMENTARY SHORT IN THE LEAD TO THE STATIONARY COILS DUE TO WATER THAT WAS GETTING INSIDE THE CONTROL ROD POWER CABINET. THE WATER LEAKAGE WAS STOPPED THE CABINET WAS DRIED, AND THE UNIT WAS RETURNED TO FULL POWER. WESTINGHOUSE WAS CONSULTED AND IT WAS DETERMINED THAT NO SAFETY LIMITS WERE ENCROACHED UPON DURING THIS INCIDENT.

[176] TURKEY POINT 3 DOCKET 50-250 LER 84-015  
 ENGINEERED SAFETY FEATURE ACTUATION - TURBINE RUNBACK.  
 EVENT DATE: 051484 REPORT DATE: 061384 NSSS: WE TYPE: PWR  
 VENDOR: CROUSE-HINDS  
 POWER DESIGNS INC.

(NSIC 190302) ON MAY 14, 1984, A TURBINE RUNBACK OCCURRED. THE ROOT CAUSE WAS DETERMINED TO STEM FROM AN INSTRUMENT POWER SUPPLY FAILURE IN THE NUCLEAR INSTRUMENTATION SYSTEM (NIS) THAT RESULTED IN AN 'NIS ROD DROP' SIGNAL (NIS CHANNEL N-41) WHICH GENERATED THE TURBINE RUNBACK. ALL EQUIPMENT FUNCTIONED AS DESIGNED. IMMEDIATE CORRECTIVE ACTIONS INCLUDED PROMPT IDENTIFICATION OF THE CAUSE OF THE RUNBACK AND RESTORATION OF FULL POWER OPERATION, TRIPPING THE ASSOCIATED REACTOR TRIP BISTABLES FOR THE NIS CHANNELS REMOVED FROM SERVICE, ISOLATION OF THE FAILED POWER SUPPLY, AND RETURN TO SERVICE OF NIS CHANNEL N-41. SIMILAR OCCURRENCES: LER 250-84-009 AND LER 250-84-013.

[177] TURKEY POINT 4 DOCKET 50-251 LER 84-006  
 ENGINEERED SAFETY FEATURE ACTUATION - 4KV BUS STRIPPING.  
 EVENT DATE: 050584 REPORT DATE: 060484 NSSS: WE TYPE: PWR

(NSIC 190303) ON MAY 5, 1984, WITH UNIT 4 IN A SCHEDULED REFUELING OUTAGE (CORE OFF-LOADED), ACTUATION OF BUS STRIPPING RELAYS ON A 4KV BUS OCCURRED. THE ROOT CAUSE WAS DETERMINED TO STEM FROM PERSONNEL ACCIDENTALLY JARRING OR SHORTING AN ELECTRICAL AUXILIARY RELAY CONTACT PAIR. THIS OCCURRED DURING PERFORMANCE, BY MEMBERS OF THE PLANT CONSTRUCTION WORK FORCE, OF MODIFICATIONS IN THE 4KV BUS SEQUENCER CUBICLE AND ASSOCIATED WITH THE ADDITION OF UNDERVOLTAGE RELAY PROTECTION. THIS RESULTED IN A LOSS OF VOLTAGE CONDITION THAT DID NOT ACTUALLY EXIST, APPEARING TO THE LOGIC CIRCUITRY FOR BUS STRIPPING. ACTUATION OF THE BUS STRIPPING RELAYS RESULTED, STRIPPING THE AFFECTED 4KV BUS, STARTING THE ASSOCIATED DIESEL GENERATOR AND INITIATING SEQUENCER ACTION. IMMEDIATE CORRECTIVE ACTIONS INCLUDED TRANSFERRING THE 4KV BUS BACK ONTO THE ASSOCIATED START-UP TRANSFORMER AND SECURING THE DIESEL GENERATOR. ADDITIONALLY, SUPERVISORS OVERSEEING THE UNDERVOLTAGE MODIFICATIONS WERE INSTRUCTED TO EXERCISE MORE CARE IN THE IMPLEMENTATION OF THE WORK TO PRECLUDE A RECURRENCE. SIMILAR OCCURRENCES: 250-84-012.

[178] WPPSS 2 DOCKET 50-397 LER 84-041  
 SURVEILLANCE ON TWO DG'S WITHOUT PRELUBE/WARMUP.  
 EVENT DATE: 050984 REPORT DATE: 060684 NSSS: GE TYPE: BWR  
 VENDOR: GENERAL MOTORS

(NSIC 190340) 05/09/84 - PERFORMED SURVEILLANCE ON #2 STANDBY DIESEL GENERATOR (DG1B) WITHOUT PRELUBE/WARMUP IN VIOLATION OF TECH SPEC 4.8.1.1.2.A.4. 05/19/84 - PERFORMED SURVEILLANCE ON #1 STANDBY DIESEL GENERATOR (DG1A) WITHOUT PRELUBE/WARMUP IN VIOLATION OF TECH SPEC 4.8.1.1.2.A.4. EVENTS ARE THE RESULT OF RECENT CHANGES TO TECH SPEC REQUIRING ACTION THAT THE COMPONENT DESIGN CURRENTLY DOES NOT ALLOW. CORRECTIVE ACTION: OBTAIN TECH SPEC CHANGE TO ALLOW STARTING OF DG WITHOUT PRELUBE/WARMUP.

[179] WPPSS 2 DOCKET 50-397 LER 84-044  
 REACTOR TRIPS DUE TO HIGH PRESSURE.  
 EVENT DATE: 051384 REPORT DATE: 061284 NSSS: GE TYPE: BWR  
 VENDOR: CONSOLIDATED CONTROLS CORP.

(NSIC 190491) DURING THE POWER ASCENSION TEST PROGRAM THE TURBINE WAS BEING ROLLED TO SYNCHRONOUS SPEED. AS THE TURBINE SPEED APPROACHED THE THROTTLE VALVE TO GOVERNOR VALVE TRANSFER SPEED OF 1650 RPM, A PRESSURE FLUCTUATION IN THE DIGITAL ELECTROHYDRAULIC (DEH) SYSTEM EMERGENCY TRIP HEADER ALLOWED LEAKAGE OF

DEH FLUID PAST THE CLOSED SEAT OF THE BYPASS RESET SOLENOID FOR MS-V-160C (ONE OF THE FOUR MAIN STEAM BYPASS VALVES). THIS LEAKAGE ALLOWED DEH FLUID TO BE REDIRECTED AND CAUSED MS-V-160C TO MOVE TO A FULL OPEN POSITION. SUBSEQUENTLY, THE THREE REMAINING BYPASS VALVES COMPENSATED AND WENT FULLY CLOSED CAUSING A HIGH PRESSURE REACTOR TRIP. IMMEDIATE CORRECTIVE ACTION WAS TO CLOSE THE MAIN STEAM ISOLATION VALVES (MSIV'S) AND SHUT DOWN THE DEH PUMPS TO ALLOW CLOSURE OF MS-V-160C. THIS WAS DONE TO CONTROL REACTOR PRESSURE VESSEL (RPV) COOLDOWN RATE. FURTHER CORRECTIVE ACTION CONSISTED OF VALVE CLEANING AND LAPPING OF THE SEATS ON ALL FOUR BYPASS RESET SOLENOID VALVES. ALSO A CHECK VALVE WAS INSTALLED IN THE COMMON EMERGENCY TRIP HEADER TO FURTHER ISOLATE THE BYPASS RESET SOLENOID VALVES FROM HEADER PRESSURE FLUCTUATIONS.

[180] WPPSS 2 DOCKET 50-397 LER 84-042  
 REACTOR SHUT DOWN DUE TO LOSS OF WATER LEVEL CONTROL.  
 EVENT DATE: 051784 REPORT DATE: 060884 NSSS: GE TYPE: BWR  
 VENDOR: DE LAVAL TURBINE, INC.

(NSIC 190448) ON MAY 17, 1984 AT 1016 THE REACTOR WAS MANUALLY SHUT DOWN DUE TO LOSS OF CONTROL OF VESSEL WATER LEVEL AS A RESULT OF A MALFUNCTION WITH MECHANICAL LINKAGE FROM A SERVO CONTROL MOTOR DESIGNED TO CONTROL REACTOR FEEDPUMP TURBINE SPEED.

[181] WPPSS 2 DOCKET 50-397 LER 84-046  
 SPURIOUS TRIPS OF CONTROL ROOM EMERGENCY FILTRATION UNITS.  
 EVENT DATE: 052284 REPORT DATE: 061484 NSSS: GE TYPE: BWR  
 VENDOR: KAMAN SCIENCES CORP.

(NSIC 190381) CONTROL ROOM OUTSIDE AIR RADIATION MONITORS (WOA-RIS-31A, 31B, 32A, 32B) PERIODICALLY SPIKE TO TRIP THE ASSOCIATED HIGH-HIGH RADIATION ALARMS RESULTING IN STARTING OF THE CONTROL ROOM EMERGENCY FILTRATION UNITS (AN ESF SYSTEM). THE SPIKING HAS BEEN DETERMINED TO BE CAUSED BY EXCESSIVE ELECTRICAL NOISE INDUCED INTO THE RADIATION MONITORING SYSTEM. AFTER VERIFYING THAT RADIATION LEVELS WERE NOT ABOVE NORMAL BACKGROUND, THE RADMONITORS AND EMERGENCY FILTRATION UNITS WERE RESET AND RETURNED TO SERVICE.

[182] WPPSS 2 DOCKET 50-397 LER 84-049  
 SPURIOUS TRIP OF CONTROL ROOM EMERGENCY FILTRATION UNITS.  
 EVENT DATE: 052284 REPORT DATE: 062084 NSSS: GE TYPE: BWR  
 VENDOR: KAMAN SCIENCES CORP.

(NSIC 190451) CONTROL ROOM EMERGENCY FILTRATION UNITS (AN ESF SYSTEM) WERE SPURIOUSLY ACTUATED DUE TO A SPIKE ON THE CORRESPONDING RADIATION MONITORING SYSTEM. THE SPIKE WAS ASSOCIATED WITH THE STARTING OF A CONTROL ROOM HVAC SUPPLY FAN. AFTER VERIFYING THAT RADIATION LEVELS WERE NOT ABOVE NORMAL BACKGROUND, THE RADIATION MONITORS AND EMERGENCY FILTRATION UNITS WERE RESET AND RETURNED TO A NORMAL LINEUP.

[183] WPPSS 2 DOCKET 50-397 LER 84-047  
 SIGNIFICANT DESIGN DEFICIENCY REGARDING FIRE PENETRATIONS.  
 EVENT DATE: 052584 REPORT DATE: 061584 NSSS: GE TYPE: BWR

(NSIC 190449) BIOLOGICAL SHEILD WALL - PENETRATION FIRE PROTECTION SEALS NOT INSTALLED. IMMEDIATE CORRECTIVE ACTION WAS TO ESTABLISH A FIRE WATCH PATROL IN ACCORDANCE WITH TECH SPEC ACTION ITEM (3.7.7.A).



[184] WPPSS 2 DOCKET 50-397 LER 84-035  
 RCIC ISOLATES ON SPURIOUS HIGH DIFFERENTIAL PRESSURE SIGNAL.  
 EVENT DATE: 052884 REPORT DATE: 062184 NSSS: GE TYPE: BWR  
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 190492) AN APPARENT SPURIOUS TRIP SIGNAL FROM THE RCIC STEAM SUPPLY HIGH FLOW DIFFERENTIAL PRESSURE SWITCH ISOLATED THE RCIC SYSTEM AT NO FLOW CONDITIONS WITH THE REACTOR AT APPROXIMATELY 300 PSIG. CONTROL ROOM OPERATORS VERIFIED NO FLOW CONDITIONS, RESET THE RCIC SYSTEM ISOLATION AND RESTORED THE RCIC SYSTEM TO SERVICE.

[185] WPPSS 2 DOCKET 50-397 LER 84-048  
 MISAPPLICATION OF FUSES IN 250 V.D.C. SYSTEM.  
 EVENT DATE: 053084 REPORT DATE: 062584 NSSS: GE TYPE: BWR  
 VENDOR: BUSSMANN MFG (DIV OF MCGRAW-EDISON)

(NSIC 190450) FUSES USED IN THE CLASS IE 250 V.D.C. SYSTEM WERE DISCOVERED TO BE INAPPROPRIATELY APPLIED. A PORTION OF THESE FUSES WHICH WERE REQUIRED TO RETURN THE 250 VOLT SYSTEM TO WITHIN ITS DESIGN BASIS WERE IMMEDIATELY REPLACED AND THE BALANCE OF THE FUSES SCHEDULED FOR REPLACEMENT DURING THE NEXT MAJOR MAINTENANCE OUTAGE.

[186] WPPSS 2 DOCKET 50-397 LER 84-056  
 MAIN TURBINE BYPASS VALVE CLOSURE CAUSES SCRAM.  
 EVENT DATE: 060184 REPORT DATE: 062884 NSSS: GE TYPE: BWR

(NSIC 190493) A REACTOR PROTECTION SYSTEM (RPS) TRIP ON HIGH REACTOR PRESSURE OCCURRED AS A RESULT OF THE CLOSURE OF ALL FOUR MAIN TURBINE BYPASS VALVES. CONTROL OF THE BPVS WAS LOST WHEN AN ELECTRONIC CIRCUIT CARD WHICH PROVIDES THE OPEN/CLOSE DEMAND TO THE VALVES FAILED IN THE DIGITAL ELECTROHYDRAULIC (DEH) CONTROL SYSTEM. THE INABILITY TO PASS STEAM TO THE MAIN CONDENSER RESULTED IN A REACTOR PRESSURE INCREASE TO THE RPS SETPOINT OF 1038 PSIG.

[187] WPPSS 2 DOCKET 50-397 LER 84-059  
 SURVEILLANCE ON DIESEL GENERATORS WITHOUT PRELUBE/WARMUP.  
 EVENT DATE: 060884 REPORT DATE: 070984 NSSS: GE TYPE: BWR  
 VENDOR: GENERAL MOTORS

(NSIC 190494) (1) 06/08/84 - PERFORMED SURVEILLANCE ON #2 STANDBY DIESEL GENERATOR (DG1B) WITHOUT PRELUBE/WARMUP IN VIOLATION OF TECH SPEC 4.8.1.1.2.A.4. (2) 06/18/84 - PERFORMED SURVEILLANCE ON #1 STANDBY DIESEL GENERATOR (DG1A) WITHOUT PRELUBE/WARMUP IN VIOLATION OF TECH SPEC 4.8.1.1.2.A.4. EVENTS ARE THE RESULT OF RECENT CHANGES TO TECH SPEC REQUIRING ACTION THAT THE COMPONENT DESIGN CURRENTLY DOES NOT ALLOW. CORRECTIVE ACTION WAS TO OBTAIN TECH SPEC CHANGE TO ALLOW STARTING OF D.G. WITHOUT PRELUBE/WARMUP.

[188] YANKEE ROWE DOCKET 50-029 LER 84-009  
 DIESEL GENERATOR INADVERTENTLY STARTED ON OFF-SITE POWER LINE LOST.  
 EVENT DATE: 051084 REPORT DATE: 060884 NSSS: WE TYPE: PWR

(NSIC 190300) DURING A REFUELING OUTAGE, IN MODE 6, A LOSS OF OFF-SITE POWER TO THE NO. 3 (2400V) BUS, THE NO. 6-3 (480V) BUS AND THE NO. 1 (480V) EMERGENCY BUS RESULTED IN THE AUTOMATIC ACTUATION OF THE NO. 1 DIESEL GENERATOR, AN ENGINEERED SAFETY FEATURE. THE CAUSE OF THIS EVENT WAS ATTRIBUTED TO PERSONNEL ERROR. THE PLANT WAS BEING SUPPLIED BY 2 SOURCES OF OFF-SITE POWER (Y-177 AND Z-126 LINES) AND THE Y-177 LINE OIL CIRCUIT BREAKER (OCB) WAS OUT OF SERVICE FOR A MAINTENANCE INSPECTION. THE 115 KV BUS (BETWEEN THE Y-177 AND Z-126 LINE OCB'S) WAS

DE-ENERGIZED. WHEN THE Y-177 JCB WAS CLOSED, AS PART OF THE INSPECTION, AUTOMATIC RELAY ACTION CAUSED THE LOSS OF POWER TO THE ABOVE-NOTED IN-PLANT BUSES AND AUTOMATIC ACTUATION OF THE NO. 1 DIESEL GENERATOR. THE CONTROL ROOM OPERATOR VERIFIED PLANT CONDITIONS AND RE-CLOSED THE BREAKERS FROM THE Y-177 LINE, RESTORING POWER TO THE BUSES. THE ESP SYSTEM FUNCTIONED AS REQUIRED.

[189] ZION 1 DOCKET 50-295 LER 82-049 REV 1  
 UPDATE ON HYDROGEN RECOMBINER FAILED TO REACH REQUIRED TEMPERATURE.  
 EVENT DATE: 122882 REPORT DATE: 011083 NSSS: WE TYPE: PWR  
 OTHER UNITS INVOLVED: ZION 2 (PWR)  
 VENDOR: ATOMICS INTERNATIONAL

(NSIC 190398) DURING PERIODIC TESTING, UNIT 1 HYDROGEN RECOMBINER FAILED TO REACH REQUIRED TEMPERATURE. THE REDUNDANT RECOMBINER (UNIT 2) FAILED ITS OPERABILITY TEST. THESE FAILURES VIOLATE TECH SPEC 3.8.8.B. BOTH UNIT 1 AND 2 HYDROGEN PURGE SYSTEMS WERE OPERABLE. BOTH RECOMBINERS WERE INOPERABLE. LER 50-295/77-94 WAS WRITTEN FOR PREVIOUS UNIT 1 FAILURE. THE UNIT 2 RECOMBINER FAILED BECAUSE POWER LEADS TO SCR POWER CONTROL WERE LOOSE. LEADS WERE CLEANED AND TIGHTENED; RECOMBINER PASSED OPERABILITY TEST LESS THAN 2 HRS AFTER FAILURE. UNIT 1 POWER CONTROLLER TRANSFORMER FAILED. FAILED PART WAS REPLACED AND RECOMBINER DECLARED OPERABLE WITHIN 2 DAYS. FAILURE MECHANISM IS BEING INVESTIGATED.

[190] ZION 2 DOCKET 50-304 LER 84-012  
 OPERABILITY OF CONTAINMENT PURGE AND VENT ISOLATION SYSTEMS NOT TESTED.  
 EVENT DATE: 042084 REPORT DATE: 060684 NSSS: WE TYPE: PWR

(NSIC 190364) SINCE THE BEGINNING OF THE REFUELING OUTAGE DURING WHICH EVENT OCCURRED, CONTAINMENT PURGE HAD BEEN ONGOING. AT 0115 HRS ON 4/20/84 REFUELING OPERATIONS COMMENCED. AT 0300 THEY WERE SECURED FOR THE EVENING. AT 0530, SHIFT MANAGEMENT REALIZED THAT TESTING OF CONTAINMENT PURGE AND VENT SYSTEMS HAD NOT TAKEN PLACE PRIOR TO FUEL MOVES AS REQUIRED PER TECH SPEC 4.13.3.C. PURGE WAS SECURED AND TESTING WAS SUCCESSFULLY PERFORMED. THE CAUSE WAS SHIFT MANAGEMENT THOUGHT THAT REQUIRED TESTING HAD BEEN PERFORMED ON PREVIOUS SHIFT. THIS WAS A MISUNDERSTANDING. POST-MODIFICATION TESTING OF NEW FUEL HANDLING ACCIDENT MONITORS HAD TAKEN PLACE THEN. THIS TESTING WAS SIMILAR TO THE TESTING THAT SHOULD HAVE PRECEDED FUEL MOVES, BUT NOT AS INCLUSIVE. BECAUSE THE FASTER ACTING PRIMARY CONTAINMENT PURGE/VENT ISOLATION SYSTEM, ASSOCIATED WITH FUEL HANDLING ACCIDENT MONITORS, WAS POST-MODIFICATION TESTED DURING THE SHIFT PREVIOUS TO REFUELING, AND BECAUSE THIS SYSTEM AS WELL AS A BACKUP SYSTEM WERE SUCCESSFULLY TESTED ONLY A FEW HRS AFTER THE START OF REFUELING, ADEQUATE PROTECTION AGAINST A FUEL HANDLING ACCIDENT ALWAYS EXISTED DURING THE EVENT. OPERATING PERSONNEL INVOLVED WERE REMINDED TO BE MORE CAREFUL WHEN VERIFYING PREREQUISITES TO SUBSEQUENT OPERATIONS.

[191] ZION 2 DOCKET 50-304 LER 84-013  
 REACTOR CONTAINMENT FAN COOLER TUBE DEGRADATION.  
 EVENT DATE: 050384 REPORT DATE: 062884 NSSS: WE TYPE: PWR

(NSIC 190425) THIS LICENSEE EVENT REPORT IS BEING SUBMITTED ON A VOLUNTARY BASIS BECAUSE THIS MAY BE OF GENERIC CONCERN. DURING THE UNIT 2 REFUELING OUTAGE, EDDY CURRENT EXAMINATION OF THE 2C REACTOR CONTAINMENT FAN COOLER (RCFC) COILS WAS PERFORMED. THE EDDY CURRENT RESULTS INDICATED INTERNAL PITTING IN MANY OF THE TUBES. THESE RESULTS WERE VERIFIED BY REMOVING AND ANALYZING TUBE SAMPLES FROM THE COOLING COIL ASSEMBLY. THE PITTING WAS DETERMINED TO BE CAUSED BY UNDER-DEPOSIT CORROSION. A DECISION WAS THEN MADE TO EXAMINE THE FOUR REMAINING RCFC'S AND SIMILAR DEGRADATION OF THE TUBES WAS FOUND. THE RCFC'S WERE FILLED AND PRESSURIZED WITH SERVICE WATER TO DETERMINE IF ANY LEAKAGE EXISTED. LEAKAGE WAS OBSERVED ON ALL FIVE RCFC'S TO VARIOUS DEGREES. FURTHER TESTING WAS THEN

DONE TO DETERMINE THE LOCATION OF THE INDIVIDUAL LEAKING TUBES. ALL IDENTIFIED LEAKING TUBES WERE PLUGGED. THIS IS THE FIRST TIME THAT THE CONDITION OF THE RCFC COOLING COILS HAS BEEN DETERMINED. ALL PREVIOUS ATTEMPTS AT EDDY CURRENT EXAMINATIONS HAVE YIELDED INCONCLUSIVE RESULTS.

## 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.

- AIR 23, 55, 145  
 BATTERIES & CHARGERS 45, 92, 133  
 BEARING 3-5, 30, 57, 94, 137, 155  
 BLOWERS 23, 55, 82, 122, 145, 169, 182  
 BREAKER 5, 30, 60, 63, 72, 95, 123, 148, 150, 161, 176, 188  
 BYPASS 19, 81, 186  
 CABLES AND CONNECTORS 7, 9, 18, 22, 24, 64, 68, 69, 72, 80, 90, 95, 134, 161, 169, 175, 177, 184, 188, 189  
 COMPONENTS 3, 6, 9, 14, 28, 35, 39, 58, 59, 64, 66, 72, 74, 137, 154, 173, 180  
 COMPUTER, DIGITAL 8, 43  
 CONDENSER 87  
 CONTAINMENT AIR LOCK 129  
 CONTRACTOR PERSONNEL 7, 34, 42, 43, 47, 60, 61, 185, 188  
 CONTROL 5, 6, 9-11, 13, 48-50, 56, 58, 59, 63, 72, 74, 94, 98, 99, 121, 139, 142, 153, 154, 180, 186  
 CONTROL PANEL/ROOM 23, 92  
 CONTROL RODS 76, 146, 161, 163, 175  
 CONTROLLER 118  
 COOLING 191  
 COOLING DEVICE 191  
 DEMINERALIZERS 54  
 DRIVE 35, 64, 78, 79, 138, 148  
 ELECTRIC POWER 5, 30, 32, 36, 60, 63, 67, 72, 95, 123, 148, 150, 161, 176, 188  
 ELECTRIC POWER, UNINTERRUPTED 176  
 ELECTRONIC FUNCTION UNITS 10, 20, 32, 36, 41, 56, 67, 96, 97, 106, 175, 176, 186  
 ENGINES, INTERNAL COMBUSTION 30, 157, 178, 187, 188  
 EQUIPMENT 12, 57, 72, 119, 144, 155  
 FAILURE, COMPONENT 3, 6, 9, 14, 28, 35, 39, 58, 59, 64, 66, 72, 74, 137, 154, 173, 180  
 FAILURE, EQUIPMENT 1, 3-20, 22-27, 29, 30, 32-43, 45, 47-50, 53-76, 78-85, 87, 88, 90-98, 100-104, 106-109, 111, 112, 114, 116, 118, 119, 121-123, 125, 126, 129, 130, 132-134, 137-158, 160, 161, 163-165, 167, 169-180, 182-189, 191  
 FAILURE, INSTRUMENT 2, 7, 10, 11, 13, 15-18, 20, 24, 26, 28, 30, 32, 33, 44, 48-51, 53, 55, 58-60, 64, 67, 68, 72, 74, 77, 80, 82, 83, 88, 90, 93-97, 99, 105, 107, 114, 117, 118, 121-124, 127, 130, 131, 134-136, 139, 143, 145, 147, 149, 150, 155, 156, 159, 162, 166, 169-171, 174, 176, 177, 180-182, 184-186, 188-190  
 FAILURE, PIPE 6, 23, 71, 87, 100, 101, 113, 132  
 FAILURE, TUBING 1, 25, 65, 115, 191  
 FASTENER 12, 14, 37, 40, 71, 72, 104, 176, 180  
 FILTERS 25, 107-109, 130  
 FIRE 99, 162  
 FLOW 5, 6, 9-11, 13, 48-50, 56, 72, 74, 98, 121, 139, 153, 154  
 FLUX DISTRIBUTION 18, 20, 77, 95, 131, 134, 176  
 FUEL ELEMENTS 41, 75, 152, 163-165  
 FUSE 10, 53, 121, 134, 169, 185  
 GENERATOR, DIESEL 30, 63, 118, 157, 178, 187, 188  
 GENERATOR, MOTOR 161  
 GENERATORS 72  
 HEAT EXCHANGERS 1, 13, 23, 55, 65, 67, 81, 87, 97, 98, 139, 145, 154, 160, 191  
 HOSE 42, 129  
 HYDRAULIC SYSTEM 5, 6, 11, 72  
 INDICATORS 10, 20, 33, 53, 60, 72, 74, 77, 96, 107, 117, 131, 134, 143, 147, 156, 170, 190  
 INSTRUMENT LINE 49  
 INSTRUMENT, ALARM 130, 159, 162, 181  
 INSTRUMENT, CONTROL 11, 30, 44, 118  
 INSTRUMENT, CURRENT 90  
 INSTRUMENT, FLOW 51  
 INSTRUMENT, INTERLOCK 90, 136  
 INSTRUMENT, LIQUID LEVEL 51, 174  
 INSTRUMENT, POSITION 10, 16, 53, 74, 96  
 INSTRUMENT, SPEED 94, 180  
 INSTRUMENT, SWITCH 7, 11, 16, 17, 30, 44, 48-50, 55, 58, 67, 68, 80, 82, 83, 88, 93, 95, 114, 118, 122, 123, 135, 155, 156, 166, 171, 176, 181, 182, 184  
 INSTRUMENT, VOLTAGE 148, 150, 159, 177  
 INSTRUMENTS, MISC. 28, 58  
 INVERTER 92, 95, 176  
 MONITOR 28  
 MOTORS 5, 6, 82  
 NEUTRON 18, 20, 77, 95, 131, 134, 176  
 NOZZLE 27  
 OPERATOR ACTION 3, 8, 11-15, 17, 19, 21-24, 26, 37, 41, 44, 46, 54-56, 62-64, 67, 69, 70, 72, 73, 77, 78, 80, 84-92, 95, 97, 99-101, 107-111, 116-120, 122-124, 128-130, 133-137, 139, 140, 144, 149, 153, 155, 157, 159, 160, 162, 163, 167, 169-173, 177, 178, 183, 184, 187, 190  
 PENETRATION 125, 129, 132  
 PENETRATION, ELECTRICAL 172, 183  
 PIPES AND PIPE FITTINGS 6, 23, 71, 87, 100, 101, 113, 132, 176  
 PNEUMATIC SYSTEM 37, 38, 122, 173  
 PRESSURE DROP 59, 186  
 PRESSURE RELIEF 11, 39, 78, 100, 101, 141, 158  
 PRESSURE VESSELS 14, 74, 111, 174, 180,

## COMPONENT INDEX

PRESSURE VESSELS 186  
PRESSURE, INTERNAL 59, 186  
PRESSURIZER 114  
PUMPS 3-6, 11, 26, 34, 35, 37-40, 57,  
70, 72, 93, 94, 97, 102, 104, 118,  
121, 138, 141, 151, 155, 160, 170, 180  
RADIATION MONITORS 33, 60, 107, 135,  
143, 147, 155, 156, 161, 182, 190  
REACTOR 14, 74, 111, 174, 180, 186  
RECOMBINERS 189  
RECORDERS 139  
RELAYS 15, 24, 26, 72, 90, 114, 121,  
127, 136, 145, 148, 150, 159, 176,  
177, 188  
RESPONSE TIME 145, 159  
SAMPLING 151  
SEAL 12, 29, 34, 47, 56, 67, 85, 126,  
132, 142, 160, 172, 183  
SENSORS, FLOW 48-51, 88, 97, 176  
SENSORS, LEVEL 51, 117, 123, 130, 139,  
165, 174  
SENSORS, PRESSURE 2, 51, 72, 80, 95,  
122, 171, 184  
SENSORS, TEMPERATURE 32, 51, 58, 64,  
68, 83, 93, 105, 124, 170  
SERVOMECHANISM 7, 9, 66, 103, 121  
SHOCK ABSORBER 137, 140  
SMOKE 99, 162  
SOLENOID 10, 122  
SOLID STATE DEVICE 20, 41, 56, 96, 97,  
175, 186  
STEAM GENERATOR 1, 13, 65, 67, 81, 97,  
98, 139, 154, 160  
STEEL 71  
STORAGE CONTAINER 73, 103, 118, 130  
STRUCTURE 116  
SUPPORT STRUCTURE 71, 137, 140  
TEMPERATURE 58, 63, 189  
TRANSFORMERS 90, 189  
TUBING 1, 25, 65, 115, 191  
TURBINE 15, 38, 67, 74, 80, 81, 83, 90,  
97, 154, 176, 180  
VALVE OPERATORS 5-7, 9-11, 37, 38, 40,  
48, 66, 72, 103, 121, 122, 138, 158,  
173  
VALVE, CHECK 141  
VALVES 5-7, 9-12, 14-17, 19, 24, 29,  
33, 35, 37-40, 42, 48-50, 53, 56, 59-  
64, 66-69, 72, 74, 78, 79, 81-84, 88,  
91, 93, 95, 98, 100, 101, 103, 107,  
112, 114, 119, 121, 122, 129, 138,  
139, 141-143, 145, 149, 153-156, 158,  
160, 167, 169-171, 173, 179, 184-186

## 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 2, 15-17, 24, 26, 56, 59, 64, 83, 88, 93, 95, 107, 121, 123, 136, 166, 169-171, 184  
ANNUNCIATORS 159  
AUXILIARY 3-7, 9-11, 37, 38, 40, 53, 84, 92  
BUILDING 55, 84, 87, 116, 143, 145, 155, 168, 169, 181, 182  
BYPASS 59, 154, 179  
CABLES AND CONNECTORS 176  
CALIBRATION 15, 17, 26, 44, 46, 62, 70, 72, 77, 80, 86, 89, 108, 109, 111, 112, 117, 123, 129, 134, 136, 149, 153, 157, 168-171, 184, 187, 190  
COMPUTER, DIGITAL 41, 43  
CONDENSER 87  
CONSTRUCTION 60, 61, 177  
CONTAINMENT 69, 70, 82, 107-109, 122, 129, 167, 169, 173, 191  
CONTAINMENT ATMOSPHERE 189, 190  
CONTAINMENT ATMOSPHERE/SSF 189  
CONTAINMENT ATMOSPHERE/TSF 189, 190  
CONTAINMENT ISOLATION 14, 16, 17, 19, 24, 60, 61, 64, 67, 68, 72, 79, 83, 88, 93, 95, 107, 121, 129, 147, 149, 156, 169-171, 173, 184, 185  
CONTAINMENT PURGE 70  
CONTAINMENT SPRAY 121, 130, 153  
CONTAINMENT SPRAY/SSF 153  
CONTAINMENT/TSF 167  
CONTROL 55, 143, 145, 155, 169, 181, 182, 189, 190  
CONTROL PANEL/ROOM 92  
CONTROL SYSTEM 13, 44, 72, 74, 94, 96-98, 114, 118, 175, 179, 180, 186  
COOLANT PURIFICATION SYSTEM 34, 39, 54, 68, 69, 72, 93, 95, 102, 104, 121, 170  
COOLANT PURIFICATION SYSTEM/SSF 104  
COOLANT PURIFICATION SYSTEM/TSF 68, 69, 72, 93, 95  
COOLING 63  
COOLING SYSTEM, SECONDARY 1, 3-7, 9-11, 13, 14, 37, 38, 40, 53, 65, 67, 74, 81, 87, 97, 98, 114, 137, 139, 140, 154, 160, 179, 180  
COOLING SYSTEM, SECONDARY/SSF 3-6, 11, 13, 14, 37, 40, 53, 97, 160  
COOLING SYSTEM, SECONDARY/TSF 97, 114, 154, 160, 179  
CORE 41, 75, 76, 146, 152, 161, 163-165, 175  
CORE SPRAY 167  
DEMINERALIZERS 140  
ELECTRIC POWER 5, 23, 30, 45, 55, 63, 69, 72, 82, 90, 92, 123, 133, 148, 150, 159, 161, 177, 185, 188, 189  
ELECTRIC POWER/SSF 72  
ELECTRIC POWER/TSF 23, 133, 185  
ELECTRIC POWER, VITAL 32, 53, 60, 92, 95, 123, 176  
EMERGENCY POWER, ELECTRIC 30, 63, 72, 73, 118, 157, 177, 178, 187, 188  
EMERGENCY POWER, ELECTRIC/SSF 30, 63, 72, 73, 118, 157, 177, 187  
EMERGENCY POWER, ELECTRIC/TSF 72, 118  
ENGINEERED SAFETY FEATURE 2, 15-17, 24, 26, 56, 59, 64, 83, 88, 93, 95, 107, 121, 123, 136, 166, 169-171, 184  
ENGINEERED SAFETY FEATURE/SSF 95  
ENGINEERED SAFETY FEATURE/TSF 95  
ENGINES, INTERNAL COMBUSTION 63, 72, 73, 118  
FAILURE, ADMINISTRATIVE CONTROL 41, 135, 140  
FAILURE, DESIGN ERROR 22, 23, 43, 63, 78, 88, 100, 101, 122, 130, 133, 137, 167, 178, 183  
FAILURE, FABRICATION ERROR 11, 34  
FAILURE, INSTALLATION ERROR 7, 12, 24, 47, 73, 85, 90, 119, 124, 162, 172, 185  
FAILURE, MAINTENANCE ERROR 3, 12-14, 37, 42, 55, 64, 69, 87, 91, 92, 95, 99, 107, 110, 116, 121, 134, 139, 155, 160, 188  
FAILURE, OPERATOR ERROR 19, 56, 67, 72, 76, 81, 86, 97, 128, 130, 146, 159, 161, 173  
FEEDWATER 3-7, 9-11, 13, 37, 38, 40, 53, 74, 81, 97, 98, 114, 139, 154, 160, 180  
FIRE PROTECTION 12, 42, 47, 57, 62, 85, 90, 93, 103, 119, 120, 126, 138, 162, 172, 183  
FIRE PROTECTION/SSF 57, 103, 120  
FIRE PROTECTION/TSF 90, 103, 119  
FLOW, RECIRCULATION 72, 94  
FUEL ELEMENTS 116, 169  
FUEL, FOSSIL 73, 118  
GENERATORS 25, 67, 80, 81, 90, 97, 154, 176, 179, 186  
HPCI 22, 64  
HPCI/TSF 64  
HYDROGEN 189, 190  
INSTRUMENT, ALARM 159  
INSTRUMENT, IN CORE 18, 20, 21, 77, 94, 95, 110, 115, 131, 134, 135, 176  
INSTRUMENT, IN CORE/SSF 18, 21  
INSTRUMENT, NON-NUCLEAR 10, 11, 28, 48-51, 67, 118, 122, 130, 139, 145, 174, 176  
LEAK DETECTION 33, 60, 68, 124, 135, 147, 190  
LOCAL CONTROL PANEL 24  
LUBRICATION 160  
MAIN COOLING SYSTEM 1, 13, 22, 23, 27, 29, 46, 54, 56, 65, 67, 72, 81, 94, 97, 98, 114, 125, 137, 139, 152, 154,

## SYSTEM INDEX

MAIN COOLING SYSTEM 158, 160, 164, 165  
 MAIN COOLING SYSTEM/SSF 72  
 MAIN COOLING SYSTEM/TSF 46, 54, 56, 72,  
 152, 164, 165  
 MONITOR 99, 162  
 MONITORING SYSTEM, RADIATION 143, 151,  
 155, 156, 181, 182  
 OFF GAS 19, 86, 89, 151  
 OFF GAS/TSF 86, 89  
 OFF SITE 23, 45, 72, 90, 133, 188  
 ON SITE 5, 23, 30, 55, 63, 69, 82, 148,  
 150, 159, 161, 177, 188, 189  
 PNEUMATIC SYSTEM 112  
 PNEUMATIC SYSTEM/TSF 112  
 POISON, SOLUBLE 95  
 POWER DISTRIBUTION 96, 114, 175  
 PRESSURE RELIEF 22, 29, 114  
 PRESSURE VESSELS 14, 74, 111, 174, 180,  
 186  
 PRESSURIZER 56, 114, 158  
 PROCESS MONITORING 8, 32, 36, 51, 53,  
 58, 80, 105, 106, 117, 127, 134, 136,  
 148, 189  
 RCIC 15, 64, 74, 83, 92, 184  
 RCIC/TSF 15, 64, 74, 83, 92, 184  
 REACTOR CONTROL 96, 114, 175  
 REACTOR PROTECTION SYSTEM 8, 32, 36,  
 51, 58, 80, 105, 106, 117, 127, 134,  
 136, 148  
 REACTOR PROTECTION SYSTEM/SSF 36  
 REACTOR PROTECTION SYSTEM/TSF 8  
 RHR 26, 48-50, 66, 68, 69, 71, 100,  
 101, 174  
 RHR/SSF 48-50, 71  
 RHR/TSF 68, 69, 71  
 SERVICE WATER SYSTEM 35, 113, 132, 168,  
 191  
 SERVICE WATER SYSTEM/SSF 35, 113  
 SERVICE WATER SYSTEM/TSF 168  
 SHUTDOWN SYSTEM, SECONDARY 78  
 SHUTDOWN SYSTEM, SECONDARY/TSF 78  
 SOLID STATE DEVICE 44  
 STACK 141, 142  
 STACK/TSF 141, 142  
 STEAM GENERATOR 1, 13, 65, 67, 81, 97,  
 98, 114, 137, 139, 154, 160  
 STORAGE CONTAINER 95, 160  
 STRUCTURE 91  
 SUBSYSTEM FAULT 3-6, 11, 13, 14, 18,  
 21, 30, 35-37, 40, 48-50, 53, 57, 63,  
 67, 71-73, 95, 97, 103, 104, 113, 118,  
 120, 122, 153, 157, 160, 173, 177,  
 182, 187, 189  
 SUPPORT STRUCTURE 176  
 TESTING 15, 17, 26, 44, 46, 62, 70, 72,  
 77, 80, 86, 89, 108, 109, 111, 112,  
 117, 123, 129, 134, 136, 149, 153,  
 157, 168-171, 184, 187, 190  
 TOTAL SYSTEM FAULT 8, 15, 23, 46, 54,  
 56, 64, 68, 69, 71, 72, 74, 78, 83,  
 86, 87, 89, 90, 92, 93, 95, 97, 103,  
 107, 112, 114, 118, 119, 122, 133,  
 TOTAL SYSTEM FAULT 141, 142, 152, 154,  
 160, 164, 165, 167-169, 179, 181, 184,  
 185, 189, 190  
 TURBINE 25, 59, 67, 80, 81, 87, 90, 97,  
 154, 168, 176, 179, 186  
 TURBINE/SSF 67  
 VENTILATION SYSTEM 23, 55, 69, 70, 82,  
 87, 107-109, 122, 143, 145, 155, 168,  
 169, 173, 181, 182, 191  
 VENTILATION SYSTEM/SSF 122, 173, 182  
 VENTILATION SYSTEM/TSF 69, 87, 107,  
 122, 168, 169, 181  
 WASTE TREATMENT, GAS 87, 141, 142

## 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.

- ACTUATION 13, 15, 16, 19, 24, 26, 44, 59, 60, 72, 82, 83, 88, 93, 95, 107, 121, 123, 128, 143, 147, 155, 156, 169, 170, 176, 177, 179, 181, 182, 184, 188
- ACTUATOR 2, 15-17, 24, 26, 56, 59, 64, 83, 88, 93, 95, 107, 121, 123, 136, 166, 169-171, 184
- ADMINISTRATIVE PERSONNEL ERROR - SEE FAILURE, ADMINISTRATIVE CONTROL
- AGE EFFECT - SEE EFFECT, AGE
- AIR 23, 55, 145
- AIR/STEAM BINDING 9, 49
- ANNUNCIATORS 30, 53, 69, 88, 93, 94, 107, 141, 142, 159, 180
- AQUATIC ORGANISM 31
- ARKANSAS NUCLEAR 1 (PWR) 1-4, 12
- ARKANSAS NUCLEAR 2 (PWR) 5-13
- ARNOLD (BWR) 14-16
- AUXILIARY 3-7, 9-11, 33, 34, 37, 38, 40, 47, 53, 84, 92, 120, 129, 156, 160, 162
- BATTERIES & CHARGERS 5, 92, 133
- BEARING 3-5, 30, 57, 94, 137, 155
- BEAVER VALLEY 1 (PWR) 17
- BIG ROCK POINT (BWR) 18-21
- BIOACCUMULATION/TURNOVER 31
- BLOWERS 23, 55, 82, 122, 145, 169, 182
- BREAKER 5, 30, 60, 63, 72, 95, 123, 148, 150, 161, 176, 188
- BROWNS FERRY 1 (BWR) 22-25
- BROWNS FERRY 2 (BWR) 22, 23, 26
- BROWNS FERRY 3 (BWR) 24, 27
- BRUNSWICK 1 (BWR) 28
- BRUNSWICK 2 (BWR) 29
- BUILDING 12, 28, 33, 34, 47, 55, 62, 84, 85, 87, 99, 116, 120, 129, 143, 145, 155, 156, 160, 162, 168, 169, 172, 181, 182
- BUILDING/SSF 120
- BWR REACTOR - SEE REACTOR, BWR
- BYPASS 19, 59, 91, 154, 179, 186
- CABLES AND CONNECTORS 7, 9, 12, 18, 22, 24, 64, 68, 69, 80, 90, 95, 134, 161, 169, 175-177, 184, 188, 189
- CALIBRATION 15, 17, 26, 44, 46, 62, 70, 77, 80, 86, 89, 108, 109, 111, 112, 117, 123, 129, 134, 136, 149, 153, 157, 168-171, 184, 187, 190
- CALVERT CLIFFS 1 (PWR) 30-34
- CALVERT CLIFFS 2 (PWR) 35-40
- CLADDING FAILURE - SEE FAILURE, CLADDING
- COMMUNICATION 120, 190
- COMPONENT COOLING SYSTEM 176
- COMPONENT FAILURE - SEE FAILURE, COMPONENT
- COMPONENTS 3, 6, 9, 14, 28, 35, 39, 58, 59, 64, 66, 72, 74, 137, 154, COMPONENTS 173, 180
- COMPUTER, DIGITAL 8, 41, 43
- CONCENTRATION 31, 54
- CONDENSER 87
- CONSTRUCTION 60, 61, 177
- CONTAINMENT 2, 17, 23, 33, 56, 60, 61, 68-70, 82, 95, 100, 101, 107-109, 122, 129, 147, 167, 169, 173, 183, 191
- CONTAINMENT AIR LOCK 129
- CONTAINMENT ATMOSPHERE 147, 189, 190
- CONTAINMENT ATMOSPHERE/SSF 189
- CONTAINMENT ATMOSPHERE/TSP 189, 190
- CONTAINMENT ISOLATION 14, 16, 17, 19, 24, 60, 61, 64, 67, 68, 79, 83, 88, 93, 107, 121, 129, 147, 149, 156, 169-171, 173, 184, 185
- CONTAINMENT PURGE 70
- CONTAINMENT SPRAY 121, 130, 153
- CONTAINMENT SPRAY/SSF 153
- CONTAINMENT/TSP 167
- CONTAMINATION 141, 142, 152, 164, 165
- CONTRACTOR PERSONNEL 7, 34, 42, 43, 47, 60, 61, 185, 188
- CONTROL 5, 6, 9-13, 28, 48-50, 55, 56, 58, 59, 63, 74, 85, 94, 98, 99, 121, 139, 142, 143, 145, 147, 153-155, 169, 172, 180-182, 186, 189, 190
- CONTROL PANEL/ROOM 23, 92
- CONTROL ROD DRIVES 96, 136, 148, 150, 161
- CONTROL RODS 76, 146, 161, 163, 175
- CONTROL SYSTEM 13, 44, 74, 94, 96-98, 114, 118, 175, 179, 180, 186
- CONTROLLER 118
- COOK 1 (PWR) 41-43
- COOK 2 (PWR) 42, 44-47
- COOLANT PURIFICATION SYSTEM 16, 34, 39, 54, 68, 69, 72, 88, 93, 95, 102, 104, 121, 170, 171
- COOLANT PURIFICATION SYSTEM/SSF 95, 104
- COOLANT PURIFICATION SYSTEM/TSP 68, 69, 72, 93, 95
- COOLING 63, 191
- COOLING DEVICE 191
- COOLING SYSTEM, SECONDARY 1, 3-7, 9-11, 13, 14, 19, 37, 38, 40, 53, 65, 67, 74, 79, 81, 87, 97, 98, 106, 114, 127, 135, 137, 139, 140, 154, 160, 179, 180
- COOLING SYSTEM, SECONDARY/SSF 3-6, 11, 13, 14, 37, 40, 53, 97, 160
- COOLING SYSTEM, SECONDARY/TSP 97, 114, 154, 160, 179
- CORE 8, 18, 20, 21, 41, 43, 75-77, 94, 95, 110, 115, 131, 134, 135, 146, 152, 161, 163-165, 175, 176
- CORE SPRAY 167



## KEYWORD INDEX

- CORE/SSF 18, 21  
 CORE/TSF 8  
 CORROSION 27, 28, 65, 75, 113, 115, 125, 191  
 CRACK 1, 27, 37, 64, 71, 72, 74, 78, 102, 103, 115, 125, 130, 138, 141, 142, 154, 173  
 CRUD 11, 25, 97, 107, 114, 174  
 CRYSTAL RIVER 3 (PWR) 48-52  
 DAVIS-BESSE 1 (PWR) 53-57  
 DEFORMATION 74, 75, 137  
 DEMINERALIZERS 54, 140  
 DESIGN ERROR - SEE FAILURE, DESIGN ERROR  
 DIABLO CANYON 1 (PWR) 58-60  
 DIESEL GENERATOR - SEE GENERATOR, DIESEL  
 DRESDEN 2 (BWR) 61, 62  
 DRIFT 2, 13, 51, 64, 72, 92, 99, 106, 166  
 DRIVE 35, 64, 78, 79, 138, 148  
 EFFECT, AGE 11  
 EFFECT, PH 54  
 ELECTRIC POWER 5, 23, 30, 32, 36, 45, 55, 60, 63, 67, 69, 72, 82, 90, 92, 95, 123, 133, 148, 150, 159, 161, 176, 177, 185, 188, 189  
 ELECTRIC POWER/SSF 72  
 ELECTRIC POWER/TSF 23, 133, 185  
 ELECTRIC POWER, UNINTERRUPTED 176  
 ELECTRIC POWER, VITAL 32, 53, 60, 92, 95, 123, 176  
 ELECTRICAL FAILURE 10, 18, 23-25, 53, 68, 69, 72, 74, 92, 95, 97, 114, 133, 134, 161, 169, 175-177, 185, 188, 189  
 ELECTRONIC FUNCTION UNITS 10, 20, 32, 36, 41, 56, 67, 96, 97, 106, 175, 176, 186  
 EMERGENCY POWER, ELECTRIC 30, 63, 72, 73, 118, 157, 177, 178, 187, 188  
 EMERGENCY POWER, ELECTRIC/SSF 30, 63, 72, 73, 118, 157, 177, 187  
 EMERGENCY POWER, ELECTRIC/TSF 118  
 ENGINEERED SAFETY FEATURE 2, 13, 15-17, 19, 24, 26, 44, 56, 59, 60, 64, 72, 82, 83, 88, 93, 95, 107, 121, 123, 128, 136, 143, 147, 155, 156, 166, 169-171, 176, 177, 179, 181, 182, 184, 188  
 ENGINEERED SAFETY FEATURE/SSF 95  
 ENGINEERED SAFETY FEATURE/TSF 95  
 ENGINES, INTERNAL COMBUSTION 12, 30, 62, 63, 73, 118, 157, 178, 187, 188  
 ENVIRONMENT - SEE MONITORING PROGRAM, ENVIRONMENTAL  
 ENVIRONMENT/TSF 142  
 EQUIPMENT 12, 57, 72, 119, 144, 155  
 EQUIPMENT FAILURE - SEE FAILURE, EQUIPMENT  
 FABRICATION ERROR - SEE FAILURE, FABRICATION ERROR  
 FAILURE 1-191  
 FAILURE, ADMINISTRATIVE CONTROL 3, 12, 14, 17, 26, 41, 44, 52, 62, 67, 69, 70, 72, 77, 84, 95, 99, 108, 109, 111, 116, 118, 121, 129, 135, 136, 139, 140, 149, 157, 159, 172, 173, 187, 188  
 FAILURE, CLADDING 152, 164, 165  
 FAILURE, COMPONENT 3, 6, 9, 14, 28, 35, 39, 58, 59, 64, 66, 72, 74, 137, 154, 173, 190  
 FAILURE, DESIGN ERROR 22, 23, 43, 63, 78, 88, 100, 101, 122, 130, 133, 137, 167, 178, 183  
 FAILURE, EQUIPMENT 1, 3-20, 22-27, 29, 30, 32-43, 45, 47-50, 52-76, 78-85, 87, 88, 90-98, 100-104, 106-109, 111, 112, 114, 116, 118, 119, 121-123, 125, 126, 129, 130, 132-134, 137-158, 160, 161, 163-165, 167, 169-180, 182-189, 191  
 FAILURE, FABRICATION ERROR 11, 34  
 FAILURE, INSTALLATION ERROR 7, 12, 24, 47, 73, 85, 90, 119, 124, 162, 172, 185  
 FAILURE, INSTRUMENT 2, 7, 10, 11, 13, 15-18, 20, 24, 26, 28, 30, 32, 33, 44, 48-51, 53, 55, 58-60, 64, 67, 68, 72, 74, 77, 80, 82, 83, 88, 90, 93-97, 99, 105, 107, 114, 117, 118, 121-124, 127, 130, 131, 134-136, 139, 143, 145, 147, 148, 150, 155, 156, 159, 162, 166, 169-171, 174, 176, 177, 180-182, 184-186, 188-190  
 FAILURE, MAINTENANCE ERROR 3, 12-14, 37, 42, 55, 64, 69, 87, 91, 92, 95, 99, 107, 110, 116, 121, 134, 139, 155, 160, 188  
 FAILURE, OPERATOR ERROR 19, 56, 67, 76, 81, 86, 97, 128, 130, 146, 159, 161, 173  
 FAILURE, PIPE 6, 23, 71, 87, 100, 101, 113, 132  
 FAILURE, TUBING 1, 25, 65, 115, 191  
 FARLEY 2 (PWR) 63  
 FASTENER 12, 14, 37, 40, 71, 72, 104, 176, 180  
 FEEDWATER 3-7, 9-11, 13, 37, 38, 40, 53, 74, 81, 97, 98, 114, 139, 154, 160, 180  
 FILTERS 25, 107-109, 130  
 FIRE 99, 162  
 FIRE PROTECTION 12, 42, 47, 52, 57, 62, 85, 90, 99, 103, 119, 120, 126, 138, 162, 172, 183  
 FIRE PROTECTION/SSF 57, 103, 120  
 FIRE PROTECTION/TSF 90, 103, 119  
 FITZPATRICK (BWR) 64  
 FLAW 27, 115, 125  
 FLOOD 175  
 FLOW 5, 6, 9-11, 13, 14, 28, 35, 48-50, 56, 74, 94, 97, 98, 107, 114, 115, 121, 122, 139, 153, 154, 174,

## KEYWORD INDEX

- FLOW 180  
 FLOW BLOCKAGE 97  
 FLOW, RECIRCULATION 94  
 FLUX DISTRIBUTION 18, 20, 41, 77, 131, 134, 176  
 FT. CALHOUN 1 (PWR) 65  
 FUEL ELEMENTS 41, 75, 116, 152, 163-165, 169  
 FUEL, FOSSIL 73, 118  
 FUSE 10, 53, 121, 134, 169, 185  
 GENERATOR, DIESEL 30, 63, 118, 157, 178, 187, 188  
 GENERATOR, MOTOR 161  
 GENERATORS 25, 67, 72, 80, 81, 90, 97, 154, 176, 179, 186  
 GINNA (PWR) 66, 67  
 GRAND GULF 1 (BWR) 68-74  
 HATCH 1 (BWR) 75-77  
 HATCH 2 (BWR) 78  
 HEAT EXCHANGERS 1, 13, 23, 55, 65, 67, 81, 87, 97, 98, 139, 145, 154, 160, 191  
 HIGH 13, 14, 54, 56, 79, 87, 100, 105, 111, 114, 148, 150, 154, 167, 179, 186  
 HIGH TEMPERATURE 3-5, 23, 30, 79, 87, 127, 163, 174  
 HOSE 42, 129  
 HPCI 22, 64  
 HPCI/TSF 64  
 HUMAN FACTORS 11, 13, 19, 21, 22, 24, 34, 37, 43, 46, 47, 55, 63, 64, 72, 73, 76, 78, 81, 85-90, 92, 95, 100, 101, 107, 110, 119, 122-124, 130, 133, 134, 137, 140, 144, 146, 153, 155, 162, 167, 178, 183, 185  
 HYDRAULIC SYSTEM 5, 6, 11  
 HYDROGEN 147, 189, 190  
 IMPACT SHOCK 15, 134  
 INCIDENT, HUMAN ERROR 7, 8, 15, 23, 42, 56, 60, 72, 80, 91, 97, 128, 134, 135, 160, 168-171, 177, 184  
 INDIAN POINT 2 (PWR) 79  
 INDICATORS 10, 20, 33, 53, 60, 74, 77, 96, 107, 117, 131, 134, 143, 147, 156, 170, 190  
 INSPECTION 1-4, 7, 12, 15, 21-23, 25-29, 33, 34, 38, 42-45, 47, 48, 50, 51, 54, 55, 58, 59, 61, 63-65, 67, 71, 73, 75, 78, 80, 84-86, 88, 91, 96, 97, 99-101, 105-107, 110-112, 115, 118, 119, 124-127, 130, 132-134, 137-142, 144, 145, 148-150, 153, 154, 166, 169-173, 176, 178, 179, 182, 183, 187-189, 191  
 INSTALLATION ERROR - SEE FAILURE, INSTALLATION ERROR  
 INSTRUMENT FAILURE - SEE FAILURE, INSTRUMENT  
 INSTRUMENT LINE 49  
 INSTRUMENT, ABNORMAL INDICATION 10, 16, 18, 20, 21, 28, 30, 41, 43, 49, INSTRUMENT, ABNORMAL INDICATION 53, 58-60, 67, 68, 74, 80, 88, 90, 94-96, 99, 107, 110, 123, 124, 134, 139, 143, 155, 156, 159, 162, 170, 174, 176, 177, 181, 182, 184, 186  
 INSTRUMENT, ALARM 30, 53, 69, 88, 93, 94, 107, 130, 141, 142, 159, 162, 180, 181  
 INSTRUMENT, CONTROL 11, 30, 44, 118  
 INSTRUMENT, CURRENT 90  
 INSTRUMENT, FLOW 51  
 INSTRUMENT, IN CORE 18, 20, 21, 77, 94, 110, 115, 131, 134, 135, 176  
 INSTRUMENT, IN CORE/SSF 18, 21  
 INSTRUMENT, INTERLOCK 90, 136  
 INSTRUMENT, LIQUID LEVEL 51, 174  
 INSTRUMENT, NON-NUCLEAR 10, 11, 28, 48-51, 67, 118, 122, 130, 139, 145, 174, 176  
 INSTRUMENT, POSITION 10, 16, 53, 74, 96  
 INSTRUMENT, SPEED 94, 180  
 INSTRUMENT, SWITCH 7, 11, 16, 17, 30, 44, 48-50, 55, 58, 67, 68, 80, 82, 83, 88, 93, 95, 114, 118, 122, 123, 135, 155, 156, 166, 171, 176, 181, 182, 184  
 INSTRUMENT, VOLTAGE 148, 150, 159, 177  
 INSTRUMENTS, MISC. 28, 58  
 INVERTER 92, 95, 175  
 KEWAUNEE (PWR) 80-82  
 LA SALLE 1 (BWR) 83-88  
 LA SALLE 2 (BWR) 85, 89-93  
 LACROSSE (BWR) 94  
 LEAK 6, 23, 33, 34, 40, 52, 56, 65, 87, 100, 101, 113, 116, 125, 132, 141, 142, 152, 158, 160, 164, 165, 179, 191  
 LEAK DETECTION 33, 60, 68, 124, 135, 147, 190  
 LOCAL CONTROL PANEL 24  
 LOW 9, 11, 14, 28, 35, 67, 74, 81, 94, 95, 97, 98, 103, 104, 107, 112, 114, 118, 122, 130, 137, 139, 154, 160, 174, 180, 189  
 LUBRICATION 79, 160  
 MAIN COOLING SYSTEM 1, 13, 22, 23, 27, 29, 32, 36, 46, 51, 54, 56, 58, 65, 67, 72, 81, 94, 95, 97, 98, 105, 106, 114, 125, 137, 139, 152, 154, 158-160, 164, 165  
 MAIN COOLING SYSTEM/TSF 46, 54, 56, 72, 152, 164, 165  
 MAINE YANKEE (PWR) 95  
 MAINTENANCE AND REPAIR 3, 5, 6, 9-11, 13, 14, 18, 20, 21, 24, 28, 30, 35-40, 48-50, 53, 58, 59, 63, 64, 66, 68, 72, 74, 78, 79, 85, 87, 90, 92, 94, 95, 97, 99, 102-104, 114, 118, 121-123, 134, 141, 148, 150, 155, 158, 173, 175, 179, 180, 184, 186, 189

## KEYWORD INDEX

- MAINTENANCE ERROR - SEE FAILURE,  
 MAINTENANCE ERROR  
 MATERIAL 34, 54  
 MCGUIRE 1 (PWR) 96  
 MCGUIRE 2 (PWR) 97, 98  
 MILLSTONE 1 (BWR) 99  
 MILLSTONE 2 (PWR) 100-106  
 MODIFICATION 50, 158, 162  
 MONITOR 28, 99, 162  
 MONITORING PROGRAM, ENVIRONMENTAL 31  
 MONITORING SYSTEM, RADIATION 143, 151,  
 155, 156, 181, 182  
 MONTICELLO (BWR) 107  
 MOTORS 5, 6, 82  
 NEUTRON 18, 20, 77, 95, 131, 134, 176  
 NINE MILE POINT 1 (BWR) 108-112  
 NOISE 16, 21, 110, 130, 131, 143, 147,  
 155, 156, 181, 182  
 NORTH ANNA 1 (PWR) 113  
 NORTH ANNA 2 (PWR) 113  
 NOZZLE 27  
 NRC-AE 41, 163, 185  
 OCONEE 1 (PWR) 114  
 OFF GAS 19, 86, 89, 151  
 OFF GAS/TSF 86, 89  
 OFF SITE 23, 45, 72, 90, 133, 141,  
 142, 188  
 ON SITE 5, 23, 30, 55, 63, 69, 82,  
 148, 150, 159, 161, 177, 188, 189  
 OPERATION 5, 6, 8, 11-15, 17, 22-26,  
 28, 32-40, 42, 43, 48-50, 53-56, 61,  
 63, 64, 67, 76, 80-87, 89-92, 94, 95,  
 97, 98, 100-106, 113, 114, 122, 124,  
 129, 130, 132, 135, 136, 139, 141-  
 152, 154-156, 158-160, 162, 163, 166-  
 168, 175, 176, 178, 180, 186, 187,  
 189  
 OPERATOR ACTION 3, 8, 11-15, 17, 19,  
 21-24, 26, 37, 41, 44, 46, 54-56, 62-  
 64, 67, 69, 70, 72, 73, 77, 78, 80,  
 84-92, 97, 99-101, 107-111, 116-120,  
 122-124, 128-130, 133-137, 139, 140,  
 144, 149, 153, 155, 157, 159, 160,  
 162, 163, 167, 169-173, 177, 178,  
 183, 184, 187, 190  
 OPERATOR ERROR - SEE FAILURE, OPERATOR  
 ERROR  
 OXIDATION 27, 28, 65, 75, 113, 115,  
 125, 191  
 OYSTER CREEK (BWR) 115-119  
 PALISADES (PWR) 120, 121  
 PEACH BOTTOM 2 (BWR) 122, 123  
 PEACH BOTTOM 3 (BWR) 122, 124, 125  
 PENETRATION 125, 129, 132  
 PENETRATION, ELECTRICAL 172, 183  
 PH EFFECT - SEE EFFECT, PH  
 PILGRIM 1 (BWR) 126, 127  
 PIPE FAILURE - SEE FAILURE, PIPE; PIPES  
 AND PIPE FITTINGS  
 PIPES AND PIPE FITTINGS 6, 23, 71, 87,  
 100, 101, 113, 132, 176  
 PNEUMATIC SYSTEM 37, 38, 112, 122, 173  
 PNEUMATIC SYSTEM/TSF 112  
 POINT BEACH 2 (PWR) 128  
 POWER DISTRIBUTION 96, 114, 175  
 PRAIRIE ISLAND 1 (PWR) 129, 130  
 PRESSURE DROP 59, 74, 174, 186  
 PRESSURE PULSE 101, 179  
 PRESSURE RELIEF 11, 22, 29, 39, 78,  
 100, 101, 114, 141, 158  
 PRESSURE VESSELS 14, 74, 111, 117,  
 123, 125, 166, 174, 180, 186  
 PRESSURE, EXTERNAL 9, 11, 14, 56, 87,  
 100, 104, 111, 112, 114, 167, 179,  
 186  
 PRESSURE, INTERNAL 9, 11, 14, 56, 59,  
 87, 100, 104, 111, 112, 114, 167,  
 179, 186  
 PRESSURIZER 36, 51, 56, 95, 114, 158  
 PRESSURIZER/SSF 36  
 PROCEDURES AND MANUALS 3, 12, 14, 17,  
 26, 41, 44, 46, 52, 54, 61, 62, 67,  
 69, 70, 72, 77, 89, 95, 99, 108, 109,  
 111, 112, 116-118, 120, 121, 129,  
 135, 136, 139, 140, 151, 157, 161-  
 163, 167, 168, 172, 173, 187, 188,  
 190  
 PROCESS MONITORING 8, 32, 36, 51, 53,  
 58, 80, 105, 106, 117, 127, 134, 136,  
 148, 189  
 PUMPS 3-6, 11, 26, 34, 35, 37-40, 57,  
 70, 72, 74, 93, 94, 97, 102, 104,  
 118, 121, 138, 141, 151, 155, 160,  
 170, 174, 180  
 PWR REACTOR - SEE REACTOR, PWR  
 QUAD CITIES 1 (BWR) 131-134  
 QUAD CITIES 2 (BWR) 133, 135  
 RADIATION MONITORS 33, 60, 107, 135,  
 143, 147, 155, 156, 181, 182, 190  
 RADIOACTIVITY RELEASE 141, 142, 152,  
 164, 165  
 RANCHO SECO (PWR) 136  
 RCIC 15, 64, 74, 83, 92, 184  
 RCIC/TSF 15, 64, 74, 83, 92, 184  
 REACTOR 14, 74, 111, 174, 180, 186  
 REACTOR CONTROL 96, 114, 175  
 REACTOR POWER 50, 158  
 REACTOR PROTECTION SYSTEM 8, 32, 36,  
 51, 58, 80, 105, 106, 117, 127, 134,  
 136, 148  
 REACTOR PROTECTION SYSTEM/SSF 36  
 REACTOR PROTECTION SYSTEM/TSF 8  
 REACTOR SHUTDOWN 13, 18-21, 25, 34,  
 56, 58, 59, 65, 67, 71, 72, 74, 76,  
 80, 81, 87, 90, 94, 97, 98, 100-112,  
 114, 131, 134, 139, 154, 160, 161,  
 179, 180, 186  
 REACTOR STARTUP 4, 7, 10, 30, 60, 70,  
 72, 73, 77, 131, 161, 167, 179, 181,  
 185  
 REACTOR STARTUP EXPERIENCE 58, 59, 71,  
 74, 93, 140, 157, 170, 171, 184  
 REACTOR, BWR 14-16, 18-29, 61, 62, 64,  
 68-78, 83-94, 99, 107-112, 115-119,

## KEYWORD INDEX

REACTOR, BWR 122-127, 131-135, 166-171, 178-187  
 REACTOR, PWR 1-13, 17, 30-60, 63, 65-67, 79-82, 95-98, 100-106, 113, 114, 120, 121, 128-130, 136-165, 172-177, 188-191  
 RECOMBINERS 189  
 RECORDERPS 139  
 REFUELING 1, 2, 24, 27, 42, 44, 51, 108-112, 115, 117-120, 123, 126, 127, 134, 138, 177, 188, 191  
 RELAYS 15, 24, 26, 90, 114, 121, 127, 136, 145, 148, 150, 159, 176, 177, 188  
 RESPONSE TIME 12, 17, 41, 42, 55, 56, 62, 64, 72, 79, 84-86, 89, 91, 99, 105, 108, 109, 112, 119, 120, 128, 135, 136, 139, 145, 148-150, 153, 157, 159, 162, 172, 173, 183, 187, 188  
 REVIEW 17, 46, 67, 70, 77, 89, 108, 109, 116, 117, 120, 135, 136, 140, 151, 157, 162, 167, 168, 190  
 RHR 17, 26, 48-50, 66, 68, 69, 71, 100, 101, 169, 174  
 RHR/SSF 48-50, 71  
 RHR/TSF 68, 69, 71  
 ROBINSON 2 (PWR) 137  
 SALEM 1 (PWR) 138  
 SALEM 2 (PWR) 139  
 SAMPLING 31, 151  
 SAN ONOFRE 2 (PWR) 140-145  
 SAN ONOFRE 3 (PWR) 141-144, 146-152  
 SCRAM, REAL 13, 19, 25, 34, 56, 58, 59, 67, 74, 76, 80, 81, 87, 90, 94, 97, 98, 110-112, 114, 139, 154, 160, 161, 179, 180, 186  
 SCRAM, SPURIOUS 18, 20, 21, 131, 134  
 SEAL 12, 29, 34, 47, 56, 67, 85, 126, 132, 142, 160, 172, 183  
 SENSORS, FLOW 48-51, 88, 97, 176  
 SENSORS, LEVEL 51, 117, 123, 130, 139, 166, 174  
 SENSORS, PRESSURE 2, 51, 80, 95, 122, 171, 184  
 SENSORS, TEMPERATURE 32, 51, 58, 64, 68, 83, 93, 105, 124, 170  
 SEQUOYAH 1 (PWR) 153-157  
 SEQUOYAH 2 (PWR) 156, 158-160  
 SERVICE WATER SYSTEM 35, 113, 132, 168, 191  
 SERVICE WATER SYSTEM/SSF 35, 113  
 SERVICE WATER SYSTEM/TSF 168  
 SERVOMECHANISM 7, 9, 66, 103, 121  
 SHOCK ABSORBER 137, 140  
 SHUTDOWN SYSTEM, SECONDARY 78  
 SHUTDOWN SYSTEM, SECONDARY/TSF 78  
 SILVER 31  
 SMOKE 99, 162  
 SOLENOID 10, 122  
 SOLID STATE DEVICE 20, 41, 44, 56, 96, 97, 175, 186  
 SPENT FUEL POOL 156  
 ST. LUCIE 1 (PWR) 161  
 STACK 141, 142  
 STACK/TSF 141, 142  
 STEAM GENERATOR 1, 13, 65, 67, 81, 97, 98, 106, 114, 137, 139, 154, 160  
 STEEL 71  
 STORAGE CONTAINER 73, 103, 118, 130, 160  
 STRUCTURE 12, 40, 42, 85, 90, 91, 113, 116, 119, 120, 124, 126, 138  
 STRUCTURE/SSF 120  
 STRUCTURE/TSF 90, 119  
 SUBSYSTEM FAULT 3-6, 11, 13, 14, 18, 21, 30, 35-37, 40, 48-50, 53, 57, 63, 67, 71-73, 95, 97, 103, 104, 113, 118, 120, 122, 153, 157, 160, 173, 177, 182, 187, 189  
 SUMMER 1 (PWR) 162  
 SUPPORT STRUCTURE 12, 71, 137, 140, 176  
 SURRY 1 (PWR) 163-165  
 SUSQUEHANNA 1 (BWR) 166-168  
 SUSQUEHANNA 2 (BWR) 167-171  
 SYSTEM CAPACITY 13, 67, 74, 81, 95, 97, 98, 103, 118, 130, 137, 139, 154, 160, 180  
 TECHNICAL SPECIFICATIONS 70, 173  
 TEMPERATURE 58, 63, 189  
 TEST INTERVAL 17, 46, 56, 62, 70, 72, 77, 86, 89, 108, 109, 117, 120, 135, 136, 149, 151, 157, 168, 190  
 TEST, SYSTEM OPERABILITY 1-4, 7, 12, 15, 21-23, 25-29, 33, 34, 38, 42-45, 47, 48, 50-52, 54, 55, 58, 59, 61, 63-65, 67, 71, 73, 75, 78, 80, 84-86, 88, 91, 96, 97, 99-101, 105-107, 110-112, 115, 118, 119, 124-127, 130, 132-134, 137-142, 144, 145, 148-150, 153, 154, 166, 169-173, 176, 178, 179, 182, 183, 187-189, 191  
 TESTING 15, 17, 26, 44, 46, 62, 67, 70, 77, 80, 86, 89, 108, 109, 111, 112, 116, 117, 120, 123, 129, 134-136, 140, 149, 151, 153, 157, 162, 167-171, 184, 187, 190  
 THREE MILE ISLAND 1 (PWR) 172  
 THREE MILE ISLAND 2 (PWR) 173  
 TOTAL SYSTEM FAULT 8, 15, 23, 46, 54, 56, 64, 68, 69, 71, 72, 74, 78, 83, 86, 87, 89, 90, 92, 93, 95, 97, 103, 107, 112, 114, 118, 119, 122, 133, 141, 142, 152, 154, 160, 164, 165, 167-169, 179, 181, 184, 185, 189, 190  
 TRAINING 159  
 TRANSFORMERS 90, 189  
 TRANSIENT 152, 164, 165  
 TROJAN (PWR) 174  
 TUBING 1, 25, 65, 115, 191  
 TUBING FAILURE - SEE FAILURE, TUBING  
 TURBINE 15, 25, 38, 59, 67, 74, 80, 81, 83, 87, 90, 97, 99, 154, 168,

## KEYWORD INDEX

TURBINE 176, 179, 180, 186  
TURBINE/SSF 67  
TURKEY POINT 3 (PWR) 175, 176  
TURKEY POINT 4 (PWR) 177  
UPDATE 1-12, 28, 30, 32-38, 40, 41,  
48-51, 53, 54, 68, 69, 100-106, 113,  
120, 135, 158, 162, 163, 166, 189  
VALVE OPERATORS 5-7, 9-11, 37, 38, 40,  
48, 66, 103, 121, 122, 138, 158, 173  
VALVE, CHECK 141  
VALVES 5-7, 9-12, 14-17, 19, 24, 29,  
33, 35, 37-40, 42, 48-50, 52, 53, 56,  
59-64, 66-69, 72, 74, 78, 79, 81-84,  
88, 91, 93, 95, 98, 100, 101, 103,  
107, 112, 114, 119, 121, 122, 129,  
138, 139, 141-143, 147, 149, 153-156,  
158, 160, 167, 169-171, 173, 179,  
184-186  
VENTILATION SYSTEM 23, 28, 55, 60, 69,  
70, 82, 87, 95, 107-109, 122, 143,  
145, 155, 156, 168, 169, 173, 181,  
182, 191  
VENTILATION SYSTEM/SSF 122, 173, 182  
VENTILATION SYSTEM/TSP 69, 87, 107,  
122, 168, 169, 181  
VIBRATION 14, 115, 132  
WASTE TREATMENT, GAS 87, 141, 142  
WEAR 78, 155  
WEATHER, SEVERE 72  
WELDS 27, 115, 125  
WPPSS 2 (BWR) 178-187  
YANKEE ROWE (PWR) 188  
ZION 1 (PWR) 189  
ZION 2 (PWR) 189-191

## VENDOR CODE INDEX

AMOT CONTROL CORP. 63  
 ARMCO STEEL CORP. 34  
 ASCO VALVES 33, 122  
 ATOMICS INTERNATIONAL 189  
 ATWOOD & MORRILL CO., INC. 79  
 AUTOMATIC SPRINKLER CORPORATION 99  
 AUTOMATIC TIMING AND CONTROL INC. 159  
 BABCOCK & WILCOX COMPANY 1  
 BAILEY METER COMPANY 51, 98  
 BARTON INSTRUMENT CO., DIV OF ITT 48-  
 50, 184  
 BECHTEL CORP. 71, 100, 101  
 BETTIS CORPORATION 173  
 BORG-WARNER CORP. 9  
 BURNS ENGINEERING 124  
 BUSSMANN MFG (DIV OF MCGRAW-EDISON) 185  
 CAMBRIDGE FILTER CORP. 108, 109  
 CARBORUNDUM CO. 130  
 COMBUSTION ENGINEERING, INC. 8, 65  
 CONSOLIDATED CONTROLS CORP. 179  
 CONTROL COMPONENTS 74  
 COPES-VULCAN, INC. 98, 154  
 CORSBY VALVE & GAGE CO. 39  
 CROUSE-HINDS 176  
 DE LAVAL TURBINE, INC. 180  
 EXIDE INDUSTRIAL DIV 45  
 FISCHER & PORTER CO. 2  
 FISHER CONTROLS CO. 37, 38, 40  
 FISHER FLOW CONTROL DIV (ROCKWELL I 142  
 GAST MANUFACTURING CORP. 155  
 GAULIN CORP. 104  
 GENERAL ELECTRIC CO. 20, 21, 30, 75,  
 77, 115, 125, 127  
 GENERAL MOTORS 178, 187  
 GOULDS INC. (INDUSTRIAL BATTERY DIV 133  
 GULF GENERAL ATOMIC 106  
 GUYON ALLOYS 113  
 HAGAN CONTROLS 58  
 INGERSOL-RAND CO. 3, 4  
 JORDON CONTROLS CO. 94  
 KAMAN SCIENCES CORP. 181, 182  
 KEROTEST MANUFACTURING CORP. 141  
 LAMBDA ELECTRONICS 32  
 LIMITORQUE CORP. 7, 66  
 LONERGAN, J.E., CO. 78  
 MACAULAY CONTROLS CO. 59  
 NECI-NUCLEAR ENGINEERING & COMPONENTS 64  
 NUCLEAR VALVE DIVISION 11  
 PACIFIC SCIENTIFIC COMPANY 140  
 POTTER & BRUMFIELD 114  
 POWER DESIGNS INC. 175  
 POWER-MATE 36  
 RILEY COMPANY, THE 68  
 RILEY COMPANY, THE - PANALARM DIVIS 83  
 RILEY-BEAIRD, INC. 93  
 ROCHESTER INSTRUMENT SYSTEMS, INC. 32  
 ROCKWELL MANUFACTURING COMPANY 14  
 ROCKWELL-INTERNATIONAL 56  
 ROSEMOUNT, INC. 105  
 SCHUTTE AND KOERING COMPANY 64  
 SMITH VALVE CORP. 138  
 TARGET ROCK CORP. 29, 158  
 TEXAS PIPE AND BENDING, INC. 71  
 VELAN VALVE CORP. 66  
 WALLACE & TIEMAN, INC. 28  
 WESTINGHOUSE ELECTRIC CORP. 67, 96, 97,  
 175  
 WESTON HYDRAULICS DIVISION 5, 6  
 WOODWARD GOVERNOR COMPANY 74  
 WOOSTER ELECTRIC COMPANY 103

NRC FORM 335 (11-81)		U.S. NUCLEAR REGULATORY COMMISSION <b>BIBLIOGRAPHIC DATA SHEET</b>		1. REPORT NUMBER (Assigned by DDC) NUREG/CR-2000 ORNL/NSIC-200 Vol. 3, No. 8	
4. TITLE AND SUBTITLE (Add Volume No., if appropriate) Licensee Event Report (LER) Compilation for month of August 1984				2. (Leave blank)	
7. AUTHOR(S) Prepared by Oak Ridge National Laboratory				3. RECIPIENT'S ACCESSION NO.	
9. PERFORMING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code) Oak Ridge National Laboratory Nuclear Operations Analysis Center Oak Ridge, TN 37831				5. DATE REPORT COMPLETED MONTH: September   YEAR: 1984	
12. SPONSORING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code) Office for Analysis and Evaluation of Operational Data U.S. Nuclear Regulatory Commission Washington, DC 20555				DATE REPORT ISSUED MONTH: September   YEAR: 1984	
13. TYPE OF REPORT Monthly Report				6. (Leave blank)	
PERIOD COVERED (Inclusive dates) August 1984				8. (Leave blank)	
15. SUPPLEMENTARY NOTES				10. PROJECT/TASK/WORK UNIT NO.	
16. ABSTRACT (200 words or less) This monthly report contains Licensee Event Report (LER) operational information that was processed into the LER data file of the Nuclear Safety Information Center (NSIC) during the one month period identified on the cover of this document. The LERs, from which this information is derived, are submitted to the Nuclear Regulatory Commission (NRC) by nuclear power plant licensees in accordance with federal regulations. Procedures for LER reporting are described in detail in NRC Regulatory Guide 1.16 and NUREG-0161, Instructions for Preparation of Data Entry Sheets for Licensee Event Reports. The LER summaries in this report are arranged alphabetically by facility name and then chronologically by event date for each facility. Component, system keywords, and component vendor indexes follow the summaries. The components, systems, and vendors are assigned by the computer using correlation tables from the Sequence Coding and Search System.				11. FIN NO. FIN A9135	
17. KEY WORDS AND DOCUMENT ANALYSIS licensee event report (LER)				14. (Leave blank)	
17a. DESCRIPTORS				16. IDENTIFIERS OPEN ENDED TERMS	
18. AVAILABILITY STATEMENT Unlimited				19. SECURITY CLASS (This report) Unclassified	
20. SECURITY CLASS (This page) Unclassified				21. NO. OF PAGES 5	

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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NUREG/CR-2000, Vol. 3, No. 8

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