
Licensee Event Report (LER) Compilation

For month of January 1986

Oak Ridge National Laboratory

Prepared for
U.S. Nuclear Regulatory
Commission

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Abstract

This monthly report contains Licensee Event Report (LER) operational information that was processed into the LER data file of the Nuclear Safety Information Center (NSIC) during the one month period identified on the cover of the document. The LERs, from which this information is derived, are submitted to the Nuclear Regulatory Commission (NRC) by nuclear power plant licensees in accordance with federal regulations. Procedures for LER reporting for revisions to those events occurring prior to 1984 are described in NRC Regulatory Guide 1.16 and NUREG-1061, *Instructions for Preparation of Data Entry Sheets for Licensee Event Reports*. For those events occurring on and after January 1, 1984, LERs are being submitted in accordance with the revised rule contained in Title 10 Part 50.73 of the Code of Federal Regulations (10 CFR 50.73 - Licensee Event Report System) which was published in the Federal Register (Vol. 48, No. 144) on July 26, 1983. NUREG-1022, *Licensee Event Report System - Description of Systems and Guidelines for Reporting*, provides supporting guidance and information on the revised LER rule.

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

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UNDERGOING OPERABILITY TESTING ON 11/07/85 WHEN IT TRIPPED ON ELECTRICAL OVERSPEED DURING AN AUTOSTART SEQUENCE. TROUBLESHOOTING REVEALED THE RCIC TURBINE'S AIRPAX ELECTRICAL OVERSPEED TRIP MONITOR HAD DRIFTED TO A LOW VALUE WHICH COULD BE REACHED DURING A NORMAL TURBINE AUTOSTART. THE ROOT CAUSE OF THIS PROBLEM IS CONSIDERED TO BE THE LACK OF ROUTINE CALIBRATION ON THIS MECHANISM. PERIODIC CALIBRATION WILL BE ESTABLISHED FOR THE TURBINE ELECTRICAL OVERSPEED MONITOR. IN ADDITION, METHODS FOR INCREASING THE RELIABILITY OF THE RCIC AND HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEMS ARE BEING EXAMINED BY A MULTIDISCIPLINED ENGINEERING TASK FORCE.

[8] BEAVER VALLEY 1 DOCKET 50-334 LER 85-019
 REACTOR TRIP DUE TO RCS LOOP FLOW INSTRUMENTATION SPIKE.
 EVENT DATE: 102585 REPORT DATE: 112185 NSSS: WE TYPE: PWR
 VENDOR: FISCHER & PORTER CO.

(NSIC 196742) ON 10/25/85 AT 1149 HOURS, A REACTOR TRIP OCCURRED DUE TO THE RECEIPT OF A REACTOR COOLANT SYSTEM (RCS) LOW FLOW TRIP SIGNAL IN LOOP A. THE AT-POWER PERMISSIVE ALLOWING LOW FLOW IN ONE LOOP WAS NOT IN EFFECT BECAUSE REACTOR POWER WAS ABOVE THE SETPOINT OF 31 PERCENT. THE OPERATORS FOLLOWED THE APPLICABLE EMERGENCY PROCEDURES AND STABILIZED THE PLANT IN HOT STANDBY BY 1201 HOURS. PRIOR TO THE TRIP, ONE OF THREE FLOW TRANSMITTERS IN LOOP A WAS PLACED IN THE TRIPPED (LOW FLOW) CONDITION TO ALLOW TRANSMITTER REPAIR. DURING THE RESTORATION PROCESS FOLLOWING TRANSMITTER REPAIR, ONE OF THE REMAINING LOOP A FLOW TRANSMITTERS SENSED A LOW FLOW CONDITION SATISFYING THE 2/3 TRIP COINCIDENCE FOR LOW FLOW IN ONE LOOP. THE LOW LOOP FLOW SIGNAL CAUSED A RESULTANT REACTOR TRIP. THE CAUSE FOR THE LOW FLOW SIGNAL WAS DUE TO A PROCEDURE DEFICIENCY. THE MAINTENANCE PROCEDURE BEING USED REQUIRED THE OPENING OF THE COMMON HIGH PRESSURE SIDE TAP OF THE TRANSMITTER FIRST, RATHER THAN THE INDIVIDUAL LOW PRESSURE TAPS. THIS FILL AND VENT PROCESS CAUSED A PRESSURE PERTURBATION ON AN ASSOCIATED LOOP TRANSMITTER AND MADE UP THE REQUIRED TRIP LOGIC. PROCEDURAL CHANGES HAVE BEEN INSTITUTED TO DENOTE THE PROPER VENTING SEQUENCE FOR THE MAINTENANCE PROCEDURES FOR LOOP FLOW TRANSMITTERS.

[9] BIG ROCK POINT DOCKET 50-155 LER 85-007
 CONTAINMENT ISOLATION VALVE NOT LEAK TESTED AFTER MAINTENANCE.
 EVENT DATE: 092585 REPORT DATE: 102585 NSSS: GE TYPE: BWR

(NSIC 196462) BIG ROCK POINT TECH SPEC 3.6 REQUIRES THAT: 'CONTAINMENT SPHERE INTEGRITY SHALL BE MAINTAINED DURING POWER OPERATION, REFUELING OPERATION, SHUTDOWN, AND COLD SHUTDOWN CONDITIONS EXCEPT AS SPECIFIED BY A SYSTEM OF PROCEDURES AND CONTROLS TO BE ESTABLISHED FOR OCCASIONS CONTAINMENT MUST BE BREACHED DURING COLD SHUTDOWN'. CONTRARY TO THE ABOVE, A CONTAINMENT ISOLATION VALVE (CV-4103) WAS RETURNED TO SERVICE FOLLOWING MAINTENANCE WITHOUT A COMPONENT LEAK RATE TEST BEING PERFORMED TO VERIFY OPERABILITY. THIS REDUCED THE REDUNDANCY FOR CONTAINMENT ISOLATION OF THE CONTAINMENT DIRTY SUMP LINE. FOLLOWING RETURN TO SERVICE, 10 FUEL MOVES WERE PERFORMED IN THE SPENT FUEL POOL, WHICH WAS A VIOLATION OF SYSTEM OPERATING PROCEDURES WHICH REQUIRE CONTAINMENT INTEGRITY TO MOVE FUEL. UPON DISCOVERY, THE INNER CONTAINMENT ISOLATION VALVE (CV-4025), UPSTREAM OF CV-4103, WAS CLOSED AND CAUTION TAGGED TO RE-ESTABLISH CONTAINMENT INTEGRITY. CV-4025 THE INNER ISOLATION VALVE WAS OPERABLE AND CAPABLE OF PERFORMING ITS ISOLATION FUNCTION DURING THE EVENT.

[10] BROWNS FERRY 2 DOCKET 50-260 LER 84-007 REV 1
 UPDATE ON MSIV LEAKAGE.
 EVENT DATE: 092284 REPORT DATE: 011585 NSSS: GE TYPE: BWR

(NSIC 196516) THE ISOLATION VALVES ON THE B AND C MAIN STEAM LINES WERE FOUND TO HAVE EXCESSIVE LEAKAGE (GREATER THAN 11.5 SCFH). TESTING ON MAIN STEAM LINE B

[25] BRUNSWICK 1 DOCKET 50-325 LER 85-058
 DEFECTIVE PROCEDURE RENDERS CORE SPRAY AND LPCI INOPERABLE DURING TESTING.
 EVENT DATE: 102985 REPORT DATE: 112785 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 196738) ON 10/29/85, A DETERMINATION WAS MADE THAT DURING PERFORMANCE OF THE CORE SPRAY SIMULATED AUTOMATIC ACTUATION AND LOGIC FUNCTIONAL TEST, PERIODIC TEST (PT) 07.1.9, BOTH LOOPS OF THE LOW PRESSURE COOLANT INJECTION (LPCI) MODE OF THE RESIDUAL HEAT REMOVAL (RHR) SYSTEM WERE RENDERED INCAPABLE OF REACTOR INJECTION SHOULD RECEIPT OF AN ACTUAL LPCI INITIATION SIGNAL OCCUR. THE PT IS USED TO SATISFY REQUIREMENTS OF TECH SPEC 4.3.3.2. THE PROCEDURAL PROBLEM APPLIED TO UNITS 1 AND 2 AND WAS INITIALLY DISCOVERED DURING A TECHNICAL REVIEW OF THE PT. UNIT 1 WAS IN A REFUEL/MAINTENANCE OUTAGE AND UNIT 2 WAS AT 90 PERCENT POWER. THE PROCEDURAL PROBLEM RESULTED FROM A STEP IN THE PROCEDURE WHICH DEENERGIZED RELAYS IN THE REACTOR LOW PRESSURE PERMISSIVE LOGIC TO CORE SPRAY INITIATION INSTRUMENTATION. IT WAS NOT RECOGNIZED THIS ALSO PREVENTED THE RHR LPCI INITIATION LOGIC FROM SENSING REACTOR PRESSURE. THE CAUSE OF THIS OVERSIGHT IS ATTRIBUTED TO INADEQUATE TECHNICAL REVIEW DURING PRIOR REVISIONS TO THE PT. THE PT PROCEDURE FOR UNIT 1 WAS APPROPRIATELY REVISED TO ENSURE LPCI OPERABILITY DURING PERFORMANCE OF THE TESTING. THE RESPECTIVE UNIT 2 PROCEDURE IS CURRENTLY BEING REVISED IN A LIKEWISE MANNER. BY 1/31/86, A PROCEDURE DEVELOPED BY THE ONGOING MAINTENANCE SURVEILLANCE TEST REWRITE PROGRAM WILL BE IMPLEMENTED TO REPLACE THE PT ON EACH UNIT WITH A PROCEDURE WHICH ONLY AFFECTS OPERABILITY OF THE CORE SPRAY LOOP UNDER TEST.

[26] BRUNSWICK 1 DOCKET 50-325 LER 85-059
 OPERATOR ERROR CAUSES LOW REACTOR LEVEL SIGNALS AND REACTOR SCRAM.
 EVENT DATE: 110285 REPORT DATE: 120285 NSSS: GE TYPE: BWR
 VENDOR: ALLEN-BRADLEY CO.
 GENERAL ELECTRIC CO.
 NORDBERG
 SCHUTTE AND KOERING COMPANY

(NSIC 197006) ON 11-02-85, AT 2326, UNIT 1 PRIMARY CONTAINMENT GROUPS 1, 3, AND 6 ISOLATIONS OCCURRED DUE TO A REACTOR LOW LEVEL (LL) NO. 2 SIGNAL. THE HIGH PRESSURE COOLANT INJECTION SYSTEM AND THE REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM AUTO-STARTED AND RCIC TRIPPED. THE CORE SPRAY SUBSYSTEMS (A AND B) AUTO-STARTED ON A MOMENTARY REACTOR LL NO. 3 SIGNAL. THE REACTOR BUILDING VENTILATION SYSTEM AUTO-ISOLATED AND THE STANDBY GAS TREATMENT SYSTEM AUTO-STARTED. THE RESIDUAL HEAT REMOVAL SYSTEM LPCI MODE DID NOT INITIATE BECAUSE THE LL NO. 3 SIGNAL DID NOT SEAL IN. EMERGENCY AC DIESEL GENERATOR (D/G) NOS. 1-4 AUTO-STARTED AND D/G NO. 4 TRIPPED. AT 2332, THE UNIT AUTO-SCRAMMED DUE TO HIGH REACTOR PRESSURE. A SCRAM RECOVERY WAS CARRIED OUT. REACTOR SAFETY RELIEF VALVE A WAS MANUALLY OPENED TO CONTROL REACTOR PRESSURE. THE RCIC AND REACTOR CONDENSATE FEEDWATER SYSTEMS WERE UTILIZED TO CONTROL REACTOR LEVEL. THE INCURRED LOW LEVEL SIGNALS RESULTED FROM REACTOR LEVEL INSTRUMENTATION FALSELY SENSING LOW REACTOR LEVELS WHEN A PRESSURE SPIKE OCCURRED ON THE INSTRUMENTS' COMMON REFERENCE LEG DUE TO OPENING THE INSTRUMENT DRAIN VALVE OF REACTOR PRESSURE INSTRUMENT C32-PT-N008. THE INVOLVED PERSON WAS APPROPRIATELY DISCIPLINED. PROBLEMS AFFECTING OPERABILITY OF D/G NO. 4 AND RCIC WERE RESOLVED AND THEY WERE RETURNED TO SERVICE.

[27] BRUNSWICK 1 DOCKET 50-325 LER 85-060
 HYDROGEN MONITORS NOT TESTED AND GRAB SAMPLES MISSED.
 EVENT DATE: 110585 REPORT DATE: 120585 NSSS: GE TYPE: BWR

(NSIC 196739) FROM 10-31-85, AT 1215, UNTIL 11-03-85, AT 0025, AND 11-05-85, AT 0010, UNTIL 11-05-85, AT 0100, REQUIRED GRAB SAMPLING AND ANALYSIS OF THE UNIT 1 MAIN CONDENSER OFF-GAS SYSTEM HYDROGEN RECOMBINER TRAINS' EFFLUENT AND

COMPLETION OF TESTING, THE COOLDOWN FOR REFUELING WAS CONTINUED. INTERIM CORRECTIVE ACTION INCLUDES VERIFICATION OF THE HYDRAULIC TESTING UNITS PERFORMANCE.

[55] CATAWBA 1 DOCKET 50-413 LER 85-044
 REACTOR TRIPS DUE TO LOW STEAM GENERATOR LEVEL.
 EVENT DATE: 062285 REPORT DATE: 072285 NSSS: WE TYPE: PWR

(NSIC 196647) ON 6-22-85, AT 1708 HRS, A SG LOW-LOW LEVEL REACTOR TRIP OCCURRED. THE UNIT WAS RECOVERING FROM A REACTOR TRIP WHICH HAD OCCURRED EARLIER, AT 0105 HRS. WHEN THE UNIT 1 NUCLEAR CONTROL OPERATOR (NCO) NOTICED THAT SG LEVELS WERE DECREASING, HE REQUESTED THAT THE UNIT 2 NCO INCREASE THE SPEED OF THE MAIN FEEDWATER PUMP TURBINE (CFPT), BUT DID NOT COMMUNICATE TO HIM THE MODE OF SPEED CONTROL. THIS CAUSED THE UNIT 2 NCO TO MISTAKENLY OPERATE THE WRONG CONTROLLER. BEFORE THIS ERROR COULD BE REALIZED, THE REACTOR TRIPPED ON LOW-LOW SG C LEVEL. BECAUSE OF THE FAILURE TO EFFECTIVELY COMMUNICATE THE SPEED CONTROL STATUS, THIS INCIDENT IS CLASSIFIED AS A PERSONNEL ERROR. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73, SECTION (A)(2)(IV), AND 10 CFR 50.72, SECTION (B)(2)(II).

[56] CATAWBA 1 DOCKET 50-413 LER 85-053
 DG BATTERY CHARGER INOPERABLE DUE TO BLOWN FUSES.
 EVENT DATE: 072985 REPORT DATE: 091385 NSSS: WE TYPE: PWR
 VENDOR: CUTLER-HAMMER
 POWER CONVERSION PRODUCTS, INC.

(NSIC 196601) DURING AN INVESTIGATION ON 8-19-85, INTO THE CAUSE OF INDICATING LIGHT SOCKET SHORTINGS ON DG 1A BATTERY CHARGER (1DGCA) AND DIESEL ENGINE 1A CONTROL PANEL, IT WAS DISCOVERED THAT 1DGCA WAS INOPERABLE FROM 1447 TO 2030 HRS ON 7-29-85. DURING THIS TIME PERIOD, IT WAS NOT RECOGNIZED THAT THE CHARGER WAS INOPERABLE, AND THEREFORE, THE AVAILABILITY OF ALTERNATE POWER SOURCES WAS NOT VERIFIED AS REQUIRED BY TECH SPEC 3.8 1.1. UNIT 1 WAS IN MODE 1 IN THE PROCESS OF REACTOR POWER ESCALATION AT THE TIME OF THE INCIDENT. THIS INCIDENT HAS BEEN ASSIGNED 3 EVENT CAUSE CATEGORIES. AN EVENT CAUSE OF DESIGN DEFICIENCY HAS BEEN ASSIGNED AS THE MAIN CAUSE BECAUSE THE DESIGN OF THE CHARGER DID NOT ALLOW THE OPERATOR TO RECOGNIZE THAT THE CHARGER WAS INOPERABLE. AN EVENT CAUSE OF PERSONNEL ERROR HAS BEEN ASSIGNED BECAUSE PERSONNEL DID NOT PROPERLY TAKE ACTION TO CLEAR AN ALARM SIGNIFYING TROUBLE WITH THE CHARGER. AN EVENT CAUSE OF PROCEDURAL DEFICIENCY HAS BEEN ASSIGNED BECAUSE THE ANNUNCIATOR RESPONSE PROCEDURE DID NOT ADEQUATELY AID THE OPERATOR IN IDENTIFYING THE CAUSE OF THE CHARGER TROUBLE ALARM AND DID NOT DIRECT THE OPERATOR TO BEGIN VERIFICATION OF THE AVAILABILITY OF OFFSITE POWER SOURCES. AFTER THE CHARGER WAS DISCOVERED TO BE INOPERABLE, AN INVESTIGATION REVEALED THAT 2 FUSES IN THE CHARGER HAD BLOWN FOLLOWING AN ATTEMPTED INDICATING LIGHT REPLACEMENT ON 1DGCA. THE FUSES WERE REPLACED, AND THE CHARGER RETURNED TO SERVICE.

[57] CATAWBA 1 DOCKET 50-413 LER 85-049
 AUXILIARY FEEDWATER PUMPS START DUE TO MAIN FEEDWATER PUMP TRIP.
 EVENT DATE: 073185 REPORT DATE: 082985 NSSS: WE TYPE: PWR

(NSIC 196648) ON 7-31-85, AT 2335 HRS, THE MOTOR DRIVEN AUX FEEDWATER PUMPS AUTO-STARTED DUE TO THE TRIP OF MAIN FEEDWATER PUMP A. THE CF PUMP TRIP OCCURRED WHILE SHUTTING THE REACTOR DOWN TO PERFORM CONDENSER TUBE LEAK REPAIRS. CF PUMP TURBINE SPEED WAS INCREASED, AS DIRECTED BY THE APPROPRIATE OPERATING PROCEDURE, PRIOR TO SWAPPING FEEDWATER FLOW FROM THE LOWER CF NOZZLES TO THE UPPER CA NOZZLES. WHEN THIS WAS DONE, A FEEDWATER TRANSIENT WAS INITIATED IN THE SYSTEM, MAKING FEEDWATER FLOW INTERMITTENTLY SWING HIGH AND LOW, AND EVENTUALLY TRIPPED CF PUMP A ON HIGH DISCHARGE PRESSURE. THE SWING BEGAN BECAUSE OF THE SLUGGISH

OPEN PENETRATIONS. AS THIS BARRIER WAS BELIEVED TO HAVE BEEN IN A NON-CONFORMING CONDITION FOR A PERIOD GREATER THAN THAT ALLOWED BY TECH SPEC 3.22.F, THIS INCIDENT IS REPORTABLE UNDER 10 CFR 50.73(A)(2)(I).

[65] COOK 1 DOCKET 50-315 LER 83-131 REV 1
 UPDATE ON SURVEILLANCE TEST FREQUENCY FOR HOSES EXCEEDED.
 EVENT DATE: 123183 REPORT DATE: 092685 NSSS: WE TYPE: PWR

(NSIC 196512) DURING A REVIEW OF DATA SHEETS GENERATED WHILE CONDUCTING HYDROSTATIC TESTING OF THE PLANT'S TECH SPEC FIRE HOSES, IT WAS DISCOVERED THAT SOME HOSES ON THESE STANDPIPES HAD EXCEEDED THE 3 YR SURVEILLANCE TEST FREQUENCY OF TECH SPEC 4.7.9.5C. IN VIEW OF THE FACT THAT ALL HOSES ON THE STANDPIPES HAD JUST SUCCESSFULLY PASSED THE HYDROSTATIC TEST, NO FURTHER ACTION WAS TAKEN. THIS WAS THE FIRST OCCURRENCE OF THIS TYPE. MISSED SURV. WAS ATTRIBUTED TO 3 FACTORS: 1) TWO DIFFERENT FIRE HOSE TEST FREQ. BEING CONDUCTED AT PLANT; A 3 YR FREQ. TO SATISFY TECH SPEC, AND A 5 YR FREQ. TO SATISFY NFPA CRITERIA; 2) INADVERTENT INTERCHANGING OF HOSES THAT OCCURRED DURING FIRE DRILLS; AND 3) ERRONEOUS ENTRY INTO TECH SPEC COMPUTER PROGRAM. RESOLUTION OF DEFICIENCIES - PROCEDURE REVISION, COMPUTER PROGRAM CORRECTED.

[66] COOK 1 DOCKET 50-315 LER 84-036
 PERSONNEL ACCESS HATCH LEFT OPEN.
 EVENT DATE: 071784 REPORT DATE: 112185 NSSS: WE TYPE: PWR

(NSIC 196660) ON JULY 17, 1984 AT APPROXIMATELY 1500 HOURS PERSONNEL ACCESS HATCH (IEEE/DR) BETWEEN UPPER AND LOWER CONTAINMENT WAS OPENED BY INDIVIDUALS WHO REQUIRED ENTRY INTO UPPER CONTAINMENT. THE UPPER CONTAINMENT AIRLOCK WAS UNAVAILABLE FOR ADMITTANCE DUE TO A SIX MONTH SURVEILLANCE TEST IN PROGRESS. IT WAS NECESSARY FOR PERSONNEL TO ENTER UPPER CONTAINMENT FOR REPAIRS ON THE AIRLOCK DOOR EQUALIZING VALVE. THE PERSONNEL HATCH REMAINED OPEN THE ENTIRE TIME THE INDIVIDUALS WERE IN UPPER CONTAINMENT. UPON DEPARTURE AT 1523 IT WAS DECIDED BY THE LEAD MAN TO LEAVE THE HATCH OPEN TO PERMIT EASIER ENTRY BY THE NEXT CREW. THE HATCH WAS SUBSEQUENTLY CLOSED AND DECLARED OPERABLE AT 1620 ON 7/17/84. THE HATCH REMAINED OPEN FOR APPROXIMATELY ONE HOUR AND TWENTY MINUTES. ON OCTOBER 21, 1985, IT WAS DETERMINED DURING THE REVIEW OF THE CONDITION REPORT CLOSE-OUT THAT THIS EVENT WAS REPORTABLE DUE TO VIOLATION OF TECH SPEC 3.6.5.5. THE INDIVIDUAL RESPONSIBLE FOR FAILING TO CLOSE THE HATCH WAS MADE AWARE OF TECH SPEC 3.6.5.5. THE HATCH IN QUESTION WAS LABELED WITH INFORMATION PERTAINING TO TECH SPEC REQUIREMENTS. AS THERE IS NO HISTORY OF SIMILAR OCCURRENCES, THIS EVENT IS CONSIDERED TO BE AN ISOLATED CASE.

[67] COOK 1 DOCKET 50-315 LER 85-056
 FIRE BARRIER SEAL MISSING IN CONTROL ROOM CABLE VAULT CEILING.
 EVENT DATE: 053085 REPORT DATE: 112185 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 196954) AT 0800 HOURS WITH UNIT 1 IN MODE 6 AND NO FUEL IN THE CORE, A TECHNICIAN DISCOVERED A DEFECTIVE FIRE SEAL (IEEE/SEAL) IN THE UNIT 1 CONTROL ROOM CABLE VAULT CEILING. THIS CONSTITUTED AN INOPERABLE FIRE BARRIER PER TECH SPEC 3.7.10. THIS EVENT WAS DETERMINED TO BE REPORTABLE ON OCTOBER 22, 1985, WHILE INVESTIGATING CONCERNS RAISED DURING THE ASSOCIATED CONDITION REPORT CLOSEOUT REVIEW. CONTINUOUS FIRE WATER COVERAGE WAS ESTABLISHED AT 0820 HOURS, MAY 30, 1985. THE SEAL WAS REPAIRED AND DECLARED OPERABLE ON MAY 30, 1985, AT 1557 HOURS. THE DEFECT CONSISTED OF AN UNSEALED HOLE OF 3 INCHES BY 4 INCHES BEHIND A CONTROL ROOM PANEL. THIS PENETRATION IS ON THE 18 MONTH SURVEILLANCE PROGRAM AND WAS CHECKED LAST ON APRIL 18, 1985. THIS PENETRATION WAS SATISFACTORY AT THAT TIME. IT COULD NOT BE DETERMINED WHEN OR WHO REMOVED THIS SEAL. A SAFETY EVALUATION REVEALED THAT: THE UNIT 1 CONTROL ROOM VENTILATION

SYSTEM (CRVS) WOULD HAVE MAINTAINED A POSITIVE PRESSURE IN THE UNIT 1 CONTROL ROOM; AND THE UNIT 2 CRVS WOULD HAVE OPERATED AT A LOWER POSITIVE PRESSURE, BUT CAPABLE OF MEETING OPERABILITY REQUIREMENTS. SINCE THE OPEN PENETRATION WAS LOCATED IN THE CEILING OF THE PROTECTED AREA AND WOULD HAVE A MINIMAL EFFECT ON THE CARBON DIOXIDE OR HALON CONCENTRATION WITHIN THE AREA, IT IS CONCLUDED THAT THERE WAS NO APPRECIABLE DEGRADATION OF THE CONTROL ROOM CABLE VAULT FIRE SUPPRESSION SYSTEM. SIMILAR EVENTS: 315/85-24 AND 18, 316/85-6.

[68] COOK 1 DOCKET 50-315 LER 85-040
 POTENTIAL FOR RESIDUAL HEAT REMOVAL SYSTEM OPERATION BELOW ALLOWABLE FLOW LIMITS.
 EVENT DATE: 080785 REPORT DATE: 090685 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 196537) THIS IS A SPECIAL REPORT CONCERNING A CONDITION DISCOVERED DURING THE INVESTIGATION OF THE EVENT REPORTED IN LER 50-315/85-031. ON AUGUST 7, 1985, AT 1800 HOURS WITH BOTH UNITS 1 AND 2 IN MODE 5 (COLD SHUTDOWN), IT WAS DETERMINED THAT THE RESIDUAL HEAT REMOVAL (RHR) LOW-FLOW ALARM IS BYPASSED WHEN AN ALTERNATE (ECCS) FLOW PATH IS USED. THE LOW-FLOW ALARM WAS INSTALLED IN THE NORMAL COOLDOWN RETURN LINE TO SATISFY A UNIT 2 LICENSE CONDITION. THIS LICENSE CONDITION, WHICH WAS IMPOSED DUE TO CONCERN OVER INADVERTENT ISOLATION VALVE CLOSURE, REQUIRED THAT THE FLOW INDICATORS BE CONTINUOUSLY MONITORED DURING RHR OPERATION. UPON INSTALLATION OF THE RHR LOW-FLOW ALARM, THE LICENSE CONDITION WAS REMOVED. HOWEVER, THE OCCASIONAL USE OF AN ALTERNATE FLOW PATH, WHICH HAS NO LOW FLOW ALARM, HAS RESULTED IN THE SITUATION THAT PROMPTED THE ORIGINAL LICENSE CONDITION. TO INSURE THAT A LOSS OF RHR FLOW IS DETECTED, APPROPRIATE CONTROLS HAVE BEEN IMPLEMENTED REQUIRING THE CONTROL ROOM OPERATORS TO MONITOR RHR FLOW INSTRUMENTATION WHEN USING THE ALTERNATE FLOW PATH.

[69] COOK 1 DOCKET 50-315 LER 85-039
 FAILURE TO TEST FIREWATER VALVE.
 EVENT DATE: 080885 REPORT DATE: 090685 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 196536) DURING A FLOW DIAGRAM VERIFICATION WALKDOWN IT WAS FOUND THAT THE FLOW DIAGRAM DID NOT CONCUR WITH THE PHYSICAL LAYOUT OF THE FIREWATER RING HEADER. THE RESULTING INVESTIGATION LEAD TO THE EXCAVATION OF A BURIED FIREWATER RING HEADER SECTIONALIZING VALVE, 12-PP-129. ON AUGUST 8, 1985 WITH BOTH UNITS IN MODE 5 (COLD SHUTDOWN), IT WAS DETERMINED THAT THE TECH SPEC SURVEILLANCE REQUIREMENTS FOR THE FIREWATER RING HEADER VALVE (12-PP-129) WERE NOT BEING PERFORMED AS REQUIRED. A TECH SPEC SURVEILLANCE REQUIRES VERIFYING THE VALVE IS IN ITS CORRECT POSITION AT LEAST ONCE PER 31 DAYS (4.7.9.1.1B) AND COMPLETING ONE FULL CYCLE OF TRAVEL AT LEAST ONCE PER 12 MONTHS (4.7.9.1.1D). THE VALVE WAS FOUND IN THE OPEN POSITION AND WAS CYCLED THROUGH ONE FULL CYCLE AT THE TIME OF ITS DISCOVERY. TO PERMIT FUTURE VALVE IDENTIFICATION AND TESTING: 1) A CURB BOX HAS BEEN INSTALLED OVER THE VALVE WITH PROPER LABELING AND, 2) THE VALVE HAS BEEN INCLUDED IN THE APPROPRIATE SURVEILLANCE TEST PROCEDURE.

[70] COOK 1 DOCKET 50-315 LER 85-043
 FAILURE TO CALIBRATE PRIMARY SENSORS.
 EVENT DATE: 083085 REPORT DATE: 093085 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 196676) WITH UNITS 1 AND 2 IN MODE 5 (COLD SHUTDOWN) AN IE HEADQUARTERS TEAM INSPECTION WAS CONDUCTED IN THE AREA OF INSTRUMENT SURVEILLANCES. A CONFIRMATORY ACTION LETTER WAS ISSUED ON AUGUST 30, 1985. AS PART OF THE REQUIRED ACTIONS, A REVIEW OF TECH SPEC SURVEILLANCES INVOLVING CALIBRATION AND TIME RESPONSE TESTING OF PROCESS SENSORS WAS CONDUCTED TO ENSURE THAT TECH SPEC SURVEILLANCE REQUIREMENTS ARE SATISFIED. THIS REVIEW DISCLOSED THE FOLLOWING

INSTALLATION OF AN APPROVED DESIGN CHANGE. THIS SATISFIED THE 2/4 COINCIDENCE REQUIRED TO TRIP BOTH SOURCE RANGE CHANNELS CONTRARY TO TECH SPEC 3.3.1.1 TABLE 3.3-1 ITEM 6.B WHICH REQUIRES AT LEAST ONE CHANNEL OPERABLE. COMPLIANCE WITH SHUTDOWN MARGIN REQUIREMENTS WAS VERIFIED PER THE ASSOCIATED ACTION STATEMENT. WITH BOTH SOURCE RANGE CHANNELS INOPERABLE, A REACTOR TRIP SIGNAL WAS GENERATED EVEN THOUGH THE REACTOR TRIP BREAKERS WERE OPEN AND NO EQUIPMENT ACTUATIONS RESULTED. AT 0852 HRS, THE FUSES WERE RE-INSTALLED IN THE PWR RANGE DRAWERS AND BOTH SOURCE RANGE CHANNELS WERE RESTORED. THE INCIDENT WAS DUE TO PERSONNEL ERROR ON THE PART OF BOTH THE UNIT SUPERVISOR AND TECHNICIANS. TO PREVENT RECURRENCE, ALL OF THE PERSONNEL INVOLVED HAVE BEEN COUNSELED ON THE IMPORTANCE OF THOROUGHLY RESEARCHING ALL POSSIBLE CONSEQUENCES OF THEIR ACTIONS.

[82] COOK 1 DOCKET 50-315 LER 85-054
HIGH STEAM GENERATOR LEVEL CAUSES REACTOR TRIP SIGNAL.
EVENT DATE: 102685 REPORT DATE: 112185 NSSS: WE TYPE: PWR

(NSIC 196953) ON OCTOBER 26, 1985, AT 2236 HOURS WITH UNIT 1 IN MODE 3 (HOT STANDBY), A REACTOR TRIP SIGNAL WAS RECEIVED FROM NUMBER 11 STEAM GENERATOR HIGH HIGH LEVEL. THERE WAS NO AUTOMATIC ACTUATION OF PLANT EQUIPMENT, AS THE FEEDWATER SYSTEM WAS ISOLATED AND THE TURBINE WAS TRIPPED AT THE TIME THE SIGNAL WAS RECEIVED. THE REACTOR TRIP SIGNAL WAS CAUSED BY THE INADVERTENT OVERFILL OF NUMBER 11 STEAM GENERATOR. THE STEAM GENERATOR LEVEL WAS BEING MAINTAINED AT THE 60 PERCENT LEVEL TO PERFORM A TEMPERATURE DETECTOR CROSS CALIBRATION PROCEDURE. TEMPERATURE CHANGES AND FEEDWATER VALVE LEAKBY INCREASED LEVEL TO 68 PERCENT CAUSING THE TRIP SIGNAL. THE LICENSED OPERATOR CONTROLLING THE LEVEL WAS ALSO ENGAGED IN SHIFT TURNOVER WHILE MONITORING THE LEVEL. THERE WAS NO WARNING OF INCREASING LEVEL AS A STANDING HIGH DEVIATION ALARM HAD BEEN IN EFFECT, SINCE STEAM GENERATOR LEVEL WAS TAKEN ABOVE 50 PERCENT FOR THE CROSS CALIBRATION. TO PREVENT RECURRENCE, A WORK ORDER HAS BEEN ISSUED TO INVESTIGATE LEAKBY OF THE FEEDWATER VALVES AND THE OPERATOR HAS BEEN COUNSELED ON ATTENTION TO DUTIES.

[83] COOK 1 DOCKET 50-315 LER 85-059
REACTOR TRIP SIGNAL ON ERRONEOUS HIGH SOURCE RANGE FLUX.
EVENT DATE: 110485 REPORT DATE: 120485 NSSS: WE TYPE: PWR

(NSIC 196731) ON 11-4-85 AT 1625 HRS, WITH THE UNIT IN HOT STANDBY AND THE REACTOR TRIP BREAKERS OPEN, AN AUTOMATIC ESP'S ACTUATION OCCURRED RESULTING IN A REACTOR TRIP SIGNAL. THE INITIATING EVENT WAS AN ERRONEOUS HIGH SOURCE RANGE NEUTRON FLUX INDICATION. THIS INCIDENT OCCURRED WHILE CONDUCTING INSTRUMENTATION CHECKS PRIOR TO UNIT STARTUP. A TECHNICIAN, LIFTING LEADS NECESSARY FOR THE TESTING, INADVERTENTLY PRODUCED THE SOURCE RANGE TRIP BY LIFTING THE INCORRECT LEADS, CONTRARY TO THE APPLICABLE PROCEDURE. THE LEADS WERE RELOADED, AND THE TRIP ALARMS RESET WITHIN APPROX 5 MINS. THE EVENT IS ATTRIBUTABLE TO PERSONNEL ERROR. TO PREVENT RECURRENCE THE TECHNICIAN INVOLVED HAS BEEN COUNSELED ON THE IMPORTANCE OF CORRECTLY IDENTIFYING CIRCUITRY PRIOR TO MODIFICATION.

[84] COOK 2 DOCKET 50-316 LER 85-043
USE OF INCORRECT SAMPLE POINT IN OBTAINING REQUIRED SAMPLES OF SERVICE WATER.
EVENT DATE: 082585 REPORT DATE: 092485 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: COOK 1 (PWR)

(NSIC 196678) AT 1900 HOURS WITH BOTH UNITS 1 AND 2 IN MODE 5 (COLD SHUTDOWN) IT WAS DISCOVERED, WHILE INVESTIGATING AN UNRELATED OCCURRENCE, THAT THE INCORRECT ESSENTIAL SERVICE WATER (ESW) SAMPLE POINT WAS BEING USED TO FULFILL THE REQUIREMENT OF TECH SPEC 3.3.3.9, TABLE 3.3-12, ACTION TIME 25. ACTION STATEMENT COMPLIANCE WAS REQUIRED DUE TO THE INOPERABILITY OF PROCESS RADIATION MONITORING INSTRUMENTATION (R-28). THE SUBJECT SAMPLE WAS OBTAINED FROM THE NORMAL ESW SAMPLE POINT ON THE DISCHARGE OF THE COMPONENT COOLING WATER HEAT EXCHANGER. THE

SAMPLE SHOULD HAVE BEEN DRAWN FROM THE SAMPLE POINT LOCATED ON THE DISCHARGE OF THE CONTAINMENT SPRAY HEAT EXCHANGER. THE APPLICABLE PROCEDURE (12 THP 6020 LAB.037) DID NOT SPECIFY THE SAMPLE POINT TO BE USED. INVESTIGATION REVEALED THAT THIS SAMPLING LOCATION HAD BEEN ERRONEOUSLY USED NUMEROUS TIMES IN THE PAST TO SATISFY THE ABOVE REFERENCED TECH SPEC. TO PREVENT RECURRENCE, 12 THP 6020 LAB.037 HAS BEEN REVISED TO PROVIDE A LISTING OF THE SPECIFIC SAMPLE POINTS TO BE USED TO OBTAIN GRAB SAMPLES UPON THE INOPERABILITY OF PROCESS RADIATION MONITORING INSTRUMENTATION. PREVIOUS OCCURRENCES OF A SIMILAR NATURE INCLUDE LER 50-315/85-002.

[85] COOK 2 DOCKET 50-316 LER 85-029
 INOPERABLE FIRE DOOR.
 EVENT DATE: 101085 REPORT DATE: 110885 NSSS: WE TYPE: PWR

(NSIC 196491) ON 10-10-85 AT 0755 HRS WITH THE REACTOR SYSTEM IN MODE 5, A SAFETY-RELATED FIRE DOOR (IEEE/DR) WAS FOUND INOPERABLE DUE TO A LOOSE SEQUENCER ARM ASSEMBLY PREVENTING THE DOOR FROM CLOSING COMPLETELY. MISSING SCREWS FROM THE MOUNTING PLATE HAD ALLOWED THE ARM TO TILT INTO A PRONOUNCED DOWNWARD POSITION WHICH PREVENTED THE DOOR FROM CLOSING THE FINAL 3-4 INCHES. POST-MAINTENANCE SURVEILLANCE TESTING IN COMPLIANCE WITH TECH SPEC 4.7.10.3 WAS COMPLETED SATISFACTORILY AT 2300 HRS ON 10-10-85. THE SUBJECT DOOR IS LOCATED AT THE ENTRANCE TO QUADRANT 2 ON THE 612 ELEVATION AND IS VERIFIED OPERABLE ONCE EVERY 24 HRS. DETECTION AND CARBON DIOXIDE SUPPRESSION SYSTEMS HAVE REMAINED OPERABLE DURING THE ENSUING TIME PERIOD. IT IS UNKNOWN AT THIS TIME WHY THE PLATE HAD THE SCREWS MISSING. TO PREVENT RECURRENCE, THE NEW SCREWS WERE STAKED AS A SAFEGUARD TO INHIBIT ANY ROTATIONAL MOVEMENT. THE REMAINING SAFETY RELATED FIRE DOORS HAVE BEEN INSPECTED ON THEIR 24 HR DAILY TOUR.

[86] COOK 2 DOCKET 50-316 LER 85-030
 CONTAMINATION FROM VALVE PACKING LEAK IN CONTAINMENT CAUSES ESF ACTUATION.
 EVENT DATE: 101985 REPORT DATE: 111585 NSSS: WE TYPE: PWR
 VENDOR: ROCKWELL MANUFACTURING COMPANY

(NSIC 196955) ON OCTOBER 19, 1985 AT 0831 HOURS WITH THE REACTOR IN MODE 3 (HOT STANDBY), ERS-2301, THE LOWER CONTAINMENT AIRBORNE MONITOR PARTICULATE CHANNEL TRAIN A HIGH ALARMED. ON THE SAME DAY AT 0850 HOURS ERS-2401, THE LOWER CONTAINMENT AIRBORNE MONITOR PARTICULATE CHANNEL TRAIN B HIGH ALARMED. THE HIGH ALARMS RESULTED IN AN ESF ACTUATION WHICH WOULD HAVE RESULTED IN AN ISOLATION OF THE CONTAINMENT PURGE SYSTEM HAD THE CONTAINMENT PURGE SYSTEM BEEN IN SERVICE. REACTOR PRESSURE AND TEMPERATURE WERE BEING INCREASED DURING THIS TIME. THE MONITORS INDICATED THE AIRBORNE ACTIVITY IN CONTAINMENT TO BE TRENDING UPWARD. AFTER THE MONITORS HIGH ALARMED OPERATIONS PERSONNEL WERE SENT INTO THE CONTAINMENT TO CHECK FOR REACTOR COOLANT SYSTEM LEAKS. ALTHOUGH NO LEAKS WERE IDENTIFIED DURING THE INITIAL INSPECTION, ON OCTOBER 21, 1985 DURING THE FINAL REACTOR COOLANT SYSTEM WALKDOWN AT OPERATING TEMPERATURE AND PRESSURE THE RESISTANCE TEMPERATURE DETECTOR BYPASS LOOP VALVE, RC-111 (IEEE/SHV) WAS FOUND TO HAVE A PACKING LEAK AND WAS REPAIRED. IT IS BELIEVED THAT THIS VALVE WAS LEAKING AT THE TIME OF THE MONITORS HIGH ALARM BUT WENT UNDETECTED DURING THE INITIAL INSPECTION. THE MONITORS ERS-2301 AND 2401 WERE TRACKING THE INCREASING LEVELS OF RADIOACTIVITY IN CONTAINMENT AND PERFORMED AS DESIGNED. PREVIOUS OCCURRENCES OF A SIMILAR EVENT INCLUDE: 316/85-011; 316/84-035.

[87] COOK 2 DOCKET 50-316 LER 85-032
 CONTAINMENT RADIATION MONITOR FAILURE CAUSES ESF ACTUATION SIGNAL.
 EVENT DATE: 102285 REPORT DATE: 112185 NSSS: WE TYPE: PWR
 VENDOR: EBERLINE INSTRUMENT CORP.

(NSIC 196627) ON 10-22-85, AT 1600 HRS, WHILE IN HOT STANDBY, IT WAS FOUND THAT

OF THE EVENT. THE HIGH ALARM SETPOINT AND ALERT ALARM SETPOINT WERE READJUSTED TO MORE ADEQUATELY REFLECT THE BACKGROUND RADIATION LEVELS IN THE CONTAINMENT. SIMILAR EVENTS: 315/85-055 AND 316/85-034.

[91] COOK 2 DOCKET 50-316 LER 85-036
DIESEL GENERATOR ROOM CARDOX FIRE PROTECTION SYSTEM ISOLATED WITHOUT ESTABLISHING A FIRE WATCH.
EVENT DATE: 103085 REPORT DATE: 112785 NSSS: WE TYPE: PWR

(NSIC 196629) ON 10-30-85 AT 0610 HRS WITH UNIT 2 IN MODE 3, A SECURITY OFFICER DISCOVERED THE CARDOX FIRE PROTECTION SYSTEM FOR THE AB EMERGENCY DG ROOM ISOLATED WITHOUT FIRE WATCH COVERAGE AS REQUIRED BY TECH SPEC 3.7.9.3.A. THE SYSTEM WAS RETURNED TO NORMAL AT 0620 HRS FOLLOWING VERIFICATION THAT THE PROTECTED AREA WAS UNOCCUPIED. INVESTIGATION REVEALED THAT THE AFFECTED AREA WAS ISOLATED FOR A ROUTINE TOUR ON 10-30 AT 0311 HRS. FOLLOWING COMPLETION OF THE TOUR, AT 0317 HRS, INVOLVED PERSONNEL (NON-LICENSED OPERATOR AND SECURITY OFFICER) LEFT THE AREA. IN REVIEWING THE APPLICABLE SIGNOFF SHEET (REQUIRED BY PROCEDURE TO VERIFY SYSTEM RESTORATION) IT WAS NOTED THAT: 1) THE SECURITY OFFICER DOCUMENTED RETURNING THE ISOLATION SWITCH TO NORMAL, AND 2) THE OPERATOR DOCUMENTED WITNESSING THE RESTORATION. HOWEVER, IT WAS ALSO DETERMINED THAT THE OPERATOR PROVIDED HIS SIGNATURE OF THE SIGNOFF SHEET WITHOUT ACTUALLY WITNESSING THE RESTORATION OF THE SYSTEM. SINCE THE TOUR OF THE AFFECTED AREA IS CONDUCTED APPROX ONCE EVERY 8 HRS, AND FIRE DETECTION SYSTEMS WITHIN THE DG ROOM WOULD HAVE ALERTED CONTROL ROOM PERSONNEL HAD A FIRE OCCURRED, IT IS CONCLUDED THAT THERE WAS NO APPRECIABLE DEGRADATION OF FIRE PROTECTION CAPABILITY DUE TO THIS INCIDENT. TO PREVENT RECURRENCE APPROPRIATE ADMINISTRATIVE ACTION WAS TAKEN WITH THE INDIVIDUALS INVOLVED.

[92] COOK 2 DOCKET 50-316 LER 85-038
INCORRECT ALARM SETPOINT ENTERED TO CONTAINMENT PARTICULATE MONITOR.
EVENT DATE: 111085 REPORT DATE: 120685 NSSS: WE TYPE: PWR

(NSIC 196732) ON 11-10-85 AT 0156 HRS ERS-1401 THE LOWER CONTAINMENT AIRBORNE MONITOR PARTICULATE CHANNEL TRAIN B (IEEE/MON) HIGH ALARMED. THE HIGH ALARM RESULTED IN AN ESP ACTUATION WHICH WOULD HAVE RESULTED IN AN ISOLATION OF THE CONTAINMENT PURGE SYSTEM HAD THE CONTAINMENT PURGE SYSTEM BEEN IN SERVICE. THE HIGH ALARM WAS THE RESULT OF AN ERROR IN INPUTTING THE HIGH ALARM SETPOINT EXPONENT VALUE OF E-3 INSTEAD OF THE CALCULATED VALUE OF E-2. THE HIGH ALARM OCCURRED IMMEDIATELY AND WAS RESET TO ITS CALCULATED VALUE. THE TECHNICIAN INVOLVED WAS COUNSELLED IN THE NECESSITY TO INSURE THE PROPER VALUE IS ENTERED.

[93] COOPER DOCKET 50-298 LER 85-010
OPERATOR ERROR CAUSES ESP ACTUATION AFTER REACTOR SCRAM.
EVENT DATE: 100585 REPORT DATE: 110485 NSSS: GE TYPE: BWR

(NSIC 196532) DURING FULL POWER OPERATION, IT WAS OBSERVED THAT REACTOR VESSEL WATER CONDUCTIVITY WAS INCREASING. THIS CONDITION WAS ACCOMPANIED BY BEARING HIGH VIBRATION ON NUMBER 2 LOW PRESSURE MAIN TURBINE. IT WAS DECIDED THAT POWER WOULD BE LOWERED, THE REACTOR WOULD BE SCRAMMED, AND THE PLANT PLACED IN A COLD SHUTDOWN CONDITION IN ORDER TO INVESTIGATE THE CAUSE OF THE PROBLEMS. THE REACTOR WAS MANUALLY SCRAMMED AND THE TURBINE MANUALLY TRIPPED. A GROUP I ISOLATION THEN OCCURRED. THIS WAS CAUSED BY A LOW MAIN STEAM LINE PRESSURE ISOLATION SIGNAL WITH THE REACTOR MODE SWITCH IN RUN. THIS EVENT IS ATTRIBUTABLE PRIMARILY TO PERSONNEL ERROR. THE OPERATORS FAILED TO CORRECTLY FOLLOW PROCEDURES AND DID NOT PLACE THE MODE SWITCH IN REFUEL AFTER THE MANUAL SCRAM.

[94] COOPER DOCKET 50-298 LER 85-011
 HIGH PRESSURE COOLANT INJECTION SYSTEM INOPERABLE.
 EVENT DATE: 102085 REPORT DATE: 111985 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.
 NUTHERM INTERNATIONAL

(NSIC 197002) AT 2140, OCTOBER 20, 1985, THE HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEM WAS DECLARED INOPERABLE DURING SURVEILLANCE TESTING. THE REACTOR WAS IN COLD SHUTDOWN (I.E., COOLANT TEMPERATURE LESS THAN 212 F AND THE REACTOR VENTED) FOR REPAIRS TO THE MAIN TURBINE GENERATOR. OPERABILITY OF THE HPCI SYSTEM IS NOT REQUIRED BY TECH SPECS WHEN REACTOR PRESSURE IS LESS THAN 113 PSIG. INVESTIGATION DETERMINED THAT THE DISCONNECT SWITCH IN THE MOTOR STARTER OF THE HPCI PUMP MINIMUM FLOW BYPASS ISOLATION VALVE (HPCI-MO-25) HAD BEEN DAMAGED AND WAS INOPERABLE. DAMAGE TO THE SWITCH OCCURRED AS A RESULT OF OVERTRAVEL OF THE OPERATING HANDLE DUE TO POOR SWITCH DESIGN. THE DISCONNECT SWITCH WAS REPLACED AND OTHER SWITCHES OF COMMON DESIGN WERE INSPECTED FOR DAMAGE. NO DAMAGE DUE TO HANDLE OVERTRAVEL WAS FOUND; HOWEVER, A REDESIGN OR REPLACEMENT OF THE SWITCHES IS BEING EVALUATED.

[95] COOPER DOCKET 50-298 LER 85-012
 HIGH PRESSURE COOLANT INJECTION SYSTEM INOPERABLE.
 EVENT DATE: 102085 REPORT DATE: 111985 NSSS: GE TYPE: BWR
 VENDOR: BALDOR ELECTRIC

(NSIC 197003) AT 2125, OCTOBER 20, 1985, THE HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEM WAS FOUND TO BE INOPERABLE DURING DAILY EXERCISING OF THE HPCI TURBINE AUXILIARY LUBE OIL PUMP. THE REACTOR WAS IN COLD SHUTDOWN (I.E., COOLANT TEMPERATURE LESS THAN 212 F AND THE REACTOR VENTED) FOR REPAIRS TO THE MAIN TURBINE GENERATOR. OPERABILITY OF THE HPCI SYSTEM IS NOT REQUIRED BY TECH SPECS WHEN REACTOR PRESSURE IS LESS THAN 113 PSIG. THE AUXILIARY LUBE OIL PUMP IS EXERCISED DAILY TO SUPPLY OIL TO THE HPCI TURBINE STOP VALVE HYDRAULIC OPERATOR. THIS EVOLUTION ENSURES THAT THE STOP VALVE WILL NOT STICK DUE TO LONG PERIODS OF INACTIVITY. THE AUXILIARY LUBE OIL PUMP STARTS AUTOMATICALLY DURING A HPCI INITIATION SIGNAL TO OPEN THE VALVE AND ALLOW THE TURBINE TO START. NO TECH SPECS WERE VIOLATED AND THE EVENT REPRESENTED MINIMAL SAFETY CONSEQUENCE. INVESTIGATION DETERMINED THAT THE AUXILIARY LUBE OIL PUMP MOTOR COMMUTATOR SEGMENTS WERE BURNED AND THE ARMATURE COILS WERE SHORTED. IT IS BELIEVED THAT THE CONDITIONS FOUND WERE DUE TO A FAILED BEARING WHICH ALLOWED THE ROTOR TO CONTACT THE STATOR. THE MOTOR WAS REMOVED AND REBUILT USING UPGRADED MATERIALS. THE REBUILT MOTOR WAS INSTALLED AND TESTED SATISFACTORILY.

[96] CRYSTAL RIVER 3 DOCKET 50-302 LER 83-038
 FIRE BARRIER SEALS SURVEILLANCE OVERLOOKED.
 EVENT DATE: 092283 REPORT DATE: 100683 NSSS: BW TYPE: PWR

(NSIC 188382) FOLLOW-UP INVESTIGATION ON 9-22-83 OF A FLORIDA POWER QUALITY AUDIT FINDING UNCOVERED THE EXISTENCE OF A PROCEDURAL INADEQUACY WHICH ALLOWED THE REQUIREMENT FOR SURVEILLANCE OF CERTAIN FIRE BARRIER PENETRATION SEALS TO BE OVERLOOKED, CONTRARY TO TECH SPEC 3.7.12, AND REPORTABLE UNDER TECH SPEC 6.9.1.8.F. THE CAUSE OF THIS EVENT WAS DUE TO INADEQUATE PROCEDURES. UPON DISCOVERY THE SEALS WERE IMMEDIATELY INSPECTED AND DETERMINED TO BE FUNCTIONAL. SURVEILLANCE PROCEDURE SP-407, FIRE BARRIER PENETRATION SEALS, WILL BE REVISED TO ASSURE ALL APPLICABLE FIRE BARRIER PENETRATION SEALS ARE INCLUDED IN THE SCHEDULED SURVEILLANCE.

[100] CRYSTAL RIVER 3 DOCKET 50-302 LER 85-015
 MAIN TURBINE DRAIN LINE BREAK RESULTS IN ANTICIPATORY REACTOR TRIP.
 EVENT DATE: 082085 REPORT DATE: 091985 NSSS: BW TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196535) ON AUGUST 20, 1985, (FOLLOWING A REFUELING AND MODIFICATION OUTAGE) AT 0900, A DRAIN LINE FOR THE MAIN TURBINE HIGH PRESSURE CROSSOVER LINE SEVERED. THE OPERATORS BEGAN REDUCING POWER BUT DECIDED TO MANUALLY TRIP THE MAIN TURBINE TO ISOLATE THE LEAK. THE REACTOR AUTOMATICALLY TRIPPED ON ANTICIPATORY REACTOR TRIP ON TURBINE TRIP AS REACTOR POWER WAS GREATER THAN TWENTY PERCENT. THE STEAM LINE BREAK WAS CAUSED BY FATIGUE FAILURE OF THE SOCKET WELD AT A FABRICATION DEFECT. THE FATIGUE FAILURE IS SUSPECTED TO HAVE BEEN INDUCED BY VIBRATIONS CAUSED BY MODIFIED TURBINE GOVERNOR VALVES THAT WERE RECENTLY INSTALLED. ON THE FOLLOWING DAY, A SECOND STEAM LINE FAILURE OCCURRED AT THE SAME WELD DUE TO FAULTY REPAIRS. A REACTOR TRIP DID NOT OCCUR DURING THIS TRANSIENT. THE WELD WAS LATER REPAIRED SUCCESSFULLY. OTHER LIKELY FAILURE POINTS ON THE MAIN TURBINE WERE INSPECTED. NO DAMAGE WAS FOUND. THE MODIFIED TURBINE GOVERNOR VALVES WERE REPLACED WITH GOVERNOR VALVES OF THE PREVIOUS DESIGN.

[101] CRYSTAL RIVER 3 DOCKET 50-302 LER 85-019
 UNPLANNED AUTOMATIC ACTUATION OF EMERGENCY DIESEL GENERATOR.
 EVENT DATE: 100885 REPORT DATE: 110785 NSSS: BW TYPE: PWR
 VENDOR: EDWARDS CO.

(NSIC 196492) ON 10-8-85 AT 1159 HRS, AN UNPLANNED ACTUATION OF THE 'A' EMERGENCY DG OCCURRED. THE EDG STARTED WHEN THE AIR START SOLENOID VALVES WERE INADVERTENTLY DE-ENERGIZED WHILE PREPARING TO PERFORM MAINTENANCE ACTIVITIES ON AN ANNUNCIATOR ALARM ASSOCIATED WITH THE DG. THE EDG STARTED AS DESIGNED AND WAS SHUT DOWN 2 MINS LATER. THE EVENT OCCURRED BECAUSE AN ELECTRICIAN OPENED THE WRONG CIRCUIT BREAKER AFTER MISINTERPRETING THE ELECTRICAL POWER SUPPLY DRAWINGS AND FAILING TO EITHER READ OR UNDERSTAND A WARNING LABEL ON THE CIRCUIT BREAKER. A CONTRIBUTING FACTOR TO THESE ERRORS WAS A DESIRE TO RAPIDLY DE-ENERGIZE THE ANNUNCIATOR RELAY BECAUSE IT WAS EMITTING SMOKE. THE ELECTRICIAN WILL BE COUNSELED IN ACCORDANCE WITH PLANT POLICY.

[102] DAVIS-BESSE 1 DOCKET 50-346 LER 85-015
 FOLLOW-UP TO THE DEFECTIVE TORREY PINES LIMITORQUE PROCEDURE PART 21 REPORT.
 EVENT DATE: 072485 REPORT DATE: 082385 NSSS: BW TYPE: PWR
 VENDOR: LIMITORQUE CORP.

(NSIC 196556) THIS IS A FOLLOW-UP REPORT TO THE 10CFR PART 21 REPORT MADE ON 7-29-85. IT REPORTED A DEFECT IN A PROCEDURE FOR SETTING LIMITORQUE VALVE OPERATORS PROVIDED BY TORREY PINES TECHNOLOGY. THIS DEFECT WAS INCORPORATED INTO A STATION MAINTENANCE PROCEDURE WHICH WAS THEN USED TO SET THE LIMITORQUE VALVE OPERATORS INCLUDING THOSE ON SAFETY RELATED SYSTEMS. THE ONLY VALVES THAT HAVE DEMONSTRATED THEIR INOPERABILITY SO FAR HAVE BEEN THE AUX FEEDWATER ISOLATION VALVES, WHICH FAILED TO REOPEN ONCE THEY CLOSED DURING THE 6-9-85 EVENT (LER 85-013). THE DEFECT IN THE PROCEDURE CAUSED THE BYPASS LIMIT SWITCH TO BE SET TOO LOW WHICH RESULTED IN THE VALVE OPERATOR TORQUING OUT BEFORE THE VALVE MOVED OFF ITS SEAT. TOLEDO EDISON HAS CORRECTED ITS PROCEDURE AND HAS STARTED TO RESET AND TEST ITS NUCLEAR SAFETY RELATED VALVES. A MOVATS SYSTEM IS BEING USED TO DO THE TESTING. THE NUCLEAR SAFETY-RELATED VALVES WILL BE TESTED BEFORE RESTART FROM THE PRESENT OUTAGE.

[103] DIABLO CANYON 1 DOCKET 50-275 LER 85-034
 SURVEILLANCE ON PLANT VENT RADIATION MONITOR NOT COMPLETED DUE TO COMPUTER DATA ENTRY ERROR.
 EVENT DATE: 062985 REPORT DATE: 111885 NSSS: WE TYPE: PWR

INSTALLED ON THE CPCU CONTROL PANEL STATING THAT THE CPCU SHOULD ALWAYS BE SET TO RESTART ON SLOW SPEED.

[106] DRESDEN 2 DOCKET 50-237 LER 84-013 REV 1
 UPDATE ON OPERATOR ERROR CAUSING LOW EHC OIL PRESSURE AND REACTOR SCRAM.
 EVENT DATE: 072284 REPORT DATE: 050885 NSSS: GE TYPE: BWR

(NSIC 196513) DURING NORMAL OPERATION THE FLOW BYPASS VALVE (FV-1) OF THE ELECTRO HYDRAULIC CONTROL (EHC) SYSTEM WAS OPENED CAUSING THE TURBINE TO TRIP ON LOW EHC OIL PRESSURE, SUBSEQUENTLY RESULTING IN A REACTOR SCRAM. SAFETY SIGNIFICANCE WAS MINIMAL SINCE ALL SAFE SHUTDOWN SYSTEMS OPERATED AS DESIGNED. THIS IS A FIRST OCCURRENCE OF THIS TYPE AT DRESDEN. THE CAUSE OF THE EVENT WAS DUE TO PERSONNEL ERROR. IN TRYING TO START UP THE EHC SYSTEM ON UNIT 3, THE EQUIPMENT ATTENDANT INADVERTENTLY OPENED THE FV-1 ON UNIT 2. A FORMAL INVESTIGATION COMMITTEE CONSISTING OF ONSITE AND OFFSITE PERSONNEL WAS CONVENED TO REVIEW THIS EVENT AND RECOMMEND CORRECTIVE ACTIONS. THE RESULTS OF THE REVIEW REVEAL THAT THE CAUSE OF THE EVENT WAS THE EQUIPMENT ATTENDANT'S INEXPERIENCE. TO PREVENT A RECURRENCE, CHANGES HAVE BEEN MADE TO THE TRAINING PROGRAM FOR THE NEWLY HIRED EQUIPMENT ATTENDANTS. THIS INCLUDES EQUAL TIME SPENT ON BOTH UNITS 2 AND 3 DURING ON-THE-JOB TRAINING AND CLOSER SHIFT SUPERVISION ONCE THEY ARE QUALIFIED.

[107] DRESDEN 2 DOCKET 50-237 LER 85-002 REV 2
 UPDATE ON MOMENTARY VIOLATION OF SECONDARY CONTAINMENT.
 EVENT DATE: 010385 REPORT DATE: 032185 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 3 (BWR)

(NSIC 196991) DURING A NORMAL UNIT 2 REFUELING OUTAGE AND NORMAL UNIT 3 POWER OPERATION, THE CONTROL ROOM RECEIVED THE REACTOR/TURBINE 517' INTERLOCK ALARM, INDICATING THE UNIT 2 INTERLOCK DOORS WERE SIMULTANEOUSLY OPEN. SECONDARY CONTAINMENT WAS MOMENTARILY BROKEN, BUT WAS IMMEDIATELY RE-ESTABLISHED WHEN PERSONNEL IN THE INTERLOCK PROMPTLY PUSHED THE TURBINE BUILDING DOOR CLOSED. THE TURBINE BUILDING DOOR WAS CLOSING TOO QUICKLY AND BOUNCING BACK OPEN, WHILE THE REACTOR BUILDING DOOR WAS PERMITTED TO BE OPENED. THE CLOSURE ARMS FOR THE INTERLOCK DOORS WERE ADJUSTED TO ALLOW SLOWER CLOSING OF THE DOORS. THE INTERLOCK FUNCTIONED AS DESIGNED, AND NO FURTHER PROBLEMS WERE NOTED.

[108] DRESDEN 2 DOCKET 50-237 LER 85-001 REV 1
 UPDATE ON BREAKER FAILING TO TRIP DUE TO DISCONNECTED RELAY.
 EVENT DATE: 010485 REPORT DATE: 022185 NSSS: GE TYPE: BWR

(NSIC 196990) DURING UNIT REFUELING OUTAGE, THE 4 KV BREAKER 2329 (BUS 23-1 MAIN FEED BREAKER) FAILED TO TRIP OPEN WHILE THE OPERATIONAL ANALYSIS DEPARTMENT (OAD) WAS CONDUCTING BREAKER DIFFERENTIAL RELAY TESTING. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THERE WAS REDUNDANT TRIPPING LOGIC THAT WOULD HAVE OPERATED THE BREAKERS IN AN IDENTICAL MANNER FOR A DIFFERENTIAL FAULT AND THE UNIT WAS IN A REFUELING OUTAGE. THE CAUSE OF THE BREAKER FAILURE WAS DISCONNECTED WIRES IN THE TRIPPING LOGIC. IN REVIEWING THE BREAKER'S WORK HISTORY SINCE THE LAST SUCCESSFUL TEST (3/8/83), IT WAS FOUND THAT NO WORK WAS PERFORMED DURING THIS PERIOD. THUS, THE REASON FOR THE DISCONNECTED WIRES IS UNKNOWN. A WORK REQUEST WAS WRITTEN TO CORRECT THE PROBLEM AND THE WIRES WERE SUBSEQUENTLY RECONNECTED. AFTER SUCCESSFUL TESTING, THE BREAKER WAS RETURNED TO SERVICE.

[109] DRESDEN 2 DOCKET 50-237 LER 85-034
 LOSS OF OFFSITE POWER CAUSES REACTOR SCRAM.
 EVENT DATE: 081685 REPORT DATE: 091185 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 1 (BWR)
 DRESDEN 3 (BWR)

VENDOR: CUTLER-HAMMER
GENERAL ELECTRIC CO.

(NSIC 196523) DURING NORMAL UNIT OPERATION, ON 8-16-85 AT 0021, DRESDEN UNIT 2 SCRAMMED DUE TO LOW REACTOR WATER LEVEL. THE SCRAM RESULTED FROM LOSS OF OFFSITE POWER DUE TO A FAULT ON THE SECONDARY SIDE OF UNIT 1 RESERVE AUX TRANSFORMER, TR12. TRANSFORMER 12 PRIMARY SIDE WAS BEING POWERED FROM THE SAME 138 KV POWER SOURCE AS THE UNIT 2 RESERVE AUX TRANSFORMER, TR22. WHEN PROTECTIVE RELAYING SENSED THE FAULT, THE UNIT 2 OFFSITE POWER SOURCE WAS ISOLATED AND POWER TO TR22 WAS LOST. 4 KV BUSES 22 AND 24 DID NOT AUTOMATICALLY TRANSFER POWER. ONE OF TWO RUNNING REACTOR FEEDPUMPS POWERED FROM BUS 22 TRIPPED ON BUS UNDERVOLTAGE AND THE STANDBY REACTOR FEEDPUMP ALSO POWERED FROM BUS 22 FAILED TO AUTOMATICALLY START BECAUSE OF THE BUS UNDERVOLTAGE. THE LOW WATER LEVEL SCRAM AND COMPLETE LOSS OF POWER TO THE UNIT RESULTED. BOTH EMERGENCY DG'S AUTOMATICALLY STARTED AND THE UNIT WAS PLACED INTO A SAFE SHUTDOWN CONDITION. INVESTIGATION OF THE 4 KV BREAKER CONTROL CIRCUITRY HAS SHOWN THAT UNDER THE CONDITION THAT PREVAILED, RESERVE FEED BREAKERS FOR BUSES 22 AND 24 WERE NOT DESIGNED TO AUTOMATICALLY TRANSFER POWER FEED TO THE UNIT AUX TRANSFORMER, TR21. THE CIRCUITRY HAS BEEN MODIFIED AND FUNCTIONALLY TESTED TO ENSURE THAT THIS EVENT DOES NOT RECUR. THE SAFETY SIGNIFICANCE OF THIS EVENT WAS MINIMIZED BY THE FACT THAT ALL SAFETY SYSTEMS FUNCTIONED AS DESIGNED AND THE UNIT WAS PLACED IN A SAFE SHUTDOWN CONDITION.

[110] DRESDEN 2 DOCKET 50-237 LER 85-035
LOW CONDENSER VACUUM CAUSES REACTOR SCRAM.
EVENT DATE: 092985 REPORT DATE: 102885 NSSS: GE TYPE: BWR
VENDOR: PATHWAY BELLOWES, INC.

(NSIC 196522) ON 9-29-85, DURING A SCHEDULED DRESDEN UNIT 2 SHUTDOWN, A FULL REACTOR SCRAM OCCURRED DUE TO LOW CONDENSER VACUUM. THE LOSS OF VACUUM WAS ATTRIBUTED TO AIR IN-LEAKAGE THROUGH A RUPTURED EXPANSION JOINT (BELLOWES) ON THE SEAL STEAM RELIEF VALVE DISCHARGE LINE. IT WAS HYPOTHESIZED THAT THE SEAL STEAM RELIEF VALVE HAD PERFORMED ITS DESIGNED FUNCTION AND LIFTED FOLLOWING A MINOR ADJUSTMENT OF THE SEAL STEAM PRESSURE REGULATOR ON THE TURBINE FLOOR. THE FLOW OF STEAM PAST THE RELIEF VALVE MAY HAVE CAUSED LINE MOVEMENT RESULTING IN DAMAGE TO THE BELLOWES AND SUBSEQUENTLY CAUSING A COMPLETE FAILURE. THE SAFETY SIGNIFICANCE OF THE EVENT WAS MINIMAL SINCE ALL REACTOR SCRAM FUNCTIONS PERFORMED AS DESIGNED. THE BELLOWES ON THE DISCHARGE LINE WAS REPLACED. HOWEVER, TO PREVENT RECURRENCE OF THE EVENT TAGS WILL BE MADE FOR BOTH DRESDEN UNIT 2 AND 3 AND WILL BE LOCATED AT THE SEAL STEAM PRESSURE REGULATORS TO WARN OPERATORS OF THE SENSITIVITY OF THE REGULATORS WHEN ADJUSTMENTS ARE MADE. IN ADDITION AN ACTION ITEM RECORD WILL BE SUBMITTED TO DETERMINE IF A SYSTEM DESIGN CHANGE IS REQUIRED TO PREVENT FUTURE BELLOWES FAILURES. A 'CAUTION' STATEMENT WILL BE ADDED TO DRESDEN OPERATING PROCEDURE 5600-2 TO FURTHER NOTIFY OPERATORS OF THE SEAL STEAM PRESSURE REGULATORS' SENSITIVITY. THE LAST SCRAM DUE TO LOW CONDENSER VACUUM BY AIR IN-LEAKAGE OF THIS TYPE WAS LER 84-015 ON DOCKET 50-249.

[111] DRESDEN 2 DOCKET 50-237 LER 85-038
REACTOR VESSEL VENT LINE INADVERTENTLY ISOLATED.
EVENT DATE: 100585 REPORT DATE: 103185 NSSS: GE TYPE: BWR

(NSIC 196569) ON 10-5-85, WITH UNIT 2 IN THE SHUTDOWN MODE FOR AN EQUIPMENT QUALIFICATION (EQ) OUTAGE, THE NUCLEAR STATION OPERATOR (NSO) OBSERVED AT 1530 HRS THAT VALVE MO-2-220-2 AUTOMATICALLY CLOSED WHEN BEING PLACED BACK IN SERVICE. THIS EVENT LEFT THE REACTOR IN AN UNVENTED CONDITION. THIS WAS IN CONTRADICTION OF TECH SPEC 3.6.B.1. THE SHIFT FOREMAN IMMEDIATELY INITIATED OUT OF SERVICE DOCUMENTATION AND VALVE MO-2-220-2 WAS OPENED AT 1600 HRS ON 10-5-85, RESTORING THE VENT PATH TO THE MAIN CONDENSER. VALVE MO-2-220-2 WAS RACKED OUT OF SERVICE OPEN ON 9-30-85. ON 10-3-85, FUSES WERE PULLED TO TAKE THE OUTBOARD MAIN STEAM ISOLATION VALVES (MSIV'S) OUT OF SERVICE CLOSED. ON 10-5-85, WHEN PLACING VALVE

MO-2-220-2 BACK IN SERVICE (RACKED IN), THE DESIGN INTERLOCK CLOSED CIRCUITRY WITH THE MSIV'S PICKED UP AND CAUSED THE MO-2-220-2 VALVE TO AUTOMATICALLY CLOSE. THIS EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE SINCE THE MODE SWITCH WAS IN SHUTDOWN, NO CRD PUMPS WERE RUNNING, AND THE VESSEL WAS APPROX 130 F ABOVE THE MINIMUM TEMPERATURE FOR AN INSERVICE PRESSURE TEST. THE AUTOCLOSURE OF THE REACTOR VENT PATH IS AN ISOLATED INCIDENT WHICH WAS IMMEDIATELY RECOGNIZED AND PROMPTLY CORRECTED. PREVIOUS EVENT REPORTED BY LER 85-19 ON DOCKET 50-249.

[112] DRESDEN 2 DOCKET 50-237 LER 85-037
 STANDBY GAS SYSTEM AUTOMATIC START AND UNIT 2 REACTOR BUILDING VENTILATION TRIP.
 EVENT DATE: 100785 REPORT DATE: 110485 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 3 (BWR)

(NSIC 196992) WHILE UNIT 2 WAS IN THE SHUTDOWN MODE, THE REACTOR BUILDING VENTILATION TRIPPED AND ISOLATED WITH THE STANDBY GAS TREATMENT (SBGT) SYSTEM AUTO-STARTING AS REQUIRED. THE UNIT 3 REACTOR BUILDING VENTILATION SYSTEM WAS IMMEDIATELY TRIPPED AND ISOLATED PER OPERATING ORDER 1-85. AT 0556 HOURS, ON 10/7/85, THE UNIT 2 NUCLEAR STATION OPERATOR (NSO) WAS HANGING MASTER OUTAGE NUMBER II-1360 AND SLAVE OUTAGES II-1360 A THROUGH E IN ORDER TO TAKE VALVES 220-44, 220-51 AND 220-46 OUT OF SERVICE. THE EQUIPMENT OUTAGE CHECKLIST REQUIRED FUSE 595-712 TO BE REMOVED IN ORDER TO TAKE VALVE 220-44 OUT OF SERVICE. WHILE THE NSO INTENDED TO REMOVE FUSE 595-712 FROM THE REAR OF THE 902-4 PANEL, HE ACCIDENTLY REMOVED THE 595-718 FUSE. THE 595-718 FUSE ENERGIZES CONTROL RELAY 595-135 WHICH HAS TWO NORMALLY CLOSED CONTACTS FOR SBGT AUTO-INITIATION AND REACTOR BUILDING VENTILATION ISOLATION INTERLOCK. ONCE THE 595-718 FUSE WAS REMOVED THE CONTACTS WENT TO THE OPEN POSITION TRIPPING AND ISOLATING THE REACTOR BUILDING VENTILATION AND AUTO-STARTING THE SBGT SYSTEM. SUBSEQUENT REVIEW OF THE OUTAGE IDENTIFIED THE CORRECT FUSE, WHICH WAS REMOVED AND FUSE 595-718 WAS REPLACED. THE SBGT SYSTEM WAS SECURED AT 0617 HOURS. TO PREVENT THIS EVENT FROM RECURRING A STATION TAILGATE SESSION EXPLAINING THE IMPORTANCE OF VERIFYING THE CORRECT EQUIPMENT IS TAKEN OUT OF SERVICE WILL BE PRESENTED TO THE OPERATIONS DEPARTMENT.

[113] DRESDEN 3 DOCKET 50-249 LER 85-019
 REACTOR VESSEL NOT VENTED WHILE TEMPERATURE BELOW LIMIT.
 EVENT DATE: 092385 REPORT DATE: 102285 NSSS: GE TYPE: BWR

(NSIC 196505) ON 9-23-85 WITH THE DRESDEN UNIT 3 REACTOR IN THE SHUTDOWN MODE, THE SHIFT CONTROL ROOM ENGINEER (SCRE) OBSERVED THAT THE REACTOR VESSEL WAS NOT VENTED AT LESS THAN 149 F. THE SCRE IMMEDIATELY NOTIFIED THE UNIT 3 OPERATING ENGINEER OF THE ANOMALY AND THE REACTOR HEAD VENTS WERE IMMEDIATELY OPENED AT 0730. THIS EVENT WAS CONTRARY TO THE WORDING OF TECH SPEC 3.6.B.1. THE EVENT WAS CAUSED BY AN INADEQUACY OF THE DRESDEN UNIT 2/3 SHUTDOWN PROCEDURE (DRESDEN GENERAL PROCEDURE 2-1) TO COMPLETELY OUTLINE THE CONDITIONS UNDER WHICH THE REACTOR VESSEL MUST BE VENTED. TO PREVENT THIS EVENT FROM RECURRING, A PROCEDURE CHANGE WAS INITIATED TO ADD A 'CAUTION' STATEMENT TO DGP 2-1 STATING THAT THE REACTOR PRESSURE VESSEL MUST BE VENTED WHEN ANY PORTION OF THE VESSEL IS LESS THAN 149 F AND THE REACTOR VESSEL MODERATOR AND FLANGE TEMPERATURE REQUIREMENTS AS STATED I DGP 2-1 STEP D.58 ARE MET. IF THIS IS NOT POSSIBLE, REACTOR VESSEL TEMPERATURES MUST BE MAINTAINED AT OR ABOVE 149 F. A TECH SPEC CHANGE WAS INITIATED TO CHANGE THE MINIMUM OPERATING TEMPERATURE OF 149 F TO 100 F. ALSO, THE EVENT WILL BE REVIEWED BY OPERATING PERSONNEL IN A FUTURE WEEKLY TAILGATE SESSION. THE SAFETY SIGNIFICANCE OF THE EVENT WAS MINIMAL SINCE NO CONTROL ROD DRIVE PUMPS WERE RUNNING. IF THE REACTOR VESSEL HAD BEEN INADVERTENTLY PRESSURIZED, VESSEL TEMPERATURES WERE ABOVE THE MINIMUM TEMPERATURE REQUIREMENT FOR AN INSERVICE PRESSURE TEST.

[114] DRESDEN 3 DOCKET 50-249 LER 85-023
 OPERATOR ERROR CAUSES LOW REACTOR WATER LEVEL AND REACTOR SCRAM.
 EVENT DATE: 101785 REPORT DATE: 111485 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 2 (BWR)

(NSIC 196571) UNIT 3 TRIPPED ON A REACTOR VESSEL LOW WATER LEVEL SCRAM. SEVERAL DAYS BEFORE THE SCRAM HAD OCCURRED, THE REACTOR OPERATOR HAD NOTICED OSCILLATIONS IN THE REACTOR VESSEL WATER LEVEL. SUSPECTING THAT THE MASTER CONTROLLER WAS THE CAUSE OF THE OSCILLATIONS, THE 3A FEEDWATER REGULATING VALVE (FWRV) WAS PLACED INTO INDIVIDUAL MANUAL CONTROL AND THE MASTER CONTROLLER WAS TAKEN OUT OF SERVICE TO BE REPLACED WITH A SPARE. FOLLOWING THE INSTALLATION OF THE SPARE MASTER CONTROLLER, THE INSTRUMENT MAINTENANCE DEPARTMENT TURNED IT OVER TO THE OPERATING DEPARTMENT TO BE PLACED BACK INTO SERVICE. PRIOR TO PLACING THE 3A FWRV INTO MASTER CONTROL, THE OPERATOR FAILED TO PROPERLY BALANCE THE DEMAND SIGNAL OF THE MASTER CONTROLLER WITH THE 3A FWRV INDIVIDUAL CONTROLLER OUTPUT. WHEN THE MASTER CONTROLLER WAS PLACED INTO SERVICE, THE DEMAND SIGNAL WAS SET AT 0 CAUSING THE 3A FWRV TO CLOSE. REACTOR WATER LEVEL DROPPED RAPIDLY, SUBSEQUENTLY CAUSING THE REACTOR TO SCRAM ON LOW WATER LEVEL. SAFETY SIGNIFICANCE WAS MINIMAL BECAUSE ALL SYSTEMS OPERATED AS DESIGNED AND THE UNIT WAS BROUGHT TO A SAFE SHUTDOWN. TO PREVENT THE RECURRENCE OF THIS EVENT, A PROCEDURE DESCRIBING OPERATION AND BALANCE OF THE FEEDWATER CONTROLLERS WILL BE WRITTEN AND THE OPERATOR AND STATION CONTROL ROOM ENGINEER WERE INSTRUCTED ON THE IMPORTANCE OF EVALUATING THE CONDITION OF A SYSTEM PRIOR TO PLACING IT INTO SERVICE.

[115] DRESDEN 3 DOCKET 50-249 LER 85-021
 TEFLON TAPE FRAGMENT CAUSES CONTAINMENT ISOLATION VALVE LEAKAGE.
 EVENT DATE: 110785 REPORT DATE: 120685 NSSS: GE TYPE: BWR

(NSIC 196667) DURING THE UNIT 3 REFUELING OUTAGE, WHILE PERFORMING DTS 1600-1 (LOCAL LEAK RATE TESTING OF PRIMARY CONTAINMENT VALVES), THE NITROGEN MAKEUP ISOLATION VALVES LEAKED IN EXCESS OF 3026 SCFH. THIS LEAKAGE CAUSED THE TOTAL 'AS FOUND' LEAKAGE FOR TYPE 'B' AND 'C' TESTING TO EXCEED THE TECH SPEC LIMIT OF 493.116 SCFH. INVESTIGATION FOUND THAT TEFLON TAPE, USED ON THE THREADS OF THE PIPE CONNECTED TO RV-3-8526 HAD BECOME UNWRAPPED AND LODGED ON THE SEAT OF THE VALVE PREVENTING RV-3-8526 FROM SEATING PROPERLY. THIS CAUSED THE EXCESSIVE LEAKAGE BY THE VALVE. SAFETY SIGNIFICANCE IS MINIMAL SINCE THE OTHER IN-LINE ISOLATION VALVES SHOWED NO SIGNIFICANT LEAKAGE DURING THE TEST. FURTHERMORE, THE REACTOR BLDG VENTILATION SYSTEM WOULD HAVE ISOLATED IF THE RELIEF VALVE DISCHARGES HAD REACHED THE RADIOLOGICAL LIMITS ESTABLISHED BY DRESDEN STATION. PRIOR TO THE STARTUP OF UNIT 3 THE NITROGEN MAKEUP PRIMARY CONTAINMENT ISOLATION VALVES WILL BE RETESTED IN ACCORDANCE WITH DTS 1600-1. FURTHERMORE, A SUPPLEMENTAL REPORT WILL BE SUBMITTED FOLLOWING THE CURRENT REFUELING OUTAGE GIVING THE TOTALS FOR 'AS FOUND' AND 'AS LEFT' LEAKAGE FOR TYPE 'B' AND 'C' LEAK TESTING. PREVIOUS OCCURRENCE WAS REPORTED UNDER REPORTABLE OCCURRENCE #84-23 UNDER DOCKET 50-237.

[116] FARLEY 1 DOCKET 50-348 LER 85-019
 WIRING ERROR RESULTS IN INOPERABLE SMOKE DETECTORS.
 EVENT DATE: 070985 REPORT DATE: 111985 NSSS: WE TYPE: PWR

(NSIC 196638) AT 0950 ON 10-23-85, DURING SEMI-ANNUAL SMOKE DETECTOR TESTING, IT WAS DISCOVERED THAT THE FIFTH, SIXTH AND SEVENTH SMOKE DETECTORS IN FIRE PROTECTION SYSTEM 1A-32 WERE INOPERABLE. SUBSEQUENT INVESTIGATION REVEALED THAT THESE DETECTORS HAD BEEN INOPERABLE SINCE 7-9-85 WHEN WIRES FOR THE FIFTH SMOKE DETECTOR WERE RETERMINATED INCORRECTLY. SINCE IT WAS NOT RECOGNIZED AT THE TIME THAT THESE DETECTORS WERE INOPERABLE, THE TECH SPEC 3.3.3.9 ACTION STATEMENT CONCERNING THE ESTABLISHMENT OF A FIRE WATCH PATROL WITHIN 1 HR IN EACH OF THESE ROOMS WAS NOT MET. UPON DISCOVERY ON 10-23-85, AN HOURLY FIREWATCH PATROL WAS ESTABLISHED IMMEDIATELY IN THE AFFECTED AREAS. THE SMOKE DETECTORS WERE RETURNED

TO SERVICE AT 1528 ON 10-23-85. THIS EVENT WAS CAUSED BY PERSONNEL ERROR IN THAT ADEQUATE VERIFICATION WAS NOT SPECIFIED TO ENSURE THE OPERABILITY OF THE DETECTORS AFTER THE COMPLETION OF THE WORK. TO PREVENT RECURRENCE, THE INDIVIDUALS INVOLVED WILL BE COUNSELED AND THIS EVENT WILL BE DISCUSSED WITH OTHER APPROPRIATE INDIVIDUALS.

[117] FARLEY 1 DOCKET 50-348 LER 85-016
SHORTS IN CONTAINMENT LOW VOLTAGE CONTROL PENETRATION MODULES.
EVENT DATE: 100285 REPORT DATE: 100985 NSSS: WE TYPE: PWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 196637) UNIT 1 OF FARLEY NUCLEAR PLANT HAS EXPERIENCED ELECTRICAL SHORTS BETWEEN CONDUCTORS IN GE SERIES 100 LOW VOLTAGE CONTROL ELECTRICAL CONTAINMENT PENETRATION MODULES. UNIT 1 HAS A TOTAL OF 55 SUCH PENETRATION MODULES. EACH MODULE CONTAINS 72 CONDUCTORS. A RECORD SEARCH SHOWS THAT SINCE 8-80, 14 OF THESE MODULES HAVE EXPERIENCED ELECTRICAL SHORTS BETWEEN AT LEAST 2 OF THE 72 CONDUCTORS. WHEN SHORTS ARE FOUND, THE AFFECTED PLANT CABLES ARE DETERMINATED AND CONNECTED TO SPARE CONDUCTORS. AS PLANT CONDITIONS PERMITTED, 13 OF THESE MODULES WERE REPLACED WITH MODULES MANUFACTURED BY CONAX CORPORATION. THE REMAINING MODULE WAS REPLACED WITH A SPARE GE SERIES 100 MODULE. UNIT 2 HAS SHOWN NO EVIDENCE OF THIS SHORTING CONDITION ON THIS TYPE MODULE.

[118] FERMI 2 DOCKET 50-341 LER 85-062
IRM SURVEILLANCE MISSED.
EVENT DATE: 090985 REPORT DATE: 101685 NSSS: GE TYPE: BWR

(NSIC 196470) ON 9-6-85 AT 1828 HRS IRM CHANNELS B AND D WERE INOPERABLE BECAUSE THE WEEKLY CHANNEL FUNCTIONAL TEST HAD NOT BEEN COMPLETED WITHIN THE ALLOWED TIME INTERVAL. TECH SPEC 3.3.1 REQUIRES 3 OPERABLE IRM CHANNELS PER TRIP SYSTEM WHEN IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN) AND THIS CONDITION WAS NOT MET. THE TECH SPEC ACTION TO VERIFY ALL INSERTABLE CONTROL RODS TO BE INSERTED IN THE CORE AND LOCK THE REACTOR MODE SWITCH IN THE SHUTDOWN POSITION WAS NOT PERFORMED BECAUSE AT THE TIME THE NUCLEAR SHIFT SUPERVISOR (NSS) AND HIS STAFF DID NOT KNOW THAT THE SURVEILLANCE TIME INTERVAL HAD BEEN EXCEEDED. AT 0510 HRS ON 9-7-85, THE IRM FUNCTIONAL TESTS FOR DIV II CHANNELS B, D AND F WERE COMPLETED MEETING THE REQUIREMENT OF SPEC 3.3.1. THE CRITICAL COMPLETION SCHEDULE FOR EACH SURVEILLANCE HAS BEEN ADDED TO THE WEEKLY SCHEDULE GIVEN TO THE CONTROL ROOM. OVERDUE SURVEILLANCES ARE NOW POSTED IN THE PLAN-OF-THE-DAY.

[119] FERMI 2 DOCKET 50-341 LER 85-063
DIFFERENTIAL FLOW TRANSMITTER FAILURE CAUSES RWCU ISOLATION.
EVENT DATE: 092085 REPORT DATE: 102185 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 196551) AT 0341 HRS ON 9-20-85, THE RWCU SYSTEM ISOLATED ON A HIGH DIFFERENTIAL FLOW SIGNAL. THE PLANT WAS IN OPERATIONAL CONDITION 2, BEGINNING A SHUTDOWN TO OPERATIONAL CONDITION 3. THIS ISOLATION APPARENTLY RESULTED FROM THE EFFECTS ON THE RWCU FLOW SENSORS FROM CHANGES IN REACTOR PRESSURE AND CONDENSER PRESSURE ASSOCIATED WITH CLOSURE OF THE MSIV'S AND BREAKING CONDENSER VACUUM. AT 0355 HRS, THE RWCU PUMP DISCHARGE FLOW TRANSMITTER LOCKED-IN AT ABOUT 59 GPM. THIS SIGNAL CLEARED WHEN THE FLOW TRANSMITTER WAS FILLED AND VENTED. THE RWCU WAS RESTARTED AT 0423 HRS. BLOWDOWN FLOW INDICATION WAS FOUND FAILED AT 0435 HRS. THE SYSTEM WAS SHUT DOWN AT 0638 HRS, AND THE BLOWDOWN FLOW INSTRUMENT WAS REPAIRED BY VENTING AND REFILLING THAT THE PUMP DISCHARGE FLOW TRANSMITTER WOULD NOT HOLD A CALIBRATION. THE CAUSE OF THIS FAILURE COULD NOT BE DETERMINED. AFTER THE TRANSMITTER WAS REPLACED, RWCU WAS RETURNED TO SERVICE IN BYPASS AT 1227 HRS. INSTRUMENT DRIFT MAY HAVE CONTRIBUTED TO THIS EVENT. CONSIDERATION IS BEING GIVEN TO REPLACING THESE INSTRUMENTS WITH MORE RELIABLE MODELS.

PERSONNEL VALVING LEVEL INSTRUMENTS BACK INTO SERVICE. IN LER 85-021, CORRECTIVE ACTION TAKEN INCLUDED REVISING PROCEDURE 41.000.09, 'PROCESS INSTRUMENTATION REMOVAL FROM AND RETURN TO SERVICE'. HOWEVER, TRANSMITTER B21N035 ON INSTRUMENT RACK H21P010 WAS INADVERTENTLY OVERLOOKED WHEN 41.000.09 WAS REVISED AND WAS NOT INCLUDED IN THE PRECAUTION. CORRECTIVE ACTION INCLUDES THE ADDITION OF ALL COMMON LEG INSTRUMENTS TO THE VALVING PROCEDURE TO PREVENT CONFUSION (PROCEDURE CHANGE SUBMITTED 10-9-85) AND ADDITION OF A CAUTIONARY STATEMENT ON ALL COMMON LINE INSTRUMENT'S SPEC SHEETS WHICH ARE PART OF THE CALIBRATION PACKAGE.

[123] FERM 2 DOCKET 50-341 LER 85-068
 TURBINE BYPASS VALVE FAILS OPEN AND CAUSES REACTOR SCRAM.
 EVENT DATE: 100185 REPORT DATE: 103085 NSSS: GE TYPE: BWR
 VENDOR: ELLIOTT CO.

(NSIC 196594) AT 0622 HRS ON 10-1-85 WHILE INCREASING REACTOR PRESSURE IN PREPARATION FOR STARTUP TEST STUT.HUA.016 'MANUAL SCOOP TUBE CONTROL', BOTH TURBINE BYPASS VALVES WENT 100% OPEN. PRIOR TO THIS OCCURRING, THE PLANT WAS IN OPERATIONAL CONDITION 2, WITH REACTOR PRESSURE 960 PSIG. THE RESULTING PRESSURE DROP CAUSED REACTOR WATER LEVEL TO SWELL ABOVE THE LEVEL 8 SETPOINT, AUTOMATICALLY TRIPPING THE REACTOR FEED PUMP TURBINE. AT 0623 HRS, CONTROL ROOM OPERATORS CLOSED THE BYPASS VALVES CAUSING REACTOR WATER LEVEL TO DECREASE TO LEVEL 3. AN AUTOMATIC REACTOR SCRAM OCCURRED ON LEVEL 3. THE CAUSE OF THE EVENT WAS TRACED TO A DISCONTINUITY IN THE MOTORIZED POTENTIOMETER THAT DERIVES THE REACTOR PRESSURE SETPOINT SIGNAL. REACTOR PRESSURE IS CONTROLLED BY POSITIONING THE TURBINE BYPASS VALVES. IN THIS EVENT, THE PRESSURE SETPOINT SIGNAL DROPPED SUDDENLY FROM 960 TO ABOUT 250 PSIG AND THE BYPASS VALVES RESPONDED BY GOING FULL OPEN. THE MOTORIZED POTENTIOMETER CIRCUIT BOARD WAS REPLACED AND HAS SINCE OPERATED SATISFACTORILY.

[124] FERM 2 DOCKET 50-341 LER 85-069
 SIMULTANEOUS VENTILATION OF DRYWELL AND TORUS.
 EVENT DATE: 100485 REPORT DATE: 110185 NSSS: GE TYPE: BWR

(NSIC 196554) AT 1844 HRS ON 10-4-85 VENTILATION OF THE TORUS AND DRYWELL IN ACCORDANCE WITH SYSTEM OPERATING PROCEDURE SOP 23.406 WAS COMMENCED TO REDUCE CONTAINMENT TEMPERATURE. AT THE TIME, THE PLANT WAS IN OPERATIONAL CONDITION 2 (STARTUP). ON 10-5 AT 0830 HRS, THE ONCOMING NUCLEAR SHIFT SUPERVISOR (NSS) NOTED THAT BOTH FLOW PATHS (DRYWELL AND TORUS) WERE IN SERVICE SIMULTANEOUSLY, WHICH THE NSS RECOGNIZED IS PROHIBITED BY TECH SPEC 3.6.1.8. BY DIRECTION OF THE NSS, VENTILATION OF THE TORUS AND DRYWELL WAS SHUT DOWN AT 0850 HRS. THE LCO IN TECH SPEC 3.6.1.8 ALLOWS THE ISOLATION VALVES TO BE OPEN IN ONLY ONE SUPPLY AND ONE EXHAUST LINE AT THE SAME TIME FOR INERTING, DEINERTING, OR PRESSURE CONTROL OF THE DRYWELL AND TORUS. THE CAUSE OF THIS EVENT WAS PROCEDURAL INADEQUACY. SOP 23.406 ALLOWED SIMULTANEOUS PURGING OF THE DRYWELL AND TORUS WITH BOTH (DRYWELL AND TORUS) SUPPLY LINES AND EXHAUST LINES OPEN. THE PROCEDURE HAS BEEN MODIFIED AND ALL SHIFT PERSONNEL HAVE BEEN NOTIFIED OF THE CHANGE.

[125] FERM 2 DOCKET 50-341 LER 85-071
 SPURIOUS REACTOR SCRAM.
 EVENT DATE: 101185 REPORT DATE: 110785 NSSS: GE TYPE: BWR

(NSIC 196555) ON 10-11-85 AT 0205 HRS AS THE REACTOR WAS BEING MANUALLY SHUT DOWN, THE RPS INITIATED A FULL SCRAM ON A SPURIOUS REACTOR WATER LEVEL 3 SIGNAL. BEFORE THE SCRAM OCCURRED, ACTUAL REACTOR WATER LEVEL WAS A NORMAL 197 INCHES, REACTOR PRESSURE WAS 33 PSIG AND THE PLANT WAS IN OPERATIONAL CONDITION 2. ALL CONTROL RODS, SRM'S AND IRM'S FULLY INSERTED, AND THE GROUP 13 VALVES ISOLATED AS DESIGNED. THE CONTROL ROOM OPERATORS ENTERED ABNORMAL OPERATING PROCEDURE 20.000.21 FOR REACTOR SCRAM, AND QUICKLY STABILIZED PLANT CONDITIONS. TO DATE NO

CAUSE FOR THE REACTOR SCRAM HAS BEEN IDENTIFIED. NO RPS RELATED WORK NOR SURVEILLANCES WERE IN PROGRESS AT THE TIME WHICH WOULD HAVE PRODUCED THE SPURIOUS SCRAM SIGNAL. THE I&C GROUP IS INVESTIGATING TO DETERMINE THE CAUSE OF THE SCRAM SIGNAL. THE INVESTIGATION WILL CONSIST OF ELECTRONIC MONITORING OF RPS POWER FEEDS, GROUNDS, LOGIC CIRCUITRY, ETC. TO DETERMINE IF INTERMITTENT NOISE, VOLTAGE SPIKES, GROUND FAULTS, OR OTHER ABNORMALITIES MAY HAVE CAUSED THIS SCRAM. CURRENTLY I&C IS IN THE PROCESS OF SELECTING AND OBTAINING THE MONITORING EQUIPMENT. INFO GAINED FROM THE INVESTIGATION WILL BE EVALUATED AND APPROPRIATE CORRECTIVE MEASURES WILL BE TAKEN. THERE HAS BEEN ONE OTHER SIMILAR REACTOR SCRAM, ALSO BEING INVESTIGATED, WHICH WILL BE REPORTED AS LER 85-073.

[126] FERM I 2 DOCKET 50-341 LER 85-070
 FOUR CONTAINMENT ATMOSPHERE SAMPLES MISSED.
 EVENT DATE: 101285 REPORT DATE: 111185 NSSS: GE TYPE: BWR

(NSIC 196595) DURING SHIFT TURNOVER 10-13-85, THE SHIFT CHEMISTRY TECHNICIAN WAS INFORMED THAT THE DIV I PRIMARY CONTAINMENT ATMOSPHERE MONITORING SYSTEM (PCAMS) HAD BEEN SHUT DOWN SINCE ABOUT 1445 HRS ON 10-11 FOR SYSTEM MODIFICATIONS. THIS IS THE PRIMARY SYSTEM USED BY CHEMISTRY TO OBTAIN GRAB SAMPLES OF PRIMARY CONTAINMENT ATMOSPHERE FOR ANALYSIS TO COMPLY WITH TECH SPEC 4.11.2.8.3. AT THE TIME, CONTAINMENT PURGE WAS UNDERWAY THROUGH THE REACTOR BLDG EXHAUST PLENUM, DURING WHICH THIS SPEC REQUIRES A DRYWELL ATMOSPHERE GRAB SAMPLE TO BE TAKEN AND ANALYZED AT LEAST ONCE PER 12 HRS. THE CHEMISTRY GROUP DETERMINED THAT 4 DRYWELL AIR SAMPLES HAD BEEN TAKEN USING DIV I PCAMS WHILE THE SYSTEM HAD BEEN SHUT DOWN AND ISOLATED. THE LAST VALID SAMPLE TAKEN PREVIOUS TO ISOLATING DIV I PCAMS WAS AT 0830 HRS ON 10-11. THE NEXT VALID SAMPLE WAS TAKEN AT 0030 HRS ON 10-13. THE TECH SPEC SURVEILLANCE REQUIREMENT WAS EXCEEDED BY 28 HRS. THE CAUSE OF THIS EVENT IS FAILURE TO FOLLOW THE PREREQUISITES IN CHEMISTRY PROCEDURE 78.000.69, WHICH REQUIRES VERIFYING THAT A SAMPLE PUMP AND ASSOCIATED FLOW PATH IS IN SERVICE. CHEMISTRY PROCEDURE 78.000.69 WILL BE REVISED TO REQUIRE A SPECIFIC CHECKPOINT TO VERIFY THAT THE SAMPLE PUMP IS OPERATING AND THAT THE ASSOCIATED FLOW PATH HAS BEEN ESTABLISHED.

[127] FERM I 2 DOCKET 50-341 LER 85-072
 OPERATOR PULLS WRONG FUSES AND CAUSES CONTAINMENT ISOLATION VALVES TO CLOSE.
 EVENT DATE: 101385 REPORT DATE: 111185 NSSS: GE TYPE: BWR

(NSIC 196744) ON OCTOBER 13, 1985, THE PLANT WAS IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN). AT 0836 HOURS, SHUTDOWN COOLING ISOLATION VALVE E11F008 CLOSED, CAUSING A TRIP OF THE RUNNING RHR PUMP. ABOUT ONE MINUTE LATER, REACTOR WATER CLEANUP (RWCU) ISOLATION VALVE G33F004 CLOSED, TRIPPING THE RWCU PUMPS. THE OPERATING SHIFT INVESTIGATED AND DETERMINED THAT THE TRIPS WERE CAUSED BY A NON-LICENSED OPERATOR PULLING FUSES IN THE WRONG CABINET. THE OPERATOR PULLED THE FUSES TO PROVIDE PERSONNEL PROTECTION AS AUTHORIZED BY WORK ORDERS. THE TAGGING ORDER IN THE WORK ORDER PACKAGES DIRECTED HIM TO PANEL H21P623. THE OPERATOR ERRED WHEN HE WENT TO THE KEY LOG AND CHECKED OUT THE KEYS FOR PANEL H11P623 INSTEAD. AT 1010 HOURS RWCU WAS PLACED BACK IN SERVICE, AND AT 1147 HOURS RHR WAS RETURNED TO SERVICE IN THE SHUTDOWN COOLING MODE. THE OPERATOR HAS BEEN COUNSELED BY THE NSS AND THIS LER WILL BE PLACED IN REQUIRED READING FOR BOTH LICENSED AND NON-LICENSED OPERATORS.

[128] FERM I 2 DOCKET 50-341 LER 85-073
 SPURIOUS LOW LEVEL SIGNAL CAUSES REACTOR SCRAM.
 EVENT DATE: 101485 REPORT DATE: 111385 NSSS: GE TYPE: BWR

(NSIC 196596) ON 10-14-85 AT 2247 HRS, A FULL SCRAM (LOW REACTOR WATER LEVEL 3) SIGNAL WAS INPUT TO RPS. THE PLANT WAS IN OPERATIONAL CONDITION 4 WITH ALL CONTROL RODS ALREADY INSERTED. TO DATE NO CONCLUSIVE CAUSE HAS BEEN DETERMINED.

AN INVESTIGATION IS CURRENTLY UNDERWAY TO DETERMINE IF INTERMITTENT ELECTRICAL NOISE IS PRESENT. INFORMATION GAINED FROM THE INVESTIGATION WILL BE EVALUATED AND APPROPRIATE CORRECTIVE MEASURES TAKEN. THERE HAS BEEN ONE OTHER SIMILAR REACTOR SCRAM, ALSO BEING INVESTIGATED, WHICH WAS REPORTED AS LER 85-071.

[129] FERM I 2 DOCKET 50-341 LER 85-074
 TESTING ERROR CAUSES INITIATION OF DIV II CORE SPRAY.
 EVENT DATE: 101985 REPORT DATE: 111685 NSSS: GE TYPE: BWR

(NSIC 196636) ON 10-19-85, THE PLANT WAS IN OPERATIONAL CONDITION 4 FOR AN OUTAGE. SURVEILLANCE PROCEDURES WERE BEING RUN TO RETURN EQUIPMENT AND SYSTEMS TO OPERABLE STATUS. AT 0608 HRS, A PORTION OF THE DIV II ECCS AND THE DIV II EMERGENCY DG RELAY LOGIC WAS ACTUATED. THIS CAUSED EDG'S #13 AND #14 AND CORE SPRAY SYSTEM (CSS) PUMPS B AND D TO AUTO-START, AND CSS INJECTION VALVE E21F005 TO OPEN. WITH E21F005 OPEN, THE CSS BEGAN INJECTING WATER INTO THE REACTOR PRESSURE VESSEL (RPV). THE CONTROL ROOM STAFF RESPONDED BY VERIFYING RPV WATER LEVEL, AND THEN SHUTTING DOWN THE CSS PUMPS. ABOUT 1070 GALS OF WATER WAS INJECTED INTO THE RPV. THE EVENT WAS DETERMINED TO MEET THE CRITERIA OF AN UNUSUAL EVENT, AND THE APPROPRIATE GOVERNMENT AGENCIES WERE NOTIFIED. ACTUATION OF THE RELAY LOGIC IS BELIEVED TO HAVE BEEN CAUSED BY I&C REPAIRMEN INADVERTENTLY APPLYING 130 VOLTS DC TO RELAYS LOCATED IN THE CABINET THEY WERE WORKING IN WHILE PERFORMING INITIAL CONDITIONS OF A SURVEILLANCE PROCEDURE. TO PREVENT RECURRENCE, ENGINEERING IS EVALUATING A PROPOSAL TO INSTALL TEST PLUGS OR JACKS AND TO IMPROVE LIGHTING IN THE CABINET.

[130] FERM I 2 DOCKET 50-341 LER 85-075
 OPERATOR FAILURE TO RESET LOAD SEQUENCER CAUSES START OF EECW/EESW DURING EDG TEST.
 EVENT DATE: 102385 REPORT DATE: 112285 NSSS: GE TYPE: BWR

(NSIC 196964) ON OCTOBER 23, 1985, THE PLANT WAS IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN) FOR A MAINTENANCE AND MODIFICATION OUTAGE. AT 2154 HOURS THAT DAY, EMERGENCY DIESEL GENERATOR (EDG) #12 WAS STARTED FOR POST MODIFICATION TESTING. APPROXIMATELY 20 SECONDS LATER, THE DIVISION I EMERGENCY EQUIPMENT COOLING WATER (EECW) AND EMERGENCY EQUIPMENT SERVICE WATER (EESW) PUMPS AUTO-STARTED, AND THE DIVISION I EECW ISOLATED FROM THE REACTOR BUILDING CLOSED COOLING WATER SYSTEM HEADER. THE AUTO-START AND SUBSEQUENT ISOLATION WAS DETERMINED TO HAVE RESULTED FROM ACTUATION OF THE DIGITAL LOAD SEQUENCER ASSOCIATED WITH EDG #12. ACTUATION OF THE DIGITAL LOAD SEQUENCER WAS TRACED BACK TO A FAILURE TO MANUALLY RESET THE SEQUENCER AFTER RESTORATION OF ELECTRICAL BUSES THE DAY BEFORE, OCTOBER 22, 1985. THE STEP TO RESET THE SEQUENCER IS IN THE PROCEDURE, SOP 23.321, BUT IT WAS OVERLOOKED BY THE OPERATOR. A MEMO HAS BEEN ISSUED TO OPERATIONS PERSONNEL REMINDING THEM OF THE REQUIREMENTS THEY MUST FOLLOW WHENEVER IT IS NECESSARY TO PERFORM A PROCEDURE OUT OF SEQUENCE.

[131] FERM I 2 DOCKET 50-341 LER 85-064
 SWITCHING BATTERY CHARGERS CAUSES SPURIOUS RWCU STEAM LEAK SIGNAL.
 EVENT DATE: 102485 REPORT DATE: 112285 NSSS: GE TYPE: BWR
 VENDOR: RILEY COMPANY, THE

(NSIC 196743) ON OCTOBER 24, 1985, THE PLANT WAS IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN) FOR A PLANNED MAINTENANCE AND MODIFICATION OUTAGE. THE REACTOR WATER CLEANUP (RWCU) SYSTEM WAS SHUT DOWN. AT 0641 HOURS THAT DAY, RWCU INBOARD PRIMARY CONTAINMENT ISOLATION VALVE G33F001 WENT CLOSED. THE ISOLATION WAS INITIATED BY THE RWCU STEAM LEAK DETECTION SYSTEM (SLDS) ON A HIGH DIFFERENTIAL TEMPERATURE CONDITION IN THE AREA OF THE RWCU EQUIPMENT ROOM. THE IMMEDIATE ACTIONS TAKEN WERE TO VERIFY FULL CLOSURE OF ISOLATION VALVE G33F001 AND TO VERIFY THAT NO ACTUAL SYSTEM LEAKAGE EXISTED. THE SPURIOUS SIGNAL MOST LIKELY

WAS GENERATED BY SWITCHING THE DIVISION I, 130 VOLT D.C. BATTERY CHARGER. WHAT IS SUSPECTED OCCURRED IS WHEN THE CHARGES WERE SWITCHED THE VOLTAGE IN THE DIVISION I 130 VOLT D.C. SYSTEM DIPPED MOMENTARILY. WHEN THE VOLTAGE RECOVERED, THE RWCU SLDS ACTUATED. THE RILEY MODEL 86TGF AND 86VTFF TEMPERATURE SWITCHES USED IN THE RWCU SLDS ARE KNOWN TO ACTUATE TO CAUSE AN ISOLATION SIGNAL WHENEVER THEY ARE ENERGIZED. A DESIGN MODIFICATION HAS BEEN INSTALLED IN THE RWCU SLDS LOGIC TO PREVENT RECURRENCE OF RWCU ISOLATIONS ON SPURIOUS SIGNALS IN THE RWCU SLDS. THE MODIFICATION INVOLVES THE ADDITION OF A TIME DELAY TO THE FINAL OUTPUT RELAY IN THE RWCU SLDS CIRCUIT. THIS MODIFICATION COMPLETES CORRECTIVE ACTION FOR LER 85-025, 85-027, 85-028, 85-031, AND 85-050, IN WHICH SPURIOUS SIGNALS CAUSED AN RWCU ISOLATION.

[132] FITZPATRICK DOCKET 50-333 LER 85-024
 DEFECTIVE CALIBRATION PROCEDURE FOR CONTAINMENT HYDROGEN/OXYGEN ANALYZERS.
 EVENT DATE: 091385 REPORT DATE: 101585 NSSS: GE TYPE: BWR
 VENDOR: EXO SENSORS INC

(NSIC 196469) TECH SPEC SECTIONS 3.7.A.6.B AND 3.7.A.9 REQUIRE CONTAINMENT OXYGEN AND HYDROGEN TO BE CONTINUOUSLY MONITORED WHILE CONTAINMENT INTEGRITY IS REQUIRED WITH OXYGEN CONCENTRATION TO BE MAINTAINED LESS THAN 4.0% BY WEIGHT. FROM 0940 ON 9-17-85 UNTIL 1400 ON 9-18-85, BOTH A AND B CONTAINMENT ANALYZERS APPEARED TO BE OUT OF PROCEDURAL TOLERANCES IN THE NON-CONSERVATIVE DIRECTION AND WERE DECLARED INOPERABLE. AFTER SITE TESTING AND DISCUSSIONS WITH THE MANUFACTURERS, IT HAS BEEN SHOWN THAT THE SURVEILLANCE PROCEDURE INADVERTENTLY COULD HAVE CAUSED ERRONEOUS AS LEFT DATA. THE PROCEDURE IS BEING REVISED TO REFLECT THE CHANGES NECESSARY TO RECTIFY THIS SITUATION.

[133] FITZPATRICK DOCKET 50-333 LER 85-025
 HPCI ISOLATION VALVE OPERATOR FAILS DUE TO TORQUE SWITCH SETPOINT DRIFT.
 EVENT DATE: 102985 REPORT DATE: 111885 NSSS: GE TYPE: BWR
 VENDOR: LIMITORQUE CORP.

(NSIC 196741) DURING NORMAL FULL POWER OPERATION THE OUTBOARD STEAM SUPPLY ISOLATION VALVE FOR THE HIGH PRESSURE CORE INJECTION SYSTEM (HPCI) EXPERIENCED A MOTOR OPERATOR FAILURE RESULTING IN DECLARING HPCI INOPERATIVE. BECAUSE THE REACTOR CORE ISOLATION COOLING SYSTEM (RCIC) WAS ALSO OUT OF SERVICE FOR PREVENTIVE MAINTENANCE THE PLANT WAS PLACED ON A 24 HOUR LCO PER TECH SPEC 3.5.E.2. THE CAUSE OF THIS FAILURE WAS IMPROPER TORQUE SWITCH SETTING AS A RESULT OF A LOOSENED LOCKING SCREW. THE MOTOR OPERATOR WAS REPLACED PRIOR TO THE LCO EXPIRING (WITHIN 19 HOURS). THE PLANT CONTINUED NORMAL OPERATION FOLLOWING REPAIR. THE REDUNDANT AUTOMATIC DEPRESSURIZATION SYSTEM (ADS) WAS AVAILABLE.

[134] FITZPATRICK DOCKET 50-333 LER 85-026
 345KV ELECTRICAL DISTURBANCE CAUSES REACTOR SCRAM.
 EVENT DATE: 103185 REPORT DATE: 112285 NSSS: GE TYPE: BWR

(NSIC 196730) ON 10-31-85 MAINTENANCE WAS BEING PERFORMED AT A 345 KV SUBSTATION WHICH NECESSITATED THAT ALL BUT A SMALL PORTION OF THE GENERATOR OUTPUT GO OUT OVER ONE OF TWO PARALLEL 345KV LINES. AT 0924 A BREAKER TRIP ON THE MORE HEAVILY LOADED LINE WAS EXPERIENCED. THIS WAS SEEN AS AN ELECTRICAL LOAD REJECTION BY THE TURBINE ELECTRO-HYDRAULIC CONTROL (EHC) SYSTEM. THE EHC POWER LOAD UNBALANCE (PLU) CIRCUIT CAUSED A FAST CLOSURE OF THE TURBINE CONTROL VALVES (TCV) WHICH RESULTED IN A REACTOR SCRAM. THE BREAKER OPERATION WAS A RESULT OF AN ELECTRICAL DISTURBANCE AT A 345KV SUBSTATION. THE VOID COLLAPSE FOLLOWING THE SCRAM CAUSED A GROUP II AND RWCU SYSTEM ISOLATION ON REACTOR LOW LEVEL OF 177 INCHES ABOVE TOP OF ACTIVE FUEL (TAF). STANDBY GAS TREATMENT TRAINS A AND B ALSO STARTED ON REACTOR LOW LEVEL. REACTOR WATER LEVEL INITIALLY WENT LOW ON THE SCRAM (165.5 INCHES TAF), WITH LEVEL INCREASING DUE TO MANUAL STARTING AND INITIATION OF RCIC

AND CONTINUED OPERATION OF THE TWO REACTOR FEED PUMPS. AS LEVEL INCREASED, RCIC WAS MANUALLY TRIPPED AND THEN BOTH A AND B RFP'S TRIPPED ON HIGH LEVEL. RFP B WAS RESTARTED FOR WATER LEVEL CONTROL. BASED ON A SLIGHT INCREASE IN SAFETY RELIEF VALVE (SRV) TAILPIPE TEMPERATURE, SRV-K STARTED TO OPEN. PRESSURE CONTROL WAS MAINTAINED BY TURBINE BYPASS VALVES.

[135] FT. ST. VRAIN DOCKET 50-267 LER 85-016
 "A" HELIUM CIRCULATOR TRIPS TWICE ON BUFFER-MID-BUFFER DIFFERENTIAL PRESSURE.
 EVENT DATE: 091385 REPORT DATE: 101185 NSSS: GA TYPE: HTGR

(NSIC 197022) ON 9/13/85, WITH THE REACTOR SHUTDOWN AND "B" AND "D" HELIUM CIRCULATORS OPERATING ON STEAM DRIVES, "A" HELIUM CIRCULATOR WAS PLACED IN THE SELF-TURBINING MODE. FIVE MINUTES AFTER RELEASING THE CIRCULATOR BRAKE, "A" RECIRCULATOR TRIPPED ON LOW BUFFER-MID-BUFFER DIFFERENTIAL PRESSURE. CONTROL ROOM OPERATORS RESET THE BUFFER-MID-BUFFER TRIP AND RETURNED "A" CIRCULATOR TO SELF-TURBINING. HOWEVER, APPROXIMATELY 27 MINUTES LATER, THE CIRCULATOR TRIPPED ON HIGH BUFFER-MID-BUFFER. THE BUFFER-MID-BUFFER TRIPS HAD NO EFFECT ON THE OPERATION OF THE "B" AND "D" CIRCULATORS. IT HAS BEEN DETERMINED THAT WATER ENTERED THE MID-BUFFER SENSE LINE, THEREBY CAUSING ERRONEOUS BUFFER-MID-BUFFER DIFFERENTIAL PRESSURE INDICATION AND THE CIRCULATOR BUFFER-MID-BUFFER TRIPS. SINGLE CIRCULATOR TRIPS ARE INITIATED FOR EQUIPMENT PROTECTION PURPOSES DUE TO ABNORMAL INDICATIONS ASSOCIATED WITH A SINGLE CIRCULATOR. SINGLE ACTUATIONS OF THE CIRCULATOR TRIP CIRCUITRY ARE NOT CONSIDERED TO REQUIRE NRC NOTIFICATION NOR LICENSEE EVENT REPORTING IN ACCORDANCE WITH THE REQUIREMENTS OF 10CFR50.72 AND 50.73. HOWEVER, DUE TO RECENT CONCERNS EXPRESSED BY THE SENIOR RESIDENT INSPECTOR, THE LICENSEE WILL VOLUNTARILY REPORT ACTUATIONS OF THE CIRCULATOR TRIP CIRCUITRY, UNTIL THIS ITEM CAN BE REVIEWED FURTHER WITH THE APPROPRIATE OFFICES.

[136] FT. ST. VRAIN DOCKET 50-267 LER 85-017
 UNPLANNED ACTUATION OF THE PPS SCRAM CIRCUITRY DURING SURVEILLANCE.
 EVENT DATE: 091685 REPORT DATE: 101685 NSSS: GA TYPE: HTGR

(NSIC 197021) ON SEPTEMBER 16, 1985 AT APPROXIMATELY 1420 HOURS, A REACTOR SCRAM ACTUATION OCCURRED ON SCRAM CHANNELS "A" AND "B", NEUTRON FLUX RATE OF CHANGE HIGH, FROM THE WIDE RANGE CHANNELS DURING PRE-CRITICAL TESTING. THE CAUSE OF THE SCRAM ACTUATION WAS PERSONNEL ERROR DURING THE PERFORMANCE OF SURVEILLANCE TEST SR 5.4.1.1.5.B-P/5.4.1.4.3.B-P, WIDE RANGE POWER CHANNEL TEST. THIS SURVEILLANCE VERIFIES THE OPERABILITY OF THE WIDE RANGE NEUTRON CHANNEL CIRCUITRY, INDICATION, AND ASSOCIATED PPS TRIP SETPOINTS, PRIOR TO START-UP. THIS EVENT WAS NOT REPORTED UNTIL SEPTEMBER 17, 1985, BECAUSE OF A MISINTERPRETATION OF THE REPORTABILITY REQUIREMENTS OF 10 CFR 50.72. THE TECHNICIAN WHO PERFORMED THE SURVEILLANCE WAS REPRIMANDED FOR FAILURE TO FOLLOW PROCEDURES. AN OPERATIONS ORDER WAS ISSUED TO CLARIFY REPORTABILITY REQUIREMENTS.

[137] GINNA DOCKET 50-244 LER 85-016
 INOPERABLE ROD POSITION INDICATING SYSTEM.
 EVENT DATE: 091585 REPORT DATE: 101485 NSSS: WE TYPE: PWR
 VENDOR: POWER-MATE

(NSIC 196713) ON 9-15 A CONTROL ROD DEVIATION ALARM OCCURRED 20 MINS AFTER AN AUTOMATIC REACTOR WATER MAKEUP. THE MEASURED POSITION SIGNAL FOR BANK 'B' RODS I07 AND E07 AND BANK 'D' RODS C07 AND K07 IDENTIFIED THEM AS THE CAUSE FOR THE ALARM. AN INTERMITTENT FLUCTUATION PROBLEM WITH RPI INDICATION, COUPLED WITH THE RCS TEMPERATURE CHANGE FROM THE MAKEUP, WERE ASSESSED AS THE CAUSE FOR THE DEVIATION. THE RPI'S WERE ALIGNED TO THEIR RESPECTIVE BANK COUNTERS. ON 9-16 THE CONTROL ROD POSITION INDICATION SYSTEM WAS MADE INOPERABLE TO REPLACE THE +13V DC AND -13V DC POWER SUPPLIES WHICH WERE SUSPECTED AS THE CAUSE FOR THE RPI FLUCTUATIONS. THE SYSTEM WAS INOPERABLE FOR A TOTAL OF 30 MINS; 3 MINS WITH LOSS

OF INDICATION AND 27 MINS FOR RPI ALIGNMENT. THESE CONDITIONS WERE A VIOLATION OF R.E. GINNA TECH SPEC 3.10.5.

[138] GINNA DOCKET 50-244 LER 85-017
CONTROL ROD INSERTION AND BANK OVERLAP VIOLATION.
EVENT DATE: 091685 REPORT DATE: 101585 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC SUPPLY COMPANY

(NSIC 196663) ON 9-16-85 AT 1849 HRS, WITH THE PLANT OPERATING AT 100% POWER, THE ROD CONTROL SYSTEM FAILED TO OPERATE AS INTENDED. THIS OCCURRENCE WAS DETECTED DURING THE POST-MAINTENANCE TESTING FOLLOWING THE RPI POWER SUPPLIES CHANGEOUT PER EM-419. THE ROD CONTROL SYSTEM, WHEN SELECTED TO BANK 'D' SELECTOR SWITCH, ALLOWED 2 RODS IN BANK 'B', I-07 AND E-07 AND ONLY 2 RODS IN BANK 'D' G-03 AND G-11 TO MOVE. THIS CONDITION VIOLATED THE INSERTION LIMIT AND PROPER BANK OVERLAP AS REQUIRED IN THE GINNA PLANT TECH SPECS. AS A RESULT, THE ROD CONTROL SYSTEM WAS DECLARED INOPERABLE AT THAT TIME. SUBSEQUENT INVESTIGATION REVEALED THAT THE FULL LENGTH ROD CONTROL POWER CABINET 1BD WAS INADVERTENTLY SELECTING THE 2 BANK 'B' RODS FOR MOVEMENT. THE PROBLEM WAS TRACED TO A FAULTY FIRING CIRCUIT CARD IN THE 1BD CABINET. THE FIRING CIRCUIT CARD WAS SUCCESSFULLY REPLACED UNDER EM-514 AND THE CONTROL ROD SYSTEM DECLARED OPERABLE AT 2210 HRS.

[139] GRAND GULF 1 DOCKET 50-416 LER 85-037
CONTROL ROOM REMOTE INDICATION FOR A FIRE DETECTOR INOPERABLE.
EVENT DATE: 062085 REPORT DATE: 102185 NSSS: GE TYPE: BWR

(NSIC 196475) ON 9-20-85, A SMOKE DETECTOR IN A CONTROL BLDG HVAC CHASE FAILED TO ANNUNCIATE ON THE CONTROL ROOM COMPUTER CONSOLE WHEN IT WAS TESTED DURING THE SEMI-ANNUAL FUNCTIONAL TEST SURVEILLANCE. AN INVESTIGATION REVEALED THAT THE REMOTE INDICATION FOR THIS SMOKE DETECTOR HAD BEEN INOPERABLE SINCE 6-20-85. THE LOCAL PANEL ALARMS AND CONTROL BLDG FIRE ALARM BELLS FOR THE SMOKE DETECTOR WERE OPERABLE. A UTILITY ENGINEER ENTERED AN ERRONEOUS ZONE DESCRIPTION INTO THE COMPUTER DATA BASE ON 6-20-85. THIS MADE THE CONTROL ROOM REMOTE INDICATION FOR THAT FIRE DETECTOR INOPERABLE. PROCEDURES WILL BE IMPLEMENTED TO BETTER CONTROL CHANGES TO THE DATA BASE.

[140] GRAND GULF 1 DOCKET 50-416 LER 85-035
MSIV LEAKAGE CONTROL VALVE TESTS MISSED.
EVENT DATE: 091185 REPORT DATE: 101185 NSSS: GE TYPE: BWR

(NSIC 196474) ON 9-11-85 AT 1230 PLANT STAFF DETERMINED THAT 4 MOTOR-OPERATED VALVES AND 2 DRAIN LINE CHECK VALVES OF THE MSIV LEAKAGE CONTROL SYSTEM HAD NOT BEEN TESTED WITHIN THE REQUIRED FREQUENCY OF TECH SPEC 4.6.1.4.B AND TECH SPEC 4.0.5. THE INSERVICE TESTING AND INSPECTION REQUIREMENTS OF TECH SPEC 4.0.5 BECAME EFFECTIVE 7-1-85. THE REQUIRED SURVEILLANCE WAS COMPLETED ON 9-11-85, AND CONFIRMED THE OPERABILITY OF THE SUBJECT VALVES. THE SURVEILLANCE PROCEDURE FOR TESTING THESE VALVES WAS ISSUED ON 4-8-85, BUT WAS NOT PLACED IN THE SURVEILLANCE PROGRAM TRACKING SYSTEM (SPTS) DATA BASE FOR SCHEDULING. PROCEDURAL CHANGES ARE BEING MADE TO PREVENT RECURRENCE.

[141] GRAND GULF 1 DOCKET 50-416 LER 85-036
LOSS OF CIRCULATING WATER PUMP LUBRICATION CAUSES REACTOR SCRAM.
EVENT DATE: 091685 REPORT DATE: 101585 NSSS: GE TYPE: BWR

(NSIC 196566) ON 9-16-85, THE REACTOR AUTOMATICALLY SCRAMMED DUE TO A TURBINE TRIP ON LOW CONDENSER VACUUM. THE LOW VACUUM WAS CAUSED WHEN THE CONDENSER CIRCULATING WATER PUMPS TRIPPED ON LOW LUBE WATER FLOW. A BREAKER SUPPLYING POWER TO THE CONTROL CIRCUITRY FOR THE DOMESTIC WATER PUMPS (WHICH SUPPLY THE

SOURCE WATER FOR THE LUBRICATION OF THE CIRCULATING WATER PUMPS) WAS INADVERTENTLY OPENED. THE LOSS OF POWER TO THE CONTROL CIRCUITRY RESULTED IN THE IMPROPER OPERATION OF BOTH DOMESTIC WATER PUMPS CREATING THE LOW LUBE WATER FLOW CONDITION.

[142] GRAND GULF 1 DOCKET 50-416 LER 85-038
 ESP ACTUATIONS DUE TO A FAILED INVERTER.
 EVENT DATE: 092585 REPORT DATE: 102285 NSSS: GE TYPE: BWR
 VENDOR: POWELL, WILLIAM COMPANY, THE
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 196476) ON 9-25-85, A FAILED TRANSFORMER INTERNAL TO AN INVERTER CAUSED A REDUCED VOLTAGE OUTPUT WHICH RESULTED IN THE ACTUATION OF SGTS 'A' AND CONTROL ROOM FRESH AIR UNIT 'A'. DIVISIONAL PRIMARY CONTAINMENT AND SECONDARY CONTAINMENT ISOLATION VALVES, WHICH HAVE ASSOCIATED LOGIC POWERED BY THE INVERTER, AUTOMATICALLY CLOSED. A DRYWELL INBOARD ISOLATION VALVE ON THE DISCHARGE OF THE DRYWELL EQUIPMENT DRAIN SUMP PUMP FAILED TO CLOSE ON THE AUTOMATIC ISOLATION SIGNAL. THE DETERMINATION OF THE CAUSE AND CORRECTIVE ACTIONS ARE NOT COMPLETE. AN UPDATE REPORT IS EXPECTED TO BE SUBMITTED BY 12-16-85.

[143] GRAND GULF 1 DOCKET 50-416 LER 85-040
 SETPOINTS FOR 158 CONTROL ROD SCRAM ACCUMULATOR PRESSURE SWITCHES DRIFT LOW.
 EVENT DATE: 102185 REPORT DATE: 111885 NSSS: GE TYPE: BWR
 VENDOR: BARKSDALE COMPANY

(NSIC 196689) FROM 9-29-85 TO 10-21-85, WHILE PERFORMING THE CALIBRATION SURVEILLANCE OF SCRAM HYDRAULIC CONTROL UNIT (HCU) ACCUMULATOR LOW PRESSURE ALARM SWITCHES, 158 OF 193 ALARM SWITCHES WERE FOUND WITH SETPOINTS LOWER THAN THE 1520 PSIG LIMIT OF TECH SPECS 4.1.3.3.B.1.B. DUE TO THE APPARENT GENERIC DRIFT CHARACTERISTIC OF THESE INSTRUMENTS, BARKSDALE MODEL NO. BIT-GH32SS, THE PLANT TECH SPECS WERE REVISED TO DELETE THE UPPER TECH SPEC LIMIT AND ALLOW SETTING THE ALARM AT 1600 PSIG RATHER THAN 1535 PSIG ON DECREASING PRESSURE.

[144] GRAND GULF 1 DOCKET 50-416 LER 85-041
 ALTERNATE SHUTDOWN COOLING LOOP TESTED LATE.
 EVENT DATE: 103185 REPORT DATE: 120285 NSSS: GE TYPE: BWR

(NSIC 196973) ON OCTOBER 31, 1985, OPERATIONS PERSONNEL DISCOVERED THAT THE OPERABILITY OF THE ALTERNATE METHOD OF DECAY HEAT REMOVAL HAD NOT BEEN DEMONSTRATED WITHIN A 24 HOUR PERIOD AS REQUIRED BY ACTION (A) OF TECH SPEC 3.4.9.2. THE OPERATIONS MIDNIGHT SHIFT, NORMALLY RESPONSIBLE FOR PERFORMING THIS ACTION, CHOSE NOT TO DEMONSTRATE OPERABILITY OF SHUTDOWN COOLING (SDC) LOOP "B" WHICH WAS BEING USED AS THE ALTERNATE METHOD OF DECAY HEAT REMOVAL BECAUSE IT HAD BEEN OPERATED AND SECURED BY THE PREVIOUS SHIFT ON OCTOBER 29, 1985 AT 2122. THUS THE NEXT OPERABILITY DEMONSTRATION WAS NOT DUE UNTIL THE NEXT DAY AT 2122. THE EVENING SHIFT WHICH BEGAN AT 1530 ON OCTOBER 30, 1985, BELIEVED THE DEMONSTRATION WAS PERFORMED EVERY MIDNIGHT SHIFT AND THEREFORE, DID NOT PERFORM THE DEMONSTRATION. THE NEXT MIDNIGHT SHIFT DISCOVERED THE ERROR AND COMPLETED THE DEMONSTRATION AT 0118 ON OCTOBER 31, 1985. INADEQUATE COORDINATION OF THIS CHANGE RESULTED IN THE DEMONSTRATION BEING PERFORMED 4 HOURS LATE. THE MIDNIGHT SHIFT HAS BEEN INSTRUCTED TO DEMONSTRATE THE OPERABILITY OF THE ALTERNATE METHOD OF DECAY HEAT REMOVAL BETWEEN 0300 AND 0500 EACH DAY. LICENSED OPERATORS WERE INFORMED OF THIS EVENT AND ITS CAUSES. IN ADDITION, A CHANGE IS BEING MADE TO THE SHIFT SUPERVISOR TURNOVER CHECKSHEET TO ENSURE ANY LCO REQUIREMENTS ARE TURNED OVER TO THE NEXT SHIFT.

[145] GRAND GULF 1 DOCKET 50-416 LER 85-043
 GENERIC FAILURE OF TERMINAL STRIPS COULD CAUSE LOSS OF HYDROGEN ANALYZERS.
 EVENT DATE: 110785 REPORT DATE: 120985 NSSS: GE TYPE: BWR

(NSIC 197015) ON NOVEMBER 7, 1985, TECHNICIANS PERFORMING UNRELATED WORK ON THE HYDROGEN ANALYZERS FOUND TERMINAL STRIPS IN ALL FOUR HYDROGEN ANALYZERS BRITTLE, CRACKED, OR BROKEN. THE TERMINAL STRIPS, CINCH JONES MODEL NUMBERS 3-140 AND 6-141, ARE QUALIFIED FOR A SERVICE ENVIRONMENT OF 300 F FOR 10 YEARS. THE DEGRADED TERMINAL STRIPS HAD BEEN IN SERVICE FROM 8 TO 17 MONTHS. THE TERMINAL STRIPS ARE LOCATED IN A COMPARTMENT WHERE THE AVERAGE AIR TEMPERATURE DURING OPERATION WAS MAINTAINED AT 290 F FOR PROPER OPERATION OF THE ANALYZERS. THE TEMPERATURE CONTROL SWITCHES ARE NORMALLY SET TO DEENERGIZE THE HEATING ELEMENTS AT 300 F. THE DEGRADATION OF THE TERMINAL STRIPS IS DUE TO EXCESSIVE HEAT. TEMPERATURES IN THE COMPARTMENT WILL BE MONITORED TO DETERMINE FINAL CORRECTIVE ACTION. IN THE INTERIM, THE TERMINAL STRIPS WILL BE REPLACED WITH LIKE COMPONENTS AND THE TEMPERATURE CONTROL SWITCH SETPOINTS HAVE BEEN LOWERED TO DEENERGIZE THE HEATING ELEMENTS AT 285 F. THE VENDOR RECOMMENDS A 275 F AVERAGE TEMPERATURE FOR PROPER OPERATION OF THE HYDROGEN ANALYZERS.

[146] HATCH 1 DOCKET 50-321 LER 85-031
 RWCU PUMP SEAL FAILURE, MISSED CONDUCTIVITY SAMPLE, AND REACTOR SCRAM.
 EVENT DATE: 092085 REPORT DATE: 101485 NSSS: GE TYPE: BWR
 VENDOR: INGERSOL-RAND CO.
 LIMITORQUE CORP.

(NSIC 196538) ON 09/20/85 AT APPROXIMATELY 1543 CDT, THE REACTOR WATER CLEAN-UP (RWCU) INBOARD PRIMARY CONTAINMENT ISOLATION VALVE (G31-F001) ISOLATED AND COULD NOT BE OPENED. ON 09/20/85 AT APPROXIMATELY 1950 CDT, PLANT PERSONNEL COULD NOT OBTAIN A REACTOR WATER SAMPLE FOR A CONDUCTIVITY CHECK. THIS CHECK WAS REQUIRED BY TECH SPEC SECTION 4.6.F.2.A.1 BECAUSE THE REACTOR WATER CONTINUOUS CONDUCTIVITY MONITOR HAD BECOME INOPERABLE (NO SAMPLE FLOW) WHEN RWCU ISOLATED. ON 09/20/85 AT 2343 CDT, PLANT PERSONNEL STARTED A REACTOR SHUTDOWN PER TECH SPEC SECTION 3.6.F.2.C. ON 09/21/85 AT APPROXIMATELY 1029 CDT, THE UNIT WAS IN HOT SHUTDOWN PROCEEDING TO COLD SHUTDOWN, AND PLANT PERSONNEL WERE RETURNING A REACTOR WATER LEVEL TRANSMITTER TO SERVICE, WHEN A FULL RPS LOGIC ACTUATION OCCURRED. G31-F001 ISOLATED AS A RESULT OF A BLOWN SEAL ON THE "A" RWCU PUMP (G31-C001A). SEDIMENT WAS BLOCKING THE SMALL DIAMETER REACTOR COOLANT SAMPLE LINE AND THE POST ACCIDENT SAMPLING SYSTEM WAS SECURED DUE TO A LEAK IN THE SAMPLING ROOM, RESULTING IN THE INABILITY TO PERFORM A CONDUCTIVITY CHECK ON REACTOR COOLANT. THE "A" RWCU PUMP (G31-C001A) WILL BE REPAIRED. THE SEDIMENT WAS CLEANED OUT OF THE REACTOR COOLANT SAMPLE LINE AND THE POST ACCIDENT SAMPLING SYSTEM LEAK WAS FIXED.

[147] HATCH 1 DOCKET 50-321 LER 85-033
 SPIKE CN CHLORINE MONITOR ISOLATES CONTROL ROOM VENTILATION.
 EVENT DATE: 100485 REPORT DATE: 102885 NSSS: GE TYPE: BWR

(NSIC 196539) ON 10/04/85 AT APPROXIMATELY 1458 CDT, AN ISOLATION OF THE CONTROL ROOM VENTILATION SYSTEM OCCURRED. AT THE TIME OF ISOLATION, PLANT PERSONNEL RETURNED THE CONTROL ROOM VENTILATION SYSTEM TO NORMAL STATUS. THE ISOLATION WAS DUE TO A SPURIOUS SPIKE ON THE "A" CONTROL ROOM CHLORINE MONITOR (1Z41-N022A). THERE IS NO CORRECTIVE ACTION TO PREVENT SPURIOUS SPIKES ON CONTROL ROOM CHLORINE MONITORS. THERE HAVE BEEN NO SIMILAR EVENTS.

[148] HATCH 1 DOCKET 50-321 LER 85-034
 FLOW TRANSMITTER FAILURE CAUSES THREE RWCU ISOLATIONS.
 EVENT DATE: 101485 REPORT DATE: 110885 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 196583) WITH THE UNIT OPERATING AT 2436 MWT (APPROX 100% POWER), AND DURING PREWARMING OF THE RWCU RECIRCULATION PUMP PER THE 'REACTOR WATER CLEANUP SYSTEM' PROCEDURE, PLANT PERSONNEL RECEIVED A RWCU ISOLATION WHEN THE RWCU PUMP'S INBOARD AND OUTBOARD SUCTION ISOLATION VALVES 1G31-F001 AND 1G31-F004 ISOLATED ON HIGH DIFFERENTIAL FLOW ON THE FOLLOWING DATES: AT APPROX 1750 CDT ON 10-14-85, AT APPROX 1230 CDT ON 10-21-85 (ONLY 1G31-F004 ISOLATED), AND AT APPROX 1725 CDT ON 10-23-85. THE CAUSE OF THESE EVENTS HAS BEEN DETERMINED TO BE AN INTERMITTENTLY SPIKING FLOW TRANSMITTER. SUBSEQUENT TO AN INVESTIGATION, THE EXISTING TRANSMITTER WAS REMOVED AND REPLACED WITH A NEW IMPROVED TRANSMITTER PER A PREVIOUSLY APPROVED DESIGN CHANGE REQUEST. SIMILAR EVENTS IN THE PAST WHERE THE RWCU SYSTEM HAS ISOLATED ON HIGH DIFFERENTIAL FLOW FOR OTHER REASONS ARE DESCRIBED IN THE FOLLOWING LER'S: 366/84-010, 321/84-029, 321/85-001, 321/85-012, 366/85-008, 366/85-021, AND 366/85-032.

[149] HATCH 1 DOCKET 50-321 LER 85-035
 RUPTURE DISC LEAK CAUSES HPCI TURBINE ISOLATION.
 EVENT DATE: 101685 REPORT DATE: 111285 NSSS: GE TYPE: BWR
 VENDOR: CONTINENTAL DISC CORP.

(NSIC 196584) ON 10-16-85 AT APPROX 0937 CDT, DURING THE PERFORMANCE OF THE MONTHLY 'HPCI PUMP OPERABILITY' PROCEDURE, THE HPCI TURBINE ISOLATED DUE TO AN APPARENT HIGH EXHAUST DIAPHRAGM PRESSURE. IMMEDIATELY UPON DISCOVERY, PLANT PERSONNEL DECLARED HPCI INOPERABLE AND INITIATED A 14-DAY LCO AS REQUIRED BY TECH SPECS SECTION 3.5.D.2. IMMEDIATELY UPON DISCOVERY, PLANT PERSONNEL DECLARED HPCI INOPERABLE AND INITIATED A 14-DAY LCO AS REQUIRED BY TECH SPECS SECTION 3.5.D.2. PLANT PERSONNEL INVESTIGATED THE CAUSE OF THE HIGH EXHAUST DIAPHRAGM PRESSURE, AND DETERMINED THAT THE EXHAUST'S INBOARD RUPTURE DIAPHRAGM (MANUFACTURER, TYPE/STYLE: CONTINENTAL DISC. CORP., R-STD-R) WAS LEAKING AROUND ITS OUTER EDGE. ONLY THE INBOARD DIAPHRAGM WAS FOUND DEFECTIVE. HOWEVER, FOR GOOD PREVENTIVE MAINTENANCE PURPOSES, BOTH THE INBOARD AND OUTBOARD DIAPHRAGM WERE REPLACED. HPCI WAS THEN FUNCTIONALLY TESTED SATISFACTORILY PER 34SV-E41-002-1 AND RETURNED TO SERVICE AT APPROX 2215 CDT ON 10-16-85. ALL OTHER EMERGENCY CORE COOLING SYSTEMS WERE OPERABLE WHILE HPCI WAS INOPERABLE. A SIMILAR EVENT WAS LAST REPORTED VIA LER 50-321/85-005.

[150] HATCH 1 DOCKET 50-321 LER 85-037
 SPURIOUS CHLORINE MONITOR SIGNAL CAUSES CONTROL ROOM VENTILATION ISOLATION.
 EVENT DATE: 102465 REPORT DATE: 111885 NSSS: GE TYPE: BWR

(NSIC 196630) AT APPROX 0735 C. ON 10-24-85, OPERATIONS PERSONNEL RECEIVED A HIGH CHLORINE CONCENTRATION ALARM, FOLLOWED BY MAIN CONTROL ROOM ENVIRONMENTAL ISOLATION. AN IMMEDIATE INVESTIGATION SHOWED THAT MAINTENANCE PERSONNEL WERE PERFORMING MAINTENANCE ON CHLORINE MONITOR 1E41-N022B AT APPROX THE SAME TIME THE ISOLATION OCCURRED. IT APPEARS THAT THE CHLORINE MONITOR'S PRINTED CIRCUIT BOARD RELAY (K-1) CLOSED MOMENTARILY AT SOME TIME DURING THE CIRCUIT BOARD'S DISMOUNTING AND LOWERING PROCESS. THIS CAUSED THE MAIN CONTROL ROOM (MCR) ENVIRONMENTAL SYSTEM TO ISOLATE AND RECIRCULATE THE MCR ATMOSPHERE THROUGH ITS CHARCOAL FILTERS. SUBSEQUENT TO THE INVESTIGATION, THE MCR CHLORINE ISOLATION SIGNAL WAS RESET; THUS THE MCR ENVIRONMENTAL SYSTEM WAS RETURNED TO NORMAL. THE METHOD USED TO REMOVE THE CIRCUIT BOARD FROM THE MONITOR IS CONSISTENT WITH PAST PRACTICE. THIS SPURIOUS ACTUATION OF THE MONITOR IS CONSIDERED TO BE AN ISOLATED EVENT.

[151] HATCH 1 DOCKET 50-321 LER 85-038
 RADWASTE PUMP CASING CRACKS AND LEAKS.
 EVENT DATE: 102985 REPORT DATE: 112685 NSSS: GE TYPE: BWR
 VENDOR: INGERSOL-RAND CO.

(NSIC 196733) ON 10-29-85 AT 1729 CST, WITH THE REACTOR MODE SWITCH IN THE RUN POSITION AND REACTOR POWER AT 2436 MW (100% POWER), MAINTENANCE PERSONNEL NOTED WATER ON THE FLOOR OF THE 158 FT ELEVATION OF THE UNIT 1 REACTOR BLDG. THEY IMMEDIATELY REPORTED THE LEAK TO THE MAIN CONTROL ROOM OPERATOR. AT THAT TIME, SBTG SYSTEM 'B' AUTO-STARTED, AND A GROUP 2 ISOLATION (INCLUDING ISOLATION OF THE HYDROGEN/OXYGEN ANALYZERS AND FISSION PRODUCT MONITORS) WAS RECEIVED DUE TO THE REACTOR BLDG RADIATION MONITORS READING APPROX 20 MILLIREM PER HR. A RADIOLOGICAL EVENT WAS DECLARED. AN INVESTIGATION OF THE LEAK REVEALED THAT THE RADWASTE'S 'CLEAN-UP SLUDGE DISCHARGE MIX PUMP' (1G11-C028) HAD A CASING CRACK. THE PUMP WAS ISOLATED AND CLEAN-UP OF THE LEAK BEGAN. ON 10-29-85 AT APPROX 2330 CST, THE RADIOLOGICAL EVENT WAS TERMINATED AND SBTG SYSTEM 'B' WAS SECURED. ON 10-30-85 AT 0015 CST, THE GROUP 2 ISOLATION WAS RESET AND THE HYDROGEN/OXYGEN ANALYZERS AND FISSION PRODUCT MONITORS WERE RETURNED TO SERVICE. THE SBTG SYSTEM AND THE GROUP 2 ISOLATION OPERATED AS REQUIRED. THEREFORE, NO ACTUAL OR POTENTIAL ADVERSE SAFETY CONSEQUENCES OR IMPLICATIONS RESULTED FROM THIS EVENT. THERE ARE NO KNOWN PREVIOUS SIMILAR EVENTS.

[152] HATCH 2 DOCKET 50-366 LER 81-036 REV 1
 UPDATE ON DIESEL GENERATOR FAILURE TO OBTAIN DESIRED VOLTAGE.
 EVENT DATE: 041681 REPORT DATE: 110185 NSSS: GE TYPE: BWR
 VENDOR: SQUARE D COMPANY

(NSIC 196984) UNIT 2 WAS OPERATING AT 95% POWER. WHILE PERFORMING SURVEILLANCE FOR EMERGENCY DIESEL GENERATOR 2C, THE GENERATOR FAILED TO OBTAIN RATED VOLTAGE LESS THAN OR EQUAL TO 12 SEC AS REQUIRED BY PSAR TABLE 8.3.3. RATED VOLTAGE WAS OBTAINED IN 18 SECONDS, AND THE DIESEL WAS AVAILABLE TO SUPPLY EMERGENCY AC POWER HAD IT BEEN NEEDED. AN LCO WAS DECLARED PER UNIT TWO TECH SPECS 3/4.8.1. THE EVENT IS NONREPETITIVE. THE FIELD FLASH CIRCUIT FAILED AND THE GENERATOR EXCITED BY RESIDUAL MAGNETISM. FOLLOWING A MAINTENANCE INSPECTION THE SURVEILLANCE PROCEDURE WAS SUCCESSFULLY PERFORMED, AND THE DIESEL WAS RETURNED TO AN OPERABLE STATUS. FOR FURTHER DETAILS, REFER TO THE NARRATIVE REPORT.

[153] HATCH 2 DOCKET 50-366 LER 84-003 REV 1
 UPDATE ON RWCU FLOW TRANSMITTER INSTALLED BACKWARDS.
 EVENT DATE: 011584 REPORT DATE: 091784 NSSS: GE TYPE: BWR
 VENDOR: POWELL, WILLIAM COMPANY
 ROSEMOUNT, INC.

(NSIC 196457) ON 1-15-84, WITH THE REACTOR IN COLD SHUTDOWN, OPERATING PERSONNEL WERE IN THE PROCESS OF LOWERING REACTOR WATER LEVEL WITH THE RWCU PUMP BY DUMPING THE WATER INTO THE MAIN CONDENSER. AT THE BEGINNING OF THIS PROCESS, A FCIS VALVE GROUP 5 ISOLATION SIGNAL OCCURRED WHICH SHOULD HAVE CLOSED RWCU SYSTEM ISOLATION VALVES 2G31-F001 AND 2G31-F004. THE RWCU INBOARD ISOLATION VALVE 2G31-F001 CLOSED; HOWEVER, THE RWCU SYSTEM OUTBOARD ISOLATION VALVE 2G31-F004 DID NOT CLOSE. AN INVESTIGATION HAS DETERMINED THAT THE ISOLATION SIGNAL OCCURRED DURING THIS EVENT BECAUSE THE REACTOR WATER CLEANUP DUMP FLOW TRANSMITTER (2G31-N012) HAD BEEN INSTALLED INCORRECTLY DURING COMPLETION OF A DESIGN CHANGE REQUEST. THE RWCU DUMP FLOW TRANSMITTER WAS REINSTALLED CORRECTLY AND RETURNED TO SERVICE ON 1-17-84.

[154] HATCH 2 DOCKET 50-366 LER 85-031
 PERSONNEL ERROR CAUSES RWCU ISOLATION.
 EVENT DATE: 091385 REPORT DATE: 100785 NSSS: GE TYPE: BWR

(NSIC 196504) AT APPROX 1720 CDT ON 9-13-85 FOLLOWING PERFORMANCE OF THE REACTOR WATER DEMINERALIZER PROCEDURE (HNP-2-1326), PLANT PERSONNEL WERE PLACING THE RWCU SYSTEM IN SERVICE PER THE 'REACTOR WATER CLEANUP SYSTEM' PROCEDURE (HNP-2-1325). AT THAT TIME, THEY NOTED THAT THE RWCU PUMP INBOARD SUCTION ISOLATION VALVE

(2G31-F001) HAD ISOLATED ON HIGH SYSTEM DIFFERENTIAL FLOW. AFTER AN INVESTIGATION, PLANT PERSONNEL DETERMINED THAT RWCU STRAINER BACKWASH ISOLATION VALVES 2G31-F090B AND 2G31-F091B HAD NOT BEEN COMPLETELY CLOSED WHEN THE PRECOAT AND BACK WASH CYCLE HAD BEEN COMPLETED. CONSEQUENTLY WHEN THE RWCU SYSTEM WAS PLACED IN SERVICE, ENOUGH RWCU SYSTEM WATER FLOWED BACK THROUGH THE INCOMPLETELY CLOSED ISOLATION VALVES TO CAUSE A HIGH DIFFERENTIAL FLOW SIGNAL, THUS CAUSING PRIMARY CONTAINMENT ISOLATION VALVE 2G31-F001 TO CLOSE. PLANT PERSONNEL THEN CLOSED ISOLATION VALVES 2G31-F090B AND 2G31-F091B, AND RETURNED THE RWCU SYSTEM TO SERVICE PER PROCEDURE HNP-2-1325 ON 9-14-85 AT APPROX 1330 CDT. THIS EVENT HAD NO ACTUAL OR POTENTIAL ADVERSE SAFETY CONSEQUENCES.

[155] HATCH 2 DOCKET 50-366 LER 85-032
 REACTOR WATER CLEANUP ISOLATION DUE TO HIGH SYSTEM DIFFERENTIAL FLOW.
 EVENT DATE: 100585 REPORT DATE: 110185 NSSS: GE TYPE: BWR
 VENDOR: CONTROMATICS CORP.

(NSIC 196968) AT APPROX 1235 CDT ON 10-05-85, PLANT PERSONNEL WERE PLACING THE RWCU SYSTEM IN SERVICE WHEN THEY NOTED THAT THE RWCU PUMP INBOARD SUCTION ISOLATION VALVE HAD ISOLATED ON HIGH SYSTEM DIFFERENTIAL FLOW. AFTER INVESTIGATING, PLANT PERSONNEL DETERMINED THAT THE RWCU BACKWASH AIR SUPPLY ISOLATION VALVES 2G31-F076B AND 2G31-F109B WERE LEAKING PAST THEIR SEATS. WHEN THE RWCU SYSTEM WAS PLACED IN SERVICE, WATER FLOWED PAST THESE VALVES AND INTO THE RADWASTE COLLECTION SYSTEM, THUS CAUSING THE RWCU SYSTEM TO ISOLATE ON HIGH DIFFERENTIAL FLOW. ISOLATION VALVES 2G31-F076B AND 2G31-F109B WERE REBUILT AND WERE FUNCTIONALLY TESTED. THE RWCU SYSTEM WAS SATISFACTORILY RETURNED TO SERVICE ON 10-8-85.

[156] HATCH 2 DOCKET 50-366 LER 85-030
 OIL VALVE FAILURE CAUSES CONDENSATE BOOSTER PUMP TRIP AND REACTOR SCRAM.
 EVENT DATE: 110585 REPORT DATE: 120585 NSSS: GE TYPE: BWR
 VENDOR: INGERSOL-RAND CO.
 TERRY STEAM TURBINE COMPANY

(NSIC 197010) ON 11/05/85 AT APPROXIMATELY 2157 CST THE PLANT WAS IN STEADY-STATE OPERATION AT 2422 MWT (APPROXIMATELY 99% POWER) WHEN A REACTOR SCRAM OCCURRED. FOLLOWING THE SCRAM, REACTOR WATER LEVEL DROPPED RESULTING IN ENGINEERED SAFETY FEATURES (ESF) ACTUATIONS. THE "2B" CONDENSATE BOOSTER PUMP TRIPPED ON LOW OIL PRESSURE (THE "2A" CONDENSATE BOOSTER PUMP WAS ALREADY OUT OF SERVICE FOR PREVENTIVE MAINTENANCE AND TO REPAIR AN OIL LEAK ON THE OIL SYSTEM 3-WAY VALVE). AT FULL POWER TWO OF THE THREE CONDENSATE BOOSTER PUMPS ARE REQUIRED TO MAINTAIN OPERATION. AS A RESULT OF THE EQUIPMENT FAILURE, BOTH FEED PUMPS TRIPPED, CAUSING A REACTOR SCRAM ON LOW REACTOR WATER LEVEL. THE LOW OIL PRESSURE ON "2B" CONDENSATE BOOSTER PUMP WAS EVALUATED AS BEING CAUSED BY A STUCK SUCTION (FOOT) VALVE ON THE MAIN OIL PUMP. THE SUCTION (FOOT) VALVE, STRAINER, AND THE OIL SUMP WERE CLEANED, RELATED OIL FILTERS WERE CHANGED AND THE "2B" CONDENSATE BOOSTER PUMP WAS RETURNED TO SERVICE ON 11/07/85 AT APPROXIMATELY 1630 CST. THIS REPORT ALSO MEETS THE SPECIAL REPORT REQUIREMENTS AS PER TECH SPEC SECTION 3.5.1, ACTION C.

[157] HATCH 2 DOCKET 50-366 LER 85-036
 OPERATOR ERROR DURING SHIFTCCHANGE CAUSES REACTOR SCRAM
 EVENT DATE: 110785 REPORT DATE: 120685 NSSS: GE TYPE: BWR

(NSIC 196969) AT 1450 CST ON 11-7-85, WITH THE UNIT IN THE STARTUP MODE, A FULL REACTOR SCRAM OCCURRED. FOLLOWING AN INVESTIGATION, IT WAS DETERMINED THAT A HIGHER THAN NORMAL AMOUNT OF STEAM HAD BEEN USED TO EQUALIZE PRESSURE AROUND THE CLOSED INBOARD MSIV'S. THIS CAUSED THE REACTOR VESSEL WATER LEVEL TO LOWER TO 28 INCHES ABOVE INSTRUMENT ZERO. CONSEQUENTLY, DURING THE PROCESS OF RESTORING

VESSEL WATER LEVEL, AN INCREASE IN REACTOR POWER RESULTED, CAUSING IRM 2C51-K601D AND 2C51-K601E TO SPIKE TO THEIR HI-HI SETPOINT WHICH ACTUATED THE RPS. THIS EVENT IS THE RESULT OF LICENSED PLANT PERSONNEL ERROR IN THAT THE RESPONSE TO THE INCREASE IN REACTOR POWER WAS NOT DETECTED IN TIME TO PREVENT THE ACTUATION OF THE RPS WHICH SCRAMMED THE REACTOR.

[158] INDIAN POINT 2 DOCKET 50-247 LER 84-012 REV 1
 UPDATE ON AUXILIARY FEEDWATER PUMP RELAY FAILURES.
 EVENT DATE: 091084 REPORT DATE: 040385 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196515) ON 9-10-84, WHILE AT COLD SHUTDOWN FOR A REFUELING-MAINTENANCE OUTAGE, THE AUX FEEDWATER PUMPS DID NOT START WHEN ACTUATED. THE PUMPS WERE BEING USED FOR SG FILL. THE CAUSE OF THE FAILURE OF THE PUMPS TO NOT START WAS TRACED TO 2 RELAYS, 1 PER PUMP. EXAMINATION OF THE RELAYS REVEALED OPEN CIRCUITING AND SEVERE DEGRADATION OF THE INSULATION. IN THE 2 WEEK PERIOD PRIOR TO THIS EVENT, 3 OTHER SIMILAR RELAYS FAILED WITH EVIDENCE OF SIMILAR DEGRADATION. THE CAUSE OF PREVIOUS FAILURES WAS TRACEABLE TO SENSITIVITY OF THE RELAYS TO TEMPERATURE. THE 2 FAILED RELAYS OF THIS EVENT ARE FREQUENTLY ENERGIZED. DURING THIS OUTAGE, WHEN THE RELAYS WERE ENERGIZED, A CHECK OF OPERATING VOLTAGE INDICATED IT TO BE BELOW THE MAXIMUM RECOMMENDED BY THE SUPPLIER. THE CAUSE OF THE FAILURES IS ATTRIBUTED TO LENGTH OF SERVICE.

[159] INDIAN POINT 2 DOCKET 50-247 LER 85-013
 CONTAINMENT FAN COOLER LEAKS.
 EVENT DATE: 100485 REPORT DATE: 101885 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196715) ON OCTOBER 4, 1985, THE LEAKAGE INTO CONTAINMENT FROM ALL SOURCES EXCEEDED THE TECH SPEC LIMIT OF 10 GPM FOR COMBINED LEAKAGE. THE FAN COOLER LEAKAGE DETECTION SYSTEM INDICATED THAT A FAN COOLER UNIT HAD INCURRED A SERVICE WATER LEAK. IN 1983, TO EVALUATE THE CONDITION OF THE ADMIRALTY BRASS TUBING IN THE FAN COOLER UNITS, TWO TUBE SAMPLES WERE CUT FROM WATER BOX #1 IN FAN COOLER UNIT #22, AS WELL AS FROM OTHER FAN COOLER UNITS. THE SOURCE OF THE LEAKAGE WAS TRACED TO A TUBE IN FAN COOLER UNIT 22'S WATER BOX, WHICH HAD BEEN CUT IN 1983. THE WATER BOX WAS ISOLATED BY MEANS OF BLIND FLANGES, AND THE LEAK TERMINATED. REPLACEMENT OF THE FAN COIL UNIT IS PLANNED DURING THE REFUELING OUTAGE SCHEDULED TO BEGIN IN JANUARY 1986.

[160] INDIAN POINT 2 DOCKET 50-247 LER 85-014
 HIGH STEAM GENERATOR LEVEL DURING STARTUP.
 EVENT DATE: 102485 REPORT DATE: 112285 NSSS: WE TYPE: PWR

(NSIC 196716) ON OCTOBER 24, 1985, AT 5:32 P.M. DURING RESTART FROM A PLANNED OUTAGE, THE REACTOR TRIPPED DUE TO HIGH STEAM GENERATOR LEVEL. A HIGH STEAM GENERATOR LEVEL SIGNAL RESULTED FROM A STEAM GENERATOR SWELL AT THE TIME OF GENERATOR LOAD INCREASE JUST SUBSEQUENT TO BUS SYNCHRONIZATION. THE CAUSE OF THE EVENT IS ATTRIBUTED TO OPERATOR ERROR CAUSED BY A COMBINATION OF FACTORS. THESE FACTORS INCLUDE INADEQUATE TRAINING AND OPERATOR INEXPERIENCE. BOTH LONG-TERM AND SHORT-TERM ACTIONS HAVE BEEN PLANNED OR IMPLEMENTED TO CORRECT THESE CIRCUMSTANCES. THIS INCLUDES EVALUATION OF THE TRAINING PROGRAM.

[161] INDIAN POINT 3 DOCKET 50-286 LER 85-006
 MALFUNCTIONING FEEDWATER REGULATING VALVE CAUSES REACTOR TRIP.
 EVENT DATE: 100485 REPORT DATE: 110185 NSSS: WE TYPE: PWR
 VENDOR: BAILEY METER COMPANY

(NSIC 196388) ON OCTOBER 4, 1985 DURING INITIAL UNIT STARTUP FROM A SCHEDULED REFUELING OUTAGE, A TURBINE TRIP AND SUBSEQUENT REACTOR TRIP WERE INITIATED AUTOMATICALLY BY A HIGH LEVEL IN NO. 33 STEAM GENERATOR. THE HIGH WATER LEVEL WAS CAUSED BY SLUGGISH RESPONSE OF NO. 33 MAIN FEEDWATER REGULATING VALVE AS THE OPERATOR SWITCHED FROM LOW FEEDWATER FLOW REGULATION TO MAIN FEEDWATER FLOW REGULATION. THE IRREGULAR RESPONSE WAS FOUND TO HAVE BEEN CAUSED BY A MALFUNCTION OF THE VALVE'S POSITIONER LINKAGE ASSEMBLY. THE ASSEMBLY WAS REPLACED, AND THE OTHER MAIN FEEDWATER REGULATORS WERE INSPECTED. THE UNIT WAS SUBSEQUENTLY SYNCHRONIZED TO THE BUS.

[162] INDIAN POINT 3 DOCKET 50-286 LER 85-007
DIRT ACCUMULATION IN TURBINE CONTROL OIL CAUSES REACTOR TRIP.
EVENT DATE: 101585 REPORT DATE: 111485 NSSJ: WE TYPE: PWR

(NSIC 196493) ON 10-15-85 A MAIN TURBINE GENERATOR TRIP WAS INITIATED AUTOMATICALLY BY A SIGNAL FROM THE MAIN TURBINE HIGH PRESSURE CONTROL OIL SYSTEM. AN AUTOMATIC REACTOR TRIP SUBSEQUENTLY OCCURRED AS PER DESIGN. INVESTIGATION DETERMINED THAT FOREIGN MATTER HAD ACCUMULATED IN THE OIL SYSTEM, BLOCKING CONTROL OIL STRAINERS AND ORIFICES. THIS BLOCKAGE LOWERED DOWNSTREAM OIL PRESSURE, UNTIL THE TRIP SETPOINT WAS REACHED. IT IS BELIEVED THAT THE FOREIGN MATTER ENTERED THE SYSTEM AS A RESULT OF WORK PERFORMED DURING THE RECENT REFUELING OUTAGE. THE STRAINERS AND OTHER SYSTEM COMPONENTS WERE CLEANED AND FLUSHED AND THE UNIT RETURNED TO SERVICE.

[163] LA SALLE 1 DOCKET 50-373 LER 85-065
SPURIOUS TRIP OF TWO CHLORINE DETECTORS.
EVENT DATE: 092985 REPORT DATE: 102885 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
VENDOR: WALLACE & TIERMAN, INC.

(NSIC 196563) AT 1814 HRS ON 9-29-85, BOTH CHLORINE DETECTORS FOR THE 'B' TRAIN OF THE CONTROL ROOM/AUX ELECTRICAL EQUIPMENT ROOM HVAC SYSTEM ALARMED SIMULTANEOUSLY RESULTING IN ESP DAMPER OPERATIONS. THE PLANT WAS CHECKED FOR CHLORINE AND NONE WAS DETECTED. SINCE THE CHLORINE DETECTORS ACTUATED SIMULTANEOUSLY, IT IS BELIEVED THAT THERE MAY HAVE BEEN A COMMON CAUSE FOR THE ACTUATIONS. IT IS POSSIBLE THAT THE CAUSE FOR THE ACTUATIONS WAS RADIO-FREQUENCY INTERFERENCE, HOWEVER, THE INSTRUMENT MECHANICS FOUND THAT THE OAE-VC091A DETECTOR SETPOINT HAD DRIFTED LOW. NO SPECIFIC CAUSE COULD BE FOUND FOR THE AE-VC091B DETECTOR ACTUATION. NO DEFINITE CAUSE FOR THE ACTUATION COULD BE FOUND. THE 'B' DETECTOR WAS RESET THE FOLLOWING DAY AND OPERATED PROPERLY. THE 'A' DETECTOR WAS RECALIBRATED, FUNCTIONALLY CHECKED AND RETURNED TO SERVICE ON 10-3-85. SIMILAR EVENTS: 373/83-051, 373/84-068, 373/84-073, 373/84-088, 373/85-007, 373/85-042, 373/85-043, 373/85-044, 373/85-051 AND 373/85-062.

[164] LA SALLE 1 DOCKET 50-373 LER 85-063
CONTROL ROOM HVAC CHLORINE DETECTOR TRIPS.
EVENT DATE: 100885 REPORT DATE: 102885 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
VENDOR: WALLACE & TIERMAN, INC.

(NSIC 196642) AT 0335 HRS ON 10-8-85 THE 'B' CHLORINE DETECTOR ON THE 'B' CONTROL ROOM VENTILATION/AUX ELECTRIC EQUIPMENT ROOM VC/VE TRIPPED AND WOULD NOT RESET. NO INDICATION OF CHLORINE GAS EXISTED AT THE TIME. THE TRIP RESULTED IN AN ESP ACTUATION RESULTING IN THE 'B' VC/VE TRAIN AUTOMATICALLY LINING UP IN THE RECIRCULATION MODE OF OPERATION. THE CAUSE OF THE CHLORINE DETECTOR TRIP WAS THAT THE ELECTROLYTE DRIP RATE FOR THE DETECTOR WAS LOWER THAN NORMAL. THE INSTRUMENT MAINTENANCE DEPARTMENT RESTORED THE PROPER DRIP RATE AND THE LOCAL AND CONTROL ROOM ALARMS WERE RESET.

[165] LA SALLE 1 DOCKET 50-373 LER 85-064
 SPURIOUS TRIP OF AMMONIA DETECTOR.
 EVENT DATE: 101485 REPORT DATE: 102885 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 196643) ON 10-14-85 AT 1004 A HIGH AMMONIA ALARM WAS RECEIVED IN THE CONTROL ROOM FOR THE CONTROL ROOM VENTILATION/AUX ELECTRIC EQUIPMENT ROOM VENTILATION SYSTEMS. THIS APPEARED TO BE A SPURIOUS TRIP OF THE 'B' AMMONIA DETECTOR (OXY-VC165B) FOR THE 'B' VC/VE VENTILATION TRAIN. THE AMMONIA DETECTOR TRIP RESULTED IN AN ESP ACTIVATION PLACING THE VC/VE VENTILATION SYSTEMS IN THE RECIRCULATION MODE WITH THE CHARCOAL FILTER TRAINS IN OPERATION, ISOLATED FROM OUTSIDE AIR. OPERATING PERSONNEL DISPATCHED TO THE SCENE COULD FIND NO APPARENT CAUSE FOR THE ALARM AND SUBSEQUENTLY RESET THE ALARM WITHOUT INCIDENT. THE VC/VE VENTILATION TRAINS WERE RESTORED TO NORMAL SYSTEM LINE-UP. THE DETECTOR IS MANUFACTURED BY MDA SCIENTIFIC CO.

[166] LA SALLE 1 DOCKET 50-373 LER 85-066
 CONTAINMENT ISOLATION VALVE FAILED LOCAL LEAK RATE TEST.
 EVENT DATE: 110585 REPORT DATE: 120285 NSSS: GE TYPE: BWR
 VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 196971) ON NOVEMBER 5, 1985, WHILE UNIT 1 WAS SHUTDOWN FOR A SCHEDULED REFUEL OUTAGE, A LOCAL LEAK RATE TEST WAS PERFORMED ON INBOARD FEEDWATER CHECK VALVE, 1B21-F010B. A LEAKAGE OF 1982 SCFH WAS OBSERVED WHICH IS IN EXCESS OF THE .6 LA LIMIT. THE EXACT CAUSE OF THE FAILURE IS UNKNOWN AT THIS TIME. A COMPLETE INSPECTION OF THE VALVE WILL BE MADE PRIOR TO REPAIRS SUCH THAT A MODE OF FAILURE CAN BE DETERMINED. A SUPPLEMENTAL REPORT WILL BE SUBMITTED AT THE END OF THE REFUELING OUTAGE. WORK REQUEST L51592 HAS BEEN GENERATED TO REPAIR THE VALVE. A LOCAL LEAK RATE TEST WILL BE PERFORMED AT THE COMPLETION OF THE REPAIR WORK TO ENSURE CONTAINMENT INTEGRITY.

[167] LA SALLE 2 DOCKET 50-374 LER 85-041
 GROUND FAULT IN HPCS INITIATION SWITCH.
 EVENT DATE: 093085 REPORT DATE: 103085 NSSS: GE TYPE: BWR
 VENDOR: ITT-BARTON

(NSIC 196564) ON 9-30-85 AT 1820 HRS, THE HIGH PRESSURE CORE SPRAY SYSTEM WAS DECLARED INOPERABLE DUE TO TROUBLESHOOTING OF THE 125V DC, DIV III GROUND ALARM ON THE HPCS SYSTEM. DURING SUBSEQUENT TROUBLESHOOTING, THE HPCS LOW LEVEL INITIATION SWITCH, 2B21-N031D, WAS DETERMINED TO BE MALFUNCTIONING. THE CAUSE FOR THE SWITCH MALFUNCTION WAS AN ACTUAL GROUND ON A SWITCH TERMINAL LEAD. APPARENTLY THE TAPED INSULATION HAD WORN THROUGH EXPOSING THE WIRE AND ALLOWING A PATH TO GROUND. THE FAILURE OF THE SWITCH DID NOT AFFECT THE ABILITY OF THE HIGH PRESSURE CORE SPRAY SYSTEM TO PERFORM ITS ECCS FUNCTION. THE SWITCH IS PART OF A 1 OUT OF 2 TAKEN TWICE LOGIC WHICH WOULD PREVENT A SWITCH FAILURE FROM EITHER INADVERTENTLY INITIATING HPCS OR INHIBITTING AN INITIATION UPON AN ACTUAL LOW LEVEL. A JUMPER WAS IMMEDIATELY INSTALLED TO PUT THE SWITCH IN THE TIPPED CONDITION AS CALLED FOR BY TECH SPEC 3.3.3. DIV I AND DIV II EMERGENCY CORE COOLING SYSTEMS (ECCS) WERE BOTH OPERABLE AND AVAILABLE. THE INITIATION SWITCH WAS REPAIRED UNDER WORK REQUEST L52350 AND HPCS RESTORED TO OPERABLE STATUS.

[168] LA SALLE 2 DOCKET 50-374 LER 85-046
 FAILURE TO DECLARE LPCI TRAIN INOPERABLE DURING MAINTENANCE ON MINIMUM FLOW VALVE OPERATOR.
 EVENT DATE: 100785 REPORT DATE: 112585 NSSS: GE TYPE: BWR
 VENDOR: LIMITORQUE CORP.

(NSIC 197011) ON OCTOBER 7, 1985, AT 0421 HOURS, THE LOW PRESSURE COOLANT INJECTION SYSTEM A (LPCI) MINIMUM FLOW VALVE, 2E12-F064A WAS TAKEN OUT OF SERVICE FOR MAINTENANCE (CLOSED). THE HIGH PRESSURE CORE SPRAY SYSTEM (HPCS) WAS ALREADY INOPERABLE. AT 1545 HOURS THE LPCI A SYSTEM WAS DECLARED INOPERABLE DUE TO AN INTERPRETATION OF THE DEFINITION OF OPERABILITY. A SHUTDOWN WAS NOT REQUIRED BECAUSE VALVE 2E12-F064A WAS RESTORED TO OPERABLE STATUS AT 1644 HOURS. THE EVENT WAS CAUSED BY AN INCORRECT DECISION CONCERNING THE DEFINITION OF OPERABILITY. A MORE CONSERVATIVE APPROACH TO ECCS OPERABILITY WILL BE TAKEN. LONG TERM CRITERIA WILL BE DEVELOPED TO EVALUATE THE IMPACT OF A COMPONENT BEING OUT OF SERVICE ON SYSTEM OPERABILITY. THIS REPORT IS BEING SUBMITTED AFTER THE 30-DAY LIMIT DUE TO AN ADMINISTRATIVE ERROR IN NOT INITIATING THE REPORT AT THE TIME OF THE EVENT.

[169] LA SALLE 2 DOCKET 50-374 LER 85-043
 DRYWELL VACUUM BREAKER OPENS.
 EVENT DATE: 101085 REPORT DATE: 110785 NSSS: GE TYPE: BWR
 VENDOR: GPE CONTROLS

(NSIC 196600) ON 10-10-85, AT 1933 HRS VACUUM BREAKER 2PC001A OPENED AND CLOSED EQUALIZING A PRESSURE DIFFERENCE BETWEEN THE PRIMARY CONTAINMENT DRYWELL AND THE SUPPRESSION POOL. THE CAUSE OF THE DIFFERENTIAL PRESSURE WHICH CAUSED THE OPENING AND CLOSING OF THE VACUUM BREAKER IS UNKNOWN. THERE WERE NO PLANT EVALUATIONS IN PROGRESS WHICH MIGHT HAVE CONTRIBUTED TO THIS EVENT. THIS EXACT EVENT HAS NOT PREVIOUSLY OCCURRED, BUT SIMILAR EVENTS ARE DOCUMENTED IN LER 85-014, 85-015, 85-025, LER 84-077, 84-080, 84-081, 84-083, 84-088, 84-090, 84-091, 84-092.

[170] LA SALLE 2 DOCKET 50-374 LER 85-045
 MAINTENANCE ERROR CAUSES RHR ISOLATION.
 EVENT DATE: 103185 REPORT DATE: 112585 NSSS: GE TYPE: BWR

(NSIC 196972) ON OCTOBER 31, 1985, AT 1600 HOURS, THE "B" RESIDUAL HEAT REMOVAL SYSTEM (RHR), OPERATING IN THE SHUTDOWN COOLING MODE, ISOLATED DUE TO A TRIP SIGNAL FROM THE LEAK DETECTION SYSTEM (LD). UNIT 2 WAS IN COLD SHUTDOWN AT THE TIME OF THE EVENT. THE TRIP SIGNAL WAS CAUSED BY A BREAK IN THE 120 VAC GOING TO THE DIVISION I LEAK DETECTION SYSTEM. THE BREAK IN THE 120 VAC LINE OCCURRED WHEN TWO LEADS SEPARATED AT A TERMINAL ON THE REACTOR WATER CLEANUP (CE, RT) ISOLATION TIMER WHILE AN ELECTRONIC NOISE SUPPRESSOR WAS BEING INSTALLED. WIRING OF THE REACTOR WATER CLEANUP ISOLATION TIMER WAS RETURNED TO NORMAL AND THE RHR SHUTDOWN COOLING SYSTEM WAS RESTARTED AT 1620 HOURS. AIR'S 374-200-85-12300, 374-200-85-12301 AND 374-200-85-12302 HAVE BEEN WRITTEN TO TRACK TRAINING OF THIS EVENT BY THE TECH STAFF, ELECTRICAL AND INSTRUMENT MAINTENANCE FOREMEN.

[171] LACROSSE DOCKET 50-409 LER 84-005 REV 1
 UPDATE ON DISCOVERY OF UNSEALED FIRE BARRIER PENETRATIONS.
 EVENT DATE: 040384 REPORT DATE: 092484 NSSS: AC TYPE: BWR

(NSIC 196938) DURING PLANT INSPECTIONS PROMPTED BY REVIEW OF 10CFR50, APPENDIX R CRITERIA, 3 PENETRATIONS WERE FOUND, WHICH HAD NOT BEEN PROPERLY SEALED WHERE THEY PASSED THROUGH A BARRIER BETWEEN FIRE AREAS. APPROX 80 OTHER FIRE BARRIER PENETRATIONS HAD BEEN IDENTIFIED AND SEALED APPROX 5 YEARS AGO WHEN FIRE BARRIER PENETRATIONS WERE FIRST REVIEWED AT LACBWR. CURRENT TECH SPECS REQUIRE THAT ALL PENETRATION FIRE BARRIERS PROTECTING SAFETY-RELATED AREAS BE FUNCTIONAL. EACH PENETRATION WAS SEALED THE DAY IT WAS NOTICED BY THE METHODS USED IN SEALING OTHER PENETRATIONS. THE 3 PENETRATIONS WILL BE ADDED TO THE LIST OF FIRE BARRIERS INSPECTED DURING THE 18 MONTH SURVEILLANCE TEST.

[172] LACROSSE DOCKET 50-409 LER 84-017 REV 1
 UPDATE ON CONTAINMENT BUILDING VENTILATION ISOLATION.
 EVENT DATE: 101684 REPORT DATE: 112784 NSSS: AC TYPE: BWR

(NSIC 196939) THE CONTAINMENT BUILDING (CB) VENTILATION DAMPERS AND VENT HEADER VALVE AUTOMATICALLY CLOSED ON 10-16-84 WHEN A FUSE ON THE RADIOACTIVITY MONITORING RELAY PANEL BLEW AS THE AIR EJECTOR OFFGAS MONITOR RELAY RESET PUSHBUTTON WAS PUSHED. RELAYS IN THE CB MONITOR OUTPUT CIRCUIT DE-ENERGIZED WHEN THE FUSE BLEW, CAUSING THE AUTOMATIC ACTIONS TO OCCUR. THE FUSE WAS REPLACED. THE CB VENTILATION VALVES' CLOSURE SIGNAL WAS RESET, WHICH ALLOWED THEM TO REOPEN. DURING SURVEILLANCE TESTING ON 10-17, THE SAME SEQUENCE OCCURRED WHEN THE AIR EJECTOR OFFGAS MONITOR RESET BUTTON WAS PUSHED. TROUBLESHOOTING DETERMINED THAT DUE TO THE MANNER IN WHICH ONE OF THE OFFGAS MONITOR'S RELAYS WAS WIRED WITH THE COIL ON THE HIGH SIDE OF THE LINE, THAT IF ANY DIRT HAD BUILT UP BETWEEN A PARTICULAR SET OF CONTACTS IN THE MONITOR'S CIRCUITRY OR ANY SLUGGISHNESS HAD DEVELOPED OVER A PERIOD OF TIME, A MOMENTARY SHORT TO GROUND COULD OCCUR. REWIRING OF THE RELAY COIL CIRCUIT TO BE ON THE SAME SIDE OF THE LINE AS THE CB MONITOR RELAYS, ELIMINATED THE PROBLEM.

[173] LACROSSE DOCKET 50-409 LER 85-017
 BREAKER MAINTENANCE ERROR CAUSES LOSS OF OFFSITE POWER AND REACTOR SCRAM.
 EVENT DATE: 102285 REPORT DATE: 111985 NSSS: AC TYPE: BWR
 VENDOR: ALLIS CHALMERS
 EBERLINE INSTRUMENT CORP.
 MONITOR LABS, INC.

(NSIC 197013) LACBWR EXPERIENCED A LOSS OF LOAD TRANSIENT FROM 98% POWER WHEN THE 69 KV TIE LINE BREAKER 2NB11, WHICH TIES THE PLANT TO THE GRID OPENED. THE PLANT SCRAMMED DUE TO HIGH FLUX. A LOSS OF OFFSITE POWER WAS ALSO EXPERIENCED SINCE THE RESERVE TRANSFORMER IS ALSO SUPPLIED THROUGH 2NB11. BOTH EMERGENCY DIESEL GENERATORS STARTED AND SUPPLIED ESSENTIAL LOADS. THE BREAKER OPENED WHEN AN ELECTRICAL TEST AND MAINTENANCE TECHNICIAN WHO WAS WINTERIZING THE BREAKER AIR RECEIVER BUMPED THE EMERGENCY TRIP LEVER. OFFSITE POWER WAS RESTORED ONE HOUR LATER WHEN THE BREAKER WAS CLOSED. SINCE THE RECEIVER HAD BEEN DEPRESSURIZED FOR WINTERIZATION, POWER HAD TO BE SUPPLIED TO THE RECEIVER COMPRESSOR BEFORE THE BREAKER COULD BE RECLOSED. THE COMPRESSOR'S POWER SUPPLY WAS DE-ENERGIZED DUE TO THE EVENT. THE NORMAL POWER SUPPLY TO THE BREAKER COMPRESSOR WILL BE CHANGED TO A SUPPLY UNAFFECTED BY THE BREAKER OPENING. THE EMERGENCY TRIP LEVER WAS REMOVED TO PREVENT RECURRENCE OF THIS INCIDENT. ALTERNATIVE MEASURES ARE BEING CONSIDERED FOR PERMANENT CORRECTIVE ACTION.

[174] LACROSSE DOCKET 50-409 LER 85-018
 OSCILLATOR CIRCUIT FAILURE CAUSES SPURIOUS HIGH FLUX SCRAM ALARM.
 EVENT DATE: 102385 REPORT DATE: 111885 NSSS: AC TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 196750) DURING A REACTOR STARTUP, AT VERY LOW POWER, A HIGH FLUX SCRAM ALARM WAS RECEIVED ON NUCLEAR INSTRUMENTATION (NI) CHANNEL 6. AT LOW POWER, THE PLANT IS IN 1-OF-2 LOGIC AND A SIGNAL OF MORE THAN APPROX 115% ON THE 150% SCALE ON ANY RANGE OF THE WIDE RANGE NUCLEAR INSTRUMENTATION CAUSES A REACTOR TRIP. A REACTOR SCRAM DID NOT OCCUR. THE REACTOR OPERATOR OBSERVED AN INDICATION OF 110% ON NI CH. 6. TROUBLESHOOTING DETERMINED THAT DUE TO A MALFUNCTION IN AN OSCILLATOR CIRCUIT ON THE TRIP STAGE OF NI CH. 6, WHICH SHOULD HAVE ENSURED THAT BOTH THE ALARM AND TRIP RELAYS ACTUATED AT THE SAME TIME, THE ANNUNCIATOR CAME IN APPROX 2% BEFORE THE TRIP SIGNAL ACTUATED. A VERY SLOW INCREASE IN POWER TO APPROX 110% INDICATED (ON THE 150 E-5% SCALE), IN CONJUNCTION WITH A POSSIBLE NOISE SPIKE OF A FEW PERCENT, ACTUATED THE ANNUNCIATOR, BUT NOT THE TRIP. THE DRAWER FOR NI CH. 6 WAS REPLACED. THIS INCIDENT DOES NOT MEET THE LER REPORTING CRITERIA. HOWEVER, AN ALERT WAS DECLARED BASED ON THE APPARENT IMPROPER RESPONSE

OF THE RPS. THE NRC REQUESTED THAT AN LER BE SUBMITTED BASED ON THE ATTENTION THE INCIDENT RECEIVED.

[175] LACROSSE DOCKET 50-409 LER 85-019
SHORT DUE TO LEAKAGE FROM CONTROL ROD DRIVE MECHANISM CAUSES PARTIAL SCRAM.
EVENT DATE: 102685 REPORT DATE: 112185 NSSS: AC TYPE: BWR

(NSIC 196646) A REACTOR PARTIAL SCRAM OCCURRED DUE TO A MOMENTARY SHORT IN THE CONTROL ROD DRIVE GAS PRESSURE CIRCUIT CAUSED BY LEAKAGE FROM CONTROL ROD DRIVE MECHANISM (CRDM) NO. 2. DURING A PARTIAL SCRAM, THE CENTER '3' CONTROL RODS INSERT AUTOMATICALLY, RENDERING THE REACTOR SUBCRITICAL. THE MECHANICAL SEAL ON CRDM NO. 2 IS WORN, ALLOWING MORE SEAL WATER TO FLOW THROUGH IT THAN NORMAL. SEAL LEAKAGE WAS REDUCED. THE LEAKAGE RATE IS BEING MONITORED.

[176] LIMERICK 1 DOCKET 50-352 LER 84-015 REV 1
UPDATE ON RHR SHUTDOWN COOLING ISOLATION.
EVENT DATE: 112684 REPORT DATE: 041285 NSSS: GE TYPE: BWR

(NSIC 196987) ON NOVEMBER 26, 1984, PRIOR TO INITIAL CRITICALITY, THE OUTBOARD RHR SHUTDOWN COOLING VALVES RECEIVED AN ISOLATION SIGNAL AS THE RESULT OF SURVEILLANCE TESTING. PROCEDURAL DEFICIENCY WAS IDENTIFIED AS THE CAUSE OF THE OCCURRENCE. AT THE CONCLUSION OF THE SURVEILLANCE TEST, THE SHUTDOWN COOLING MODE WAS RESTORED TO OPERATION.

[177] LIMERICK 1 DOCKET 50-352 LER 84-022 REV 1
UPDATE ON MISSING REACTOR ENCLOSURE PENETRATION SEALS.
EVENT DATE: 112984 REPORT DATE: 052885 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: LIMERICK 2 (BWR)

(NSIC 196518) DURING FIRE DAMPER INSPECTION ON 11-29-84, TWO REACTOR ENCLOSURE FIRE PENETRATIONS WERE DISCOVERED NOT SEALED. THE MISSING SEALS WERE IDENTIFIED AS A SEISMIC GAP FIRE SEAL AT A FIRE DAMPER AT ELEVATION 201 FT. AND A SPARE CONDUIT PENETRATION IN THE SAME AREA. FIRE WATCHES/PATROLS WERE ESTABLISHED IMMEDIATELY IN THE AFFECTED AREAS. ADDITIONAL INSPECTION IDENTIFIED FIRE PENETRATION SEALS MISSING ON ELEVATION 317 FEET AND AT ELEVATION 352 FEET, IN THE REACTOR AND CONTROL ENCLOSURES.

[178] LIMERICK 1 DOCKET 50-352 LER 84-046 REV 1
UPDATE ON CONTROL ROOM CHLORINE ANALYZER FAILURE.
EVENT DATE: 123004 REPORT DATE: 021985 NSSS: GE TYPE: BWR
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 196456) WITH THE UNIT IN THE STARTUP MODE, A FAILURE OF THE 'D' CONTROL ROOM CHLORINE DETECTOR CAUSED THE NORMAL VENTILATION TO ISOLATE AND THE 'B' TRAIN OF THE CONTROL ROOM EMERGENCY FRESH AIR SYSTEM TO START. INVESTIGATION DETERMINED THAT THE SAMPLE TAPE HAD BROKEN CAUSING THE ANALYZER TO INDICATE FULL SCALE. THE TAPE WAS REPAIRED AND THE ANALYZER WAS TESTED AND RETURNED TO SERVICE. SIMILAR EVENTS: 352/84-006, 352/84-008, 352/84-010, 352/84-020, 352/84-028, AND 352/84-033.

[179] LIMERICK 1 DOCKET 50-352 LER 85-067
REACTOR ENCLOSURE VENTILATION SYSTEM ISOLATES.
EVENT DATE: 081385 REPORT DATE: 091185 NSSS: GE TYPE: BWR

(NSIC 196290) AT 0800 ON 8-13 DURING POWER ASCENSION TESTING, AN ISOLATION OF THE REACTOR ENCLOSURE VENTILATION SYSTEM OCCURRED WITH THE PROPER INITIATION OF SGTS

AND REACTOR ENCLOSURE RECIRCULATION SYSTEM (RERS), AS A RESULT OF LOW ENCLOSURE DIFFERENTIAL PRESSURE. OPERATORS WERE RECEIVING NUMEROUS LOW SECONDARY CONTAINMENT DIFFERENTIAL PRESSURE ALARMS AND WERE ATTEMPTING TO RESTORE PRESSURE TO THE NORMAL 0.25 INCHES WATER LEVEL BY CHANGING EXHAUST FAN COMBINATIONS, SINCE LOW EXHAUST FLOW WAS THE SUSPECTED CAUSE. FURTHER INVESTIGATION REVEALED THAT THE OUTSIDE AIR TEMPERATURE HAD DROPPED BELOW 70 DEGREES F RESULTING IN THE AUTOMATIC SWAPPING TO THE 'WINTER MODE' OF OPERATION. THIS MODE RESULTS IN MODULATION OF THE VENTILATION INTAKE FACE AND BYPASS DAMPERS IN ORDER TO DIRECT A GREATER VOLUME OF THE OUTSIDE AIR ACROSS HEATING COILS. THE MODULATION CAUSES CHANGES IN SUPPLY FAN AIR FLOW AS A RESULT OF REDUCED DUCT RESISTANCE SUCH THAT THE SUPPLY FANS WERE PROVIDING INCREASED FLOW TO THE REACTOR ENCLOSURE. THE VARIABLE PITCH EXHAUST FANS WERE UNABLE TO COMPENSATE FOR THE INCREASED SUPPLY FLOW AND THE DIFFERENTIAL PRESSURE DECREASED EVENTUALLY RESULTING IN THE ISOLATION. THE ISOLATION WAS CONFIRMED, RESET, AND THE VENTILATION SYSTEM WAS RETURNED TO NORMAL OPERATION WITH NO FURTHER PROBLEMS. SIMILAR EVENTS: 84-041, 84-045, AND 85-005.

[180] LIMERICK 1 DOCKET 50-352 LER 85-078
CONTROL ROD OPERABILITY TESTS MISSED.
EVENT DATE: 083185 REPORT DATE: 103085 NSSS: GE TYPE: BWR

(NSIC 196561) ON 9-30-85 A FAILURE TO MEET THE SURVEILLANCE REQUIREMENTS UNDER TECH SPEC 4.1.3.1.2.A CONCERNING CONTROL ROD OPERABILITY WAS DISCOVERED. SURVEILLANCE TEST, ST-6-107-760-1, 'CONTROL ROD EXERCISE TEST' WAS NOT PERFORMED ONCE EVERY 7 DAYS WHEN THE REACTOR WAS AT A POWER LEVEL GREATER THAN 20% FOR A CONTINUOUS 14 DAY PERIOD FROM 8-23-85 UNTIL 9-6-85. THE CAUSE OF THIS EVENT WAS A FAILURE OF THE SURVEILLANCE TEST COORDINATOR TO RECOGNIZE THAT THE REQUIREMENTS FOR PERFORMING THE TEST HAD BEEN MET. CONTROL ROD OPERABILITY WAS VERIFIED WHEN THE TEST WAS COMPLETED ON 10-1-85.

[181] LIMERICK 1 DOCKET 50-352 LER 85-073
CONDENSATE PUMP TRIP CAUSES REACTOR SCRAM.
EVENT DATE: 091185 REPORT DATE: 101085 NSSS: GE TYPE: BWR

(NSIC 196557) ON 9-11-85 AT 0105 HRS, THE REACTOR SCRAMMED ON REACTOR LO LEVEL (+12.5 INCHES). THE REACTOR LEVEL HAD DROPPED AS A RESULT OF THE A AND B REACTOR FEEDWATER PUMPS TRIPPING ON LOW SUCTION PRESSURE, WHICH WAS CAUSED BY THE LOSS OF THE B CONDENSATE PUMP. THE B CONDENSATE PUMP TRIPPED ON HIGH DIFFERENTIAL PRESSURE UNITS SUCTION STRAINER WHICH WAS THE RESULT OF A PERSONNEL ERROR WHILE VALVING IN THE C CONDENSATE PUMP. REACTOR LEVEL DROPPED TO -38 INCHES (123 INCHES ABOVE ACTIVE FUEL) AND INITIATED THE HPCI AND RCIC SYSTEMS. THE HPCI SYSTEM INJECTED COOLANT FOR 4 MINS AND THE RCIC SYSTEM OPERATED FOR 15 MINS. REACTOR LEVEL WAS THEN MAINTAINED BY SUPPLYING CONDENSATE TO THE REACTOR THROUGH THE REACTOR FEEDWATER PUMP BYPASS PIPING. THE MSIV'S WERE CLOSED TO LIMIT THE COOLDOWN RATE AT 0147. A NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM GROUP 1 (MSIV'S) ISOLATION SIGNAL OCCURRED AT 0534 DUE TO LOW MAIN CONDENSER VACUUM. SINCE THE MSIV'S WERE ALREADY CLOSED, THE NSSS GROUP ISOLATIONS WERE RESET AND THE PLANT WAS STABILIZED IN THE HOT SHUTDOWN MODE BY 0600.

[182] LIMERICK 1 DOCKET 50-352 LER 85-074
BLOWN FUSE RESULTS IN ACTUATION OF AN ENGINEERED SAFETY FEATURE.
EVENT DATE: 091985 REPORT DATE: 101885 NSSS: GE TYPE: BWR

(NSIC 196558) WHILE PERFORMING SURVEILLANCE TEST ST-2-42-658-1, 'NSSS-REACTOR VESSEL WATER LEVEL-LEVEL 1 AND 2; DIV 1B, CHANNEL B1 FUNCTIONAL TEST (LIS-42-IN6811B, SL-42-IN684B)', THE I&C TECHNICIAN FOUND IT NECESSARY TO MOVE CABLING IN ORDER TO VERIFY THE IDENTITY OF A RELAY. THE APPARENT MOVEMENT OF THE CABLE RESULTED IN THE BLOWING OF FUSE B21H-F15A. THE DE-ENERGIZATION OF THE

NSSSS LOGIC CAUSED INBOARD GROUPS I, II, III, VI, VII AND VIII ISOLATION SIGNALS TO BE GENERATED. THE REACTOR WATER CLEANUP SYSTEM, PRIMARY CONTAINMENT INSTRUMENT GAS SYSTEM AND SECONDARY CONTAINMENT ISOLATED AS A RESULT OF THAT SIGNAL. SIMILAR EVENTS: 352/85-008 AND 352/85-048.

[183] LIMERICK 1 DOCKET 50-352 LER 85-075
FAILURE TO VERIFY OPERABILITY OF FIRE DOOR ALARM.
EVENT DATE: 092385 REPORT DATE: 110485 NSSS: GE TYPE: BWR

(NSIC 196559) ON 9-23-85 AT 0908 HRS, A REVIEW OF THE AUG MONTHLY SURVEILLANCE TEST ST-7-022-600-0, 'FIRE DOOR CHANNEL FUNCTIONAL TEST', REVEALED A FAILURE TO COMPLY WITH TECH SPECS 4.7.7.2 AND 4.7.7.3 ON 8-25-85 FOR FIRE DOOR 599. THE SPECS IDENTIFY REQUIREMENTS FOR VERIFICATION OF THE OPERABILITY OF UNSUPERVISED AND SUPERVISED FIRE DOORS. A REVIEW OF PAST SURVEILLANCE TESTS REVEALED THAT DOCUMENTED TESTING OF THE SUPERVISION SYSTEM OF FIRE DOOR 599, WHICH IS LOCATED IN THE FIRE WALL BARRIER SEPARATING REDUNDANT COMPONENTS IN THE SPRAY POND PUMPHOUSE, HAD NOT BEEN PERFORMED SINCE 1-7-85. ST-7-022-600-0 WAS BEING CONDUCTED AS A PARTIAL TEST BECAUSE SEVERAL FIRE DOORS LISTED ON THE TEST HAVE NOT BEEN UPGRADED WITH ELECTRICAL SUPERVISION. DESIGNATED PLANT PERSONNEL MODIFY THE TEST BY REMOVING THE UNSUPERVISED DOORS, VIA A PARTIAL TEST, FROM THE LIST OF DOORS TO BE TESTED AND THEN AUTHORIZE THE PERFORMANCE OF THE TEST. DOCUMENTED AUTHORIZATION FOR THE PARTIAL PERFORMANCE OF ST-7-022-600-0 WAS NOT OBTAINED FOR THE TESTS PERFORMED BETWEEN 1-7-85 AND 8-25-85. AS A RESULT, FIRE DOOR 599 WAS INADVERTENTLY OMITTED FROM TESTING. THE ALARM ON FIRE DOOR 599 WAS SUCCESSFULLY TESTED ON 9-23-85.

[184] LIMERICK 1 DOCKET 50-352 LER 85-076
MOMENTARY UNDERVOLTAGE CAUSES SPURIOUS CHLORINE DETECTOR SIGNAL.
EVENT DATE: 092485 REPORT DATE: 103185 NSSS: GE TYPE: BWR

(NSIC 196639) ON 9-24-85 AT 1438, AUTOMATIC ISOLATION OF THE CONTROL ROOM HVAC SYSTEM AND INITIATION OF CONTROL ROOM EMERGENCY FRESH AIR SYSTEM (CREFAS) OCCURRED. THE ACTUATIONS WERE CAUSED BY THE MAIN CONTROL ROOM 'C' CHLORINE DETECTOR LOSS OF POWER CIRCUITRY. THIS DETECTOR SENSED LOSS OF POWER AS A RESULT OF MOMENTARY UNDERVOLTAGE CONDITION WHICH OCCURRED DURING A FAST TRANSFER OF THE ELECTRICAL SUPPLY TO THIS INSTRUMENT. A SPURIOUS ELECTRICAL SIGNAL WHICH WAS GENERATED BY THE SUPERVISORY REMOTE PANEL OF THE ELECTRICAL DISTRIBUTION SYSTEM WHICH OPENED THE STATION AUX BUS BREAKER (10A105), AND DEENERGIZED THE #10 START-UP AND #101 SAFEGUARD BUSES (SEE ATTACHMENT 1). THE LOSS OF THE 101 SAFEGUARD BUS INITIATED AN UNDERVOLTAGE FAST TRANSFER OF THE D11 AND D13 SAFEGUARD BUS BREAKERS TO THE 201 SAFEGUARD BUS. IT WAS SUSPECTED THAT SEVERAL DEFECTIVE PROGRAMMABLE READ-ONLY MEMORY (PROM) CHIPS IN THE SUPERVISORY REMOTE PANEL OF THE 220 KV SWITCHYARD WERE RESPONSIBLE FOR THE SPURIOUS TRIP SIGNAL. THE PROM CHIPS WERE REPLACED, ALL BUSES (10 STATION AUX, 10 STARTUP, AND 101 SAFEGUARD) WERE REENERGIZED, MCR VENTILATION ISOLATION WAS RESET, AND THE CREFAS WAS SECURED.

[185] LIMERICK 1 DOCKET 50-352 LER 85-077 REV 1
UPDATE ON LOOSE CONNECTION CAUSES FALSE LOCA SIGNAL.
EVENT DATE: 092685 REPORT DATE: 102485 NSSS: GE TYPE: BWR
VENDOR: ROSEMOUNT, INC.

(NSIC 196560) ON 9-26-85 WHILE PERFORMING THE HPCI SYSTEM STEAM LINE DIFFERENTIAL PRESSURE TIMER FUNCTIONAL SURVEILLANCE TEST, SPURIOUS DIV IV TRIP SIGNALS WERE RECEIVED. THIS LOCA SIGNAL RESULTED IN INITIATION SIGNALS TO THE D CORE SPRAY PUMP, D KHR PUMP, HPCI SYSTEM, D-14 DG AND THE B TRAIN OF CONTROL ROOM EMERGENCY FRESH AIR SUPPLY SYSTEM. IN ADDITION, LOAD SHEDDING IN ANTICIPATION OF DG LOADING OCCURRED AND THE FOLLOWING COMPONENTS WERE AFFECTED: D144 480V AC LOAD

CENTER, REACTOR ENCLOSURE COOLING WATER (RECW), THE B CONTROL ROD DRIVE (CRD) PUMP, THE D CONTROL ROOM RADIATION MONITOR AND THE D CONTROL ROOM CHLORINE ANALYZER. THIS LOAD SHEDDING WORKED AS DESIGNED AND THE AFFECTED SYSTEMS WERE RESTORED TO OPERATION. DESPITE THE INITIATION SIGNALS TO 3 EMERGENCY CORE COOLING SYSTEMS, (CORE SPRAY, RHR AND HPCI) NO INJECTION OCCURRED BECAUSE THE HPCI SYSTEM WAS REMOVED FROM SERVICE TO PERFORM THE AFOREMENTIONED SURVEILLANCE TEST AND RHR AND CORE SPRAY REQUIRE A LOW REACTOR PRESSURE PERMISSIVE. THE DG STARTED AND CAME TO SPEED; HOWEVER, IT DID NOT LOAD BECAUSE THE SAFEGUARD BUS WAS NOT DE-ENERGIZED. THE CAUSE OF THE SPURIOUS TRIP SIGNALS WAS TRACED TO A LOOSE CONNECTION IN THE PANEL WHICH SUPPLIES POWER TO THE RESPECTIVE TRIP UNITS AND TRANSMITTER FOR DIV IV.

[186] LIMERICK 1 DOCKET 50-352 LER 85-079
STANDBY LIQUID CONTROL SYSTEM ACTUATION.
EVENT DATE: 100885 REPORT DATE: 110685 NSSS: GE TYPE: BWR

(NSIC 196597) ON 10-8-85, THE STANDBY LIQUID CONTROL (SBLC) SYSTEM RECEIVED AN UNEXPECTED ACTUATION SIGNAL. APPROX 5-7 GALS (OUT OF A NOMINAL 5000 GAL STORAGE TANK) OF SODIUM PENTABORATE SOLUTION WERE INJECTED INTO THE REACTOR VESSEL. IN CONJUNCTION WITH THE SBLC SYSTEM INITIATION, THE RWCU INBOARD SUCTION VALVE RECEIVED AN AUTOMATIC ISOLATION SIGNAL. THE EVENT WAS CAUSED BY A DESIGN DEFICIENCY WHICH ALLOWED THE SBLC SYSTEM TO START UNEXPECTEDLY BUT WOULD NOT HAVE AFFECTED THE SYSTEM'S ABILITY TO PERFORM ITS DESIGN FUNCTION. AFTER THE EVENT THE RWCU ISOLATION WAS RESET AND THE SYSTEM WAS PLACED IN SERVICE TO REMOVE THE SODIUM PENTABORATE FROM THE REACTOR WATER. A MODIFICATION TO THE SBLC START LOGIC IS BEING PURSUED.

[187] LIMERICK 1 DOCKET 50-352 LER 85-080
POTENTIAL FOR UNANALYZED LOSS OF CONTROL BUILDING COOLING DUE TO CONSTRUCTION.
EVENT DATE: 100885 REPORT DATE: 103185 NSSS: GE TYPE: BWR

(NSIC 196562) WITH THE PLANT IN THE STARTUP TEST PHASE, DURING A DESIGN REVIEW, WHICH WAS BEING PERFORMED IN SUPPORT OF A PROPOSED MODIFICATION, IT WAS DISCOVERED THAT A POTENTIAL EXISTED FOR THE OCCURRENCE OF AN OPERATING CONDITION NOT COVERED BY THE PLANT'S OPERATING OR EMERGENCY PROCEDURES, SPECIFICALLY THE LOSS OF BOTH REDUNDANT CONTROL STRUCTURE CHILLED WATER SYSTEMS DUE TO FLOODING OF THE CHILLERS OR CIRCULATING PUMPS. THIS POSTULATED LOSS COULD RESULT FROM THE PROBABLE MAXIMUM PRECIPITATION (PMP) EVENT, A COOLING TOWER BASIN BREAK, OR A CIRCULATING WATER LINE BREAK IN THE TURBINE ENCLOSURE, WITH THE RESULTANT ENTRY OF WATER INTO THE LOWER ELEVATIONS OF THE PLANT CONTROL STRUCTURE BECAUSE OF THE STATUS OF UNIT 2 CONSTRUCTION AND SITE GRADING. UPON DISCOVERY AND CONFIRMATION, CORRECTIVE MEASURES WERE TAKEN TO PRECLUDE THE LOSS OF THE CONTROL STRUCTURE CHILLED WATER SYSTEMS. IN ADDITION, A PROCEDURE HAS BEEN DEVELOPED TO SPECIFICALLY RESPOND TO THE LOSS OF CONTROL STRUCTURE COOLING.

[188] LIMERICK 1 DOCKET 50-352 LER 85-081
MAIN CONTROL ROOM CHLORINE DETECTOR FAILS.
EVENT DATE: 101385 REPORT DATE: 111285 NSSS: GE TYPE: BWR
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 196598) ON 10-13-85 AT 4:05 AM, WHILE UNIT 1 WAS IN THE SHUTDOWN MODE, AN ESF ACTUATION OCCURRED. THE NORMAL VENTILATION SYSTEM ISOLATED AND THE 'B' TRAIN OF THE CONTROL ROOM EMERGENCY FRESH AIR SYSTEM (AN ESF SYSTEM) STARTED AS A RESULT OF FAILURE OF THE 'D' CONTROL ROOM CHLORINE DETECTOR. THE SAMPLE TAPE IN THE DETECTOR INSTRUMENT HAD BROKEN, CAUSING THE ANALYZER TO INDICATE FULL SCALE. THE TAPE WAS REPAIRED, THE ANALYZER WAS TESTED AND RETURNED TO SERVICE, AND THE ISOLATION WAS RESET. PREVIOUS OCCURRENCES HAVE BEEN REPORTED AS LERS 84-008, 84-010, 84-028, 84-033, 84-046, 85-029, 85-030, 85-031, 85-042, 85-050, 85-059,

AND 85-063. THE APPROVAL FOR INSTALLATION AND TESTING OF A NEW CHLORINE DETECTION SYSTEM IS IN PROGRESS.

[189] LIMERICK 1 DOCKET 50-352 LER 85-082
 REACTOR WATER CLEANUP SYSTEM ISOLATION ON HIGH DIFFERENTIAL FLOW.
 EVENT DATE: 101485 REPORT DATE: 111585 NSSS: GE TYPE: BWR
 VENDOR: HAMMEL DAHL

(NSIC 196965) ON OCTOBER 14, 1985 AT 1630 HOURS, THE REACTOR WATER CLEANUP (RWCU) SYSTEM ISOLATED DUE TO HIGH DIFFERENTIAL FLOW. THE SYSTEM ISOLATED TWICE WHILE PLACING THE "A" RWCU PUMP IN SERVICE. THE HIGH DIFFERENTIAL FLOW RESULTED FROM SYSTEM DESIGN CHARACTERISTICS WHICH CREATED PRESSURE SURGES WHEN THE SYSTEM'S FLOW IS CHANGED FROM THE LETDOWN MODE (GRAVITY FED FLOW BYPASSES RWCU PUMPS AND DEMINERALIZERS AND FLOWS TO THE CONDENSER) TO THE OPERATING MODE (VESSEL-TO-VESSEL) WHERE FLOW IS PUMPED THROUGH DEMINERALIZERS AND RETURNS TO THE REACTOR PRESSURE VESSEL (RPV). THIS EVENT WAS AGGRAVATED BY AN EQUIPMENT MALFUNCTION AND A DEFICIENT OPERATING PROCEDURE. DUMP FLOW CONTROL VALVE, HV-C-44-1P033, WHICH HAS PREVIOUSLY BEEN IDENTIFIED AS LEAKING THROUGH, COULD HAVE ALLOWED VOIDS TO FORM IN HIGH SPOTS OF THE RWCU SYSTEM. SYSTEM PROCEDURE S44.1.A, "RWCU NORMAL STARTUP", WAS WRITTEN FOR COLD SYSTEM START-UP CONDITIONS AND DID NOT ADEQUATELY ADDRESS THE SYSTEM CONFIGURATION OF FLOW DRIVEN BY REACTOR STANDING HEAD PRIOR TO A PUMP START-UP. THE RWCU SYSTEM WAS SUCCESSFULLY RESTORED TO SERVICE AT 1640.

[190] LIMERICK 1 DOCKET 50-352 LER 85-084
 OPERATOR FAILS TO INITIATE A MANUAL ROD BLOCK DUE TO THREE INOPERABLE IRM'S.
 EVENT DATE: 101485 REPORT DATE: 111385 NSSS: GE TYPE: BWR

(NSIC 196746) ON 10-14-85 WITH THE REACTOR CRITICAL AND IN START-UP, IT WAS DETERMINED THAT THE PLANT WAS NOT IN COMPLIANCE WITH THE TECH SPEC REGARDING THE MINIMUM NUMBER OF OPERABLE IRM'S. THE TECH SPECS FOR THE RPS REQUIRES THAT 3 OF 4 IRM'S IN EACH OF 2 DIVISIONS BE OPERABLE AND THE TECH SPECS FOR ROD BLOCK MONITORING REQUIRE 6 OF 8 IRM'S BE OPERABLE. DURING THIS EVENT ONLY 5 IRM'S WERE OPERABLE. UPON DISCOVERY, ROD WITHDRAWAL WAS STOPPED UNTIL 1 OF 3 INOPERABLE DETECTORS COULD BE TESTED AND RETURNED TO SERVICE. THIS EVENT WAS CAUSED BY PERSONNEL ERROR ON THE PART OF LICENSED CONTROL ROOM PERSONNEL. SIMILAR EVENT: 352/85-008.

[191] LIMERICK 1 DOCKET 50-352 LER 85-083
 OPERATOR ERROR CAUSES INSUFFICIENT FEEDWATER FLOW AND REACTOR SCRAM.
 EVENT DATE: 101585 REPORT DATE: 111585 NSSS: GE TYPE: BWR

(NSIC 196640) ON 10-15-85 AT 0014 HRS, THE REACTOR SCRAMMED ON REACTOR LOW LEVEL (+12.5 INCHES/173.5 INCHES ABOVE ACTIVE FUEL). THE SCRAM WAS A RESULT OF LICENSED OPERATORS INCREASING REACTOR PRESSURE ABOVE CONDENSATE PUMP DISCHARGE PRESSURE DURING A REACTOR START-UP. REACTOR PRESSURE ROSE TO 550 PSIG DURING THE WITHDRAWAL OF CONTROL RODS, BEFORE THE OPERATORS REALIZED THAT A SECOND CONDENSATE PUMP AND A REACTOR FEED PUMP HAD NOT BEEN PLACED IN SERVICE AS REQUIRED BY THE START-UP PROCEDURE AT A REACTOR PRESSURE OF 450 PSIG. THE REACTOR LEVEL DROPPED DUE TO THE INSUFFICIENT MAKEUP SUPPLY AND INCREASING REACTOR PRESSURE AND THE LOW LEVEL SCRAM OCCURRED. THIS EVENT WAS PARTIALLY CAUSED BY A DEFICIENCY WITH GENERAL PROCEDURE GP-2, 'NORMAL PLANT STARTUP', BECAUSE THE PROCEDURE DID NOT PROVIDE THE OPERATORS WITH ENOUGH FLEXIBILITY WHEN PLACING THE SECOND CONDENSATE PUMP AND FIRST REACTOR FEEDPUMP IN SERVICE. THE LOWEST REACTOR WATER LEVEL REACHED DURING THE EVENT WAS +7 INCHES.

[192] LIMERICK 1 DOCKET 50-352 LER 85-085
 LIGHT BULB FAILURE CAUSES SPURIOUS CHLORINE SIGNAL.
 EVENT DATE: 102385 REPORT DATE: 112285 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 196966) ON 10-23-85 AT 1940 HRS WITH UNIT 1 AT 50% POWER, AN ESP ACTUATION OCCURRED. THE MAIN CONTROL ROOM VENTILATION SYSTEM ISOLATED AND THE 'B' TRAIN OF THE CONTROL ROOM EMERGENCY FRESH AIR SYSTEM (AN ESP SYSTEM) STARTED AS A RESULT OF FAILURE OF THE 'D' CHLORINE ANALYZER. THE ANALYZER FAILED DUE TO FAILURE OF ONE OF THE OPTIC BULBS, WHICH CAUSED THE ANALYZER TO INDICATE HIGH CHLORINE LEVEL. THE ISOLATION SIGNAL WAS CLEARED USING TEMPORARY CIRCUIT ALTERATION, TCA-412, IN ACCORDANCE WITH SYSTEM PROCEDURE S78.7.A, 'SYSTEM RESTORATION TO NORMAL OPERATION AFTER ISOLATION.' BOTH BULBS WERE REPLACED, THE ANALYZER WAS TESTED AND RETURNED TO SERVICE, AND TCA-412 WAS REMOVED. THE INSTALLATION AND TESTING OF A REPLACEMENT CHLORINE DETECTION SYSTEM IS BEING SCHEDULED. LER'S 84-008, 84-010, 84-028, 84-033, 84-046, 85-029, 85-030, 85-031, 85-042, 85-050, 85-059, 85-063, AND 85-081 REPORT CHLORINE ANALYZER FAILURES WHICH CAUSED THE CONTROL ROOM EMERGENCY FRESH AIR SYSTEM TO ACTUATE.

[193] LIMERICK 1 DOCKET 50-352 LER 85-086
 DEFECTIVE SAMPLE TAPE CAUSES SPURIOUS CHLORINE SIGNAL.
 EVENT DATE: 103085 REPORT DATE: 112785 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 196967) ON 10-30-85 AT 0615 HRS, AN ESP ACTUATION OCCURRED. THE MAIN CONTROL ROOM VENTILATION SYSTEM ISOLATED AND THE 'A' TRAIN OF THE CONTROL ROOM EMERGENCY FRESH AIR SYSTEM (AN ESP SYSTEM) STARTED AS A RESULT OF A DEFECTIVE ANALYZER TAPE IN THE 'C' CHLORINE ANALYZER. THE INSTALLATION AND TESTING OF A REPLACEMENT CHLORINE DETECTION SYSTEM HAS BEEN APPROVED AND THE MODIFICATION WORK IS PROGRESSING. LERS 84-008, 84-010, 84-028, 84-033, 84-046, 85-029, 85-030, 85-031, 85-042, 85-050, 85-059, 85-063, 85-081, AND 85-085 REPORTED CHLORINE ANALYZER FAILURES WHICH CAUSED THE CONTROL ROOM EMERGENCY FRESH AIR SYSTEM TO ACTUATE.

[194] LIMERICK 1 DOCKET 50-352 LER 85-087
 THREE RCIC CONTROL CABLES NOT ADEQUATELY PROTECTED FROM FIRE DAMAGE.
 EVENT DATE: 110585 REPORT DATE: 120985 NSSS: GE TYPE: BWR

(NSIC 197009) ON NOVEMBER 5, 1985, A REVIEW OF A SUPPLEMENTARY EVALUATION OF FIRE PROTECTION SAFE SHUTDOWN CAPABILITY DETERMINED THAT THREE CABLES WERE NOT ADEQUATELY PROTECTED FROM FIRE DAMAGE AS SPECIFIED IN THE FIRE PROTECTION EVALUATION REPORT (PPER). TWO CONTROL CABLES FOR THE UNIT COOLER SERVING THE REACTOR CORE ISOLATION COOLING (RCIC) COMPARTMENT AND ONE CONTROL CABLE FOR THE RCIC PUMP RECIRCULATION VALVE WERE NOT ENCLOSED IN FIRE PROTECTED RACEWAYS. A POSTULATED FIRE IN THE AUXILIARY EQUIPMENT ROOM COULD DAMAGE THESE THREE CABLES AND POSSIBLY RENDER THE RCIC SYSTEM, WHICH IS REQUIRED TO ACHIEVE HOT SHUTDOWN, INOPERABLE UNDER CERTAIN CONDITIONS. THE CONTROL CIRCUITRY FOR THE COMPARTMENT UNIT COOLER WILL BE MODIFIED TO PREVENT FIRE DAMAGE TO THE CABLES FROM RENDERING IT INOPERABLE. THE CIRCUIT FOR THE RCIC RECIRCULATION VALVE HV-49-1P019 WILL BE REDESIGNED SUCH THAT THE CONTROL CABLE FOR THIS VALVE WILL BE ENCAPSULATED BY A 3-HOUR FIRE BARRIER IN THE AUXILIARY EQUIPMENT ROOM. THESE MODIFICATIONS ARE SCHEDULED TO BE ISSUED TO THE SITE BY DECEMBER 15, 1985. A FIRE WATCH WILL BE MAINTAINED IN THE AUXILIARY EQUIPMENT ROOM UNTIL THESE MODIFICATIONS HAVE BEEN COMPLETED. THIS DISCOVERY IS REPORTED PURSUANT TO LICENSE CONDITION 2F.

[195] MAINE YANKEE DOCKET 50-309 LER 85-011
 INADVERTENT ACTUATION OF ECCS TRAIN DUE TO PERSONNEL ERROR.
 EVENT DATE: 091685 REPORT DATE: 101685 NSSS: CE TYPE: PWR

(NSIC 196617) WHILE THE PLANT WAS IN REFUELING SHUTDOWN, ELECTRICIANS WERE WORKING INSIDE THE MAIN CONTROL BOARD MODIFYING SAFETY INJECTION ACTUATION SIGNAL (SIAS) ANNUNCIATOR LOGIC. THIS MODIFICATION INVOLVED WORK ON CIRCUITRY THAT ACTIVATES THE ECCS. TO PREVENT ACTIVATION, MECHANICAL BLOCKING DEVICES WERE INSTALLED ON 2 SIAS RELAYS. AN ELECTRICIAN BUMPED THESE RELAY BLOCKING DEVICES AND PARTIALLY ACTIVATED ONE ECCS TRAIN. NO WATER TRANSFERRED INTO THE RCS. THERE WERE NO ADVERSE EFFECTS ON THE RUNNING RHR SYSTEM. AFTER THE ECCS ACTIVATION ADDITIONAL BLOCKING DEVICES WERE INSTALLED ON THE SIAS RELAYS.

[196] MAINE YANKEE DOCKET 50-309 LER 85-016
 OPERATOR ERROR CAUSES LOW STEAM GENERATOR LEVEL AND RESULTING REACTOR TRIP.
 EVENT DATE: 102385 REPORT DATE: 112185 NSSS: CE TYPE: PWR

(NSIC 197004) ON OCTOBER 23, 1985, DURING PLANT STARTUP, #3 STEAM GENERATOR (SG) LEVEL CAUSED A REACTOR PROTECTIVE SYSTEM LOW SG LEVEL REACTOR TRIP AT ABOUT 4% POWER. THE CAUSES OF THE TRIP WERE: (1) REGULATING FEEDWATER BY A NON-STANDARD METHOD, AND (2) OPERATOR ERROR. AN ISOLATION GATE VALVE WAS USED TO MANUALLY CONTROL SG LEVEL. THE NORMALLY USED AIR OPERATED VALVE COULD NOT CONTROL LEVEL BECAUSE IT WAS EXPERIENCING HIGH LEAKAGE BY ITS SEAT. THE OPERATOR DID NOT RESPOND RAPIDLY ENOUGH TO MAINTAIN LEVEL WITH LOCAL OPERATION OF THE MANUAL VALVE. THE AIR OPERATED VALVE WAS NOT PROPERLY SEATING DUE TO A LOOSE STEM LOCKING DEVICE. THIS LOOSE STEM LOCKING DEVICE ALLOWED THE DISC TO SPIN UP THE ACTUATOR STEM. THE DISC SEATING WAS ADJUSTED AND THE STEM LOCKING DEVICE WAS TIGHTENED WITH THE VALVE SET FOR PROPER SEATING.

[197] MCGUIRE 1 DOCKET 50-369 LER 84-018 REV 1
 UPDATE ON CONTROL AREA VENTILATION TRAINS A AND B INOPERABLE.
 EVENT DATE: 060484 REPORT DATE: 032285 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: MCGUIRE 2 (PWR)

(NSIC 196608) ON 6-4-84 AT APPROX 2000, THE TRAIN B CHILLER OF THE CONTROL AREA VENTILATION SYSTEM TRIPPED DUE TO LOW OIL LEVEL AND WAS DECLARED INOPERABLE. TRAIN A OF VC HAD BEEN PREVIOUSLY DECLARED INOPERABLE BECAUSE OF MAINTENANCE WORK. THE INOPERABILITY OF BOTH TRAINS OF VC, WHILE A UNIT IS ON-LINE, IS PROHIBITED BY TECH SPEC 3.7.6. ACCORDINGLY, AT 2205 THE CONTROL OPERATORS STARTED TO REDUCE POWER ON UNITS 1 AND 2 AS REQUIRED BY TECH SPEC 3.0.3. UNITS 1 AND 2 WERE IN MODE 1 AT 100% POWER AT THE TIME OF THIS EVENT. AT APPROX 2230, 5 GALS OF OIL WERE ADDED TO THE CHILLER AND THE CHILLER RESTARTED. WITH VC TRAIN B THEN OPERABLE, THE CONTROL OPERATORS STOPPED REDUCING POWER WITH EACH UNIT HAVING REACHED 97% POWER. TRAIN B OF VC WAS DECLARED OPERABLE AT 2255. THE UNITS WERE RETURNED TO 100% POWER AT 2312. THIS EVENT IS ATTRIBUTED TO UNUSUAL SERVICE CONDITIONS, DUE TO THE COOLING LOAD OF THE CONTROL ROOM AREA BEING INSUFFICIENT TO FULLY LOAD THE TRAIN B CHILLER. DUKE POWER IS CONTINUING ITS REVIEW OF THIS PROBLEM TO DETERMINE ANY FURTHER CORRECTIVE ACTIONS. IN ADDITION, THE FAILURES OF PRINTED CIRCUIT CARDS IN THE PROCESS CONTROL SYSTEM (PCS) CABINETS, WHICH HAVE OCCURRED IN THIS AND OTHER EVENTS INVOLVING OVERHEATING IN THE PCS CABINETS, HAVE BEEN EXAMINED. USE OF HEAT SINKS AND IMPROVED COOLING IN THE PCS CABINETS IS EXPECTED TO ALLEVIATE THE PROBLEMS.

[198] MCGUIRE 1 DOCKET 50-369 LER 85-025
 BOTH TRAINS OF CONTROL AREA VENTILATION INOPERABLE.
 EVENT DATE: 090485 REPORT DATE: 100485 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: MCGUIRE 2 (PWR)

(NSIC 196599) ON 9-9-85, AT 1544, THE TRAIN 'B' CHILLER AND AIR HANDLING UNIT FOR THE CONTROL AREA VENTILATION SYSTEM TRIPPED DUE TO A LOSS OF CONTROL POWER. THE NONESSENTIAL POWER LOSS OCCURRED WHEN A 3 AMPERE FUSE FAILED IN THE MODE AND TRAIN SELECTION CONTROLS CIRCUITRY. THE CAUSE OF THE BLOWN FUSE COULD NOT BE READILY DETERMINED. ATTEMPTS TO START THE TRAIN 'A' REDUNDANT CHILLER WERE UNSUCCESSFUL BECAUSE THE BLOWN FUSE HAD DISABLED THE COMMON CIRCUIT WHICH CONTROLS THE CHILLED WATER PUMPS IN THE AUTOMATIC MODE. THE CHILLER COMPRESSOR WOULD NOT START WITHOUT CHILLED WATER FLOW FROM THESE PUMPS. THE OPERATORS WERE NOT IMMEDIATELY AWARE THAT THE PUMPS WOULD HAVE OPERATED IN THE MANUAL OR EMERGENCY MODES DURING THE PERIOD WHEN THE FUSE WAS BLOWN. BOTH TRAINS OF CONTROL ROOM COOLING WERE NOT OPERATED FOR A TOTAL OF 27 MINS. CONTROL ROOM TEMPERATURES DID NOT REACH EXTREME CONDITIONS DURING THIS PERIOD AND NO COMPONENT FAILURES RESULTED FROM THE ABSENCE OF COOLING AIR. THIS INCIDENT IS ATTRIBUTED TO A DESIGN DEFICIENCY BECAUSE A SINGLE BLOWN FUSE CAUSED BOTH CHILLED WATER PUMPS TO BE INOPERABLE IN THE AUTOMATIC MODE (NORMAL OPERATION). THE FUSE WAS REPLACED AND APPROPRIATE WIRING CHANGES ARE BEING REVIEWED FOR POSSIBLE IMPLEMENTATION. THE PUMPS WOULD HAVE OPERATED IN THE EMERGENCY MODE.

[199] MCGUIRE 2 DOCKET 50-370 LER 84-028 REV 1
 UPDATE ON UPPER HEAD INJECTION TRAIN INOPERABLE DUE TO PRESSURE SURGE.
 EVENT DATE: 111384 REPORT DATE: 011485 NSSS: WE TYPE: PWR

(NSIC 196661) ON NOVEMBER 13, 1984 AN UPPER HEAD INJECTION (UHI) (EHS:EG) HYDRAULIC SYSTEM ALARM WAS RECEIVED IN THE CONTROL ROOM FOR TRAIN "B" WHILE "TRAIN "A" INSTRUMENTS WERE BEING CALIBRATED. AS TECHNICIANS VALVED TRAIN "B" INTO SERVICE, A PRESSURE SURGE IN THE CROSSOVER LINE BETWEEN THE TRAINS CAUSED TWO UHI ISOLATION VALVES TO PARTIALLY CLOSE. DURING ATTEMPTS TO REOPEN THE VALVES, ONE FAILED COMPLETELY CLOSED AND WAS DECLARED INOPERABLE. CAUSE OF THE EVENT IS CONSIDERED TO BE A DESIGN DEFICIENCY, BECAUSE THE CROSSOVER CONNECTION BETWEEN THE TRAINS ALLOWS PRESSURE SURGES IN ONE TRAIN TO BE TRANSMITTED TO THE OTHER. A CONTRIBUTING CAUSE IS ALSO CONSIDERED TO BE A COMPONENT MALFUNCTION, BECAUSE A CHECK VALVE DID NOT OPERATE PROPERLY. CORRECTIVE ACTION CONSISTS OF A REVISION TO THE UHI ACCUMULATOR LEVEL CALIBRATION PROCEDURE TO DISABLE UHI ISOLATION VALVES IN THE OPEN POSITION PRIOR TO ANY MAINTENANCE OR CALIBRATION ACTIVITY. WHILE THIS WILL NOT PREVENT PRESSURE SURGES BETWEEN TRAINS; IT WILL BLOCK THE ISOLATION VALVES IN THE OPEN POSITION TO ENSURE A FLOW PATH FOR UHI.

[200] MCGUIRE 2 DOCKET 50-370 LER 85-023
 LOST RADIATION MONITOR TEST DOCUMENTATION CAUSES TEST TO BE CLASSIFIED AS MISSED.
 EVENT DATE: 101485 REPORT DATE: 111385 NSSS: WE TYPE: PWR

(NSIC 196970) ON 10-14-85 IT WAS DETERMINED THAT THE MONTHLY SOURCE CHECK SURVEILLANCE ON ALL UNIT 2 EMP'S (RADIATION MONITORING DEVICES) PERFORMED ON 5-19-85, WOULD HAVE TO BE CLASSIFIED AS 'MISSED' DUE TO THE LOSS OF SUPPORTING DOCUMENTATION. THE MONTHLY SURVEILLANCE PERFORMED PRIOR TO AND AFTER THIS EVENT SHOWED THAT THE EMP'S MET THE FUNCTIONAL SPECS. THIS EVENT IS ATTRIBUTED TO PERSONNEL ERROR SINCE THE WORK REQUEST AND DATA SHEETS WERE LOST DURING THE ROUTINE PROCESS. A MANAGEMENT DEFICIENCY CONTRIBUTED TO THE EVENT DUE TO THE LACK OF A PROCEDURE FOR DUPLICATING LOST WORK REQUESTS AND ASSOCIATED DOCUMENTATION. IN ADDITION, THE METHOD CURRENTLY USED TO UPDATE THE COMPUTER WORK REQUEST TRACKING PROGRAM CONTRIBUTED TO THIS EVENT. DUE TO THE LACK OF ADMINISTRATIVE CONTROLS IN DUPLICATING LOST WORK REQUESTS, THE RESOLUTION OF THE LOST WORK REQUEST WAS NOT RESOLVED IN A TIMELY MANNER. THE METHOD OF TRANSFERRING WORK REQUESTS IS BEING REVIEWED FOR POSSIBLE CHANGES.

[201] MCGUIRE 2 DOCKET 50-370 LER 85-029
 INADVERTENT START OF TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP.
 EVENT DATE: 111085 REPORT DATE: 120985 NSSS: WE TYPE: PWR

(NSIC 196747) THE UNIT 2 TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP (AFWPT) AUTOMATICALLY STARTED FROM A LOSS OF NON-ESSENTIAL POWER. THE LOSS OF POWER OCCURRED AS THE RESULT OF A BLOWN FUSE IN THE AUTO-START CIRCUITRY. AS AN ELECTRICAL LEAD TO A PRESSURE SWITCH WAS DISCONNECTED IN ORDER TO IMPLEMENT A TEMPORARY MODIFICATION, THE FUSE BLEW ON THE AUTO-START CIRCUITRY. THE FUSE WAS REPLACED AND THE AFWPT WAS SECURED AT 1200. THE BLOWN FUSE RESULTED FROM HIGH CURRENT CAUSED BY 4 LEAK DETECTION TRANSFORMERS IN THE CIRCUIT. THE HIGH CURRENT WAS BELIEVED TO RESULT FROM HARMONICS PRODUCED WHEN A SCREW WAS LOOSENED ON THE TERMINAL BLOCK OF THE ELECTRICAL LEAD. AUXILIARY FEEDWATER WAS NOT NEEDED BUT WAS AVAILABLE DURING THE EVENT. THE TEMPORARY MODIFICATION WILL BE MADE PERMANENT TO PREVENT RECURRENCE.

[202] MILLSTONE 1 DOCKET 50-245 LER 85-000
 RUST CAUSES RECIRCULATION FLOW CHARACTERISTIC CHANGE.
 EVENT DATE: 011485 REPORT DATE: 102985 NSSS: GE TYPE: BWR

(NSIC 196524) (NON-REPORTABLE EVENT SUBMITTED FOR INFO ONLY) ON 1-14-85, AFTER RETURN TO FULL POWER FOLLOWING A MINOR POWER REDUCTION TO PLACE THE 'A' CONDENSATE BOOSTER PUMP IN SERVICE, A 5% INCREASE IN RECIRCULATION FLOW WAS REQUIRED TO ATTAIN THE SAME CORE FLOW AND CORE THERMAL POWER. THE CHANGE WAS ATTRIBUTED TO INJECTION OF OXIDES FROM THE CONDENSATE BOOSTER PUMP AND ASSOCIATED PIPING INTO THE RCS. SINCE THE RPS FLOW CONVERTERS THAT ARE USED FOR DETERMINING FLOW-BIASED APRM ROD BLOCK AND SCRAM SETPOINTS WERE ALSO AFFECTED, A POTENTIAL EXISTED FOR NON-CONSERVATIVE SETPOINTS AT RECIRCULATION FLOWS LESS THAN 100% OF THE BASELINE VALUE (AT 100% FLOW, THE ROD BLOCK AND SCRAM SETPOINTS ARE CLAMPED AT 108% AND 120% RESPECTIVELY). THE SIGNAL TO THE RPS FLOW CONVERTERS WAS THEN ADJUSTED.

[203] MILLSTONE 1 DOCKET 50-245 LER 85-017
 SPURIOUS APRM HI HI SIGNAL CAUSES REACTOR SCRAM.
 EVENT DATE: 092785 REPORT DATE: 102585 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 196525) ON 9-27-85 AT 1210 HRS WHILE CONDUCTING A REACTOR SHUTDOWN THE REACTOR SCRAMMED ON AVERAGE POWER RANGE MONITOR (APRM) HI HI WHEN THE REACTOR MODE SWITCH WAS CHANGED FROM 'RUN' TO 'STARTUP/HOT STANDBY.' THE REACTOR OPERATOR WAS FOLLOWING PROCEDURE OP 205, PLANNED SHUTDOWN TO HOT STANDBY OR HOT SHUTDOWN, IN ANTICIPATION OF HURRICANE GLORIA. KNOWING THAT A REACTOR SCRAM WOULD OCCUR ON APRM HI HI IF THE MODE SWITCH WAS TAKEN OUT OF 'RUN' WITH REACTOR POWER AT 15% OR GREATER, THE REACTOR OPERATOR CHECKED THE IRM/APRM RECORDERS ON CRP 905, WHICH WERE READING APPROX 13%. THE REACTOR OPERATOR THEN BEGAN MOVING THE MODE SWITCH TO 'STARTUP,' RESULTING IN A REACTOR SCRAM ON APRM HI HI. FIVE APRM CHANNELS HI HI TRIPS WERE SET AT 14% POWER, AND THE OTHER CHANNEL WAS SET AT 13.5% (PROCEDURE CALIBRATION LIMITS ARE 14% PLUS OR MINUS 1). THUS, THE MODE SWITCH WAS MOVED TO 'STARTUP/HOT STANDBY' WITH INDICATED POWER BELOW 15%, BUT NOT BELOW THE APRM HI HI TRIP SETTING WHICH CAUSED A REACTOR SCRAM.

[204] MILLSTONE 1 DOCKET 50-245 LER 85-018
 HURRICANE CAUSES LOSS OF OFFSITE POWER.
 EVENT DATE: 092785 REPORT DATE: 102585 NSSS: GE TYPE: BWR

(NSIC 196526) ON 9-27-85 AT 1334 HRS, WHILE IN THE SHUTDOWN MODE (486 DEGREES F, 600 PSIG) A LOSS OF NORMAL POWER (LNP) OCCURRED CAUSING VARIOUS ISOLATIONS AND SYSTEM INITIATIONS. THE LNP WAS CAUSED BY HURRICANE GLORIA. THE REACTOR WATER

CLEANUP SYSTEM ISOLATED, AND THE STANDBY GAS TREATMENT INITIATED, AS DESIGNED, AS A RESULT OF THE LNP. THE ISOLATION CONDENSER, WHICH WAS BEING PUT IN SERVICE REMOTE-MANUALLY FROM THE CONTROL ROOM, ISOLATED ON A HIGH STEAM/CONDENSATE FLOW SIGNAL. THIS ISOLATION WAS NOT RELATED TO THE LNP. OPERATIONS PERSONNEL FOLLOWED THE OPERATOR ACTIONS DELINEATED IN ONP 503B, 'LOSS OF ALL STATION AC POWER'. THE ISOLATION CONDENSER WAS PLACED IN SERVICE AND USED TO MAINTAIN THE REACTOR IN HOT SHUTDOWN.

[205] MILLSTONE 1 DOCKET 50-245 LER 85-021
 REACTOR PROTECTION OUTPUT BREAKER TRIPS.
 EVENT DATE: 100885 REPORT DATE: 110585 NSSS: GE TYPE: BWR
 VENDOR: BROWN BOVERI

(NSIC 196570) ON 10-8-85 AT 0640 HRS AN AUTOMATIC ACTUATION OF AN ESF OCCURRED. THE #2 ELECTRICAL PROTECTION ASSEMBLY FOR THE 'B' PROTECTION MOTOR GENERATOR SET TRIPPED AT 0604, CAUSING A HALF SCRAM. THE SPURIOUS TRIP WAS CAUSED BY THE TIMING RELAY, WHICH SERVES AS A FINAL TRIP MECHANISM TO THE ISOLATION BREAKER. THE INITIATION OF THE STANDBY GAS TREATMENT SYSTEM AND THE SUBSEQUENT REACTOR BLDG VENTILATION ISOLATION WAS CAUSED BY THE LOSS OF VOLTAGE TO THE TRIP CIRCUITS OF SEVERAL PROCESS RADIATION MONITORS FROM THE 'B' REACTOR PROTECTION SYSTEM BUS. THE PROTECTION TRIP BREAKER WAS RESET AND, WITH THE STANDBY GAS TREATMENT SYSTEM SECURED, THE REACTOR BLDG VENTILATION RETURNED TO NORMAL.

[206] MILLSTONE 1 DOCKET 50-245 LER 85-022
 ISOLATION CONDENSER STEAM SUPPLY PIPE WELD CRACKING.
 EVENT DATE: 103185 REPORT DATE: 111885 NSSS: GE TYPE: BWR
 VENDOR: DRAVO, INC.

(NSIC 196993) ON OCTOBER 31, 1985 AT 1400 HOURS, AS A RESULT OF PERFORMING INSERVICE INSPECTION DURING THE 1985 REFUEL OUTAGE, POSSIBLE INTERGRANULAR STRESS CORROSION CRACKING WAS IDENTIFIED WITHIN THE HEAT AFFECTED ZONE OF THE 12" ISOLATION CONDENSER WELD, DESIGNATION ICAC-F-13. THE WELD IN QUESTION WAS REPAIRED USING THE WELD OVERLAY TECHNIQUE AND A PRESSURE TEST OF THE ISOLATION CONDENSER WILL BE PERFORMED.

[207] MILLSTONE 1 DOCKET 50-245 LER 85-023
 TWO MAIN STEAM ISOLATION VALVES LEAK.
 EVENT DATE: 110485 REPORT DATE: 120385 NSSS: GE TYPE: BWR
 VENDOR: CRANE COMPANY

(NSIC 196664) AT 1300 HRS WHILE PERFORMING LOCAL LEAK RATE TESTING (LLRT) DURING THE 1985 REFUEL OUTAGE, IT WAS IDENTIFIED THAT 2 MSIV'S COULD NOT MEET THE REQUIRED LEAK RATE AS SPECIFIED IN TECH SPEC 4.7.F.2.C. AN INVESTIGATION INTO THE CAUSE OF THE FAILURE IS IN PROGRESS. ADDITIONAL INFORMATION CONCERNING THESE AND ANY OTHER VALVES WHICH FAIL LLRT WILL BE INCLUDED IN AN UPDATE REPORT FOLLOWING THE REFUELING OUTAGE.

[208] MILLSTONE 1 DOCKET 50-245 LER 85-025
 TORUS TO DRYWELL VACUUM BREAKERS' ALARMS OUT OF CALIBRATION.
 EVENT DATE: 111085 REPORT DATE: 121085 NSSS: GE TYPE: BWR
 VENDOR: ASCO VALVES

(NSIC 196665) ON 11-10-85 AT 0300 HRS WHILE PERFORMING A SURVEILLANCE ON THE TORUS TO DRYWELL VACUUM BREAKERS DURING THE 1985 REFUEL OUTAGE, THE ALARM MICROSWITCHES WERE FOUND TO BE OUT OF CALIBRATION. THE ALARMS WERE ADJUSTED AND CALIBRATED TO THEIR PROPER SETPOINTS. AN ENGINEERING EVALUATION IS BEING

PERFORMED ON THE MICROSWITCHES TO ASCERTAIN THE FEASIBILITY OF MICROSWITCH CONTACT AREA DESIGN CHANGES.

[209] MILLSTONE 1 DOCKET 50-245 LER 85-026
 SNUBBER FAILURE.
 EVENT DATE: 111685 REPORT DATE: 120685 NESS: GE TYPE: BWR
 VENDOR: BERGEN-PATTERSON PIPE SUPPORT CORPORATION

(NSIC 196666) ON 11-16-85 AT 1525 HRS, WHILE PERFORMING THE HYDRAULIC SNUBBER FUNCTIONAL TEST IN ACCORDANCE WITH TECH SPEC 4.6.I.3 DURING THE 1985 REFUEL OUTAGE, SNUBBER NUMBER HSS-55 LOCK UP RATE IN TENSION WAS FOUND TO BE OUTSIDE ACCEPTABLE LIMITS. THE SNUBBER VALVE REGULATOR ASSEMBLY WAS DISASSEMBLED AND INSPECTED WITH NO DISCREPANCIES NOTED. SINCE THE SNUBBER FAILED THE FIRST LOCK UP TEST IT CAN ONLY BE ASSUMED THAT PARTIAL BLOCKAGE OF THE METERING PORT OCCURRED BETWEEN TESTS CAUSING THE LOCK UP RATE TO SHIFT. IT SHOULD BE NOTED THAT NO EVIDENCE OF ANY FOREIGN MATTER WAS FOUND WHEN THE VALVE ASSEMBLY WAS DISASSEMBLED. THE SNUBBER WAS REASSEMBLED AND TESTED SATISFACTORY. AS REQUIRED BY TECH SPECS, AN ADDITIONAL SAMPLE OF 10 SNUBBERS WERE FUNCTIONALLY TESTED. ADDITIONAL INFORMATION FOR THIS SNUBBER AND ANY OTHER ADDITIONAL SNUBBERS, BOTH HYDRAULIC AND MECHANICAL, THAT MAY NOT MEET THE SPECIFIC DESIGN ACCEPTANCE CRITERIA WILL BE PROVIDED IN A SUPPLEMENTAL REPORT.

[210] MILLSTONE 2 DOCKET 50-336 LER 85-015
 UNDETECTED LOW FLOW THROUGH CONTAINMENT RADIATION MONITOR.
 EVENT DATE: 100885 REPORT DATE: 110785 NESS: CE TYPE: PWR
 VENDOR: DWYER INSTRUMENTS INC.
 ROOTS - CONNERSVILLE BLOWER

(NSIC 196496) ON 10-8-85 AT 0340 HRS, WITH THE PLANT IN COLD SHUTDOWN (MODE 5) IT WAS DISCOVERED THAT THERE WAS NO SAMPLE FLOW FROM RADMONITOR (RM) RM8262. UPON FURTHER INVESTIGATION OF THE RM8262 FLOW PROBLEM, IT WAS DISCOVERED THAT THE LOW FLOW SWITCH, FLS8262, WAS STUCK IN THE NON-ALARMING POSITION AND THE AUCTION VALVE (2-EB-89) FOR RM8262 WAS FOUND TO BE CLOSED. IMMEDIATE OPERATOR RESPONSE WAS TO OPEN VALVE 2-EB-89 AND VERIFY PROPER FLOW. A TROUBLE REPORT WAS SUBMITTED FOR THE SWITCH WHICH WAS REPAIRED AND CALIBRATED. THE CAUSE OF THE OCCURRENCE WAS A FAILURE OF THE OPERATOR TO VERIFY PROPER FLOW THROUGH THE RADMONITOR WHEN IT WAS PLACED BACK IN SERVICE AFTER ROUTINE MAINTENANCE WAS PERFORMED ON THE RADMONITOR. IN ADDITION THE FAILURE OF THE FLOW SWITCH CONTRIBUTED TO THE OCCURRENCE. CONTAINMENT ATMOSPHERE WAS ROUTINELY BEING SAMPLED BY HEALTH PHYSICS AND CONTAINMENT INTEGRITY WAS NOT REQUIRED. THE EVENT WAS DISCUSSED WITH THE OPERATORS INVOLVED, EMPHASIZING THE REQUIREMENT TO VERIFY PROPER FLOW WHEN PLACING A RADMONITOR IN SERVICE. SIMILAR LER'S: 80-17 AND 82-01.

[211] MONTICELLO DOCKET 50-263 LER 85-017
 EFT ACTUATION DUE TO TAPE RUNOUT.
 EVENT DATE: 100785 REPORT DATE: 110685 NESS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 196997) ON OCTOBER 7, 1985 THE EFT SYSTEM (CONTROL ROOM HVAC) TRANSFERRED TO THE EMERGENCY MODE WHEN ONE CHLORINE MONITOR TAPE CASSETTE RAN OUT OF TAPE RESULTING IN A SPURIOUS TRIP OF THE MONITOR. AN INSUFFICIENT LENGTH OF SENSING TAPE HAD BEEN SUPPLIED BY THE MANUFACTURER. A NEW TAPE CASSETTE WAS INSTALLED AND THE EFT SYSTEM WAS RETURNED TO THE NORMAL MODE OF OPERATION. ON OCTOBER 31, 1985, THE EFT SYSTEM TRANSFERRED TO THE TOXIC CHEMICAL MODE AS A RESULT OF A TAPE BREAKING ON A CHLORINE MONITOR. INVESTIGATION REVEALED A DEFECTIVE TAPE. THE TAPE WAS REPLACED AND SUBSEQUENT OPERATION OF THE MONITOR HAS BEEN SATISFACTORY. THE MANUFACTURER HAS BEEN INFORMED OF BOTH PROBLEMS.

[212] MONTICELLO DOCKET 50-263 LER 85-019
 FUEL OIL SURVEILLANCE TEST MISSED.
 EVENT DATE: 101185 REPORT DATE: 110985 NSSS: GE TYPE: BWR

(NSIC 196575) ON 10-11-85, IT WAS DETERMINED THAT THE AUGUST DIESEL FUEL OIL SAMPLE HAD NOT BEEN ANALYZED FOR QUALITY AS REQUIRED BY TECH SPEC 4.9.B.3.F. THE SAMPLE WAS TAKEN BUT NOT SENT TO THE TESTING LAB FOR ANALYSIS DUE TO A PROCEDURAL DEFICIENCY. THE PROCEDURE WILL BE REVISED TO PREVENT FUTURE SIMILAR EVENTS.

[213] MONTICELLO DOCKET 50-263 LER 85-018
 USE OF OUTDATED RADIATION MONITOR TEST PROCEDURE CAUSES SBGTS INITIATION.
 EVENT DATE: 101585 REPORT DATE: 111485 NSSS: GE TYPE: BWR

(NSIC 196574) ON 10-15-85, A REACTOR BLDG ISOLATION AND INITIATION OF STANDBY GAS TREATMENT OCCURRED DURING ROUTINE PERFORMANCE OF TEST #1267, REACTOR BLDG EXHAUST PLENUM MONITOR MONTHLY FUNCTIONAL TEST. THE ISOLATION WAS CAUSED BY AN UPSCALE TRIP FROM THE MONITOR WHEN THE TRIP CHECK PUSH BUTTON WAS RELEASED. THE POTENTIAL FOR THIS OCCURRENCE HAD BEEN RECOGNIZED PREVIOUSLY, AND CHANGES TO TEST #1267 HAD BEEN COMPLETED; HOWEVER, THE MOST RECENT REVISION OF THE TEST WAS NOT USED ON 10-15. THE UPSCALE TRIP WAS RESET AND SBGTS WAS SECURED. FEWER COPIES OF THE PROCEDURES REQUIRING TEMPORARY CHANGES WILL BE PLACED IN THE FILE AND EACH WILL HAVE A HOLD SHEET ATTACHED.

[214] NINE MILE POINT 1 DOCKET 50-220 LER 83-029
 SEDIMENT CESIUM LEVEL EXCEEDS LIMIT.
 EVENT DATE: 092983 REPORT DATE: 100783 NSSS: GE TYPE: BWR

(NSIC 189506) CAUSE - SITE LIQUID EFFLUENT. ANALYSIS OF A SHORELINE SEDIMENT SAMPLE SHOWED A CS-137 LEVEL OF 42.72 TIMES THE CONTROL SAMPLE LEVEL. THIS IS HIGHER THAN THE TECH SPEC 4.6.2(B) REPORTABLE LEVEL OF TEN TIMES THE CONTROL SAMPLE. A RECOUNT OF THE SAMPLE CONFIRMED THE RESULTS. A SIGNIFICANT PORTION OF THE DETECTED CS-137 IS A RESULT OF SITE LIQUID EFFLUENTS. THE NOV 1982 SAMPLE SHOWED CS-137 TO BE 16 TIMES THE CONTROL RESULT. THE MAY 1983 SAMPLE SHOWED CS-137 TO BE 43 TIMES THE CONTROL RESULT. THE DIFFERENCE BETWEEN NOV 1982 AND MAY 1983 SAMPLE RESULTS IS NOT DUE TO AN INCREASE IN THE LEVEL OF CS-137 CONTAINED IN THE SHORELINE SAMPLE, BUT TO A LARGE DECREASE IN THE CONTROL SAMPLE LLD LEVEL DURING MAY 1983. THE MAY 1983 AND NOV 1982 SAMPLES ARE APPROXIMATELY EQUAL. NO IMMEDIATE CORRECTIVE ACTION WILL BE TAKEN BECAUSE (A) LIQUID EFFLUENT LEVELS ARE ALREADY MAINTAINED WELL WITHIN TECH SPECS, (B) ACTUAL LEVELS OF CS-137 DID NOT RISE SIGNIFICANTLY OVER THE PREVIOUS SAMPLE LEVEL AND (C) THERE ARE NO DOSE CONSEQUENCES TO THE PUBLIC.

[215] NINE MILE POINT 1 DOCKET 50-220 LER 85-014
 REACTOR SCRAM WHILE PERFORMING SURVEILLANCE TEST.
 EVENT DATE: 081985 REPORT DATE: 091885 NSSS: GE TYPE: BWR

(NSIC 196323) ON AUGUST 19, 1985 A MAINTENANCE ELECTRICIAN INADVERTENTLY GROUNDED THE MAIN GENERATOR EXCITATION SYSTEM AMPLIDYNE MOTOR GENERATOR SET DURING THE PERFORMANCE OF A SCHEDULE SURVEILLANCE INSPECTION. THIS SUBSEQUENTLY CAUSED A MAIN GENERATOR TRIP, TURBINE TRIP, AND REACTOR SCRAM. THE HIGH PRESSURE COOLANT INJECTION MODE OF FEEDWATER INITIATED AND A PRESSURE TRANSIENT CAUSED ALL SIX ELECTROMAGNETIC RELIEF VALVES AND ALL NINE TURBINE BYPASS VALVES TO OPEN AND SUBSEQUENTLY RESET WITHOUT INCIDENT. THE #11 REACTOR FEEDWATER PUMP TRIPPED DUE TO AN INVALID LOW OIL PRESSURE SIGNAL BUT PLANT OPERATORS WERE ABLE TO MAINTAIN REACTOR WATER VESSEL WATER LEVEL WITH THE REMAINING FEEDWATER PUMP. THE AMPLIDYNE MG SET AND #11 REACTOR FEEDWATER PUMP WERE REPAIRED AND RETURNED TO SERVICE SATISFACTORILY. THE MAINTENANCE PROCEDURE IS BEING REVISED TO INCLUDE PRECAUTIONS TO ALERT MAINTENANCE PERSONNEL TO ITS IMPACT ON PLANT OPERATIONS.

[216] NINE MILE POINT 1 DOCKET 50-220 LER 85-016
 THREE FIRE DAMPERS FAIL TO CLOSE DUE TO WIRING ERROR.
 EVENT DATE: 092785 REPORT DATE: 102585 NSSS: GE TYPE: BWR

(NSIC 196520) ON 9-22-85 THREE NORMALLY OPEN DAMPERS (BV210-31, BV210-34, BV210-35) FAILED TO ISOLATE ON A HALON SUPPRESSION SIGNAL. A FIRE WATCH WAS IMMEDIATELY ESTABLISHED AND A WORK REQUEST GENERATED TO TROUBLESHOOT THE PROBLEM. IT WAS DISCOVERED ON 9-27-85 THAT A WIRING CHANGE PERFORMED ON 9-18-85 ON A SEPARATE, INDEPENDENT DAMPER CAUSED AN INTERRUPTION TO THE CLOSE INITIATION CIRCUIT FROM HALON AND CARBON DIOXIDE SUPPRESSION TO DAMPERS BV210-31, BV210-34, AND BV210-35. TECH SPEC 3.6.10.2.B REQUIRES THAT A FIRE WATCH BE POSTED WITHIN 1 HR IF HALON SUPPRESSION IS FOUND INOPERABLE. THEREFORE, FROM 9-18 TO THE 22ND HALON SUPPRESSION IN THE AUX CONTROL ROOM WAS INOPERABLE WITH NO FIRE WATCH ESTABLISHED. AFTER THE WIRING CORRECTION WAS MADE, DAMPER ISOLATION ON SUPPRESSION SIGNAL WAS SUCCESSFULLY TESTED. THE SYSTEM WAS DECLARED OPERABLE AND THE FIRE WATCH WAS CLEARED.

[217] NINE MILE POINT 1 DOCKET 50-220 LER 85-018
 SURVEILLANCE TEST FOR FIRE PUMP DELAYED.
 EVENT DATE: 101085 REPORT DATE: 110885 NSSS: GE TYPE: BWR

(NSIC 196521) THE FIRE SUPPRESSION TECH SPEC SECTION 4.6.7.B.4 FOR NINE MILE POINT UNIT 1 REQUIRES STARTING OF THE EMERGENCY DIESEL FIRE PUMP AT LEAST ONCE PER 6 MONTHS BY USING THE MANUAL BYPASS OF THE SOLENOID ON THE STARTING AIR SYSTEM. THIS REQUIREMENT BECAME EFFECTIVE 12-20-83. THE FIRST PERFORMANCE OF THE PROCEDURE FOR FULFILLING THIS REQUIREMENT (N1-ST-SA3 REV. 0) WAS DONE IN MAY 1984. HOWEVER, THE DIESEL ONLY STARTED AFTER THE STARTING AIR PRESSURE REACHED THE LOW AIR PRESSURE START SET POINT. THE TEST WAS CONSIDERED A FAILURE SINCE THE INTENT OF THE TECH SPEC HAD NOT BEEN MET, A MANUAL START OF THE DIESEL FIRE PUMP. FUNCTIONALLY THE LOW AIR PRESSURE START TEST OF 4.6.7.B.2.E WAS PERFORMED. UPON EVALUATION IT WAS DETERMINED THAT IN ORDER TO START THE DIESEL FIRE PUMP, SOLENOIDS ON THE GOVERNOR SYSTEM HAD TO BE ENERGIZED OR MANUALLY BYPASSED. PERFORMANCE OF SECTION 4.6.7.B.4 WAS DISCONTINUED UNTIL MODIFICATIONS COULD BE MADE AND THE INTENT OF THE TECH SPEC MET. THE MODIFICATIONS WERE COMPLETED AND A SYSTEM MANUAL START WAS PERFORMED 10-1-85 TO FULFILL TECH SPEC 4.6.7.B.4.

[218] NINE MILE POINT 1 DOCKET 50-220 LER 85-019
 POTENTIAL CONDITION OF NOT MEETING TECH SPEC CLOSURE TIME FOR EMERGENCY CONDENSER DC MOV'S.
 EVENT DATE: 101585 REPORT DATE: 111485 NSSS: GE TYPE: BWR
 VENDOR: CRANE COMPANY

(NSIC 196988) IT WAS REPORTED BY NMPC ENGINEERING THAT EMERGENCY CONDENSER ISOLATION DC MOTOR OPERATED VALVES 39-07 AND 39-08 MIGHT NOT CLOSE WITHIN THE 38 SECONDS REQUIRED BY TECH SPEC SECTION 3.2.7 UNDER ACCIDENT CONDITIONS. A TELEPHONE NOTIFICATION WAS MADE REPORTING THIS EVENT. THIS PROBLEM WAS DISCOVERED WHILE PERFORMING AN ANALYSIS FOR THE NEW ISOLATION VALVES, WHICH ARE TO BE INSTALLED DURING THE 1986 REFUELING OUTAGE. THE EXISTING ELECTRIC POWER SUPPLY CABLES MAY BE SIZED TOO SMALL TO ENSURE VALVE CLOSURE UNDER ACCIDENT CONDITIONS WITHIN THE REQUIRED TECH SPEC TIME FRAME. JUSTIFICATION FOR CONTINUED OPERATION IS PROVIDED BY A GENERAL ELECTRIC ANALYSIS FOR UNIT 1 WHICH SHOWED THAT NO FUEL DAMAGE WOULD OCCUR, THE CORE WOULD NOT BE UNCOVERED, AND OFFSITE RELEASES WOULD NOT EXCEED 10 CFR 100 LIMITS FOR AN EMERGENCY CONDENSER STEAM LINE RUPTURE WITHOUT ISOLATION. DURING A RECENT FORCED OUTAGE THE POWER SUPPLY CABLES FOR ISOLATION VALVE 39-08 WERE REPLACED WITH CORRECTLY SIZED CABLES CAPABLE OF ISOLATING THE VALVE IN ACCORDANCE WITH TECH SPECS. AFTER THE NEW CABLES WERE INSTALLED, CLOSURE TIME FOR ISOLATION VALVE 39-08 WAS VERIFIED AND EMERGENCY COOLING LOOP #12 RETURNED TO SERVICE. REDUNDANT EMERGENCY COOLING LOOP #11 WAS DECLARED INOPERABLE AND ISOLATED. DURING THE UPCOMING REFUELING OUTAGE (MARCH

1986) ALL FOUR EMERGENCY CONDENSER ISOLATION VALVES (39-07, 08, 09, 10) AND OPERATORS WILL REPLACE.

[219] NINE MILE POINT 1 DOCKET 50-220 LER 85-020
 SPURIOUS TRIP OF UNINTERRUPTIBLE POWER SUPPLY BREAKER.
 EVENT DATE: 103085 REPORT DATE: 112785 NSSS: GE TYPE: BWR

(NSIC 196989) ON OCTOBER 30, 1985, WITH THE REACTOR OPERATING AT 99% POWER, A MOMENTARY LOSS OF OUTPUT POWER FROM UNINTERRUPTIBLE POWER SUPPLY MOTOR-GENERATOR SET #162 WAS EXPERIENCED. THIS EVENT CAUSED THE REACTOR BUILDING VENTILATION SYSTEM TO SHIFT TO ITS EMERGENCY MODE OF OPERATION WHEN POWER WAS LOST TO ITS RESPECTIVE RADIATION MONITORING DETECTORS. THE CONTROL ROOM EMERGENCY VENTILATION SYSTEM RECEIVED AN ACTUATION SIGNAL AS DESIGNED, BUT DID NOT SHIFT INTO THE EMERGENCY VENTILATION MODE AS THE SYSTEM WAS ADMINISTRATIVELY INOPERATIVE AT THE TIME AND EMERGENCY FAN CONTROL SWITCHES WERE IN THE OFF POSITION. IN ADDITION, POWER WAS LOST TO REACTOR PROTECTION SYSTEM BUS #11 AND THE FEEDWATER CONTROL SYSTEM TRANSFERRED TO ITS ALTERNATE POWER SUPPLY. THE EVENT WAS INITIATED BY A GENERATOR UNDERVOLTAGE RELAY SENSING A SPURIOUS UNDERVOLTAGE WHICH CAUSED THE OPENING OF THE OUTPUT BREAKER. MONITORING OF THE REACTOR PROTECTION SYSTEM BUS #11 HAS REVEALED CONSIDERABLE NOISE WHICH MAY HAVE CONTRIBUTED TO THE INCIDENT.

[220] NINE MILE POINT 1 DOCKET 50-220 LER 85-022
 FAULTY TURBINE BYPASS VALVE CAUSES TWO REACTOR SCRAMS.
 EVENT DATE: 110785 REPORT DATE: 120685 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 196711) DURING STARTUP ON 11-7-85 AT 0638 AND AGAIN AT 2016 TURBINE BYPASS VALVE 12-H INADVERTNETLY CLOSED, RESULTING IN A DECREASE IN REACTOR WATER LEVEL AND SUBSEQUENT SCRAM AND INITIATION OF HPCI MODE OF FEEDWATER ON LOW REACTOR WATER LEVEL. THE PLANT ENGINEERED SAFETY SYSTEMS FUNCTIONED AS DESIGNED. AFTER THE FIRST SCRAM, ALL THE BYPASS VALVES WERE STROKED AND CHECKED FOR OPERATING DIFFICULTIES. NONE WERE FOUND UNDER COLD CONDITIONS. AFTER THE SECOND SCRAM, ALL THE BYPASS VALVES WERE AGAIN STROKED AND CHECKED FOR OPERATING DIFFICULTIES. AGAIN, NONE WERE FOUND UNDER COLD CONDITIONS. HOWEVER, DURING STARTUP AFTER THE SECOND SCRAM, TURBINE BYPASS VALVE 12-H WAS MANUALLY CONTROLLED. THE STARTUP PROCEEDED WITHOUT RECURRENCE OF THE SAME PROBLEM. THE PROBLEM WITH BYPASS VALVE 12-H IS ATTRIBUTED TO MECHANICAL STICKING AT ELEVATED TEMPERATURES. DURING BOTH STARTUP EVENTS, BYPASS VALVE 12-H RECEIVED AN OPEN SIGNAL FROM THE MECHANICAL PRESSURE REGULATOR. INITIALLY THE VALVE DID NOT OPEN SMOOTHLY. AFTER SOME TIME THE FORCE BEING APPLIED TO THE VALVE OVERCAME THE FRICTION FORCE AND THE VALVE OPENED TO A POSITION GREATER THAN THE REGULATOR SIGNAL, THEREBY ALLOWING TOO MUCH STEAM FLOW. AS A REACTION, THE MECHANICAL PRESSURE REGULATOR TRANSMITTED A CLOSE SIGNAL TO BYPASS VALVE 12-H.

[221] NINE MILE POINT 1 DOCKET 50-220 LER 85-023
 HIGH TURBINE EXHAUST TEMPERATURE CAUSES REACTOR SCRAM.
 EVENT DATE: 110885 REPORT DATE: 120685 NSSS: GE TYPE: BWR

(NSIC 196712) ON 11-8-85 AT 2210, WITH PREPARATIONS BEING MADE FOR A MAIN TURBINE STARTUP, HIGH TEMPERATURE IN THE MAIN TURBINE EXHAUST HOOD CAUSED A TURBINE TRIP AND ACTUATION OF THE HPCI MODE OF FEEDWATER FLOW. THE HIGH EXHAUST HOOD TEMPERATURE WAS A RESULT OF MULTIPLE TURBINE BYPASS VALVES OPEN FOR ELECTROMATIC RELIEF VALVE SURVEILLANCE TESTING, PREWARMING OF THE SECOND STAGE REHEATERS, AND MANUAL CONTROL OF THE EXHAUST HOOD DESUPERHEATING SPRAYS. ALL PLANT ENGINEERED SAFETY FEATURES FUNCTIONED AS DESIGNED. THE FEEDWATER SYSTEM WAS RETURNED TO ITS NORMAL LINEUP AND, AFTER EXHAUST HOOD TEMPERATURES HAD DECREASED SUFFICIENTLY, THE MAIN TURBINE STARTUP PROCEEDED WITHOUT INCIDENT.

[222] NORTH ANNA 1 DOCKET 50-338 LER 83-061 REV 3
 UPDATE ON FAILURE OF HIGH HEAD SAFETY INJECTION PUMP.
 EVENT DATE: 092183 REPORT DATE: 060685 NSSS: WE TYPE: PWR
 VENDOR: PACIFIC PUMPS

(NSIC 196657) ON SEPTEMBER 21, 1983, ONE HIGH HEAD SAFETY INJECTION (HHSI) PUMP OUT OF SERVICE, A SECOND HHSI PUMP WAS REMOVED FROM SERVICE AT 2350 DUE TO HIGH BEARING VIBRATIONS. THIS IS CONTRARY TO THE LCO OF TECH SPEC 3.5.2 WHICH REQUIRES TWO OPERABLE HHSI PUMPS IN MODE 1. THE REMAINING HHSI PUMP WAS OPERABLE AND A SECOND HHSI PUMP WAS RESTORED TO OPERABLE WITHIN THE TIME LIMITS OF THE ACTION STATEMENT. THIS EVENT IS REPORTABLE PURSUANT TO TECH SPEC 6.9.1.9.B. THE "1C" HHSI PUMP WAS TAGGED OUT FOR MAINTENANCE AT THE TIME OF THE EVENT. THE "1A" HHSI PUMP WAS REMOVED FROM SERVICE DUE TO HIGH THRUST BEARING VIBRATIONS. AN INSPECTION OF THE "1A" HHSI PUMP REVEALED A WARPED PUMP SHAFT WHICH RESULTED IN THE HIGH THRUST BEARING VIBRATIONS. AN INVESTIGATION REVEALED THAT NEW SHAFTS OFTEN REQUIRE STRAIGHTENING AT THE FACTORY. THIS USED TO BE ACCOMPLISHED BY PEENING THE HIGH SIDE OF THE BOW. IT IS BELIEVED THAT DURING OPERATION THE SHAFT TENDS TO REVERT BACK TO ITS ORIGINAL SHAPE AS THE STRESSES CREATED DURING PEENING ARE RELIEVED. THE "1C" HHSI PUMP WAS TESTED SATISFACTORILY AND RETURNED TO SERVICE AT 1931 ON SEPTEMBER 22, 1983.

[223] NORTH ANNA 1 DOCKET 50-338 LER 85-016
 PLANT SHUTDOWN REQUIRED DUE TO HIGH RCS BYPASS VALVE LEAKAGE.
 EVENT DATE: 091185 REPORT DATE: 100285 NSSS: WE TYPE: PWR
 VENDOR: ROCKWELL MANUFACTURING COMPANY

(NSIC 196681) ON SEPTEMBER 11, 1985, WITH NORTH ANNA UNIT 1 OPERATING AT 100% POWER, OPERATIONS PERSONNEL NOTICED INCREASED MAKEUP FLOW TO THE REACTOR COOLANT SYSTEM AND AN INCREASED PUMPING FREQUENCY OF THE PRIMARY DRAINS TRANSFER TANK. AT 1235 HOURS ON SEPTEMBER 11, 1985, IDENTIFIED LEAKAGE WAS DETERMINED TO BE GREATER THAN THE 10 GPM LIMIT OF TECH SPEC 3.4.6.2 AND THE APPLICABLE ACTION STATEMENT WAS ENTERED. A CONTAINMENT ENTRY IDENTIFIED THE LOOP 'B' REACTOR COOLANT SYSTEM BYPASS LINE MOTOR-OPERATED VALVE AS HAVING AN ELEVATED LEAK-OFF TEMPERATURE AS WELL AS VISIBLE LEAKAGE FROM A FLANGED CONNECTION IN THE LEAK-OFF LINE TO THE PRIMARY DRAINS TRANSFER TANK. AT 2142 HOURS THE UNIT WAS PLACED IN HOT STANDBY (MODE 3) IN ACCORDANCE WITH THE ACTION STATEMENT OF TECH SPEC 3.4.6.2. AT 2340 THE VALVE WAS OPENED ON ITS BACKSEAT AND LEAKAGE FROM THE LEAK-OFF LINE FLANGED CONNECTION WAS STOPPED. RCS LEAKAGE WAS DETERMINED TO BE WITHIN TECH SPEC LIMITS AT 0220 HOURS ON SEPTEMBER 12, 1985, AND THE TECH SPEC ACTION STATEMENT WAS CLEARED. MAINTENANCE WAS PERFORMED AND AT 1514 ON SEPTEMBER 13, 1985, AN ACCEPTABLE RCS LEAKRATE WAS OBTAINED WITH THE VALVE IN ITS CLOSED POSITION. THE UNIT WAS TAKEN CRITICAL AT 0444 HOURS ON SEPTEMBER 17, 1985, AND SUBSEQUENTLY PLACED ON LINE.

[224] NORTH ANNA 1 DOCKET 50-338 LER 85-018
 REACTOR OPERATOR'S LICENSE EXPIRES DUE TO ADMINISTRATIVE ERROR.
 EVENT DATE: 091785 REPORT DATE: 100485 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: NORTH ANNA 2 (PWR)

(NSIC 196288) ON 9-17-85 TRAINING PERSONNEL DISCOVERED THAT A REACTOR OPERATOR'S LICENSE HAD EXPIRED ON 9-3-85. THE REACTOR OPERATOR WAS IMMEDIATELY RESTRICTED TO NON-LICENSED OPERATORS DUTIES. FROM 9-4 TO 9-17-85 THE OPERATOR PERFORMED LICENSE DUTIES AS A REACTOR OPERATOR FOR 6 DAYS ON UNIT 2, AT 100% POWER, AND AS A THIRD LICENSED REACTOR OPERATOR FOR 1 WEEK FOR BOTH UNITS. THIS EVENT IS CONTRARY TO SECTION 6.2.2.B OF THE PLANTS TECH SPECS AND IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I)(B). THIS VIOLATION OCCURRED WHEN TRAINING PERSONNEL INCORRECTLY ASSUMED THE EFFECTIVE DATE OF THE LICENSE WAS THE ISSUANCE DATE OF THE LETTER AND ENTERED THAT DATE INTO THE LICENSE EXPIRATION DATE TRACKING SYSTEM. ALL NORTH ANNA POWER STATION SENIOR REACTOR OPERATOR AND REACTOR

OPERATOR LICENSES WERE REVIEWED TO VERIFY CORRECT DATES WERE ENTERED INTO THE TRACKING SYSTEM. TO PREVENT RECURRENCE OF SIMILAR EVENTS ADMINISTRATIVE CONTROLS FOR THE LICENSE EXPIRATION DATE TRACKING SYSTEM WILL BE REVIEWED AND REVISED AS REQUIRED.

[225] NORTH ANNA 2 DOCKET 50-339 LER 85-010
 INOPERABLE EMERGENCY DIESEL GENERATOR CAUSES FORCED PLANT SHUTDOWN.
 EVENT DATE: 100885 REPORT DATE: 110785 NSSS: WE TYPE: PWR
 VENDOR: COLT INDUSTRIES, INC.

(NSIC 196486) AT 0630 ON 10-8-85 THE 2H EMERGENCY DG WAS REMOVED FROM SERVICE TO PERFORM PREVENTATIVE MAINTENANCE. FOLLOWING MAINTENANCE, THE EDG WAS STARTED AT 0225 ON 10-10-85 TO PROVE OPERABILITY. 30 MINS LATER IT TRIPPED ON HIGH CRANKCASE PRESSURE. A SUBSEQUENT INSPECTION DETERMINED THE CAUSE OF THE HIGH CRANKCASE PRESSURE TO BE A CRACKED UPPER PISTON AND CYLINDER LINER DAMAGE. ALL UPPER PISTON ASSEMBLIES, AND 2 CYLINDER LINERS WERE REPLACED. THREE OF THE LOWER PISTON ASSEMBLIES WERE FOUND ACCEPTABLE AND REUSED, THE OTHERS WERE REPLACED. SINCE REPAIRS TO THE 2H EMERGENCY DG COULD NOT BE COMPLETED WITHIN THE 72 HR TIME LIMIT SPECIFIED IN THE TECH SPECS, A UNIT RAMPDOWN FROM 100% POWER WAS COMMENCED AT 0630 ON 10-11-85. A NOTIFICATION OF UNUSUAL EVENT WAS DECLARED BECAUSE OF THE FORCED SHUTDOWN. THIS EVENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I)(A). UNIT 2 WAS PLACED IN COLD SHUTDOWN AT 1725 ON 10-12-85. THE 2H EDG WAS DECLARED OPERABLE AT 2025 ON 10-14-85 AND THE UNIT WAS PLACED ON LINE AT 2148 ON 10-17-85.

[226] OYSTER CREEK DOCKET 50-219 LER 85-020
 LOSS OF BOTH DIESEL GENERATORS.
 EVENT DATE: 111185 REPORT DATE: 120685 NSSS: GE TYPE: BWR
 VENDOR: GENERAL MOTORS
 WOODWARD GOVERNOR COMPANY

(NSIC 196710) ON 11-11-85 AT 0355 HRS DG 1-2 WAS DECLARED INOPERABLE BECAUSE OF A FAILURE IN THE ELECTRIC GOVERNOR ACTUATOR CONTROLLER WHICH TRIPPED THE DG BREAKER DURING A SURVEILLANCE TEST. PRIOR TO THIS, DG 1-1 WAS REMOVED FROM SERVICE FOR BATTERY REPLACEMENT. WITH BOTH DG'S INOPERABLE, THE CORE SPRAY SYSTEM AND THE STANDBY GAS TREATMENT SYSTEM WERE CONSIDERED INOPERABLE. THE REACTOR WAS IN A COLD SHUTDOWN CONDITION AT THE TIME AND IMMEDIATE ACTIONS PERFORMED CONSISTED OF MAINTENANCE TO TROUBLESHOOT AND REPAIR DG 1-2 AND EXPEDITE THE RETURN TO SERVICE OF DG 1-1. ADMINISTRATIVE CONTROLS WERE IMPLEMENTED TO PREVENT ACTIVITIES FROM BEING PERFORMED ON THE REFUELING FLOOR THAT COULD RESULT IN THE RELEASE OF RADIOACTIVE MATERIALS AND TO PREVENT MAINTENANCE FROM BEING PERFORMED ON SYSTEMS THAT CONNECT TO THE REACTOR VESSEL LOWER THAN THE TOP OF ACTIVE FUEL, UNLESS THE SYSTEM WAS ISOLATED BY AT LEAST ONE LOCKED CLOSED VALVE. THE CAUSE WAS ATTRIBUTED TO AN ELECTRONIC COMPONENT FAILURE WITHIN THE ELECTRIC GOVERNOR ACTUATOR. CORRECTIVE ACTION CONSISTED OF REPLACING THE ELECTRIC GOVERNOR ACTUATOR. THE FAILED UNIT WAS SENT TO THE MANUFACTURER TO IDENTIFY THE FAILED ELECTRONIC COMPONENT.

[227] PALISADES DOCKET 50-255 LER 85-017
 ELECTRICAL EQUIPMENT QUALIFICATION REVIEW IDENTIFIES DEFICIENT ESF ROOM THERMOSTATS.
 EVENT DATE: 090985 REPORT DATE: 100985 NSSS: CE TYPE: PWR
 VENDOR: JOHNSON CONTROLS INC.

(NSIC 196573) ON 9-9-85, WITH THE PLANT AT POWER, A REVIEW OF ELECTRICAL EQUIPMENT QUALIFICATION (EEQ) ISSUES DETERMINED THAT THE ENGINEERED SAFEGUARDS ROOM COOLER TEMPERATURE CONTROL SWITCHES DID NOT MEET THE SCHEDULE REQUIREMENTS OF 10CFR50.49. THE ROOM COOLER FANS WERE SUBSEQUENTLY PLACED IN OPERATION IN MANUAL TO BYPASS THE TEMPERATURE SWITCHES. EVALUATION DETERMINED THAT, AS A

RESULT OF A TRANSFER OF RESPONSIBILITY FOR THE QUALIFICATION OF THE SWITCHES, NO SPECIFIC GROUP WAS ASSIGNED TO ENSURE COMPLIANCE WITH THE 10 CFR 50.49 REQUIREMENTS. THE TEMPERATURE SWITCHES HAVE BEEN INSTALLED AND ARE AWAITING OPERATIONAL TESTING. UNTIL TESTING IS COMPLETED, THE ROOM COOLERS WILL BE OPERATING IN MANUAL. A REVIEW OF THE EEQ LIST DETERMINED THIS ERROR TO BE AN ISOLATED OCCURRENCE. OFFICIAL PROJECT SCOPE CHANGES WILL BE REVIEWED WITH THE INVOLVED DEPARTMENTS TO ENSURE PROPER TRANSFER OF RESPONSIBILITY. THIS OCCURRENCE RESULTED FROM ADMINISTRATIVE ERRORS IN THE IMPLEMENTATION OF 10 CFR 50.49. ADEQUATE ALTERNATIVE METHODS WERE AVAILABLE TO PROVIDE THE ENGINEERED SAFEGUARDS ROOM COOLING REQUIREMENTS.

[228] PALISADES DOCKET 50-255 LER 85-021
NO SENIOR OPERATORS IN THE CONTROL ROOM.
EVENT DATE: 100985 REPORT DATE: 110885 NSSS: CE TYPE: PWR

(NSIC 196494) 10CFR50.54(M)(2)(III) REQUIRES AT LEAST ONE LICENSED SENIOR OPERATOR SHALL BE PRESENT IN THE CONTROL ROOM AT ALL TIMES DURING CONDITIONS OTHER THAN COLD SHUTDOWN OR REFUELING SHUTDOWN. CONSUMERS POWER COMPANY'S PROPOSED CHANGE TO TECH SPEC 6.2.2(C) DATED 1-11-85 MAKES THIS A REQUIREMENT IN THE PALISADES TECH SPEC. COMPLIANCE IS ENSURED BY AN OPERATIONS DEPARTMENT ADMINISTRATIVE PROCEDURE. ALL SENIOR OPERATORS ARE AWARE OF THIS REQUIREMENT AND THE NEED TO PROVIDE FULL COMPLIANCE. AT 1610 ON 10-9-85, A MISUNDERSTANDING BETWEEN THE OPERATIONS DEPARTMENT SHIFT SUPERVISOR AND SHIFT ENGINEER RESULTED IN NO LICENSED SENIOR OPERATORS IN THE CONTROL ROOM FOR APPROX 5 MINS. THIS OCCURRENCE RESULTED FROM A PERSONNEL ERROR. BOTH SRO'S THOUGHT THAT THEY RECEIVED ACKNOWLEDGEMENT BEFORE LEAVING THE CONTROL ROOM. THE ERROR WAS REVIEWED AND DETERMINED TO BE AN ISOLATED OCCURRENCE. THERE HAVE BEEN NO SIMILAR OCCURRENCES IN THE PAST. ONE SRO WAS READILY AVAILABLE AT ALL TIMES.

[229] PALO VERDE 1 DOCKET 50-528 LER 85-052
POST ACCIDENT SAMPLING SYSTEM HAS MATERIAL DEFICIENCIES.
EVENT DATE: 080885 REPORT DATE: 091085 NSSS: CE TYPE: PWR
VENDOR: AIRMATIC VALVE INC.

(NSIC 196697) ON AUGUST 8, 1985, PALO VERDE UNIT 1 WAS IN HOT SHUTDOWN FOR CONDENSER TUBE LEAK PROBLEMS. AS A RESULT OF A CONFIRMATORY ENGINEERING REVIEW OF THE POST ACCIDENT SAMPLING SYSTEM (PASS)(IP), COMPONENTS WITHIN THE LIQUID SAMPLING SYSTEM WERE IDENTIFIED WHICH WERE NOT SUITABLE FOR THEIR SERVICE ENVIRONMENT. THIS RESULTED IN THE PLANT POTENTIALLY BEING OUTSIDE DESIGN CONDITIONS FOR THE PASS AS SPECIFIED IN NUREG-0737. THE LIMITING CONDITION WHICH WAS IDENTIFIED WAS THE POTENTIAL BREAKDOWN OF INSULATION IN SOLENOID AIR VALVES DUE TO RADIATION EXPOSURE, WHICH MIGHT HAVE OCCURRED FOLLOWING A POSTULATED ACCIDENT WITH RESULTING DOSAGES AS ASSUMED IN NUREG-0737. THIS MIGHT HAVE PREVENTED THE OPERATION OF THE LIQUID SAMPLE PORTIONS OF THE PASS. TO CORRECT THIS SPECIFIC CONDITION, THE SYSTEM WAS MODIFIED AND/OR SHIELDED TO ASSURE ITS OPERABILITY FOLLOWING A POSTULATED ACCIDENT. THE ROOT CAUSE WAS THE INADEQUATE DESIGN OF THIS PORTION OF PASS BY THE ORIGINAL VENDOR. THE SPECIFIC PROCEDURE USED TO PERFORM BECHTEL'S DESIGN VERIFICATION IS UNDER REVIEW. ANY CHANGE TO THIS PROCEDURE, IDENTIFIED AS BEING REQUIRED, WILL BE MADE. THIS REPORT ALSO ADDRESSES THE REQUIREMENTS OF TECH SPEC 3.3.3.1, ACTION 28.

[230] PALO VERDE 1 DOCKET 50-528 LER 85-054
SEAL LEAK TEST NOT PERFORMED ON CONTAINMENT AIRLOCK.
EVENT DATE: 081585 REPORT DATE: 091685 NSSS: CE TYPE: PWR

(NSIC 196604) AT 1615 ON 8-15-85, PALO VERDE UNIT 1 WAS IN MODE 4, WHEN IT WAS DISCOVERED THAT THE TECH SPEC REQUIRED SEAL LEAK TEST WAS NOT CONDUCTED WITHIN 72 HRS FOLLOWING THE OPERATION OF THE EMERGENCY AIRLOCK LOCATED ON THE 100 FOOT

LEVEL OF THE CONTAINMENT BLDG. AS CORRECTIVE ACTION, SECURITY SYSTEM TEST PROCEDURE 20SP-0ZZ09 WILL BE MODIFIED TO REQUIRE NOTIFICATION OF THE COGNIZANT GROUP THAT A CONTAINMENT AIRLOCK DOOR HAS BEEN OPERATED AND THAT THE DOOR WILL REQUIRE SEAL LEAK TESTING.

[231] PEACH BOTTOM 2 DOCKET 50-277 LER 85-023
 MODIFICATION WORK VIOLATES CABLE SEPARATION CRITERIA (APPENDIX R).
 EVENT DATE: 011585 REPORT DATE: 112185 NSSS: GE TYPE: BWR

(NSIC 196721) ON OCTOBER 22, 1985, IT WAS DETERMINED THAT THE INSTALLATION OF A MODIFICATION ON UNIT 2 WAS NOT IN CONFORMANCE WITH THE ELECTRICAL SEPARATION CRITERIA CONTAINED IN THE FINAL SAFETY ANALYSIS REPORT. A REVIEW OF A MODIFICATION TO IMPLEMENT A REQUIREMENT OF 10CFR 50.48, APPENDIX R FOLLOWING ITS COMPLETION REVEALED THAT THE CABLES FOR TWO ISOLATION VALVES OF THE SAME PENETRATION SHARED COMMON CABLE TRAYS. THIS IS NOT IN CONFORMANCE WITH THE ELECTRICAL SEPARATION CRITERIA IN THE FSAR. UNDER AN IMPROBABLE SET OF CIRCUMSTANCES, A HOT SHORT WITHIN THE CABLE TRAY MAY CAUSE THE OPENING OF BOTH VALVES AND THUS THE LOSS OF CONTAINMENT ISOLATION THROUGH A ONE-INCH BYPASS LINE. THE CAUSE OF THIS EVENT IS THE FAILURE OF THE RESPONSIBLE ENGINEER TO PROPERLY EVALUATE THE EFFECT OF THE INBOARD ISOLATION BYPASS VALVE ON CONTAINMENT ISOLATION CAPABILITY IN THE SAFETY EVALUATION. THE DESIGN MODIFICATION HAS BEEN REVISED TO ENSURE THE ELECTRICAL SEPARATION OF THE TWO CABLES. THE MODIFICATION WILL BE COMPLETE ON UNIT 2 BY DECEMBER 31, 1985. SOLENOID VALVE, SV-2-14-015A, HAS BEEN TEMPORARILY DISCONNECTED TO PREVENT SPURIOUS OPERATION UNTIL THE REROUTING OF ITS CABLE IS COMPLETE.

[232] PEACH BOTTOM 2 DOCKET 50-277 LER 85-013
 RHR INJECTION VALVE FAILS TO OPEN TWICE CAUSING TWO REACTOR SHUTDOWNS.
 EVENT DATE: 081285 REPORT DATE: 100785 NSSS: GE TYPE: BWR
 VENDOR: ALOYCO, INC.
 LIMITORQUE CORP.
 TIMKIN ROLLER BEARING
 WALWORTH COMPANY

(NSIC 196530) ON 8-12 AT 1100 HRS AND 8-19 AT 1238 HRS, THE 'A' LOOP RHR SYSTEM OUTBOARD INJECTION VALVE, MO-2-10-154A, WAS DECLARED INOPERABLE. AT THE TIME OF EACH EVENT, UNIT 2 WAS OPERATING WITH 1 DG OUT-OF-SERVICE FOR ANNUAL INSPECTION. FAILURE OF THE MO-2-10-154A TO OPEN RENDERED 2 OF THE 4 LPCI SUBSYSTEMS OF THE RHR SYSTEM INOPERABLE. TECH SPECS REQUIRE THE SHUTDOWN OF UNIT 2 WITHIN 24 HRS DUE TO THE CONCURRENT INOPERABILITY OF A DG AND A LOW PRESSURE CORE COOLING SUBSYSTEM. COLD SHUTDOWN WAS ACHIEVED AT 0700 ON 8-13-85, AND AT 0608 ON 8-20-85. THE INITIAL INVESTIGATION INTO EACH EVENT REVEALED THAT THE VALVE WAS FULLY CLOSED AND COULD NOT BE STROKED OPEN. THE VALVE'S YOKE NUT WAS ALSO NOTICED TO HAVE SCREWED DOWN THE VALVE STEM CAUSING MECHANICAL INTERFERENCE AND BINDING IN THE VALVE YOKE ASSEMBLY. THE VALVE'S YOKE ASSEMBLY WAS REBUILT FOLLOWING EACH EVENT. THE VALVE WAS THEN VERIFIED TO BE OPERABLE AND SUBSEQUENTLY RETURNED TO SERVICE.

[233] PEACH BOTTOM 2 DOCKET 50-277 LER 85-020
 OPERATOR ERROR CAUSES LOW REACTOR LEVEL AND REACTOR SCRAM.
 EVENT DATE: 092485 REPORT DATE: 102185 NSSS: GE TYPE: BWR

(NSIC 196531) ON 9-24-85 AT 1807 HRS A SCRAM AND GROUP II AND III ISOLATIONS OCCURRED DUE TO LOW REACTOR WATER LEVEL CAUSED BY AN OPERATOR ERROR. IN RESPONSE TO A REQUEST TO OPERATE THE 'A' PUMP IN THE FULL FLOW TEST MODE (TORUS TO TORUS), THE LICENSED REACTOR OPERATOR SHUT OFF THE 'A' RHR PUMP AND CLOSED THE 'A' LOOP SHUTDOWN COOLING SUCTION VALVE. NEXT, HE OPENED THE 'A' LOOP FULL FLOW TEST RETURN (TO TORUS) VALVES. BECAUSE THE 'C' LOOP SHUTDOWN COOLING SUCTION VALVE,

WAS STILL OPEN, A PATH WAS IMMEDIATELY CREATED FOR GRAVITY FLOW OF REACTOR WATER THROUGH THE 'C' RHR PUMP TO THE TORUS. BECAUSE UNIT 2 WAS SHUTDOWN WITH ALL CONTROL RODS INSERTED, NO CONTROL ROD MOVEMENT OCCURRED. OPERATOR ERROR DURING RHR SYSTEM VALVE ALIGNMENT CAUSED REACTOR WATER LEVEL TO DECREASE. THE AUTOMATIC ISOLATIONS STOPPED THE DECREASING LEVEL. LEVEL WAS AUTOMATICALLY RESTORED TO NORMAL BY THE REACTOR FEEDWATER LEVEL CONTROL SYSTEM. THE SAFETY SYSTEMS PERFORMED PROPERLY AND THE SCRAM SIGNAL AND ISOLATIONS WERE RESET. THE OPERATOR WAS COUNSELED REGARDING HOW TO PREVENT RECURRENCE OF SUCH AN ERROR.

[234] PEACH BOTTOM 2 DOCKET 50-277 LER 85-024
 OPERATOR ERROR RESULTS IN TWO OPEN CONTAINMENT PENETRATIONS.
 EVENT DATE: 110385 REPORT DATE: 120685 NSSS: GE TYPE: BWR

(NSIC 196722) ON NOVEMBER 4, 1985 AT 1230, UNIT 2 WAS DISCOVERED TO BE IN NON-COMPLIANCE WITH THE TECH SPECS. TECH SPEC 3.7.D.2 STATES, IN PART, THAT IN THE EVENT ANY PRIMARY CONTAINMENT ISOLATION VALVE BECOMES INOPERABLE, REACTOR POWER OPERATION MAY CONTINUE PROVIDED THAT AT LEAST ONE VALVE IN EACH LINE HAVING AN INOPERABLE VALVE SHALL BE IN THE MODE CORRESPONDING TO THE ISOLATED CONDITION. DUE TO INOPERABLE PRIMARY CONTAINMENT ISOLATION VALVES, SV-2671A AND C, BLOCKING HAD BEEN APPLIED TO ISOLATE THE "A" AND "C" DRYWELL OXYGEN ANALYZER LINES IN ACCORDANCE WITH TECH SPEC 3.7.D.2. DUE TO A PERSONNEL ERROR, THE BLOCKING WAS REMOVED FROM THE "A" AND "C" DRYWELL OXYGEN ANALYZER LINES AT 0135 HOURS ON NOVEMBER 3, 1985 BEFORE THE VALVES WERE PROPERLY REPAIRED AND TESTED. THE BLOCKING WAS RESTORED UPON DISCOVERY, AND WAS NOT REMOVED UNTIL THE VALVES WERE PROPERLY TESTED. THE APPROPRIATE PERSONNEL WERE COUNSELLED REGARDING THIS PERSONNEL ERROR AND HOW TO PREVENT RECURRENCE.

[235] PEACH BOTTOM 3 DOCKET 50-278 LER 85-015
 CONTAINMENT ISOLATION VALVES EXCEED LOCAL LEAK RATE TEST ALLOWABLE LIMITS.
 EVENT DATE: 093085 REPORT DATE: 102985 NSSS: GE TYPE: BWR
 VENDOR: ATWOOD & MORRILL CO., INC.
 NUPRO COMPANY
 TARGET ROCK CORP.
 VOGT GENERAL CHECK VALVE COMPANY
 WALWORTH COMPANY

(NSIC 196579) ON 9-30-85, THE CONTAINMENT LEAK TEST PROGRAM IDENTIFIED THAT THE TOTAL COMBINED LEAKAGE OF THE TYPE B AND C TESTS EXCEEDED THE ALLOWABLE LEAK RATE LIMIT. SEVERAL VALVES TESTED HAD EXCESSIVE LEAKAGE RATES WHICH CONTRIBUTED TO THE COMBINED LEAKAGE TOTAL. THE FOLLOWING VALVES WERE IDENTIFIED AS HAVING EXCESSIVE LEAK RATES: 'B' INSTRUMENT NITROGEN RETURN-TO-DRYWELL CHECK VALVE, OXYGEN ANALYZER RETURN-TO-DRYWELL CHECK VALVE, HIGH PRESSURE COOLANT INJECTION SYSTEM TURBINE EXHAUST CHECK VALVE (3-23-65), RHR SYSTEM TORUS COOLING VALVES MO-3-10-39A AND M-3-10-34B, REACTOR WATER CLEANUP SYSTEM RETURN-TO-REACTOR VALVE MO-3-12-68, 'A' ADS BACKUP NITROGEN SOLENOID VALVE SV-9130A, CORE SPRAY SYSTEM INJECTION VALVE MO-3-14-11B, AND FEEDWATER CHECK VALVE 3-6-28A. THESE VALVES WILL BE REPAIRED AND RETESTED PRIOR TO RETURNING UNIT 3 TO POWER OPERATION. SIMILAR EVENTS: 277/85-001 AND 278/85-005.

[236] PEACH BOTTOM 3 DOCKET 50-278 LER 85-021
 MOTOR DRIVEN FIRE PUMP LEFT OUT OF SERVICE DUE TO PERSONNEL ERROR.
 EVENT DATE: 093085 REPORT DATE: 112785 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: PEACH BOTTOM 2 (BWR)

(NSIC 196672) BETWEEN SEPTEMBER 17 AND OCTOBER 10, 1985 WITH NO FUEL IN THE UNIT 3 REACTOR, ACCUMULATED SILT WAS BEING REMOVED FROM THE PUMP SUCTION AREA INSIDE THE UNIT 3 PUMP STRUCTURE. THIS NORMALLY TAKES APPROXIMATELY 10 SHIFTS TO COMPLETE; HOWEVER, THERE WERE MANY DELAYS. BECAUSE ONE OR MORE DIVERS WERE IN

THE WATER DURING SILT REMOVAL, ALL PUMPS IN THE AREA INCLUDING THE MOTOR DRIVEN FIRE PUMP WERE BLOCKED OUT OF SERVICE. TECH SPEC 3.14.A.2 REQUIRES THAT IF ONE OF THE TWO FIRE PUMPS IS INOPERABLE, IT MUST BE MADE OPERABLE WITHIN SEVEN DAYS OR A SPECIAL REPORT MUST BE MADE OPERABLE WITHIN 31 DAYS. THE MOTOR DRIVEN FIRE PUMP WAS REMOVED FROM SERVICE ON SEPTEMBER 17. IT WAS RETURNED TO SERVICE AND PROVEN OPERABLE ON SEPTEMBER 23. THE PUMP WAS REMOVED FROM SERVICE AGAIN ON SEPTEMBER 24, BUT NOT PROVEN OPERABLE WITHIN SEVEN DAYS DUE TO PERSONNEL ERROR. THIS SPECIAL REPORT WAS NOT SUBMITTED WITHIN 31 DAYS BECAUSE MORE TIME WAS REQUIRED TO PROVIDE A COMPLETE REPORT. IN THE FUTURE, SILT REMOVAL ACTIVITIES WILL BE PROPERLY PLANNED SO AS TO MINIMIZE THE OUTAGE TIME OF THE AFFECTED FIRE PUMP.

[237] PILGRIM 1 DOCKET 50-293 LER 85-028
 INADEQUATE SURVEILLANCE PROCEDURE FOR SBGTS HEATERS.
 EVENT DATE: 101085 REPORT DATE: 111285 NSSS: GE TYPE: BWR

(NSIC 196580) ON 10-10-85, DURING A POST QA AUDIT CONFERENCE, IT WAS IDENTIFIED THAT AN IMPLEMENTING PROCEDURE OF THE TECH SPECS WAS INADEQUATE. CONTRARY TO TECH SPEC REQUIREMENT 3.7.B.1.C, ALL ACTIVE COMPONENTS (HEATERS) OF THE SBGTS WERE NOT DOCUMENTED AS BEING TESTED. A REVIEW OF 8.7.2.6 PAST REVISIONS CONFIRMED THAT DOCUMENTATION OF TESTING THE HEATERS WAS NEVER REQUIRED SINCE THE TECH SPEC'S WERE ISSUED IN 1972. THE CAUSE OF THE PROBLEM WAS DETERMINED TO BE A PREVIOUS MANAGEMENT DEFICIENCY IN THAT THE REVIEW OF THE TECH SPEC SURVEILLANCE PROCEDURE WAS NOT ADEQUATE. EXISTING MANAGEMENT CONTROLS SHOULD PRECLUDE RECURRENCE. CORRECTIVE ACTION WAS TO REVISE THE TECH SPEC IMPLEMENTING PROCEDURE ON 10-10-85. IN ADDITION, EXECUTIVE MANAGEMENT HAS DIRECTED THAT THE TASK BE UNDERTAKEN TO REVIEW EXISTING TECH SPEC IMPLEMENTING PROCEDURES FOR ADEQUACY. THE SBGTS WAS SUCCESSFULLY TESTED ON 10-10-85 AT APPROX 1930 HRS. SIMILAR EVENTS DESCRIBING INADEQUATE TECH SPEC IMPLEMENTING PROCEDURES WERE IDENTIFIED IN LER'S 83-057 AND 85-002.

[238] PILGRIM 1 DOCKET 50-293 LER 85-029
 HPCI AND ATWS INVERTERS TRIP.
 EVENT DATE: 101885 REPORT DATE: 111585 NSSS: GE TYPE: BWR
 VENDOR: TOPAZ ELECTRONICS
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 196999) ON 10/18/85, AT APPROXIMATELY 1545 HOURS, THE HPCI INVERTER CIRCUIT FAILURE ALARM AND AN ATWS TROUBLE ALARM WERE RECEIVED IN THE CONTROL ROOM. AN IMMEDIATE INVESTIGATION REVEALED THAT THE HPCI INVERTER AND BREAKER THAT FEEDS THE ATWS INVERTER ("B" AND "D" CHANNELS) HAD TRIPPED. IMMEDIATE CORRECTIVE ACTION WAS TO RESET THE HPCI INVERTER AND ATWS BREAKER; ALSO, A MAINTENANCE REQUEST WAS INITIATED TO INVESTIGATE THE ROOT CAUSE OF THIS EVENT. THE HPCI INVERTER AND ATWS BREAKER WERE INOPERABLE FOR APPROXIMATELY 60 SECONDS. THE MOST PROBABLE CAUSE OF THE HPCI INVERTER AND BREAKER TRIPPING WAS ATTRIBUTED TO A POSSIBLE FLUCTUATION OF THE INPUT DC VOLTAGE. BOTH THE INVERTER AND BREAKER ARE FED FROM A COMMON BUS. FURTHER EVALUATION IS BEING CONDUCTED TO CONFIRM THE CAUSE OF THIS EVENT. AN UPDATE REPORT WILL BE SUBMITTED IF THE CAUSE IS DIFFERENT FROM WHAT IS STATED ABOVE. REDUNDANT SYSTEMS THAT WERE OPERABLE INCLUDED: LPCI, CORE SPRAY, ADS, AND RCIC.

[239] PILGRIM 1 DOCKET 50-293 LER 85-031
 FAILURE TO MEET THE MINIMUM SHIFT CREW COMPOSITION.
 EVENT DATE: 102985 REPORT DATE: 112785 NSSS: GE TYPE: BWR

(NSIC 196674) ON 10/29/85, FROM 1500 TO 1900 HOURS, A SHIFT TECHNICAL ADVISOR (STA) WITH A REACTOR OPERATORS (RO) LICENSE WAS ASSIGNED TO SIMULTANEOUSLY SERVE AS AN STA AND RO. THIS IS CONTRARY TO TECH SPEC (T.S.) TABLE 6.2-1, NOTE "B",

AND PROCEDURE 1.3.34 WHICH STATES THAT AN STA WITH A SENIOR REACTOR OPERATORS LICENSE (SRO) MAY SIMULTANEOUSLY SERVE AS AN STA AND SRO. REACTOR POWER WAS 100% DURING THIS EVENT. THE CAUSE OF NOT MAINTAINING THE MINIMUM OPERATING SHIFT CREW COMPOSITION WAS DUE TO A MISINTERPRETATION OF NOTE "B" AND PROCEDURE 1.3.34 BY THE LICENSED UTILITY PERSON IN CHARGE OF MAINTAINING THE MINIMUM SHIFT CREW COMPOSITION. CORRECTIVE ACTION WAS TO ASSIGN AN STA WITH AN SRO LICENSE TO SERVE SIMULTANEOUSLY AS THE STA AND SRO ON SHIFT AT 1900 HOURS ON 10/29/85 AND TO COUNSEL THE PERSON INVOLVED IN THE REQUIREMENTS OF TECH SPEC TABLE 6.2-1, NOTE "B", AND PROCEDURE 1.3.34.

[240] PILGRIM 1 DOCKET 50-293 LER 85-030
INADEQUATE RECIRCULATION PUMP START PROCEDURE.
EVENT DATE: 103085 REPORT DATE: 112785 NSSS: GE TYPE: BWR

(NSIC 196673) ON 10/30/85, DURING A REVIEW OF NRC INSPECTION #85-26, AN INADEQUATE TECH SPEC IMPLEMENTING PROCEDURE WAS IDENTIFIED. CONTRARY TO TECH SPEC 4.6.A.5. THE PROCEDURE (2.1.9.A) DID NOT REQUIRE LOGGING OF THE DOME AND BOTTOM HEAD DRAIN TEMPERATURES WHEN STARTING A RECIRCULATION PUMP. CAUSE OF THE EVENT WAS DETERMINED TO BE A PREVIOUS MANAGEMENT DEFICIENCY IN THAT THE REVIEW OF PROCEDURE 2.1.9.A WAS NOT ADEQUATE. THE SAFETY CONSEQUENCES OF THIS EVENT ARE NEGLIGIBLE SINCE THE PROCEDURE DOES INCLUDE A CAUTION TO COMPARE BOTH THE DOME AND BOTTOM HEAD DRAIN TEMPERATURES PRIOR TO STARTING A SECOND RECIRC. PUMP. CORRECTIVE ACTION WAS TO REVISE PROCEDURE 2.1.9.A BY ADDING A PROVISION REQUIRING THE DOME AND BOTTOM HEAD DRAIN TEMPERATURES TO BE LOGGED WHEN A SECOND RECIRC. PUMP IS STARTED.

[241] POINT BEACH 1 DOCKET 50-266 LER 85-004
AUTO START OF DIESEL GENERATORS AFTER LOSS OF LOW VOLTAGE STATION TRANSFORMER.
EVENT DATE: 072585 REPORT DATE: 082285 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196527) AT 0604 HRS ON 7-25-85, A 20% RUNBACK WAS INITIATED FROM A ROD POSITION INDICATOR (RPI) ROD BOTTOM BISTABLE ON UNIT 1. THIS BISTABLE PROVIDED A RUNBACK SIGNAL BECAUSE OF A MOMENTARY LOSS OF POWER TO 1Y06 WHICH FEEDS THE RPI SYSTEM. THE CAUSE OF THE POWER FAILURE WAS DUE TO A LOCKOUT OF THE 1X04 LOW VOLTAGE STATION TRANSFORMER. THIS LOCKOUT WAS CAUSED BY A SUDDEN PRESSURE TRIP DEVICE ACTUATION. THE LOCKOUT OF 1X04 CAUSED A LOSS OF POWER ON THE 4.16 KV BUSES 1A03/1A04 AND THE SAFEGUARDS 4.16 KV BUSES 1A05/1A06. THE 1A05/1A06 BUSES AND ASSOCIATED LOADS WERE PICKED UP BY AN AUTO START OF THE DG'S G01 AND G02. DUE TO THE SUSTAINED LOSS OF OFFSITE AC TO THE SAFEGUARDS BUSES FOR GREATER THAN 15 MINS, AN UNUSUAL EVENT WAS DECLARED. AT 0625 HRS A SHUTDOWN WAS COMMENCED AS REQUIRED BY TECH SPECS. AT 0849 HRS, THE TRANSFORMER WAS RETURNED TO SERVICE. THE UNUSUAL EVENT WAS TERMINATED AT 0857 HRS AFTER 1X04 WAS RETURNED TO SERVICE. THE UNIT WAS STARTED BACK UP TO FULL POWER OPERATION AT 1/2% PER MINUTE AT 0858 HRS.

[242] POINT BEACH 2 DOCKET 50-301 LER 85-003
DEGRADATION OF STEAM GENERATOR TUBES.
EVENT DATE: 102285 REPORT DATE: 111885 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196949) UNIT 2 WAS SHUT DOWN FOR REFUELING ON 10-5-85, FOR REFUELING NUMBER 11. EDDY CURRENT EXAM OF THE SG TUBES WAS CONDUCTED FROM 10-10-85 TO 10-23-85. EDDY CURRENT OF THE 'A' SG SHOWED 9 TUBES DEGRADED EQUAL TO OR GREATER THAN 40% AND ONE WITH AN UNDEFINED SIGNAL. ALL 10 TUBES WERE PLUGGED. TWO SLEEVED TUBES LEAKED DURING AN 800 PSID TEST. THESE TUBES WERE NOT PLUGGED SINCE THE LEAKAGE WAS CALCULATED TO BE ONLY 0.07 GALS PER DAY. EDDY CURRENT OF THE 'B' SG SHOWED

44 TUBES DEGRADED EQUAL TO OR GREATER THAN 40%. ALL 44 TUBES WERE PLUGGED. NO LEAKING TUBES WERE DETECTED DURING AN 800 PSID TEST.

[243] PRAIRIE ISLAND 1 DOCKET 50-282 LER 85-012
 REACTOR TRIP CAUSED BY TROUBLESHOOTING IN GENERATOR VOLTAGE REGULATOR.
 EVENT DATE: 091585 REPORT DATE: 101585 NSSS: WE TYPE: PWR

(NSIC 196948) ON 9-15-85 AT 0050 A CONTROL ROOM OPERATOR ATTEMPTED TO LOWER GENERATOR OUTPUT VOLTAGE USING THE VOLTAGE ADJUSTER; THE REGULATOR DID NOT RESPOND. AT 0055, THE VOLTAGE REGULATOR WAS TURNED OFF AND AN INVESTIGATION BEGUN TO LEARN WHY THE REGULATOR DID NOT WORK TO LOWER EXCITATION. DURING THE INVESTIGATION, A SIGNAL MIXING CARD IN THE AUTOMATIC CONTROL SECTION OF THE REGULATOR WAS PULLED. WHEN THE REGULATOR IS OFF, THE OUTPUT FROM THIS CARD IS GROUNDED. REMOVING THE CARD REMOVED THE GROUND, WHICH RESULTED IN AN OUTPUT SIGNAL CALLING FOR INCREASED EXCITATION. THE CONTROL ROOM OPERATOR RESPONDED TO THIS VOLTAGE TRANSIENT BY LOWERING EXCITATION VOLTAGE WITH THE BASE ADJUSTER. THE REGULATOR RESPONDED AND EXCITATION VOLTAGE DIPPED INTO THE OPERATING RANGE OF THE LOSS-OF-EXCITATION RELAY, RESULTING IN GENERATOR (GEN) LOCKOUT AND TURBINE (TRB) TRIP/REACTOR (RCT) TRIP AT 0451. FOLLOWING THE TRIP, 345KV GRID VOLTAGE REACHED ABOUT 365 KV STEADY STATE. THE 161KV VOLTAGE SPIKED BUT RETURNED TO ABOUT 168 KV. PLANT 4KV BUS VOLTAGES MOMENTARILY EXCEEDED THE PLANT OPERATING LIMIT OF 4400V DURING THE TRANSIENT, BUT REMAINED BELOW 4400V STEADY STATE. UPON INVESTIGATION IT WAS LEARNED THAT THE REGULATOR HAD BEEN PERFORMING PROPERLY ALL LONG. THE LACK OF RESPONSE OBSERVED INITIALLY WAS DUE TO PROPER OPERATION OF THE MINIMUM EXCITATION LIMITER, A FEATURE OF REGULATOR LOGIC WITH WHICH PLANT PERSONNEL WERE NOT FAMILIAR.

[244] PRAIRIE ISLAND 1 DOCKET 50-282 LER 85-013
 INOPERABILITY OF SEVERAL SAFEGUARDS VALVES CAUSED BY MOTOR-OPERATED VALVE FAILURE.
 EVENT DATE: 091585 REPORT DATE: 101585 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ELECTRIC CO.
 LIMITORQUE CORP.

(NSIC 196998) DURING STARTUP, A CONTAINMENT ISOLATION VALVE FAILED TO OPEN ON DEMAND. REPEATED ATTEMPTS TO OPEN THE VALVE RESULTED IN FAILURE OF THE VALVE OPERATOR MOTOR AND TRIPPING OF ITS MOTOR CONTROL CENTER, WHICH MADE SEVERAL OTHER SAFEGUARDS MOTOR OPERATED VALVES INOPERABLE IN ONE TRAIN. DAMAGED EQUIPMENT WAS REPLACED.

[245] QUAD CITIES 1 DOCKET 50-254 LER 84-018 REV 1
 UPDATE ON THE FUEL POOL MONITOR SPIKING HIGH TWICE.
 EVENT DATE: 092284 REPORT DATE: 101684 NSSS: GE TYPE: BWR

(NSIC 196463) ON 9-22-84 AT 11:50 PM THE REACTOR BLDG FUEL POOL CHANNEL B AREA RADIATION MONITOR MOMENTARILY SPIKED TO 200 MR/HR, TRIPPING THE REACTOR BLDG VENTILATION AND STARTING THE SGTS. THE MONITOR OPERATED SATISFACTORILY WHEN CHECKED. A SURVEY WAS CONDUCTED BY THE RADIATION PROTECTION DEPARTMENT AND NO ABNORMAL RADIATION LEVELS WERE FOUND ON THE REFUEL FLOOR. THE REACTOR BLDG VENTILATION AND SGTS WERE RETURNED TO NORMAL. NO CORRECTIVE ACTIONS WERE TAKEN BECAUSE THE CAUSE OF THE SPIKING WAS NOT KNOWN. THE SAME PROBLEM OCCURRED AGAIN ON 9-24-84, AT 10:30 AM. THIS REV, 01, OF LER 84-018 WAS INITIATED TO DOCUMENT THESE 2 IDENTICAL EVENTS WHICH OCCURRED ON 9-22-84, AND 9-24-84.

[246] QUAD CITIES 1 DOCKET 50-254 LER 85-017
 REACTOR CORE ISOLATION COOLING DISCHARGE VALVE WOULD NOT OPEN.
 EVENT DATE: 101585 REPORT DATE: 110785 NSSS: GE TYPE: BWR
 VENDOR: CUTLER-HAMMER

WESTINGHOUSE ELECTRIC CORP.

(NSIC 196572) ON 10-15-85 DURING THE PERFORMANCE OF SURVEILLANCE QOS 1300-3, 'RCIC MOTOR OPERATED VALVE OPERABILITY TEST', IT WAS DISCOVERED THAT THE RCIC PUMP DISCHARGE VALVE, MO 1-1301-48, WOULD NOT OPEN FROM THE CONTROL ROOM AFTER IT WAS CLOSED. RCIC WAS, THEREFORE, DECLARED INOPERABLE. IT WAS FOUND THAT THE MAIN CONTACTOR IN THE BREAKER FOR THE MOTOR OPERATOR FOR THE VALVE WAS DIRTY AND WOULD NOT CLOSE COMPLETELY, THEREBY FAILING TO SUPPLY POWER TO THE MOTOR. AFTER THE BREAKER WAS RESET, THE VALVE WAS SUCCESSFULLY CYCLED THREE TIMES. RCIC WAS DECLARED OPERABLE AND THE CONTACTOR WAS CLEANED UNDER WORK REQUEST Q42505. THIS REPORT IS SUBMITTED TO YOU IN ACCORDANCE WITH THE REQUIREMENTS OF THE CODE OF FEDERAL REGULATIONS, TITLE 10, PART 50.73(A)(2)(V).

[247] QUAD CITIES 2 DOCKET 50-265 LER 84-007 REV 2
 UPDATE ON TURBINE CONTROL FAST CLOSURE SWITCH FAILURE CAUSING REACTOR SCRAM.
 EVENT DATE: 061084 REPORT DATE: 101584 NSSS: GE TYPE: BWR
 VENDOR: NAMCO CONTROLS

(NSIC 196517) ON 6-10-84, AT 1:50 A.M. DURING THE WEEKLY TURBINE TEST, QOS 5600-1 CONTROL VALVES 1 THROUGH 3 OPERATED PROPERLY, BUT WHEN THE TEST SWITCH FOR CONTROL VALVE #4 WAS DEPRESSED THE VALVE IMMEDIATELY FAST CLOSED. THE RESULTING PRESSURE SPIKE COLLAPSED THE VOIDS IN THE VESSEL AND A TRIP OF THE RPS WAS RECEIVED DUE TO HIGH NEUTRON FLUX. IT HAS BEEN DETERMINED THAT THE 90% CLOSED LIMIT SWITCH IS REMAINING ENGAGED, CAUSING CONTACTS IN THE VALVE TEST CIRCUIT TO REMAIN CLOSED, AND THEREBY FAST CLOSING THE #4 CONTROL VALVE IN THE TEST MODE. THIS LINE AND SWITCH WILL BE EXAMINED AT THE NEXT OPPORTUNITY. UNTIL THEN, A WIRE IN THE TEST CIRCUIT OF THE #4 CONTROL VALVE HAS BEEN LIFTED TO PREVENT THIS FAST CLOSURE IN THE TEST MODE. A TEMPORARY PROCEDURE WAS INSTITUTED TO ENABLE THE WEEKLY TURBINE TEST TO BE PERFORMED WITHOUT A RECURRENCE OF THIS INCIDENT.

[248] QUAD CITIES 2 DOCKET 50-265 LER 85-020
 CONDENSER PIT HIGH LEVEL TRIP SWITCH OUT OF SERVICE.
 EVENT DATE: 091685 REPORT DATE: 101085 NSSS: GE TYPE: BWR

(NSIC 196612) ON 8-26-85, WHILE PERFORMING THE CONDENSER PIT HIGH LEVEL ALARM AND TRIP SURVEILLANCE, A PENCIL WAS BROKEN OFF INSIDE A '3 FOOT LEVEL' ALARM SWITCH. A WORK REQUEST WAS WRITTEN TO REMOVE THE BROKEN PENCIL. ON 9-16-85, TO AVOID AN INADVERTENT PUMP TRIP AND WITHOUT CONSIDERING THE TECH SPEC'S REQUIREMENTS, ALL HIGH LEVEL PUMP TRIP SWITCHES WERE TAKEN OUT OF SERVICE PRIOR TO THE PERFORMANCE OF THE WORK REQUEST TO REMOVE THE BROKEN PENCIL. THE CAUSE OF THIS EVENT IS PERSONNEL ERROR MAINLY DUE TO THE UNFAMILIARITY WITH THE PUMP TRIP'S CIRCUITRY. ALSO, DUE TO COMMUNICATION PROBLEMS BETWEEN SHIFT CHANGES, THE PUMP TRIP SWITCHES WERE NOT RETURNED TO SERVICE IN A TIMELY MANNER. ACTIONS HAVE BEEN TAKEN TO IMPROVE COMMUNICATIONS BETWEEN SHIFT CHANGES AND TO DEVELOP THE 'TEAM CONCEPT' WHERE OTHER PERSONNEL WITH SENIOR REACTOR OPERATOR LICENSES ARE ENCOURAGED TO QUESTION ORIGINAL DECISIONS MADE ON SHIFT. THIS REPORT IS SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CODE OF FEDERAL REGULATIONS, TITLE 10, PART 50.73(A)(2)(I), WHICH REQUIRES THE REPORTING OF ANY OPERATION PROHIBITED BY THE PLANT'S TECH SPECS.

[249] QUAD CITIES 2 DOCKET 50-265 LER 85-021
 SCRAM ON FALSE REACTOR LOW LEVEL INDICATIONS.
 EVENT DATE: 101585 REPORT DATE: 110185 NSSS: GE TYPE: BWR

(NSIC 196576) AT 10:46 PM, ON 10-15-85 INSTRUMENT MAINTENANCE PERSONNEL WERE PERFORMING 'LOW-LOW REACTOR WATER LEVEL CALIBRATION', WHEN THE INSTRUMENT MECHANIC NOTICED LEAKAGE FROM AN INSTRUMENT TAP. THE LEAKAGE INDICATED THAT ONE OF THE ISOLATION VALVES ON A LEVEL INDICATING SWITCH WAS LEAKING. WHEN HE

ATTEMPTED TO TIGHTEN THE LOW SIDE VALVE ON THE SWITCH, THE INSTRUMENT MECHANIC MISTAKENLY CRACKED THE VALVE OPEN. HE IMMEDIATELY RECLOSED THE VALVE. THIS ACTION CAUSED A PRESSURE TRANSIENT ON THE INSTRUMENTS CONNECTED TO THIS INSTRUMENT LINE. A REACTOR SCRAM AND GROUP I, II, AND III ISOLATION RESULTED FROM THE TRANSIENT. THIS EVENT HAS BEEN REVIEWED WITH THE INSTRUMENT MAINTENANCE DEPARTMENT. THIS REPORT IS SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF 10 CFR PART 50.73(A)(2)(IV).

[250] QUAD CITIES 2 DOCKET 50-265 LER 85-022
THREE-QUARTER SCRAM SIGNAL RECEIVED DURING MSIV TESTING.
EVENT DATE: 102485 REPORT DATE: 110485 NSSS: GE TYPE: BWR

(NSIC 196577) ON 10-24-85, AT 12:36 PM, UNIT 2 WAS IN THE SHUTDOWN MODE. MAIN STEAM ISOLATION VALVES CLOSURE MONTHLY SCRAM SENSOR FUNCTIONAL TEST WAS BEING PERFORMED. RELAYS 590-101A, 590-101B, 590-101C AND 590-101D WERE BLOCKED CLOSED TO MAKE IT APPEAR AS IF THE CONDENSER IS UNDER A VACUUM, BECAUSE LOW CONDENSER VACUUM CAN ALSO CAUSE MSIV CLOSURE. FURTHER ALONG IN THE TEST, A ONE-HALF SCRAM ON THE 'A' CHANNEL WAS BEING RESET WHEN THE BLOCK ON RELAY 590-101D FELL OUT. THIS CAUSED A ONE-HALF SCRAM ON THE 'B' CHANNEL. THIS ONE-HALF SCRAM ON THE 'B' CHANNEL COMBINED WITH THE HALF-RESET ONE-HALF SCRAM ON THE 'A' CHANNEL RESULTED IN A THREE-QUARTER SCRAM. THE OTHER HALF OF THE ONE-HALF SCRAM ON THE 'A' CHANNEL WAS IMMEDIATELY RESET LEAVING ONLY A ONE-HALF SCRAM ON THE 'B' CHANNEL. SINCE THIS SITUATION HAS NOT OCCURRED BEFORE, NO CHANGE TO THE PROCEDURE IS DEEMED NECESSARY.

[251] RIVERBEND 1 DOCKET 50-458 LER 85-006
FAULTY BREAKER TRIP CAUSES REACTOR SCRAM.
EVENT DATE: 091685 REPORT DATE: 101585 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CORP. (NUCLEAR ENG DIV)

(NSIC 196477) AT 0757 ON 9-16-85 WITH THE UNIT SUBCRITICAL, THE RPS ACTUATED WHILE IN THE NON-COINCIDENT TRIP MODE FOR FUEL LOADING. RPS CHANNEL A WAS IN THE ALTERNATE POWER FEED MODE TO SUPPORT DIV I EMERGENCY CORE COOLING SYSTEM TESTING DURING WHICH A SPURIOUS TRIP ON AN ELECTRICAL PROTECTION ASSEMBLY IN THE RPS CHANNEL A ALTERNATE POWER FEED OCCURRED. RPS CHANNEL A WAS SWITCHED TO THE NORMAL SUPPLY AND THE TRIP WAS RESET. THE CAUSE WAS DUE TO A MALFUNCTION IN THE UNDERVOLTAGE PRINTED CIRCUIT BOARD ON THE ALTERNATE SUPPLY BREAKER. THE BREAKER WAS REPAIRED ON 9-20-85 AND RETURNED TO SERVICE.

[252] RIVERBEND 1 DOCKET 50-458 LER 85-008
INADVERTENT LOSS OF PRIMARY COOLANT TO THE SUPPRESSION POOL CAUSES REACTOR SCRAM.
EVENT DATE: 092385 REPORT DATE: 102385 NSSS: GE TYPE: BWR

(NSIC 196503) AT 0100 ON 9-23-85, WITH THE UNIT IN OPERATIONAL CONDITION 5, THE RPS ACTUATED DUE TO WATER LEVEL BELOW THE LEVEL 3 SCRAM SETPOINT. THIS WAS CAUSED BY OPERATOR ERROR DURING THE PERFORMANCE OF SURVEILLANCE TEST PROCEDURE STP 309-0601 (DIV I, 18 MONTH ECCS TEST). AN OPERATOR BEGAN OPENING RHR 'A' SUPPRESSION POOL SUCTION VALVE (1E12*MOVFP004A) BEFORE RHR 'A' SHUTDOWN COOLING SUCTION VALVE (1E12*MOVFP006A) WAS COMPLETELY CLOSED. THIS ALLOWED WATER TO FLOW FROM THE RPV INTO THE SUPPRESSION POOL ACTUATING THE RPS AT 0100 HRS WHEN RPV WATER LEVEL FELL BELOW THE LEVEL 3 SCRAM SETPOINT. PLANT OPERATING STAFF IMPLEMENTED PROCEDURE AOP-001 (REACTOR SCRAM) WHICH REESTABLISHED REACTOR PRESSURE VESSEL LEVEL USING CRD FLOW. ALL SAFETY SYSTEMS FUNCTIONED AS DESIGNED. A CAUTION STATEMENT HAS BEEN ADDED TO THE PROCEDURE.

[253] RIVERBEND 1 DOCKET 50-458 LER 85-009
 TEMPERATURE SWITCH DESIGN DEFECT CAUSES RWCU ISOLATION.
 EVENT DATE: 092685 REPORT DATE: 102785 NSSS: GE TYPE: BWR
 VENDOR: RILEY COMPANY, THE - PANALARM DIVISION

(NSIC 196567) AT 0115 ON 9-26-85, WITH THE PLANT IN OPERATIONAL CONDITION 5, AN UNPLANNED ESF ACTUATION OCCURRED DURING THE PERFORMANCE OF SURVEILLANCE 4.3.2.1 (TABLE 4.3.2.1-1(2)(G)). PER THE PROCEDURE, SELECTOR SWITCH E31-N605E WAS PLACED IN THE 'READ' POSITION TO OBTAIN A TEMPERATURE READING. AS A RESULT OF THIS ACTION A RWCU CONTAINMENT ISOLATION OCCURRED. THE CAUSE IS A DESIGN FLAW WHICH ALLOWS THE TEMPERATURE SWITCH TO ACTUATE A RWCU ISOLATION WHEN OBTAINING TEMPERATURE READINGS. THE MANUFACTURER, U.S. RILEY CORP., IS AWARE OF THE DESIGN PROBLEM AND HAS RECOMMENDED A SPECIFIC MODIFICATION TO THE TEMPERATURE SWITCH CIRCUITRY. THE PROBLEM IS COMMON TO THE OTHER RILEY TEMPERATURE POINT MODULES, MODEL 86V AND MODEL 86 TEMP-MATIC AT RIVER BEND STATION. A MODIFICATION IS IN PROGRESS TO CORRECT THE PROBLEM.

[254] RIVERBEND 1 DOCKET 50-458 LER 85-010
 INOPERABLE STANDBY LIQUID CONTROL TRAIN DUE TO VALVE WIRING ERROR.
 EVENT DATE: 093085 REPORT DATE: 103085 NSSS: GE TYPE: BWR
 VENDOR: CARRIER MFG. CO., INC.

(NSIC 196602) AT 0300 ON 9-30-85 AN EXPLOSIVE VALVE DID NOT FIRE WHEN TRAIN 'A' OF THE STANDBY LIQUID CONTROL (SLC) SYSTEM WAS INITIATED. INVESTIGATION REVEALED THAT INCORRECTLY WIRED TERMINATIONS IN A TERMINATION PANEL WERE THE CAUSE OF THE PROBLEM. THE 'A' TRAIN OF (SLC) WAS DECLARED INOPERABLE UNTIL TERMINATIONS COULD BE CORRECTED AND THE SYSTEM TESTED SATISFACTORILY. THE ERROR WAS CORRECTED BY 10-16-85 AND THE SLC SUBSYSTEM WAS RETESTED ON 10-22-85 WITH SATISFACTORY RESULTS. TRAIN 'B' OF THE SLC SYSTEM WAS ALSO CHECKED AND FOUND TO BE SATISFACTORY.

[255] RIVERBEND 1 DOCKET 50-458 LER 85-011
 TESTING CAUSES SPURIOUS MAIN STEAM LINE ISOLATION SIGNAL.
 EVENT DATE: 093085 REPORT DATE: 103085 NSSS: GE TYPE: BWR

(NSIC 196690) AT 1110 ON 9-30-85, BOTH DIVISIONS OF SECONDARY CONTAINMENT AND PRIMARY CONTAINMENT ISOLATION WERE SPURIOUSLY ACTUATED. THE EVENT IS SUSPECTED TO BE RELATED TO TESTING WHICH GENERATED A DIV II MSIV ISOLATION SIGNAL. THE PORTION OF THE TESTING SUSPECTED OF CAUSING THE ESF ACTUATION WAS RE-PERFORMED AND NO ISOLATIONS OCCURRED.

[256] RIVERBEND 1 DOCKET 50-458 LER 85-012
 PROBLEMS WITH DIVISION I STANDBY SWITCHGEAR.
 EVENT DATE: 100385 REPORT DATE: 110285 NSSS: GE TYPE: BWR

(NSIC 196568) ON 8-28-85 A SPECIAL TEST OF A MODIFICATION (DMP.002) THAT INSTALLED REMOTE SHUTDOWN CAPABILITY (NOT REQUIRED PRIOR TO EXCEEDING 5% POWER) IN THE EVENT OF A CONTROL ROOM FIRE REVEALED THE FOLLOWING PROBLEMS WITH DIV I STANDBY SWITCHGEAR. THE FIRST INVOLVED A POTENTIAL FOR LOSS OF POWER TO THE 120V AC TRANSFER CIRCUITRY WHICH WOULD PREVENT ISOLATION OF CONTROL ROOM WIRING AND TRANSFER OF CONTROL TO LOCAL PANELS. SECONDLY, LONG LENGTHS OF CONTROL WIRING RESULTING FROM THE DESIGN MODIFICATIONS CAUSED AN EXCESSIVE VOLTAGE DROP. UNDER DEGRADED BATTERY VOLTAGE CONDITIONS, THE CONTROL CIRCUITRY WOULD NOT DELIVER THE CIRCUIT BREAKER MANUFACTURER'S SPECIFIED VOLTAGE. THE PROBLEMS WERE INVESTIGATED AND A MODIFICATION WAS INITIATED ON 9-15-85 TO CORRECT THE CONDITION. INVESTIGATION REVEALED A POTENTIAL VOLTAGE DROP PROBLEM WITH TWENTY 125V DC SAFETY-RELATED CONTROL CIRCUITS. THERE WERE 12 IN DIV I, 4 IN DIV II, AND 4 IN DIV III. IN THE EVENT OF A LOSS OF OFFSITE POWER AND A DEGRADED DC CONTROL POWER

CONDITION, THE DIV I DG OUTPUT BREAKER MAY NOT HAVE FUNCTIONED AFTER REPEATED OPEN/CLOSE CYCLES. PLANT MANAGEMENT DECIDED TO DECLARE THE DIV I DG INOPERABLE.

[257] RIVERBEND 1 DOCKET 50-458 LER 85-013
 REMOTE SHUTDOWN PANEL POWER SUPPLY LOCATED IN MAIN CONTROL ROOM (APPENDIX R).
 EVENT DATE: 101285 REPORT DATE: 111185 NSSS: GE TYPE: BWR

(NSIC 196650) ON 10-12-85 I// OPERATING CONDITION 5, IT WAS DISCOVERED THAT A DC POWER SUPPLY FOR THE REMOTE SHUTDOWN PANEL WAS LOCATED IN THE MAIN CONTROL ROOM. THIS IS IN CONTRADICTION TO 10CFR50 APPENDIX R REQUIREMENTS. AN ALTERNATE POWER SUPPLY OUTSIDE OF THE MAIN CONTROL ROOM WILL BE USED TO CORRECT THE PROBLEM. SCHEDULE FOR COMPLETION OF THIS MODIFICATION IS PRIOR TO 5% POWER.

[258] RIVERBEND 1 DOCKET 50-458 LER 85-015
 CONTROL ROOM VENTILATION LOCAL INTAKE RADIATION MONITORS FAIL.
 EVENT DATE: 101385 REPORT DATE: 111285 NSSS: GE TYPE: BWR

(NSIC 196651) AT 1150 ON 10-13-85 WITH THE UNIT SUBCRITICAL IN OPERATING CONDITION 5, IT WAS DISCOVERED THAT BOTH THE A & B CHANNELS OF THE CONTROL ROOM VENTILATION LOCAL INTAKE RADIATION MONITORS WERE INOPERABLE DUE TO THEIR SAMPLE PUMPS BEING OFF. SINCE BOTH CHANNELS WERE INOPERABLE, THE TECH SPEC REQUIREMENT FOR MINIMUM NUMBER OF CHANNELS OPERABLE WAS NOT MET. THIS CONDITION HAD EXISTED SINCE 1845 ON 10-12-85 WITHOUT MAINTAINING THE OPERATION OF THE CONTROL ROOM AIR CONDITIONING SYSTEM IN THE EMERGENCY MODE OF OPERATION AS REQUIRED BY TECH SPECS. THE SAMPLE PUMPS WERE IMMEDIATELY RESTARTED AND BOTH RADIATION MONITORS WERE DECLARED OPERABLE.

[259] RIVERBEND 1 DOCKET 50-458 LER 85-014
 LOW LEVEL IN STANDBY COOLING TOWER.
 EVENT DATE: 101885 REPORT DATE: 111785 NSSS: GE TYPE: BWR

(NSIC 196691) AT 0130 ON 10-18-85 WITH THE PLANT IN OPERATING CONDITION 4 (COLD SHUTDOWN) AND PRIOR TO INITIAL CRITICALITY, THE STANDBY COOLING TOWER LEVEL WAS DISCOVERED TO BE AT 72%. THIS IS BELOW THE MINIMUM 78% REQUIRED BY TECH SPEC 3.7.1.2.A. IMMEDIATE ACTIONS WERE TAKEN TO RESTORE LEVEL. AT 0215 ON 10-18-85 LEVEL WAS AT 80%.

[260] RIVERBEND 1 DOCKET 50-458 LER 85-018
 RHR ISOLATION.
 EVENT DATE: 102185 REPORT DATE: 112085 NSSS: GE TYPE: BWR

(NSIC 196694) AT 0210 ON 10/21/85, WITH THE UNIT SUBCRITICAL IN OPERATING CONDITION 4 (COLD SHUTDOWN), LOOP A OF THE RESIDUAL HEAT REMOVAL (RHR) SYSTEM, OPERATING IN THE SHUTDOWN COOLING MODE, RECEIVED AN UNANTICIPATED ISOLATION DURING PERFORMANCE OF A SURVEILLANCE TEST PROCEDURE. THE CAUSE OF THE ISOLATION WAS A RESULT OF PERSONNEL ERROR. MAINTENANCE PERSONNEL IMPROPERLY IDENTIFIED THE RELAY UNDER TEST. IN AN EFFORT TO CORRECTLY IDENTIFY THE RELAY, THE DRAWINGS WERE REVIEWED BUT MISINTERPRETED WHICH RESULTED IN THE ISOLATION. THE ISOLATION WAS RESET AND SHUTDOWN COOLING WAS RESTORED TO OPERATION WITHIN THIRTY MINUTES.

[261] RIVERBEND 1 DOCKET 50-458 LER 85-019
 DIVISION II RWCU ISOLATION.
 EVENT DATE: 102285 REPORT DATE: 112185 NSSS: GE TYPE: BWR

(NSIC 196695) AT 0145 ON 10/22/85 WITH THE PLANT IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN) AND PRIOR TO INITIAL CRITICALITY, A DIVISION II REACTOR WATER CLEANUP

(RWCU) ISOLATION OCCURRED. DURING CONDUCT OF A MONTHLY SURVEILLANCE TEST PROCEDURE ON THE RWCU SYSTEM, AN INSTALLED JUMPER CAME LOOSE, SHORTED AND BLEW A FUSE RESULTING IN THE DIVISION II ISOLATION. THE FUSE WAS REPLACED AND THE ISOLATION WAS RESET.

[262] RIVERBEND 1 DOCKET 50-458 LER 85-020
TESTING ERROR CAUSES RWCU ISOLATION.
EVENT DATE: 102285 REPORT DATE: 112185 NSSS: GE TYPE: BWR

(NSIC 196974) AT 1530 ON 10/22/85 WITH THE PLANT IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN) AND PRIOR TO INITIAL CRITICALITY A DIVISION I REACTOR WATER CLEANUP (RWCU) ISOLATION OCCURRED. DURING CONDUCT OF A MONTHLY SURVEILLANCE TEST PROCEDURE ON THE RWCU SYSTEM, A JUMPER BEING REMOVED TOUCHED A RELAY SEPARATION CASING WHICH BLEW A FUSE RESULTING IN THE DIVISION I ISOLATION. THE FUSE WAS REPLACED AND THE ISOLATION RESET.

[263] RIVERBEND 1 DOCKET 50-458 LER 85-021
INADVERTENT AUTOMATIC INITIATION OF HPCS SYSTEM.
EVENT DATE: 102285 REPORT DATE: 112185 NSSS: GE TYPE: BWR

(NSIC 196755) AT 1550 ON 10/22/85, DURING SURVEILLANCE TESTING ON A HPCS-DRYWELL HIGH PRESSURE TRANSMITTER, AN INITIATION OF THE HPCS SYSTEM OCCURRED. THE UNIT WAS IN A SHUTDOWN CONDITION AND NO REACTOR VESSEL INJECTION TOOK PLACE. THERE WAS NO KNOWN CAUSE FOR THE INITIATION, SO THE TEST WAS RE-PERFORMED SUCCESSFULLY. THUS, NO PROCEDURAL ERROR WAS EVIDENT. IT IS POSTULATED THAT A TEST LEAD USED DURING THE SURVEILLANCE COULD HAVE BEEN MISPLACED AND POSSIBLY SHORTED, CAUSING THE TRANSMITTER TO TRIP AND ACTIVATE THE SYSTEM.

[264] RIVERBEND 1 DOCKET 50-458 LER 85-022
TESTING PROCEDURE DEFECT CAUSES RWCU ISOLATION.
EVENT DATE: 102385 REPORT DATE: 112285 NSSS: GE TYPE: BWR

(NSIC 196975) AT 0320 ON 10/23/85 WITH THE PLANT IN OPERATING CONDITION 4 (COLD SHUTDOWN) AND PRIOR TO INITIAL CRITICALITY, A DIVISION II REACTOR WATER CLEANUP ISOLATION OCCURRED. DURING CONDUCT OF A MONTHLY SURVEILLANCE TEST PROCEDURE ON RWCU, A JUMPER WAS INSTALLED ON THE WRONG RELAY CONTACTS. WHEN A WIRE WAS LIFTED IN THE CIRCUIT THAT SHOULD HAVE BEEN JUMPERED, A RWCU ISOLATION OCCURRED. THE WIRE WAS RELOADED AND THE ISOLATION RESET.

[265] RIVERBEND 1 DOCKET 50-458 LER 85-016
TESTING ERROR CAUSES SHUTDOWN COOLING SUCTION VALVE ISOLATION.
EVENT DATE: 102485 REPORT DATE: 112385 NSSS: GE TYPE: BWR

(NSIC 196692) AT 0240 ON 10/24/85, WITH THE PLANT IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN) AND PRIOR TO INITIAL CRITICALITY, AN ESP ISOLATION OF E12*MOVFP008 (SHUTDOWN COOLING SUCTION TO RHR PUMP A) OCCURRED. DURING PERFORMANCE OF A SURVEILLANCE TEST PROCEDURE, A JUMPER SLIPPED OFF A TERMINAL AND LANDED ON A GROUNDED SURFACE CAUSING FUSE B21H-F76A TO BLOW RESULTING IN THE ISOLATION. THE FUSE WAS REPLACED AND "BANANA" PLUGS WERE INSTALLED ON TERMINAL STRIPS TO ALLOW FUTURE JUMPERS TO BE INSTALLED BY A MORE SECURE METHOD.

[266] RIVERBEND 1 DOCKET 50-458 LER 85-024
RWCU ISOLATES.
EVENT DATE: 102485 REPORT DATE: 112385 NSSS: GE TYPE: BWR

(NSIC 196977) AT 2155 ON 10/24/85 WITH THE PLANT IN OPERATIONAL CONDITION 4 (COLD

SHUTDOWN) AND PRIOR TO INITIAL CRITICALITY, THE REACTOR WATER CLEANUP SYSTEM ISOLATED DUE TO UNSTABLE HIGH DIFFERENTIAL FLOW READINGS. THE RWC BYPASS SWITCHES WERE PLACED IN BYPASS AND THE SYSTEM WAS RESTORED PER SYSTEM OPERATING PROCEDURE. INVESTIGATION INTO THE ROOT CAUSE FOR THE ISOLATION IS ONGOING. CORRECTIVE ACTION WILL BE TAKEN ONCE THE PROBLEM IS IDENTIFIED.

[267] RIVERBEND 1 DOCKET 50-458 LER 85-025
TWO REACTOR WATER CONDUCTIVITY SAMPLES MISSED.
EVENT DATE: 102485 REPORT DATE: 112385 NSSS: GE TYPE: BWR

(NSIC 196978) AT 0100 ON 10/22/85 WITH THE REACTOR IN OPERATING CONDITION 4 (COLD SHUTDOWN), REACTOR WATER CONDUCTIVITY RECORDERS 1G33-R601 AND R603 WERE TAKEN OUT OF SERVICE TO PERFORM WIRING CHANGES. TECH SPECS REQUIRE A REACTOR WATER CONDUCTIVITY MEASUREMENT BE TAKEN ONCE PER 24 HOURS IN MODES 4 AND 5 WHEN THE CONTINUOUS CONDUCTIVITY RECORDER IS INOPERABLE. TECH SPECS REQUIRE A REACTOR WATER CONDUCTIVITY MEASUREMENT BE TAKEN ONCE PER 24 HOURS IN MODES 4 AND 5 WHEN THE CONTINUOUS CONDUCTIVITY RECORDER IS INOPERABLE. TECH SPEC SURVEILLANCES WERE MISSED ON 10/24/85 AND 10/26/85 FOR REACTOR WATER CONDUCTIVITY. REVIEW OF THE REACTOR WATER CHEMICAL ANALYSIS PRIOR TO AND FOLLOWING THE MISSED SURVEILLANCES SHOWED NO ABNORMAL OR DETRIMENTAL CHEMICAL PARAMETERS.

[268] RIVERBEND 1 DOCKET 50-458 LER 85-026
MAINTENANCE ERROR CAUSES SPURIOUS REACTOR LOW LEVEL SIGNAL.
EVENT DATE: 102485 REPORT DATE: 112385 NSSS: GE TYPE: BWR

(NSIC 197017) AT 1308 ON 10/24/85 WITH THE UNIT IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN) AND PRIOR TO INITIAL CRITICALITY, AN EMERGENCY CORE COOLING SYSTEM (ECCS) ACTUATION OCCURRED. WHILE ATTEMPTING TO STOP A LEAK ON A REACTOR VESSEL LEVEL INSTRUMENT, THE LOW PRESSURE SIDE WAS INADVERTENTLY VENTED RESULTING IN THE INITIATION OF THE RESIDUAL HEAT REMOVAL SYSTEM IN THE LOW PRESSURE COOLANT INJECTION MODE. THE HIGH PRESSURE INTERLOCK PREVENTED INJECTION INTO THE VESSEL DUE TO THE HIGH REACTOR VESSEL PRESSURE ASSOCIATED WITH THE HYDROSTATIC TESTING IN PROGRESS.

[269] RIVERBEND 1 DOCKET 50-458 LER 85-017
TESTING ERROR CAUSES SHUTDOWN COOLING SUCTION VALVE ISOLATION.
EVENT DATE: 102585 REPORT DATE: 112485 NSSS: GE TYPE: BWR

(NSIC 196693) AT 2105 ON 10/25/85, WITH THE PLANT IN OPERATIONAL CONDITION 4 AND PRIOR TO INITIAL CRITICALITY, AN ESP ISOLATION OF E12*MOVFP008 (SHUTDOWN COOLING SUCTION TO RHR PUMP A) OCCURRED. DURING PERFORMANCE OF A SURVEILLANCE TEST PROCEDURE, A TECHNICIAN INADVERTENTLY GROUNDED A RECORDER LEAD WHILE ATTEMPTING TO ATTACH THE LEAD TO A RELAY TERMINAL. THIS CAUSED FUSE B21H-F76A TO BLOW WHICH THEN CAUSED THE ISOLATION. THE STP WAS REVISED TO BRING ALL SIGNAL POINTS TO A TERMINAL BLOCK WHICH PROVIDES EASIER ACCESS TO THE POINT AND REDUCES THE RISK OF INADVERTENT GROUNDING.

[270] RIVERBEND 1 DOCKET 50-458 LER 85-027
MAINTENANCE ERROR CAUSES SPURIOUS LOW REACTOR LEVEL SIGNAL.
EVENT DATE: 102785 REPORT DATE: 112685 NSSS: GE TYPE: BWR

(NSIC 196979) AT APPROXIMATELY 1300 ON 10/27/85 WITH THE UNIT IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN) AND PRIOR TO INITIAL CRITICALITY, AN ENGINEERED SAFETY FEATURE ACTUATION OCCURRED ON DIVISION I EMERGENCY CORE COOLING SYSTEM DUE TO AN ERRONEOUS REACTOR VESSEL LOW LEVEL SIGNAL. THE SIGNAL WAS CAUSED BY AN INSTRUMENT & CONTROLS TECHNICIAN BACKFILLING A LEVEL INSTRUMENT WITH A COMMON REFERENCE LEG TO OTHER INSTRUMENTS. THE 'A' DIESEL GENERATOR STARTED BUT DID NOT

CONNECT TO THE BUS DUE TO NORMAL VOLTAGE BEING PRESENT. LOW PRESSURE CORE SPRAY STARTED AND RESIDUAL HEAT REMOVAL TRAIN 'A' REALIGNED TO THE LOW PRESSURE COOLANT INJECTION MODE (INJECTION VALVE OPENED) FROM SHUTDOWN COOLING. BOTH RECIRCULATION PUMPS TRIPPED. THE INJECTION WAS SECURED IN 2-3 MINUTES WITH NO NOTICEABLE LEVEL CHANGE.

[271] RIVERBEND 1 DOCKET 50-458 LER 85-028
 TESTING ERROR CAUSES LOSS OF 13.8 KV NORMAL SWITCHGEAR.
 EVENT DATE: 103085 REPORT DATE: 112985 NSSS: GE TYPE: BWR

(NSIC 197018) AT 0723 ON 10/30/85 WHILE IN OPERATIONAL CONDITION 4 (COLD SHUTDOWN), AN ELECTRICAL TECHNICIAN MISTAKENLY TRIPPED THE MAIN SUPPLY BREAKER IN THE 13.8 KV NORMAL SWITCHGEAR. THE LOSS OF THIS NORMAL SUPPLY CAUSED SEVERAL ACTUATIONS INCLUDING RESIDUAL HEAT REMOVAL TRAIN 'A' ISOLATION AND A LOSS OF REACTOR PROTECTION SYSTEM 'E' POWER. BY 0823 ALL AFFECTED EQUIPMENT WAS RETURNED TO NORMAL OPERATION.

[272] RIVERBEND 1 DOCKET 50-458 LER 85-029
 ELECTRICAL NOISE CAUSES SPURIOUS RWCU ISOLATION.
 EVENT DATE: 103185 REPORT DATE: 113085 NSSS: GE TYPE: BWR
 VENDOR: RILEY COMPANY, THE - PANALARM DIVISION

(NSIC 196380) AT 0630 ON 10/31/85 WHILE IN OPERATIONAL CONDITION 2 (STARTUP), AN ISOLATION OF DIVISION I REACTOR WATER CLEANUP SYSTEM OCCURRED RESULTING IN CLOSING OF THE FOUR OUTBOARD ISOLATION VALVES. THE ISOLATION WAS ATTRIBUTED TO A SPURIOUS OPENING OF CONTACTS ON RILEY TEMPERATURE MODULES. THESE MODULES HAVE BEEN REPORTED TO GENERATE INADVERTENT TRIPS AS A RESULT OF TRANSIENT CONDITIONS. THE TRANSIENTS WERE PROBABLY GENERATED BY THE REACTOR WATER CLEANUP ISOLATION BYPASS TIMER RELAY WHICH IS IN CLOSE PROXIMITY OF THE TEMPERATURE MODULES. THE RILEY TEMPERATURES MODULES ARE BEING MODIFIED TO REDUCE TRANSIENT SUSCEPTIBILITY.

[273] RIVERBEND 1 DOCKET 50-458 LER 85-031
 OPERATOR ERROR CAUSES RWCU ISOLATION.
 EVENT DATE: 110185 REPORT DATE: 120185 NSSS: GE TYPE: BWR

(NSIC 197019) AT 1440 ON 11/01/85 WITH THE PLANT IN OPERATIONAL CONDITION 2 (STARTUP), A DIVISION I REACTOR WATER CLEANUP ISOLATION OCCURRED. WHILE THE OPERATOR WAS TAKING RWCU ROOM TEMPERATURES FOR SURVEILLANCE TEST PROCEDURE STP-000-001 "DAILY OPERATING LOGS," HE FAILED TO PLACE THE RWCU ISOLATION BYPASS SWITCH IN BYPASS. WHEN THE AREA SELECTION SWITCH WAS ACTUATED, THE ISOLATION OCCURRED. THE ISOLATION WAS RESET AND RWCU REINITIATED.

[274] RIVERBEND 1 DOCKET 50-458 LER 85-032
 SPURIOUS ACTUATION OF FUEL BUILDING CHARCOAL FILTER TRAIN.
 EVENT DATE: 110385 REPORT DATE: 120385 NSSS: GE TYPE: BWR
 VENDOR: FLUID COMPONENTS, INC.

(NSIC 196981) ON 11/3/85 AT APPROXIMATELY 1000 WITH THE UNIT IN OPERATIONAL CONDITION 2 (STARTUP), THE FUEL BUILDING HVAC NORMAL SUPPLY AND EXHAUST SYSTEM ISOLATED AND THE DIVISION I ESP CHARCOAL FILTER TRAIN AUTO STARTED. IT WAS DETERMINED THAT THE ISOLATION AND AUTO START RESULTED FROM A SPURIOUS LOW FLOW SIGNAL GENERATED BY THE DIVISION I FLOW SWITCH (1HVP*FS182). PROBLEMS HAVE ALSO BEEN ENCOUNTERED IN THE CONTROL BUILDING HVAC SYSTEMS WITH THIS SAME TYPE FLOW SWITCH (HOT WIRE ANEMOMETER-MASS FLOW) DUE TO SPURIOUS SIGNALS. THE CHARCOAL FILTER TRAIN WAS SECURED AND THE NORMAL SUPPLY AND EXHAUST SYSTEM SUCCESSFULLY RESTARTED. NO OTHER ISOLATIONS HAVE OCCURRED DUE TO THIS FLOW SWITCH SINCE 11/3/85.

[275] RIVERBEND 1 DOCKET 50-458 LER 85-030
 ELECTRICAL NOISE CAUSES SPURIOUS RWCU ISOLATION.
 EVENT DATE: 111885 REPORT DATE: 120185 NSSS: GE TYPE: BWR

(NSIC 196982) AT 0120 ON 11/01/85 WITH THE PLANT IN OPERATIONAL CONDITION 2 (STARTUP), A DIVISION I REACTOR WATER CLEANUP SYSTEM ISOLATION OCCURRED AS A RESULT OF A SPURIOUS REACTOR WATER CLEANUP FILTER DEMINERALIZER ROOM 1 HIGH TEMPERATURE ALARM. THE REACTOR WATER CLEANUP SYSTEM WAS PLACED BACK IN SERVICE WITH NO FURTHER PROBLEMS. UPON INVESTIGATION OF THE EVENT IT WAS NOTICED THAT THE RWCU DIFFERENTIAL FLOW TIMER RELAY CAUSED SPIKING NOISE TO ANY TEMPERATURE UNIT BEING READ WHENEVER THE TIMING RELAY ENERGIZED OR DE-ENERGIZED (SEE LER 85-029). RWCU DIFFERENTIAL FLOW INDICATION WAS UNSTABLE DURING THIS PERIOD DUE TO FLASHING AT THE BLOWDOWN FLOW TRANSMITTER (SEE LER 85-024).

[276] ROBINSON 2 DOCKET 50-261 LER 83-018 REV 1
 UPDATE ON TWO CONTAINMENT ATMOSPHERE RADIATION MONITORS TRIP.
 EVENT DATE: 072983 REPORT DATE: 070385 NSSS: WE TYPE: PWR
 VENDOR: TRACER LAB

(NSIC 196511) ON 7-29-83, AT 1255 HRS, THE VACUUM PUMP FOR THE CONTAINMENT ATMOSPHERE RADIATION MONITORS R-11 AND R-12 TRIPPED ON THERMAL OVERLOAD WITH A CONTAINMENT PRESSURE RELIEF IN PROGRESS. THIS EVENT RESULTED IN OPERATION IN A DEGRADED MODE PERMITTED BY A LCO AS DEFINED BY TECH SPEC TABLE 3.5-4, ITEM 1.C.I, AND IS REPORTED PURSUANT TO 6.9.2.B.2. THE LOSS OF R-11 AND R-12 DID NOT AFFECT NORMAL PLANT OPERATION. THE CAUSE OF THIS EVENT IS A DESIGN DEFICIENCY IN THE POST ACCIDENT SAMPLING SYSTEM (PASS) WHICH CAUSED AUTOMATIC ISOLATION OF THE SAMPLE LINE ISOLATION VALVES FOR R-11 AND R-12. INTERIM CORRECTIVE ACTION WAS TO IMPLEMENT A TEMPORARY PROCEDURE TO INSTALL A JUMPER, WHEN NECESSARY, TO OVERRIDE THE AUTOMATIC FUNCTION. FINAL CORRECTIVE ACTIONS WERE TO MODIFY THE VALVES' CIRCUITRY TO ALLOW OVERRIDING OF THE AUTOMATIC FUNCTION AND TO REVISE THE PASS OPERATING PROCEDURES.

[277] ROBINSON 2 DOCKET 50-261 LER 84-04E
 FISH SAMPLES NOT TAKEN.
 EVENT DATE: 060684 REPORT DATE: 070684 NSSS: WE TYPE: PWR

(NSIC 191517) PERSONNEL ERROR. IT WAS IDENTIFIED THAT THE SECOND QUARTER FISH SAMPLES DESCRIBED IN TECH SPEC TABLE 4.10.1, ITEM C.3, WERE NOT TAKEN WITHIN THE ALLOWED INTERVAL. THE FISH SAMPLES WERE SUBSEQUENTLY TAKEN WITHIN THE SECOND CALENDAR QUARTER; HOWEVER, THEY WERE BEYOND 92 DAYS PLUS OR MINUS 25% FROM THE PREVIOUS SAMPLE. THE SAMPLING FREQUENCY WAS MISUNDERSTOOD BY THE PERSONNEL INVOLVED TO BE SEMI-ANNUAL AS WILL BE REQUIRED BY THE SOON TO BE APPROVED RADIOLOGICAL AND ENVIRONMENTAL TECH SPEC (RETS) AMENDMENT.

[278] ROBINSON 2 DOCKET 50-261 LER 85-019
 POWER GREATER THAN 0.9 APL DURING PHYSICS TEST.
 EVENT DATE: 082985 REPORT DATE: 092785 NSSS: WE TYPE: PWR

(NSIC 196610) AT 0830 HRS ON 8-29-85, IT WAS RECOGNIZED THAT REACTOR POWER HAD BEEN INCREASED ABOVE THE 0.9 TIMES ALLOWABLE POWER LEVEL (APL) PRIOR TO COMPLETING EXCORE CALIBRATION TEST FMP-011, CALIBRATION OF THE EXCORE DETECTORS. CONSEQUENTLY, THE REACTOR CORE AXIAL POWER DISTRIBUTION HAD NOT BEEN RETURNED TO EQUILIBRIUM CONDITIONS RESULTING IN OPERATION OUTSIDE THE 'TARGET BAND' AT A POWER LEVEL ABOVE 0.9 TIMES APL. POWER ESCALATION UNDER THIS CONDITION IS CONTRARY TO TECH SPEC 3.10.2.9. A REVIEW HAS DETERMINED THAT OPERATION IN THE MANNER NOTED WAS WITHIN THE BOUNDS OF THE ROBINSON SAFETY ANALYSIS. CORRECTIVE ACTION IS TO REVISE FMP-011 TO PROVIDE NECESSARY GUIDANCE TO RETURN THE PLANT TO EQUILIBRIUM CONDITIONS PRIOR TO POWER ESCALATION ABOVE 0.9 APL.

[279] ROBINSON 2 DOCKET 50-261 LER 85-022
 ERROR IN LARGE BREAK LOCA ANALYSIS.
 EVENT DATE: 092885 REPORT DATE: 102385 NSSS: WE TYPE: PWR

(NSIC 196611) ON 9-28-85, EXXON NUCLEAR CORP INFORMED CAROLINA POWER AND LIGHT CO OF AN ERROR IN THE LARGE BREAK LOCA ANALYSIS. THE ERROR INVOLVED A FAILURE TO INCLUDE IN A COMPUTER ANALYSIS THE RELATIVE POWER IN THE OUTER RING OF 8 RADIAL NODES OF THE FUEL PELLET WHICH RESULTED IN THE PEAK CLAD TEMPERATURE BEING UNDERPREDICTED. IMMEDIATE CORRECTIVE ACTION WAS TO REDUCE REACTOR POWER BY 8% AND TO REDUCE THE HIGH FLUX TRIP SETPOINT BY 8% TO CONSERVATIVELY COMPENSATE FOR THE ERROR. EXXON SUBMITTED A 10CPR21 REPORT TO THE NRC, REGION V, DETAILING THIS ERROR. SUBSEQUENT EVALUATIONS OF THE CORRECTED ANALYSIS HAVE ESTABLISHED NEW REDUCED OPERATING LIMITS FOR TECH SPEC PARAMETERS F(SUB Q) AND K(Z). THESE EVALUATIONS WERE DISCUSSED WITH THE OFFICE OF NUCLEAR REACTOR REGULATION (ONRR). ON 10-16-85, AT APPROX 1935 HRS, PLANT POWER AND THE HIGH FLUX TRIP SETPOINTS BEGAN TO BE INCREASED WITHIN THE NEW OPERATING LIMITS FOR F(SUB Q) AND K(Z).

[280] SALEM 1 DOCKET 50-272 LER 85-010
 WASTE GAS HOLDUP SYSTEM NOT CONTINUOUSLY SAMPLED FOR OXYGEN.
 EVENT DATE: 091985 REPORT DATE: 101885 NSSS: WE TYPE: PWR

(NSIC 196670) ON 9-19-85 IT WAS DISCOVERED THAT THE IN-SERVICE WASTE GAS DECAY TANK (WGDT) WAS NOT BEING CONTINUOUSLY SAMPLED FOR OXYGEN CONTENT AS REQUIRED BY THE TECH SPECS. THE EVENT WAS CAUSED BY AN INCORRECT VALVE LINEUP WHICH APPARENTLY OCCURRED ON 9-15-85, FOLLOWING SAMPLING OF NO. 13 WGDT. THE EVENT WAS THEREFORE ATTRIBUTED TO PERSONNEL ERROR AND FAILURE TO FOLLOW PROCEDURES. THE VALVE LINEUP WAS CORRECTED, AND THE OXYGEN CONTENT OF THE WGDT'S WAS CONFIRMED TO BE LESS THAN 2%, AS REQUIRED BY THE TECH SPECS. THIS EVENT REVEALED THE NEED FOR ADDITIONAL TRAINING IN THE OPERATION OF THE NEWLY DESIGNED GAS ANALYZER SYSTEM. AS A RESULT, A BASIC 'USER FRIENDLY' TROUBLESHOOTING GUIDE, FOR EACH ALARM AND CONDITION WHICH COULD OCCUR ON THE WASTE GAS ANALYZER SYSTEM, IS BEING DEVELOPED. IN ADDITION, BOTH THE INITIAL AND CONTINUING TRAINING PROGRAMS FOR LICENSED AND NON-LICENSED OPERATORS AND FOR CHEMISTRY PERSONNEL WILL BE UPGRADED TO PROVIDE MORE FAMILIARITY WITH SYSTEM CAPABILITIES, SYSTEM OPERATION AND 'TROUBLE' ALARM RESPONSE. TWO SYSTEM DESIGN CHANGES ARE ALSO BEING CONSIDERED FOR IMPLEMENTATION. THESE IMPROVEMENTS TO THE SYSTEM DESIGN SHOULD ELIMINATE CONFUSION WHEN RESPONDING TO GAS ANALYZER ALARMS, AND ALLOW PERSONNEL TO MORE READILY DETECT POTENTIAL PROBLEMS ASSOCIATED WITH THE SAMPLE FLOW PATH.

[281] SALEM 1 DOCKET 50-272 LER 85-011
 REACTOR COOLANT SYSTEM UNIDENTIFIED LEAKAGE EXCEEDED ALLOWABLE LIMIT.
 EVENT DATE: 092285 REPORT DATE: 102285 NSSS: WE TYPE: PWR
 VENDOR: COPES-VULCAN, INC.
 VELAN VALVE CORP.

(NSIC 196671) REVIEW OF AN OPERATIONAL LEAKAGE EVENT, WHICH OCCURRED ON 9-22-85, REVEALED THAT TECH SPEC ACTION STATEMENT 3.4.6.2.B WAS NOT ENTERED (AS REQUIRED BY PROCEDURES), AND THAT A VISUAL 'ESTIMATE' OF LEAKAGE FROM THE PRESSURIZER SPRAY VALVES WAS USED TO QUANTIFY THE LEAKAGE AND MAKE THE DETERMINATION THAT RCS UNIDENTIFIED LEAKAGE WAS LESS THAN 1 GPM. IN ORDER TO CLASSIFY LEAKAGE AS 'IDENTIFIED', IT MUST BE ACCURATELY QUANTIFIED; VISUAL ESTIMATION OF LEAKAGE IS NOT ACCEPTABLE. THE EVENT WAS CAUSED, IN PART, BY OPERATOR ERROR IN THE FAILURE TO FOLLOW PROCEDURES, AND BY THE LACK OF A PROCEDURE SPECIFICALLY ADDRESSING QUANTIFICATION OF STEAM LEAKS. THIS RESULTED IN AN INVALID RCS WATER INVENTORY BALANCE CALCULATION, AND CONSEQUENTLY, VIOLATION OF THE ACTION REQUIREMENTS FOR OPERATIONAL LEAKAGE. THE STEAM LEAKS WERE REPAIRED, AND RCS UNIDENTIFIED LEAKAGE WAS VERIFIED TO BE LESS THAN 1.0 GPM, AS REQUIRED BY THE TECH SPECS. THE SUPERVISORS INVOLVED WITH THIS OCCURRENCE WERE COUNSELLED, AND THE POLICY CONCERNING THE HANDLING OF OPERATIONAL LEAKAGE EVENTS WAS RE-EMPHASIZED TO OTHER

OPERATIONS DEPARTMENT PERSONNEL IN THE DIALY NEWSLETTER. ADDITIONALLY, INSTRUCTIONS AND GUIDANCE FOR QUANTIFICATION OF STEAM LEAKS IS BEING INCORPORATED IN A NEW SURVEILLANCE PROCEDURE FOR REACTOR COOLANT LEAK DETECTION.

[282] SALEM 2 DOCKET 50-311 LER 85-018
 COMPONENT COOLING WATER HEAT EXCHANGER SERVICE WATER FLOW RATE BELOW REQUIRED VALUE.
 EVENT DATE: 082785 REPORT DATE: 092685 NSSS: WE TYPE: PWR
 VENDOR: FISHER FLOW CONTROL DIV (ROCKWELL INT)
 PRATT, HENRY COMPANY

(NSIC 196618) ON 8-27-85, NO. 22 COMPONENT COOLING WATER HEAT EXCHANGER (CCHX) SERVICE WATER OUTLET VALVE (22SW356) FAILED TO THE CLOSED POSITION. ATTEMPTS TO JACK THE VALVE OPEN FAILED TO ADEQUATELY RESTORE SERVICE WATER FLOW TO THE HEAT EXCHANGER. BECAUSE THE REDUNDANT CCHX (NO. 21) WAS OUT OF SERVICE FOR MAINTENANCE AT THE TIME, TECH SPEC 3.0.3 WAS ENTERED, AND A CONTROLLED SHUTDOWN WAS INITIATED. THE MALFUNCTION OF 22SW356 WAS ATTRIBUTED TO A VIBRATION INDUCED FAILURE WHICH CAUSED THE VALVE ACTUATOR TO SEPARATE FROM THE VALVE STEM. THE VIBRATION RESULTED FROM THE PRIOR REMOVAL OF THE CAVITROL TUBE BUNDLE FROM NO. 22 CCHX SERVICE WATER CONTROL VALVE (22SW127), DUE TO PLUGGING AND DETERIORATION. INVESTIGATION REVEALED THAT OPERATION WITH THIS TUBE BUNDLE REMOVED HAS CAUSED TURBULENCE DOWNSTREAM OF THE CONTROL VALVE. DUE TO THE CLOSE PROXIMITY OF THIS VALVE TO THE HEAT EXCHANGER OUTLET VALVE (22SW356), THE TURBULENCE CAUSED 22SW356 TO VIBRATE WHICH RESULTED IN ACTUATOR DAMAGE. THE VALVE ACTUATOR WAS REPLACED, TESTED AND NO. 22 CCHX RESTORED TO AN OPERABLE STATUS. A NEW CAVITROL TUBE BUNDLE FOR 22SW127 IS PRESENTLY SCHEDULED FOR DELIVERY BY 11-85. REPLACEMENT OF THIS COMPONENT SHOULD ALLEVIATE THE VIBRATION PROBLEM ASSOCIATED WITH 22SW356.

[283] SALEM 2 DOCKET 50-311 LER 85-019
 CONTAINMENT FAN COIL UNIT LEAKS.
 EVENT DATE: 091185 REPORT DATE: 092585 NSSS: WE TYPE: PWR

(NSIC 196619) AT 2146 HRS, 9-11-85, DURING ROUTINE POWER OPERATION, UNIDENTIFIED CONTAINMENT SUMP IN-LEAKAGE RATE EXCEEDED ONE GALLON PER MINUTE (1 GPM). TECH SPEC ACTION STATEMENT 3.4.7.2.B WAS ENTERED AT THAT TIME, AND A RCS WATER INVENTORY BALANCE CALCULATION WAS INITIATED. A CONTAINMENT ENTRY WAS PERFORMED, AND A SERVICE WATER LEAK WAS DISCOVERED ON NO. 23 CONTAINMENT FAN COIL UNIT (CFCU); THE LEAK WAS NOT FROM THE RCS. SERVICE WATER TO THE FAN COIL UNIT WAS EXPEDITIOUSLY ISOLATED, RESULTING IN NO ACCUMULATION OF WATER INSIDE THE CONTAINMENT; I.E., THE WATER WAS IMMEDIATELY REMOVED BY THE CONTAINMENT SUMP PUMPS. AT 0125 HRS, 9-12-85, ACTION STATEMENT 3.4.7.2.B WAS TERMINATED, FOLLOWING THE COMPLETION OF THE RCS WATER INVENTORY BALANCE WHICH VERIFIED THAT THE RCS UNIDENTIFIED LEAK RATE WAS LESS THAN 1 GPM. INVESTIGATION REVEALED THAT THE LEAK WAS FROM A PIPE NIPPLE ON THE CFCU VENT LINE. THE CARBON STEEL VENT LINE IS CEMENT LINED TO PREVENT CORROSION. HOWEVER, A PORTION OF THE COATING WAS MISSING AT THE POINT OF THE LEAK, AND THE NIPPLE WAS CORRODED IN THIS AREA. THE CEMENT COATING WAS APPARENTLY DAMAGED DURING THE INITIAL INSTALLATION OF THE NIPPLE. A NEW NIPPLE WAS INSTALLED, SERVICE WATER WAS RESTORED TO THE UNIT AND NO. 23 CFCU WAS RESTORED TO AN OPERABLE STATUS AT 1745 HRS, 9-12-85.

[284] SALEM 2 DOCKET 50-311 LER 85-020
 REACTOR TRIP MANUALLY INITIATED DUE TO LOWERING PRESSURIZER PRESSURE.
 EVENT DATE: 092185 REPORT DATE: 101885 NSSS: WE TYPE: PWR
 VENDOR: COPES-VULCAN, INC.
 FISCHER & PORTER CO.

(NSIC 196620) ON 9-21-85, THE PLANT EXPERIENCED A PRESSURIZER PRESSURE CONTROL PROBLEM. THE LOW PRESSURE ALARM WAS UP ON THE OVERHEAD ANNUNCIATOR, ALL

PRESSURIZER HEATER GROUPS WERE ENERGIZED AND PRESSURE WAS CYCLING BETWEEN 2220 AND 2240 PSIG. NO RCS OUT-LEAKAGE COULD BE FOUND, AND PRESSURIZER SPRAY VALVE 2PS3 WAS SUSPECTED TO BE LEAKING BY AND CAUSING THE PRESSURE DECREASE. ATTEMPTS TO FULLY SEAT THE VALVE USING THE MANUAL CONTROL FAILED. A UNIT LOAD REDUCTION AND CHARGING WERE INITIATED TO AID IN MAINTAINING PRESSURE; HOWEVER, PRESSURE CONTINUED TO DECREASE. WITH PRESSURIZER PRESSURE AT 1915 PSIG AND REACTOR POWER LEVEL AT APPROX 25%, A MANUAL REACTOR TRIP WAS INITIATED, TERMINATING THE DEPRESSURIZATION TRANSIENT. 2PS3 VALVE CONTROLLER CONTAINED A FAULTY TRANSDUCER, SUSPECTED TO HAVE BEEN DAMAGED BY THE HIGH TEMPERATURE ENVIRONMENT IN WHICH IT IS LOCATED. THIS, COUPLED WITH A LOWER THAN NORMAL 'LIFT OFF' SETTING OF THE VALVE, RESULTED IN 2PS3 NOT FULLY SEATING. THE TRANSDUCER WAS REPLACED IN KIND, THE SPRING TENSION ON 2PS3 WAS ADJUSTED FOR THE PROPER 'LIFT OFF' SETTING AND THE VALVE WAS STROKE TESTED WITH SATISFACTORY RESULTS. PLANS ARE TO REPLACE THE TRANSDUCERS FOR BOTH SPRAY VALVES WITH ONES DESIGNED FOR HIGHER OPERATING TEMPERATURES. NO REASON COULD BE FOUND FOR THE LOWER THAN NORMAL 'LIFT OFF' SETTING OF 2PS3.

[285] SAN ONOPRE 1 DOCKET 50-206 LER 85-015
RADIATION MONITORS SAMPLE LINE LEAKAGE CAUSES DILUTION OF STACK SAMPLES.
EVENT DATE: 102485 REPORT DATE: 112585 NSSS: WE TYPE: PWR

(NSIC 196941) AT 1409 ON 10-24-85 THE STACK SAMPLE LINE FOR PARTICULATE MONITOR R-1211 AND NOBLE GAS MONITOR R-1212 WAS FOUND TO HAVE 2 HOLES WHICH APPEARED TO HAVE BEEN CAUSED BY GRINDING. THESE HOLES WERE DISCOVERED DURING INSTALLATION OF ADDITIONAL SUPPORTS FOR THE SAMPLE LINE. AT THE TIME, R-1211 AND R-1212 WERE NOT ALIGNED TO MONITOR THE STACK. THEREFORE, THE CONDITION DID NOT AFFECT EFFLUENT MONITORING REQUIREMENTS OF TECH SPEC 3.5.9 AT THE TIME. HOWEVER, ON 10-23-85, R-1211 AND R-1212 WAS BEING UTILIZED TO PERFORM REQUIRED TECH SPEC MONITORING OF THE STACK. SINCE THE STACK SAMPLE LINE OPERATES UNDER A VACUUM, DILUTION OF THE SAMPLE STREAM MOST LIKELY OCCURRED SUCH THAT MONITORING REQUIREMENTS WERE NOT MET. IN ADDITION, EFFLUENT MONITORING REQUIREMENTS OF TECH SPEC 3.5.9 MAY NOT HAVE BEEN MET ON OTHER INSTANCES WHEN ALTERNATE MONITOR ALIGNMENTS UTILIZED THE AFFECTED STACK SAMPLE LINE SINCE IT IS NOT KNOWN WHEN THE HOLES FIRST EXISTED. THE LICENSEE WAS UNABLE TO DETERMINE THE TIME AT WHICH OR CIRCUMSTANCES UNDER WHICH THE GRINDING WAS PERFORMED, AND BELIEVES THIS IS AN ISOLATED INSTANCE OF SUCH AN OCCURRENCE. AS CORRECTIVE ACTION, THE HOLES IN THE VENT STACK SAMPLE LINE FOR R-1211 AND R-1212 HAVE BEEN TEMPORARILY REPAIRED AND RETURNED TO SERVICE. DURING CYCLE IX REFUELING OUTAGE, THIS SAMPLE LINE WILL BE PERMANENTLY REPAIRED TO REPLACED.

[286] SAN ONOPRE 1 DOCKET 50-206 LER 85-016
FIRE PROTECTION DELUGE SYSTEM FOR THE GENERATOR HYDROGEN SEAL OIL FAILS ITS FLOW TEST.
EVENT DATE: 102485 REPORT DATE: 112585 NSSS: WE TYPE: PWR

(NSIC 196942) ON 10-24-85 THE FIRE PROTECTION DELUGE SYSTEM FOR THE GENERATOR HYDROGEN SEAL OIL SYSTEM FAILED THE EVERY SECOND REFUELING OUTAGE SPRAY HEADER AIRFLOW SURVEILLANCE TEST. SEVEN SPRAY NOZZLES WERE FOUND PLUGGED. A FIREWATCH, WITH BACKUP FIRE SUPPRESSION EQUIPMENT, WAS ESTABLISHED WITHIN 1 HR PURSUANT TO TECH SPEC 3.14.B.2.A. THE CAUSE OF THE PLUGGING WAS AN EXCESSIVE AMOUNT OF RUST IN THE PIPING SYSTEM. THIS PORTION OF THE SYSTEM IS NORMALLY DRY, AND UPON ACTUATION OF THE DELUGE VALVE THE SYSTEM IS DESIGNED TO SPRAY DOWN THE SEAL OIL SYSTEM WITH WATER. THE PIPING IS MOSTLY CARBON STEEL AND IS ONLY LOW PRESSURE AIR TESTED EVERY OTHER REFUELING. THIS PROLONGED PERIOD OF NON-USE MAKES THIS SYSTEM SUSCEPTIBLE TO CORROSION. THE AREA PROTECTED BY THIS DELUGE SYSTEM IS MONITORED BY INFRARED FLAME DETECTORS AND SMOKE DETECTORS, WHICH ALARM IN THE CONTROL ROOM AND REQUIRE IMMEDIATE RESPONSE. IN ADDITION, THERE ARE 2 HOSE STATIONS IN THE IMMEDIATE AREA. THE AVAILABILITY OF THESE SYSTEMS PRECLUDES ANY SIGNIFICANT LOSS OF FIRE PROTECTION CAPABILITY DUE TO THE DELUGE SYSTEM BEING

INOPERABLE. AS CORRECTIVE ACTION, THE NOZZLES WERE CLEANED AND THE PIPING WAS BLOWN OUT USING HIGH PRESSURE AIR. AS A LONG-TERM CORRECTIVE ACTION, AFTER PERFORMING THE NORMAL AIRFLOW SURVEILLANCE, THE PIPING SYSTEM WILL BE PURGED USING HIGH PRESSURE AIR TO ENSURE NO ACCUMULATION OF RUST.

[287] SAN ONOPRE 3 DOCKET 50-362 LER 85-027
BRIEF INCREASE IN PURGE EXHAUST ACTIVITY CAUSES CONTAINMENT PURGE ISOLATION.
EVENT DATE: 092085 REPORT DATE: 101785 NSSS: CE TYPE: PWR

(NSIC 196641) ON 9-20-85 AT 0257, 0537, 1519 AND 1635, WITH A MAIN PURGE IN PROGRESS, THE CONTAINMENT AIRBORNE RADIATION MONITOR 3RE-7804 REACHED ITS ALARM SETPOINT AND INITIATED THE TRAIN 'A' CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) DUE TO BRIEF INCREASES IN CONTAINMENT AIRBORNE ACTIVITY DURING VENTING OF THE RCS. CHANGES IN THE ALIGNMENT OF THE CONTAINMENT VENTILATION FANS MOVED AREAS OF STAGNANT AIR INTO THE PURGE EXHAUST. THIS BRIEFLY INCREASED THE ACTIVITY MEASURED BY THE PROBE AT THE EXHAUST DUCT INLET AND CAUSED THE ACTUATIONS. AFTER EACH ACTUATION, THE MONITOR INDICATION WAS OBSERVED TO BE WITHIN THE ALLOWABLE SETPOINT PRIOR TO BEING RESET, AND THE PURGE WAS RE-ESTABLISHED SHORTLY AFTERWARDS. ALL CPIS ACTUATED COMPONENTS FUNCTIONED PROPERLY. THE CONTAINMENT PURGE WAS CONDUCTED WITHIN TECH SPEC LIMITS. NORMALLY MONITOR 3RE-7807 IS UTILIZED AS THE CPIS ESP MONITOR, WITH 3RE-7804 UTILIZED AS AN ENVIRONMENTAL EFFLUENT MONITOR SET AT A MUCH LOWER VALUE THAN 3RE-7807. HOWEVER, DURING THIS PERIOD, 3RE-7807 WAS REMOVED FROM SERVICE FOR ROUTINE MAINTENANCE. DURING THIS MAINTENANCE, 3RE-7804, WHICH REMAINED SET AT THE LOWER ENVIRONMENTAL EFFLUENT SETPOINT, WAS THEREFORE CONSIDERED THE ESP MONITOR.

[288] SAN ONOPRE 3 DOCKET 50-362 LER 85-032
ELECTRICAL NOISE CAUSES SPURIOUS ACTUATION OF THE FUEL HANDLING BUILDING
RADIATION MONITOR.
EVENT DATE: 101585 REPORT DATE: 111485 NSSS: CE TYPE: PWR

(NSIC 196497) AT 1020 ON 10-15-85, WITH UNIT 3 IN REFUELING, THE FUEL HANDLING ISOLATION SYSTEM (FHIS) (EIS SYSTEM CODE VG) TRAIN 'B' ACTUATED WHEN THE NOBLE GAS AIRBORNE RADIATION MONITOR 3RE7823B2 (EIS COMPONENT CODE MON) SPURIOUSLY ALARMED. ALL FHIS COMPONENTS ACTUATED AS REQUIRED. AN AIR SAMPLE WAS TAKEN, WHICH DETERMINED THE AIRBORNE ACTIVITY LEVEL TO BE BELOW THE SETPOINT OF THE MONITOR, AND THE FHIS WAS RESET. THERE WAS IRRADIATED FUEL IN THE SPENT FUEL POOL AND NO FUEL MOVEMENT WAS IN PROGRESS. THE CAUSE OF THE SPURIOUS ACTUATION IS BELIEVED TO BE RADIATION MONITOR SENSITIVITY TO RANDOM ELECTRICAL NOISE. AT THE TIME OF THE ACTUATION, THE OPERATORS WERE SHIFTING THE FUEL HANDLING BLDG (FHB) VENTILATION (EIS SYSTEM CODE VG) FROM NORMAL TO A RECIRCULATION MODE. THE SHIFTING OF THE VENTILATION IS BELIEVED TO BE THE PROBABLE SOURCE OF THE ELECTRICAL NOISE SPIKE. AS REPORTED IN LER 85-019, REV 1 (DOCKET 50-362), THE MOST PROBABLE ENTRY POINT OF THE NOISE SPIKE IS VIA THE DETECTOR (EIS COMPONENT CODE DET). AN INSPECTION OF THE DETECTOR WILL BE PERFORMED AND, IF NECESSARY, REPAIRS WILL BE MADE TO ENSURE PROPER GROUNDS ARE IN PLACE.

[289] SEQUOYAH 1 DOCKET 50-327 LER 83-070 REV 1
UPDATE ON COOLING WATER LEAKS INTO DIESEL GENERATOR CRANKCASE.
EVENT DATE: 051283 REPORT DATE: 072385 NSSS: WE TYPE: PWR
VENDOR: GENERAL MOTORS

(NSIC 196985) THE ORIGINAL LER STATED THAT UNIT 1 WAS IN MODE 1 AT 100 PERCENT POWER. THE 1A-A DIESEL GENERATOR (D/G) WAS DECLARED INOPERABLE FOR SURVEILLANCE REQUIREMENT 4.8.1.1.2.D.1. DURING THE WARMUP PRIOR TO THE PERFORMANCE OF THE SURVEILLANCE, A COOLING WATER LEAK TO THE CRANKCASE WAS DISCOVERED WHEN THE UNIT TRIPPED ON HIGH CRANKCASE PRESSURE. THIS REQUIRED ENTRY INTO ACTION STATEMENT 'A' OF LCO 3.8.1.1. PREVIOUS OCCURRENCES - NONE. THE ENGINE OIL COOLER AND THE

NUMBER 8 CYLINDER POWER PACK WERE REPLACED ON THE GENERAL MOTORS (GM) MODEL 16-645#4 D/G. THE CYLINDER HEAD (S/N 77A-4524) WAS CRACKED FROM THE INJECTOR WELL TO THE NUMBER THREE VALVE SEAT. AFTER AN INSPECTION BY TVA AND GM, FAILURE WAS ATTRIBUTED TO A RANDOM CAUSE. THE USE OF UTEX PARTS HAS BEEN DISCONTINUED. THE D/G WAS RETURNED TO SERVICE AND NO OTHER PROBLEMS WERE FOUND.

[290] SEQUOYAH 1 DOCKET 50-327 LER 83-102 REV 1
 UPDATE ON HIGH OXYGEN CONCENTRATION IN WASTE GAS DECAY TANK.
 EVENT DATE: 072283 REPORT DATE: 072385 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196932) WITH UNIT 1 IN MODE 1 AT 1730 CDT ON 07/22/83, AT 0235 CDT ON 07/26/83, AT 0130 CDT ON 07/30/83, AND AT 0217 CDT ON 07/31/83, A WASTE GAS DECAY TANK WAS FOUND TO HAVE AN OXYGEN CONCENTRATION OF GREATER THAN 2 PERCENT. THESE EVENTS PLACED THE UNIT IN ACTION STATEMENT 'A' OF LO C 3.11.2.5. PREVIOUS OCCURRENCES - THREE (SQRO-50-327/81055, 82078, AND 82098). ON THE FIRST EVENT, 0722/83, PCV-77-116 WAS NOT OPENING TO MAINTAIN COVER GAS PRESSURE ALLOWING AIR TO ENTER BACK INTO THE GAS DECAY TANKS. THE OPERATOR ADJUSTED THE AIR CONTROL AND THE VALVE OPENED WITH NO CALIBRATION BEING NECESSARY. THE OTHER THREE EVENTS WERE MOST PROBABLY CAUSED FROM AIR INLEAKAGE THROUGH THE BORIC ACID EVAPORATOR. THE LCOS WERE ALL CLEARED IN LESS THAN 48 HOURS. NO FURTHER ACTION IS PLANNED ON THESE EVENTS.

[291] SEQUOYAH 1 DOCKET 50-327 LER 85-031
 AUX BLDG ISOLATION OCCURS FOLLOWING LETDOWN SAMPLE LINE BREAK.
 EVENT DATE: 072985 REPORT DATE: 082685 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 196549) ON 7-29-85 AN AUX BLDG ISOLATION OCCURRED AT 2225 CST. THE ISOLATION WAS AUTOMATICALLY INITIATED BY HIGH RADIATION AS INDICATED BY AUX BLDG STACK VENTILATION MONITOR, RM-90-101. UPON THE ISOLATION, THE AUX BLDG GAS TREATMENT SYSTEM STARTED AND PROVIDED FILTRATION OF EFFLUENTS EXITING THE BLDG TO THE ENVIRONMENT. PRIOR TO THE EVENT AT 2140 CST, THE UNIT 2 OPERATOR NOTICED A SIGNIFICANT DROP IN VOLUME CONTROL TANK (VCT) LEVEL. AT 2230 CST, NORMAL LETDOWN AND CHARGING TO THE RCS WERE SECURED WHICH STABILIZED VCT LEVEL AND INDICATED THAT THE LEAK WAS ON THE LETDOWN LINE. THE LEAK OCCURRED AT A WELD ON A SAMPLE-LINE CONNECTION UPSTREAM OF VALVE 62-674. AT 2257 CST, AN UNUSUAL EVENT WAS DECLARED. APPROX 600 GALS WAS LOST DURING THE EVENT. ALL RELEASES WERE WELL WITHIN THE OFFSITE DOSE LIMITS. DURING THE EVENT, 11 PEOPLE HAD MINOR CONTAMINATION DUE TO AIRBORNE RADIOACTIVITY. ALL INDIVIDUALS WERE DECONTAMINATED. THE ROVING FIRE WATCH PERSONNEL WERE UNABLE TO MAKE THEIR NORMAL ROUNDS DUE TO ALARA PRECAUTIONS.

[292] SEQUOYAH 1 DOCKET 50-327 LER 85-034
 DIESEL GENERATOR GOVERNOR PROBLEMS.
 EVENT DATE: 082785 REPORT DATE: 092685 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)
 VENDOR: AMPHENOL
 MORRISON-KNUDSON COMPANY, INC.

(NSIC 196591) WHILE PERFORMING SURVEILLANCE INSTRUCTION 26, 'UNIT 2 DG TESTING FOR UNIT 1 SURVEILLANCE REQUIREMENTS,' THE 2B-B DG DID NOT PERFORM CORRECTLY. INVESTIGATION REVEALED THAT THE ELECTRICAL CONNECTOR BETWEEN THE CONTROL PANEL AND THE HYDRAULIC ACTUATOR ON THE ENGINE GOVERNOR OF DG 2B-1 WAS LOOSE. THE CONNECTOR WAS CHECKED, RECONNECTED, AND TIGHTENED. DG 2B-B WAS STARTED, AND THE GOVERNOR OPERATED CORRECTLY. THE CONDULET THAT HOLDS THE AMPHENOL CONNECTOR TO THE GOVERNOR HAS A THREAD MISMATCHED WITH THE GOVERNOR. DURING PREVIOUS MAINTENANCE ON THIS CONNECTOR, THE THREADS HAVE BECOME WORN AND HAVE MADE IT

DIFFICULT TO MAKE A TIGHT CONNECTION. THIS HAS BEEN DISCUSSED WITH THE VENDOR, AND THE VENDOR HAS ISSUED A 10 CFR PART 21 ON THE CONNECTOR. THE VENDOR IS NOW SUPPLYING A NEW CONDULET WITH MATCHING THREADS WHICH TVA IS PROCURING. THE NEW CONDULET WILL PREVENT FUTURE PROBLEMS OF THIS TYPE.

[293] SEQUOYAH 1 DOCKET 50-327 LER 85-035
 LOSS OF CONTROL POWER TO EMERGENCY DIESEL GENERATOR.
 EVENT DATE: 082985 REPORT DATE: 092385 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 196680) WHILE PERFORMING TROUBLESHOOTING ON VITAL BATTERY BOARD IV, CONTROL POWER FOR THE 2B-B DIESEL GENERATOR (D/G) WAS INADVERTENTLY LOST FOR A FEW SECONDS. THE LOSS OF CONTROL POWER AND THE RESULTING UNDERVOLTAGE SIGNAL STARTED D/GS 1A-A, 2A-A, AND 2B-B. D/G 1B-B WAS OUT OF SERVICE FOR MAINTENANCE AT THE TIME, AND IT DID NOT START. THE D/GS STARTED NORMALLY AND CAME UP TO SPEED, FREQUENCY, AND VOLTAGE WITHIN 10 SECONDS. THE D/GS WERE GIVEN A NORMAL STOP SIGNAL SHORTLY AFTER THE EVENT OCCURRED. THE 'B' TRAIN SUCTION VALVES FOR RADIATION MONITORS 106 AND 112 ALSO WENT CLOSED. THESE VALVES ARE REDUNDANT VALVES, AND THERE WAS NO LOSS OF MONITORING CAPABILITY. THEY WERE RETURNED TO NORMAL AFTER IT WAS DETERMINED THAT THE LOSS OF VOLTAGE WAS MOMENTARY, AND NO EQUIPMENT HAD FAILED. THE TROUBLESHOOTING WAS TO FIND THE SOURCE OF A GROUND AS INDICATED BY A GROUND-DETECTION METER, BUT IT WAS NOT LOCATED. THE GROUND DID NOT CAUSE ANY EQUIPMENT OPERABILITY PROBLEMS, AND NO OTHER EQUIPMENT WAS AFFECTED BY THIS EVENT.

[294] SEQUOYAH 1 DOCKET 50-327 LER 85-038
 AUXILIARY BUILDING VENTILATION ISOLATES ON HIGH RADIATION SIGNAL.
 EVENT DATE: 090885 REPORT DATE: 100785 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 196592) AN AUX BLDG VENTILATION ISOLATION OCCURRED DUE TO A SPIKE ON A SPENT FUEL POOL RADIATION MONITOR. THE SFP FILTER HAD BEEN TAKEN OUT OF SERVICE SO THAT THE FILTER COULD BE CHANGED OUT. THIS ACTION RESULTED IN THE RADIATION BACKGROUND LEVEL INCREASING FROM A RANGE OF 1 TO 7 MREM PER HR TO A RANGE OF 1.4 TO 9 MREM PER HR. THE TECH SPEC ALARM SETPOINT IS 15 MREM PER HR, BUT ACTUAL SET POINT IS 10 MREM PER HR TO ALLOW FOR INSTRUMENT TOLERANCE. SPIKES OCCUR FREQUENTLY DUE TO WORK SUCH AS WELDING, AND SINCE THE BACKGROUND WAS HIGHER THAN USUAL, SMALL SPIKES WERE ENOUGH TO CAUSE AN ABI. AFTER FILTER CHANGEOUT WAS COMPLETE, FLOW WAS INCREASED THROUGH THE SFP AND DEMINERALIZER, AND THE LEVEL OF THE SFP WAS RAISED. A TECH SPEC CHANGE HAS BEEN REQUESTED TO RAISE THE SET POINT ON THE SFP RM TO 200 MREM PER HR. NO PERSONNEL WERE CONTAMINATED, AND NO ABNORMAL RADIATION WAS RELEASED TO THE PUBLIC.

[295] SEQUOYAH 1 DOCKET 50-327 LER 85-039
 TESTING OF INCORRECT RADIATION MONITOR CAUSES CONTAINMENT VENTILATION ISOLATION.
 EVENT DATE: 101085 REPORT DATE: 110185 NSSS: WE TYPE: PW.
 VENDOR: GENERAL ATOMIC CO.

(NSIC 196960) ON OCTOBER 10, 1985, A CONTAINMENT VENTILATION ISOLATION (CVI) OCCURRED WHEN AN INSTRUMENT MECHANIC (IM) UNINTENTIONALLY WENT TO THE INCORRECT RADIATION MONITOR TO RUN A TEST. THE EVENT WAS CAUSED BY A PERSONNEL ERROR WHEN THE IM PERFORMING SI-82.2 UNINTENTIONALLY SELECTED THE UNIT 1 RADIATION MONITOR 1-RM-90-106 INSTEAD OF THE UNIT 2 MONITOR. THE UNIT 1 AND UNIT 2 MODULES ARE LOCATED IN THE MAIN CONTROL ROOM ON PANEL O-M-12, AND THE TWO ARE SEPARATED BY A DISTANCE OF APPROXIMATELY TWO FEET. UPON THE CVI EVENT, OPERATIONS PERSONNEL VERIFIED THAT THE CVI WAS NOT REQUIRED, NOTIFIED THE IM TO STOP WORK, AND RESET THE CVI FOR RETURNING THE ISOLATION SYSTEM TO NORMAL. THE IM WAS COUNSELED BY

MANAGEMENT ON ATTENTION TO DETAIL. FURTHERMORE, DISCIPLINARY ACTION WILL BE TAKEN AGAINST THE INDIVIDUAL INVOLVED.

[296] SEQUOYAH 1 DOCKET 50-327 LER 85-041
DEENERGIZED STARTING RELAY CAUSES INADVERTENT DIESEL GENERATOR START.
EVENT DATE: 101485 REPORT DATE: 111385 NSSS: WE TYPE: PWR

(NSIC 196961) ON OCTOBER 14, 1985, WHILE ALIGNING DIESEL GENERATOR (D/G) 1B-B FOR STANDBY OPERATION, THE REQUIRED FUSE CHECK WAS PERFORMED. WHEN THE COVER OF THE FUSE HOLDER WAS LIFTED, THE D/G STARTED. THE D/G WAS SHUT DOWN IMMEDIATELY AFTER DETERMINING THAT IT WAS AN INADVERTENT START. A CAUTION WILL BE PLACED IN THE STANDBY POWER CHECKLIST, THAT REMOVAL OF FUSES WILL CAUSE A D/G START IF PROPER PRECAUTIONS ARE NOT TAKEN.

[297] SEQUOYAH 1 DOCKET 50-327 LER 85-043
WEAR OF CENTRIFUGAL CHARGING PUMPS CAUSES LOW INJECTION FLOW.
EVENT DATE: 102385 REPORT DATE: 112085 NSSS: WE TYPE: PWR
VENDOR: PACIFIC PUMPS

(NSIC 196962) SURVEILLANCE INSTRUCTION (SI) - 260.2, "BIT COLD LEG INJECTION FLOW BALANCE, PUMP PERFORMANCE AND CHECK VALVE TEST," IS PERFORMED EACH REFUELING OUTAGE PRIMARILY TO VERIFY ACCEPTABLE PERFORMANCE OF THE PORTION OF THE EMERGENCY CORE COOLING SYSTEM (ECCS) ASSOCIATED WITH HIGH HEAD SAFETY INJECTION (HHSI) SYSTEM. AT SEQUOYAH, HHSI IS SUPPLIED VIA THE CENTRIFUGAL CHARGING PUMPS (CCP) IN THE CHEMICAL VOLUME CONTROL SYSTEM. ON OCTOBER 23 AND OCTOBER 24, 1985, THE 1A-A AND 1B-B CCPs WERE TESTED AND "AS FOUND" FAILED TO MEET THE ACCEPTANCE CRITERIA OF TECH SPEC 4.5.2.H.2.A REQUIRING THAT THE SUM OF THE INJECTION LINE FLOW RATES, EXCLUDING THE HIGHEST LINE FLOW RATE, BE GREATER THAN OR EQUAL TO 346 GPM. THE 1A-A AND 1B-B PUMPS TESTED AT 338 AND 328 GPM RESPECTIVELY. THE MOST PROBABLE CAUSE IS ATTRIBUTED TO OBSERVED DEGRADATION OF THE PUMPS. THE CCPs ARE SUBJECT TO NORMAL WEAR ASSOCIATED WITH THEIR SECONDARY DUTY OF PROVIDING NORMAL CHARGING FLOW. THIS DEGRADATION HAS BEEN DOCUMENTED AS AN INDUSTRY-WIDE PROBLEM AND IS DESCRIBED IN WESTINGHOUSE TECH BULLETIN NO. NSD-TB-80-11.

[298] SEQUOYAH 2 DOCKET 50-328 LER 82-115 REV 1
UPDATE ON CONTAINMENT AIR LOCK DOORS OPEN SIMULTANEOUSLY.
EVENT DATE: 100282 REPORT DATE: 072485 NSSS: WE TYPE: PWR
VENDOR: CHICAGO BRIDGE AND IRON COMPANY

(NSIC 196510) UNIT 2 IN MODE 1 AT 100% POWER. AT 0311 ON 10-02-82, THE OUTER DOOR OF THE UPPER CONTAINMENT PERSONNEL AIR LOCK BOUNCED BACK ON CLOSURE DURING A PERSONNEL EXIT. THIS ALLOWED THE LATCH BAR TO CLOSE BLOCKING THE DOOR OPEN. SEVERAL MINS LATER PERSONNEL EXITING CONTAINMENT OPENED THE INNER DOOR RESULTING IN BOTH DOORS BEING OPEN SIMULTANEOUSLY, VIOLATING LCO 3.6.1.3.A AND 3.6.1.1. PREVIOUS OCCURRENCES - 3 (SQRO-50-327/80-113, 80-116, AND 81-085). THE OUTER DOOR BOUNCED BACK ON CLOSURE DUE TO THE DOOR SWING OPERATING CHAIN BEING OUT OF ADJUSTMENT. THE INNER DOOR WAS CLOSED WITHIN 15 SECS OF OPENING. THE OUTER DOOR SWING OPERATING CHAIN WAS ADJUSTED AND THE DOOR SATISFACTORILY TESTED AT 0015 ON 10-03-82.

[299] SEQUOYAH 2 DOCKET 50-328 LER 83-049 REV 1
UPDATE ON ICE CONDENSER DECK DOOR FOUND FROZEN CLOSED.
EVENT DATE: 032483 REPORT DATE: 072285 NSSS: WE TYPE: PWR

(NSIC 196514) UNIT 2 IN MODE 1 AT 98% POWER. AT 1700 CST HRS, AN ICE CONDENSER INTERMEDIATE DECK DOOR IN BAY II WAS FOUND FROZEN CLOSED DURING A ROUTINE INSPECTION. THIS EVENT REQUIRED ENTRY INTO LCO 3.6.5.3. SQRO-50-327/81-105 WAS

THE ONLY PREVIOUS OCCURRENCE OF DOORS BEING INOPERABLE DUE TO INADEQUATE HEATING OF AIR HANDLING UNIT DRAINS. THE ICE RESULTED FROM WATER DRIPPING FROM THE AIR HANDLING UNIT CONDENSATE DRAIN PAN WHICH HAD FROZEN DUE TO HEATER MAT FAILURE. THE ICE WAS REMOVED, AND THE HEATER MAT WAS REPLACED.

[300] SEQUOYAH 2 DOCKET 50-328 LER 85-011
 MISPOSITIONED SWITCH ALLOWS SPURIOUS RADIATION MONITOR SIGNAL TO ACTUATE
 CONTAINMENT VENTILATION ISOLATION.
 EVENT DATE: 101085 REPORT DATE: 110885 NSSS: WE TYPE: PWR

(NSIC 196487) ON 10-10-85 AT 0136 CST, UPPER CONTAINMENT RADIATION MONITOR 2-RM-90-112 WAS PLACED IN-SERVICE AND GENERATED A SIGNAL SPIKE. THIS SIGNAL SPIKE RESULTED IN A CONTAINMENT VENTILATION ISOLATION. THE NORMAL PRACTICE, WHEN RETURNING RADIATION MONITORS TO SERVICE, IS TO HAVE CONTROL ROOM PERSONNEL PLACE THE APPROPRIATE TRIP-BLOCK SWITCH IN THE BLOCK POSITION. THIS PREVENTS SPURIOUS SIGNALS FROM INITIATING INADVERTENT ISOLATIONS. FOR THIS EVENT, THE ASSISTANT SHIFT ENGINEER (ASE) FAILED TO PROPERLY VERIFY THAT THE SWITCH WAS IN THE BLOCK POSITION. PROCEDURE PRECAUTIONS WILL ENSURE THAT THE SIGNALS ARE BLOCKED BEFORE PLACING THE RADIATION MONITORS IN-SERVICE TO PRECLUDE INADVERTENT CVI'S. RADIATION LEVELS WERE NORMAL. THIS REPORT IS REQUIRED BY 10CFR50.73 A.2.IV.

[301] SHOREHAM DOCKET 50-322 LER 85-038
 CONDENSATE ACCUMULATION IN RPV LEVEL REFERENCE LEG CAUSES REACTOR SHUTDOWN.
 EVENT DATE: 090885 REPORT DATE: 100885 NSSS: GE TYPE: BWR

(NSIC 196540) AT 0645, AN UNUSUAL EVENT WAS DECLARED BECAUSE THE WATER LEVEL INDICATORS ASSOCIATED WITH THE "B" REFERENCE LEG (WIDE RANGE AND NARROW RANGE INDICATORS) READ HIGH AND DIVERGED FROM THE WATER LEVEL INDICATORS ASSOCIATED WITH THE "A" REFERENCE LEG ("A" AND "C" INSTRUMENTS). A REACTOR SHUTDOWN WAS COMMENCED WHEN THE "B" INDICATOR WENT OFF SCALE HIGH. AT THAT TIME (0615), THE PLANT WAS IN OPERATIONAL CONDITION 2 WITH THE RPV PRESSURE AT 806 PSIG AND POWER LEVEL AT 1.25%. THE ACTUAL RPV LEVEL AGREED WITH THE "A" AND "C" NARROW RANGE INSTRUMENTS AS DETERMINED BY THE SHUTDOWN AND UPSET READINGS. THE UNUSUAL EVENT WAS DECLARED BECAUSE THE WATCH ENGINEER QUESTIONED WHETHER ECCS ACTUATION LOGIC OFF THE "B" INSTRUMENTATION WOULD AUTOMATICALLY ACTUATE AS REQUIRED. AT APPROXIMATELY 750 PSIG AND DECREASING, THE "B" REACTOR LEVEL INSTRUMENTS CAME BACK ON SCALE AND RETURNED TO "NORMAL". COOLDOWN CONTINUED TO 450 PSIG AND WAS STOPPED. THE UNUSUAL EVENT WAS TERMINATED. RPV PRESSURE WAS STABILIZED AT APPROXIMATELY 440 PSIG. NRC WAS NOTIFIED PER 10 CFR50.72 AT 0715. IT WAS DETERMINED THAT THIS INCIDENT WAS DUE TO EXCESS CONDENSATE ACCUMULATION IN THE STEAM LINE LEADING TO THE CONDENSING CHAMBER. TO PREVENT RECURRENCE, ADDITIONAL INSULATION HAS BEEN ADDED TO THIS LINE AND A HANGER HAS BEEN INSTALLED ON THE LINE TO ASSURE THAT LINE SLOPE REMAINS CONSTANT AT ALL TEMPERATURES.

[302] SHOREHAM DOCKET 50-322 LER 85-039
 DEFECTIVE TEST PROCEDURE CAUSES LOW REACTOR BUILDING DIFFERENTIAL PRESSURE.
 EVENT DATE: 090985 REPORT DATE: 100885 NSSS: GE TYPE: BWR

(NSIC 196541) ON SEPTEMBER 9, 1985 AT 0915 AND SEPTEMBER 18, 1985 AT 2216, CONTROL ROOM AIR CONDITIONING (CRAC) INITIATIONS OCCURRED DUE TO A REACTOR BUILDING LOW DIFFERENTIAL PRESSURE CONDITION. THE PLANT WAS IN OPERATIONAL CONDITION 2 AT THE TIME OF BOTH EVENTS AT A RPV PRESSURE OF 440 PSIG AND POWER LEVEL OF 1.4% FOR THE FIRST EVENT AND A RPV PRESSURE OF 160 PSIG AND POWER LEVEL OF 1.7% FOR THE SECOND EVENT. BOTH EVENTS OCCURRED WHILE PERFORMING A SURVEILLANCE PROCEDURE ON THE REACTOR BUILDING STANDBY VENTILATION SYSTEM (RBSVS) FILTER TRAINS (SP 24.405.01, RBSVS FILTER TRAIN OPERABILITY TEST). THE TEST REQUIRED TAKING SUCTION FROM THE REACTOR BUILDING NORMAL VENTILATION SYSTEM (RBNVS, WHICH WAS IN OPERATION AT BOTH TIMES) EXHAUST FAN DISCHARGE LINE, THROUGH

A MIXING PLENUM AND THEN THROUGH THE FILTER TRAINS. HOWEVER, A PARTIAL AMOUNT OF AIR WAS BEING DIVERTED UP TO THE REFUEL FLOOR WHICH CAUSED AN INCREASE IN REACTOR BUILDING PRESSURE. THIS ALLOWED THE DIFFERENTIAL PRESSURE TO DECREASE AND CRAC INITIATIONS OCCURRED. THE TEST WAS STOPPED, THE RBSVS WAS SECURED, THE DIFFERENTIAL PRESSURE INCREASED AND CRAC WAS SECURED. THE NRC WAS NOTIFIED PER 10 CFR50.72. TO PREVENT RECURRENCE, THE SURVEILLANCE PROCEDURE HAS BEEN REVISED TO TAKE AIR FROM THE REFUEL FLOOR, INTO THE MIXING PLENUM AND CIRCULATE IT THROUGH THE FILTERS.

[303] SHOREHAM DOCKET 50-322 LER 85-040
LIGHTNING CAUSES VOLTAGE DIP IN OFFSITE POWER.
EVENT DATE: 090985 REPORT DATE: 100885 NSSS: GE TYPE: BWR

(NSIC 196465) ON 9-7-85 AT 1050, AN REACTOR BLDG STANDBY VENTILATION SYSTEM (RBSVS)/CONTROL ROOM AIR CONDITIONING (CRAC) INITIATION OCCURRED DUE TO AN UNDERVOLTAGE CONDITION. THE PLANT WAS IN OPERATIONAL CONDITION 2. THE UNDERVOLTAGE CONDITION WAS DUE TO A LIGHTNING STORM WHICH CAUSED THE 138 KV OFFSITE POWER TO DECREASE BY 8KV. ALL ELECTRICAL BUSES BEING FED FROM THE 138 KV POWER WERE REDUCED PROPORTIONALLY. THIS UNDERVOLTAGE TRIP IS A NORMAL DESIGN CONDITION FOR EQUIPMENT BEING UTILIZED FOR NORMAL PLANT OPERATIONS. BY INITIATING RBSVS/CRAC, THE REACTOR BLDG NORMAL VENTILATION SYSTEM (RBNVS) TRIPPED BY DESIGN. ONCE THE CAUSE WAS DETERMINED, THE RBNVS WAS RETURNED TO NORMAL AND THE RBSVS/CRAC WAS SECURED. THERE WAS NO SAFETY SIGNIFICANCE TO THE EVENT.

[304] SHOREHAM DOCKET 50-322 LER 85-042
OPERATOR ERROR CAUSES FALSE LOW REACTOR LEVEL SIGNAL AND REACTOR SCRAM.
EVENT DATE: 091285 REPORT DATE: 101185 NSSS: GE TYPE: BWR

(NSIC 196466) ON 9-12-85 AT 0909, THE REACTOR EXPERIENCED A LOW LEVEL TRIP (LEVEL 3, +12.5") DUE TO HYDRAULIC OSCILLATIONS WHICH OCCURRED IN THE 'A' NARROW RANGE VARIABLE LEG. THE INSTRUMENTS SENSED A MOMENTARY FALSE LOW LEVEL RESULTING IN A FULL REACTOR TRIP. THE PLANT WAS IN OPERATIONAL CONDITION 2. AN OPERATOR WHO WAS CHECKING A TEST VALVE ON THE 'A' VARIABLE LEG INADVERTENTLY OPENED THE VALVE AND THEN CLOSED IT. THIS ACTION PRODUCED A PRESSURE OSCILLATION IN THE 'A' NARROW RANGE VARIABLE LEG, WHICH WAS SUFFICIENT ENOUGH TO CREATE A MOMENTARY FALSE LOW LEVEL INDICATION AND RESULTED IN A FULL REACTOR TRIP. THE RPV LEVEL WAS VERIFIED TO BE NORMAL, THE TRIP WAS RESET AND THE EMERGENCY SHUTDOWN PROCEDURE WAS PERFORMED. THERE WAS NO SAFETY SIGNIFICANCE TO THE EVENT. TO PREVENT RECURRENCE, THE OPERATOR WAS COUNSELLED IN THE CORRECT PROCEDURE FOR OPERATING VALVES. AS A RESULT OF RECENT SIMILAR INCIDENTS (LERS 85-006, 017, 020 AND 037, A STANDING ORDER WAS ISSUED TO PROHIBIT THE OPERATION OF VALVES ASSOCIATED WITH THE REFERENCE AND VARIABLE LEGS DURING OPERATIONAL CONDITIONS 1 AND 2 UNLESS REPAIR OR REPLACEMENT OF EQUIPMENT IS REQUIRED.

[305] SHOREHAM DOCKET 50-322 LER 85-043
CONNECTING INSTRUMENT STAND TO REACTOR LEVEL TRANSMITTER CAUSES REACTOR SCRAM.
EVENT DATE: 091785 REPORT DATE: 101685 NSSS: GE TYPE: BWR

(NSIC 196467) ON 9-17-85 AT 0631 A FULL REACTOR TRIP OCCURRED AS AN I&C TECHNICIAN WAS VALVING IN INSTRUMENT TEST EQUIPMENT TO THE 'B' WIDE RANGE VARIABLE LEG INSTRUMENT LINE. THE PLANT WAS IN OPERATIONAL CONDITION 4. AS THE TECHNICIAN OPENED A TEST LINE ISOLATION VALVE ON THE VARIABLE LEG SIDE FOR 1B21*LT-157D, A HYDRAULIC OSCILLATION OCCURRED IN THE LEG. THIS CAUSED A MOMENTARY FALSE LOW LEVEL SIGNAL (LEVEL 3, +12.5"), RESULTING IN A FULL REACTOR TRIP. THE VESSEL LEVEL WAS VERIFIED TO BE NORMAL (+38") AND THE TRIP WAS RESET. TO PREVENT RECURRENCE, PROCEDURES WILL BE REVISED TO PLACE THE MOST SENSITIVE TRIP CARDS IN TEST WITH A STABLE TEST CURRENT DURING THESE VALVING OPERATIONS.

[306] SHOREHAM DOCKET 50-322 LER 85-045
 PIPE VIBRATION CAUSES RHR VALVE OPERATOR BOLT FAILURES.
 EVENT DATE: 092585 REPORT DATE: 102585 NSSS: GE TYPE: BWR
 VENDOR: LIMITORQUE CORP.

(NSIC 196734) ON 9-25-85 AT 0915 AN UNUSUAL EVENT WAS DECLARED BECAUSE THE 'B' LOOP OF THE LPCI SYSTEM OF THE RHR SYSTEM WAS DECLARED INOPERABLE WHILE THE HPCI SYSTEM WAS OUT OF SERVICE DUE TO TESTING. AT THAT TIME THE PLANT WAS IN OPERATIONAL CONDITION 2. THIS CONDITION WAS NOT IN FULL COMPLIANCE WITH TECH SPEC 3.5.1 PER 10CFR50.73(A)(2)(I). A REACTOR SHUTDOWN WAS COMMENCED AT 0930 IN ACCORDANCE WITH TECH SPEC 3.0.3. THE LPCI SYSTEM WAS DECLARED INOPERABLE BECAUSE OF THE FAILURE OF THE RHR PUMP MINIMUM FLOW CONTROL VALVE 1E11*MOV-045B. THE FAILURE OF THE MINIMUM FLOW VALVE WAS DISCOVERED WHEN THE VALVE RECEIVED A SIGNAL TO MOVE WITH NO COMMENSURATE CHANGE IN SYSTEM FLOW. THE MINIMUM FLOW CONTROL VALVE EXPERIENCED FATIGUE FAILURE OF THE MOUNTING BOLTS OF THE LIMITORQUE OPERATOR TO THE VALVE YOKE. IT IS SUSPECTED THAT THIS WAS MOST PROBABLY CAUSED BY VALVE VIBRATION DUE TO CAVITATION IN THE SUPPRESSION POOL TEST RETURN LINE. AT 1058 THE TESTING ON THE HPCI SYSTEM WAS COMPLETED AND THE SYSTEM WAS RETURNED TO SERVICE. THE UNUSUAL EVENT WAS TERMINATED AT 1120. AT 1230, REACTOR SHUTDOWN WAS TERMINATED AND RPV PRELURE WAS INCREASED TO 920 PSIG. 9 ADDITIONAL VALVES IN THE RHR SYSTEM WERE FOUND TO HAVE LOOSE OPERATOR MOUNTING BOLTS. STUDIES ARE BEING PERFORMED TO VERIFY THE FAILURE MECHANISM OF THE BOLTS AND TO ELIMINATE THE VALVE CAVITATION IN THE RHR SYSTEM. A SUPPLEMENT REPORT WILL BE FORTHCOMING.

[307] SHOREHAM DOCKET 50-322 LER 85-046
 UNDERVOLTAGE SPIKES AND SUSPENDED FIRE WATCHES DUE TO HURRICANE "GLORIA".
 EVENT DATE: 092785 REPORT DATE: 102585 NSSS: GE TYPE: BWR

(NSIC 196542) ON SEPTEMBER 27, 1985 AT 1225, ESP ACTUATIONS OCCURRED DUE TO SPIKING LOW VOLTAGE CONDITIONS ON THE 138KV TRANSMISSION SYSTEM CAUSED BY HURRICANE "GLORIA". IN ADDITION, AT 1110, HOURLY FIRE WATCHES WERE SUSPENDED IN THE SCREENWELL AND THE DIESEL FUEL OIL PUMP HOUSE FOR PERSONNEL SAFETY REASONS. AN UNUSUAL EVENT (OE-13) WAS DECLARED AT 1005 AND WAS UPGRADED TO AN ALERT (A-17) AT 1100. THE PLANT WAS IN OPERATIONAL CONDITION 4 DURING ALL EVENTS WITH ALL RODS INSERTED IN THE CORE. DUE TO THE UNDERVOLTAGE CONDITION, THE REACTOR BUILDING CLOSED LOOP COOLING WATER (RBCLCW) SYSTEM SPLIT INTO ITS ACCIDENT MODE AND THE REACTOR BUILDING STANDBY VENTILATION SYSTEM (RBSVS) INITIATED. IN ACCORDANCE WITH A PLANT STANDING ORDER THE CONTROL ROOM AIR CONDITIONING (CRAC) SYSTEM WAS MANUALLY INITIATED. THE ALERT WAS DOWNGRADED TO AN UNUSUAL EVENT AT 1525 AND THE UNUSUAL EVENT WAS TERMINATED AT 1645. THE FIRE WATCHES WERE RESUMED AT 1735. THE RBSVS AND CRAC SYSTEM WERE RESET AND THE RBNVS WAS RETURNED TO ITS NORMAL OPERATING CONFIGURATION AT 2045. THE RB CLOW SYSTEM HAD ALREADY BEEN RETURNED TO NORMAL. NRC WAS NOTIFIED PER 10CFR 50.72 AT 1435.

[308] SHOREHAM DOCKET 50-322 LER 85-047
 AUTO START OF EMERGENCY DIESEL GENERATOR DUE TO EQUIPMENT OPERATOR ERROR.
 EVENT DATE: 093085 REPORT DATE: 102985 NSSS: GE TYPE: BWR

(NSIC 196543) ON SEPTEMBER 30, 1985 AT 1537, EMERGENCY DIESEL GENERATOR (EDS) 103 AUTOMATICALLY STARTED DUE TO AN UNDERVOLTAGE CONDITION AS A RESULT OF AN EQUIPMENT OPERATORS (E.O.) ERROR. THE PLANT WAS IN OPERATIONAL CONDITION 4 AT THE TIME. AFTER RECEIVING A SWITCHING ORDER (ISSUED BY PROCEDURE) TO TAG OUT AND SECURE IN THE OPEN POSITION, THE SECONDARY SIDE POTENTIAL TRANSFORMERS (PT) 4, 5, 6, AND 7 LOCATED IN THE 138 KV YARD, AN E.O. MISTAKENLY WENT TO THE BUS L03 SWITCHGEAR ROOM AND PROCEEDED TO SEARCH FOR THE PTS. HE LOCATED A DRAWER MARKED "BUS P.T. FUSES" AND OPENED IT, LOOKING FOR FURTHER IDENTIFICATION. OPENING THE DRAWER CAUSED A LOSS OF POWER TO SENSING RELAYS WHICH MONITOR BUS VOLTAGE AND SIMULATED A LOSS OF THE NORMAL STATION SERVICE TRANSFORMER (NSST) TO THE 103 BUS. THE NSST SUPPLY BREAKER TRIPPED AND A SLOW TRANSFER OF THE 103 BUS TO THE

RESERVE STATION SERVICE TRANSFORMER (RSST) OCCURRED AUTOMATICALLY STARTING THE EDG 103. THE EDG NEVER SYNCHRONIZED TO THE BUS. THE CONTROL ROOM OPERATORS VERIFIED THE SIGNAL AS SPURIOUS, SECURED THE DIESEL AND REALIGNED THE SYSTEM TO NORMAL STANDBY STATUS. THE NRC WAS NOTIFIED PER 10CFR50.72. TO PREVENT RECURRENCE, A LETTER OF REPRIMAND WAS ISSUED TO THE INDIVIDUAL RESPONSIBLE AND A RECOMMENDATION TO TRAINING, TO ADD TO THE E.O.S QUALIFICATION GUIDE, THAT ALL E.O. CANDIDATES BE REQUIRED TO SHOW THE LOCATION OF THE STATION PTS (PRIMARY AND SECONDARY SIDE).

[309] SHOREHAM DOCKET 50-322 LER 85-048
INITIATION OF ONE RBSVS TRAIN DUE TO TECHNICIAN ERROR.
EVENT DATE: 100985 REPORT DATE: 110885 NSSS: GE TYPE: EWR

(NSIC 196585) ON 10-9-85 AT 1605, A REACTOR BLDG STANDBY VENTILATION SYSTEM (RBSVS) 'B' SIDE INITIATION OCCURRED DUE TO AN I&C TECHNICIAN ERROR. THE PLANT WAS IN OPERATIONAL CONDITION 4. THE TECHNICIAN, WHO WAS FULLY QUALIFIED, WAS OPENING A CIRCUIT BREAKER IN ORDER TO DE-ENERGIZE THE CIRCUIT TO A PRESSURE SWITCH IN THE RBSVS CHILLED WATER SYSTEM. THE PRESSURE SWITCH WAS TO BE REPLACED UNDER AN APPROVED MAINTENANCE WORK REQUEST. THE CIRCUIT BREAKER THAT HE OPENED SUPPLIED POWER TO A SUBFEED PANEL TO THE RBSVS INLET AND OUTLET DAMPERS (1T46*AOV-035B & 037B). OPENING THE BREAKER RESULTED IN A LOSS OF POWER TO THE AOV'S CAUSING THEM TO CLOSE. CLOSING THE DAMPERS RESULTED IN A 'B' SIDE RBSVS INITIATION. THE BREAKER WAS RETURNED TO THE CLOSED POSITION, ALLOWING THE RBSVS 'B' SIDE TO BE RETURNED TO NORMAL. TO PREVENT RECURRENCE, THE I&C ENGINEER DISCUSSED THE INCIDENT WITH THE TECHNICIAN INVOLVED REGARDING THE PROPER WAY TO DEENERGIZE ELECTRICAL CIRCUITS. IN ADDITION, A LETTER OF REPRIMAND WAS ISSUED TO THE TECHNICIAN.

[310] SHOREHAM DOCKET 50-322 LER 85-049
MSIV'S AND RCIC STEAM EXHAUST CONTAINMENT ISOLATION VALVES LEAK.
EVENT DATE: 100985 REPORT DATE: 110885 NSSS: GE TYPE: BWR

(NSIC 196586) ON 10-9-85 AND 10-10-85, TWO LLRT'S SHOWED LEAKAGE TO EXCEED THE ALLOWABLE VALUES AS REQUIRED BY TECH SPECS. BOTH TESTS WERE PERFORMED DURING OPERATIONAL CONDITION 5 FOR BOTH EVENTS, WHILE THE PLANT WAS IN A SOURCE REPLACEMENT OUTAGE. ON 10-9 A LLRT WAS PERFORMED ON PENETRATION X-17 (RCIC STEAM EXHAUST LINE). THE LEAKAGE, WHEN COMBINED WITH ALL TYPE B AND C PENETRATION LEAKAGES, EXCEEDED THE ALLOWABLE LIMIT (0.6 LA) AS REQUIRED BY TECH SPEC 3.6.2.1.B. THE CAUSE OF THE LEAKAGE THROUGH THE VALVES IN PENETRATION X-17 (RCIC ISOLATION VALVES, 1E51*MOV-045, AND CHECK VALVES 1E51*08V-020 AND 021) IS CURRENTLY BEING INVESTIGATED. THE TWO CHECK VALVES ARE SCHEDULED TO BE REPLACED DURING THE CURRENT SOURCE OUTAGE. FROM 10-10 THROUGH THE 14TH, DURING LLRT'S ON THE MSIV'S, ALL 8 VALVES (1B21*MOV-081A-D AND 082A-D) WERE FOUND TO HAVE EXCESSIVE LEAKAGE BEYOND THE ALLOWABLE VALUE (11.5 SCFH) AS REQUIRED BY TECH SPEC 3.6.1.2.C. THE CAUSE OF THE LEAKAGE IS CURRENTLY BEING INVESTIGATED. DETAILS OF THE COMPLETED LLRT WILL BE PROVIDED IN A SUPPLEMENTAL REPORT. IN ADDITION TO THE TEST FAILURES IDENTIFIED IN THIS REPORT, SUBSEQUENT TEST FAILURES, IF ANY, WILL ALSO BE IDENTIFIED IN THE SUPPLEMENTAL REPORT, INCLUDING THE CAUSES AND CORRECTIVE ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE.

[311] SHOREHAM DOCKET 50-322 LER 85-050
TECHNICIAN ERROR DURING TEST CAUSES ESF ACTUATIONS.
EVENT DATE: 110285 REPORT DATE: 112685 NSSS: GE TYPE: BWR

(NSIC 196735) ON NOVEMBER 2, 1985 AT 1533, A REACTOR BUILDING STANDBY VENTILATION SYSTEM (RBSVS)/CONTROL ROOM AIR CONDITIONING (CRAC) "B" SIDE INITIATION OCCURRED DUE TO AN INSTRUMENT AND CONTROLS (I&C) TECHNICIAN ERROR. THE PLANT WAS IN REFUELING. WHILE PERFORMING SURVEILLANCE PROCEDURE SP44.621.10 (NSSS-RPV LOW

WATER LEVEL RESPONSE TIME TEST), THE I&C TECHNICIAN WAS HOOKING UP JUMPERS IN PANEL HI21*PNL-VX2, WHEN THE JUMPERS INADVERTENTLY SLIPPED OUT OF HIS HAND AND SHORTED OUT CONTACTS IN RELAY 3BIT46B19. SINCE THIS RELAY IS NORMALLY ENERGIZED, SHORTING OUT THE CONTACTS CAUSED THE RELAY TO MOMENTARILY DEENERGIZE, RESULTING IN THE INITIATION OF THE RBSVS/CRAC "B" SIDE AND THE TRIPPING OF THE REACTOR BUILDING NORMAL VENTILATION SYSTEM (RBNVS). THE TECHNICIAN WAS IMMEDIATELY AWARE OF HIS ERROR AS HE HEARD VARIOUS RELAYS PICKING UP. HE STOPPED THE PROCEDURE AND AWAITED FURTHER INSTRUCTIONS FROM SURVEILLANCE BEING PERFORMED, VERIFIED THE INITIATING SIGNAL AS SPURIOUS, RESET THE RBSVS AND CRAC AND RETURNED THE RBNVS TO NORMAL. TO PREVENT RECURRENCE, THE I&C TECHNICIAN INVOLVED WAS COUNSELLED BY THE I&C ENGINEER TO BE MORE CAREFUL WHEN INSTALLING JUMPERS.

[312] SHOREHAM DOCKET 50-322 LER 85-051
TWO HPCI CHECK VALVES LOSE THEIR INTERNALS.
EVENT DATE: 110485 REPORT DATE: 112685 NSSS: GE TYPE: BWR
VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 196736) ON NOVEMBER 4, 1985, WHILE PERFORMING MAINTENANCE ON THE HPCI TURBINE EXHAUST LINE, TWO CHECK VALVES IN THE LINE WERE FOUND TO BE INOPERABLE DUE TO THE SEPARATION OF THE DISC FROM THEIR VALVE BONNETS. THE PLANT WAS IN OPERATIONAL CONDITION 5. ON OCTOBER 30, 1985, MAINTENANCE PERSONNEL FOUND UNIDENTIFIED VALVE INTERNALS WEDGED IN THE INLET OF E41*MOV-044. ON NOVEMBER 2, 1985, UPON DISASSEMBLY OF THE IMMEDIATELY UPSTREAM CHECK VALVE, E41*18V-0022, MAINTENANCE DISCOVERED VALVE INTERNALS MISSING AND OTHER VALVE INTERNALS WEDGED IN THE INLET OF E41*18V-0022. ON NOVEMBER 4, 1985, DISASSEMBLY OF ANOTHER CHECK VALVE, E41*18V-0021, FURTHER UPSTREAM, REVEALED THE ABSENCE OF CERTAIN VALVE INTERNALS. EFFORTS TO RESOLVE THE PROBLEM AND PREVENT RECURRENCE ARE BEING IMPLEMENTED. THE DAMAGED VALVE INTERNALS HAVE BEEN RETURNED TO THE VENDOR FOR REPAIR.

[313] SHOREHAM DOCKET 50-322 LER 85-052
OPERATOR DEENERGIZES BOTH RPS BUSES AND CAUSES REACTOR SCRAM.
EVENT DATE: 110485 REPORT DATE: 120485 NSSS: GE TYPE: BWR

(NSIC 196737) ON NOVEMBER 4, 1985 AT 2147, A FULL REACTOR TRIP AND A FULL NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM (NSSSS) ISOLATION OCCURRED WHILE AN OPERATOR WAS TRANSFERRING THE POWER SUPPLY FOR THE "A" RPS BUS FROM THE ALTERNATE FEED TRANSFORMER TO THE 101 EMERGENCY ELECTRICAL BUS. THE PLANT WAS IN OPERATIONAL CONDITION 5, WITH THE MODE SWITCH IN SHUTDOWN AND ALL RODS INSERTED IN THE CORE. WHILE MOVING THE POWER SOURCE SELECT SWITCH (S-1) FROM THE "ALT A" POSITION TO THE "NORM" POSITION, THE SWITCH APPEARED TO HAVE INADVERTENTLY OVERTRAVELED BEYOND THE "NORM" POSITION, TO THE "ALT B" POSITION. THIS ACTION CAUSED THE TWO RPS BUSES (A&B) TO BE MOMENTARILY DEENERGIZED AT THE SAME TIME, RESULTING IN A FULL REACTOR TRIP AND A FULL NSSSS ISOLATION. THE OPERATOR, IMMEDIATELY AWARE OF THE CAUSE OF THE EVENT, RESET THE TRIP AND THE TRIP LOGIC FOR THE NSSSS. THE NRC WAS NOTIFIED AT 2258 PER 10CFR50.72. A MAINTENANCE WORK REQUEST WAS GENERATED TO EXAMINE THE S-1 SWITCH. THIS REPORT WILL BECOME REQUIRED READING FOR ALL PLANT OPERATORS TO ENSURE THAT CAUTION IS USED WHEN OPERATING THE S-1 SWITCH.

[314] SHOREHAM DOCKET 50-322 LER 85-053
TEMPORARY PROCEDURE CHANGE NOT APPROVED WITHIN 14 DAYS.
EVENT DATE: 110785 REPORT DATE: 120685 NSSS: GE TYPE: BWR

(NSIC 196679) ON NOVEMBER 7, 1985 AT 1400, IT WAS DETERMINED THAT A TEMPORARY PROCEDURE CHANGE NOTICE (TPCN) WAS NOT APPROVED BY THE PLANT MANAGER WITHIN 14 DAYS AS REQUIRED BY TECH SPEC 6.8.3.C. THE PLANT WAS IN OPERATIONAL CONDITION 5 WITH THE MODE SWITCH IN SHUTDOWN AND ALL RODS INSERTED IN THE CORE. THE TPCN WAS ISSUED OCTOBER 23 TO INCLUDE ADDITIONAL STEPS IN STATION PROCEDURE 35.703.05

(STARTUP NEUTRON SOURCES). IT WAS APPROVED BY THE REVIEW OF OPERATIONS COMMITTEE (ROC) NOVEMBER 1, BUT WAS NOT APPROVED BY THE PLANT MANAGER UNTIL NOVEMBER 7, FIFTEEN (15) DAYS AFTER ISSUANCE. TO PREVENT RECURRENCE, THE TPCNS WILL BE ADMINISTRATIVELY EXPEDITED TO ENSURE THAT THERE IS NO DELAY IN OBTAINING THE PLANT MANAGER'S SIGNATURE.

[315] ST. LUCIE 1 DOCKET 50-335 LER 85-008
PERSONNEL ERROR CAUSES TARDY SURVEILLANCE OF MAIN STEAM ISOLATION VALVES.
EVENT DATE: 100785 REPORT DATE: 110685 NSSS: CE TYPE: PWR

(NSIC 196488) ON 9-29-85 THE 25% TIME EXTENSION SPECIFIED BY THE UNIT I TECH SPECS FOR THE QUARTERLY MSIV PART-STROKE SURVEILLANCE TEST WAS EXCEEDED. THE CAUSE OF THE EVENT IS ATTRIBUTED TO A PERSONNEL ERROR ON THE PART OF THE LICENSED OPERATOR WHO SIGNED-OFF THE WEEKLY CHECK OF OUTSTANDING QUARTERLY SURVEILLANCES. THE OPERATOR MISTAKENLY REVIEWED ONLY THE SEMI-ANNUAL, ANNUAL, AND 18 MONTH SURVEILLANCE SHEETS. THE CORRECTIVE ACTION WAS TO PERFORM THE SURVEILLANCE. ADDITIONALLY, THE OPERATOR WHO OVERLOOKED THE WEEKLY REVIEW OF QUARTERLY SURVEILLANCES WAS COUNSELED ON THE NECESSITY TO PAY STRICT ATTENTION TO DETAIL WHEN PERFORMING A REVIEW. ALSO, THE SURVEILLANCE SCHEDULE NOTEBOOK HAS BEEN REORGANIZED AND RELABELED TO MINIMIZE THE PROBABILITY OF RECURRENCE. THIS EVENT IS BEING VOLUNTARILY REPORTED BUT IS NOT CONSIDERED REPORTABLE PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.73(A)(2)(I)(B).

[316] SUMMER 1 DOCKET 50-395 LER 85-016
FEEDWATER ISOLATION VALVE FAILURE COULD RESULT IN SAFETY HAZARD.
EVENT DATE: 071785 REPORT DATE: 072485 NSSS: WE TYPE: PWR
VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 196686) ON 3-18-85, THE LICENSEE REPORTED IN LER 85-001 (AS REVISED ON 5-21-85) THAT FEEDWATER ISOLATION VALVE XVG-1611A DID NOT FUNCTION AS DESIGNED WHEN THE REACTOR WAS SHUT DOWN. AFTER CLOSURE, THE VALVE CYCLED OPEN APPROX 1/2 INCH. THIS VALVE IS AN 18", 900#, PNEUMATIC-HYDRAULIC ACTUATED, DOUBLE DISC GATE VALVE SUPPLIED BY ANCHOR DARLING VALVE CO. ON 7-17-85, IT WAS DETERMINED THAT A POTENTIAL SUBSTANTIAL SAFETY HAZARD MAY HAVE EXISTED. THE VALVE WAS ORIGINALLY RECEIVED WITH AN ORIFICE IN ONE OF THE HYDRAULIC PASSAGES IN THE 'STANDBY' HYDRAULIC MANIFOLD. THIS ORIFICE WAS DESIGNED TO RELIEVE PRESSURE DUE TO THERMAL EXPANSION OF THE HYDRAULIC FLUID. AN EVALUATION OF THE VALVE OPERATOR DETERMINED THE ORIFICE WAS NOT REQUIRED AND IT WAS REPLACED BY A PLUG. IT WAS LATER DETERMINED THAT AN ORIFICE WAS ALSO INSTALLED, INADVERTENTLY BY THE MANUFACTURER, IN THE 'ACTIVE' MANIFOLD OF THE VALVE. WITH THE ORIFICE INSTALLED THE VALVE COULD BE FORCED OPEN BY SYSTEM PRESSURE LIFTING THE VALVE STEM BY PRESSURES AS LOW AS THOSE PRODUCED BY THE FEEDWATER BOOSTER PUMPS. IF THE VALVE IS FORCED OPEN DURING A STEAM BREAK CONDITION, WITH A FAILURE OF A FEEDWATER REGULATING VALVE, THE FEEDWATER BOOSTER PUMPS COULD SUPPLY FEEDWATER TO THE FAULTED SG. THE ADDITIONAL FEEDWATER MASS COULD CAUSE THE ENVIRONMENTAL CONDITIONS IN CONTAINMENT TO EXCEED THEIR ANALYZED VALUES.

[317] SUMMER 1 DOCKET 50-395 LER 85-025
MISSING ELECTRICAL JUMPERS CAUSE ERRONEOUS OVERPOWER/DELTA TEMPERATURE SETPOINTS.
EVENT DATE: 082885 REPORT DATE: 092785 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196498) ON 8-28-85 THE LICENSEE IDENTIFIED A NONCONSERVATIVE RESPONSE FOR THE OVERPOWER DELTA TEMPERATURE (OP DELTA-T) SETPOINT FOLLOWING A REACTOR TRIP WHICH OCCURRED ON 8-24 (REF LER 85-022). THE SETPOINT ON ALL 3 INSTRUMENTATION CHANNELS INCREASED ON DECREASING T-AVE CONTRARY TO THE REQUIREMENTS OF TECH SPEC 2.2.1 (ITEM 8, TABLE 2.2-1), 'REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINTS.' THE VARIANCE OF THE OP DELTA-T SETPOINT WAS INITIALLY IDENTIFIED DURING A POST

[320] SUMMER 1 DOCKET 50-395 LER 85-029
 EXCEEDED SURVEILLANCE INTERVAL FOR SHUTDOWN MARGIN CALCULATION.
 EVENT DATE: 100985 REPORT DATE: 110885 NSSS: WE TYPE: PWR

(NSIC 196483) ON 10-9-85 THE LICENSEE IDENTIFIED A SHUTDOWN MARGIN SURVEILLANCE TEST INTERVAL WHICH HAD BEEN EXCEEDED. THE TEST SHOULD HAVE BEEN PERFORMED BETWEEN 1920 HRS ON 10-6-85 AND 0120 HRS ON 1-7-85. THE SHUTDOWN MARGIN WAS VERIFIED PER THE SURVEILLANCE TEST PROCEDURE AT 0330 HRS ON 10-7-85. THIS EXCEEDED THE ALLOWED SURVEILLANCE INTERVAL BY 2 HRS AND 10 MINS IN VIOLATION OF TECH SPEC 4.0.2.A. HOWEVER, THE COMBINED TIME INTERVAL OF 3 CONSECUTIVE SHUTDOWN MARGIN SURVEILLANCES DID NOT EXCEED 3.25 TIMES THE SPECIFIED INTERVAL. THE LICENSEE ATTRIBUTED THE EXCEEDED SURVEILLANCE INTERVAL TO PERSONNEL ERROR. THE EVENT OCCURRED DURING THE SHUTDOWN FOR A REFUELING OUTAGE. ADEQUATE SHUTDOWN MARGIN WAS MAINTAINED THROUGHOUT THE COOLDOWN. NO ADVERSE CONSEQUENCES WERE IDENTIFIED FOR THIS EVENT. THE FOLLOWING CORRECTIVE ACTION IS PLANNED WITH RESPECT TO THIS EVENT: 1) ISSUANCE OF SURVEILLANCE TEST TASK SHEETS FOR TESTS OF SPECIFIED FREQUENCIES WILL BE INDEPENDENT OF THOSE ISSUED FOR OTHER ACTIVITIES. 2) THIS EVENT WILL BE DISCUSSED WITH OPERATIONS PERSONNEL IN THE WEEKLY SUPERVISOR'S MEETING.

[321] SUMMER 1 DOCKET 50-395 LER 85-031
 EDDY CURRENT EXAMINATION INDICATES DEGRADATION OF STEAM GENERATOR TUBES.
 EVENT DATE: 101485 REPORT DATE: 111385 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196644) ON 10-14-85 AT 1800 HRS, THE INSERVICE INSPECTION OF SG 'B' IDENTIFIED 9 OUT OF 700 TUBES WITH GREATER THAN OR EQUAL TO 40% THROUGH WALL INDICATIONS IN THE AREA OF THE HOT LEG TUBE SHEET. SINCE THE INSPECTION RESULTS FELL INTO CATEGORY C-3, A PROMPT NOTIFICATION WAS MADE AT 1915 HRS PER THE REQUIREMENTS OF 10 CFR 50.72(B)2(I). THE HIGH INCIDENCE OF DEGRADATION LED TO A MANAGEMENT DECISION TO PERFORM A 100% INSPECTION OF THE HOT LEG TUBE SHEET AREA ON ALL 3 SG'S. THE RESULTS ARE AS FOLLOWS: SG - A, TUBES WITH GREATER THAN OR EQUAL TO 40% DEGRADATION - 35; SG - B, TUBES WITH GREATER THAN OR EQUAL TO 40% DEGRADATION - 79; SG - C, TUBES WITH GREATER THAN OR EQUAL TO 40% DEGRADATION - 47. AN ENGINEERING EVALUATION OF THE TEST RESULTS DETERMINED THAT THE TUBE FAILURES APPEAR TO BE RELATED TO STRESSES FROM IMPROPER ROLLING OF THE TUBES INTO THE TUBESHEET AT THE TIME OF MANUFACTURE. THIS DEGRADATION DOES NOT CAUSE A REDUCTION IN THE DEGREE OF PROTECTION PROVIDED TO THE PUBLIC. TUBE PLUGGING IS EXPECTED TO BE COMPLETED PRIOR TO 12-15-85. A FINAL REPORT WILL BE MADE AT THAT TIME DETAILING THE TOTAL NUMBER OF TUBES PLUGGED IN EACH SG.

[322] SURRY 1 DOCKET 50-280 LER 84-011
 CHARGING PUMP INTERMEDIATE SEAL COOLERS OUT OF SERVICE.
 EVENT DATE: 051684 REPORT DATE: 061584 NSSS: WE TYPE: PWR

(NSIC 196705) ON 5-18-84 OPERATIONS PERSONNEL PERFORMING A SYSTEM WALKDOWN FOLLOWING MAINTENANCE DISCOVERED THE INTENDED HEAT SINK FOR THE CHARGING PUMP COMPONENT COOLING WATER SYSTEM WAS ISOLATED. THE CHARGING PUMP COMPONENT COOLING WATER ISOLATED TO INTERMEDIATE SEAL COOLER 1-SW-E-1B AND SERVICE WATER ISOLATED TO INTERMEDIATE SEAL COOLER 1-SW-E-1A. A REVIEW OF PLANT LOGS AND OPERATOR INTERVIEWS HAS CONFIRMED THAT BOTH INTERMEDIATE SEAL COOLERS WERE ISOLATED DURING 2 SEPARATE EVENTS. THE FIRST EVENT STARTED 5-16 AT 2045 HRS, WHEN 'B' COOLER WAS IMPROPERLY PLACED IN SERVICE AND 'A' COOLER WAS REMOVED FROM SERVICE UNTIL 2125. THE SECOND EVENT STARTED 2140 HRS ON THE SAME DAY WHEN 'A' COOLER WAS AGAIN REMOVED FROM SERVICE WITH 'B' COOLER REMAINING IMPROPERLY VALVED IN SERVICE. BOTH COOLERS WERE ISOLATED FOR A TOTAL OF 40 MINS DURING THE FIRST EVENT AND 32 HRS FOR THE SECOND EVENT. DUE TO THE COMPLEXITY OF THE MAINTENANCE INVOLVED, THE EXISTING PROCEDURES WERE NOT ADEQUATE TO PROVIDE THE NECESSARY VALVE ALIGNMENTS. IMMEDIATE CORRECTIVE ACTIONS INVOLVED PLACING 'B' INTERMEDIATE SEAL COOLER IN

[326] SUSQUEHANNA 1 DOCKET 50-387 LER 83-100 REV 1
 UPDATE ON RCS LEAK DETECTION SYSTEM FAILS FOUR TIMES.
 EVENT DATE: 070783 REPORT DATE: 071685 NSSS: GE TYPE: BWR

(NSIC 196986) FROM JULY 7 THROUGH 10, 1983, WITH THE UNIT AT APPROX. 60% POWER IN STEADY STATE OPERATION, THERE WERE FOUR INSTANCES OF OPERATION OF THE THERMAL OVERLOAD HEATERS ON THE TWO PUMPS IN THE "A" CHANNEL OF THE CONTAINMENT ATMOSPHERE CONTROL SYSTEM. IN ALL INSTANCES, EITHER THE AFFECTED PUMP WAS RESTARTED SHORTLY AFTER TRIPPING, OR THE OTHER PUMP IN THE CHANNEL WAS PLACED IN SERVICE. SYSTEM DOWNTIMES WERE OF SHORT DURATION. INABILITY TO RESTORE THE SYSTEM WOULD HAVE REQUIRED SHUTDOWN IN ACCORDANCE WITH TECH SPEC 3.4.3.1 ACTION STATEMENT. EXCESSIVE AMBIENT TEMPERATURES IN THE VICINITY OF THE SYSTEM CABINETS COUPLED WITH THE ALREADY RECOGNIZED PROBLEM OF HIGH TEMPERATURES WITHIN THE CABINET TO CAUSE ACTUATION OF THE THERMAL OVERLOAD HEATERS. A MODIFICATION TO RELOCATE ELECTRONIC MODULES IN THE CABINET (COMPLETED JUNE 10, 1985) IS EXPECTED TO MITIGATE THE HIGH INTERNAL CABINET TEMPERATURES AND PREVENT RECURRENCE OF THIS EVENT.

[327] SUSQUEHANNA 1 DOCKET 50-387 LER 85-029
 FIVE SURVEILLANCE TESTS MISSED.
 EVENT DATE: 091085 REPORT DATE: 101185 NSSS: GE TYPE: BWR

(NSIC 196565) ON 9-10-85 IT WAS DISCOVERED THAT 5 SURVEILLANCES NECESSARY TO MEET THE ASME CODE INSERVICE INSPECTION REQUIREMENTS OF TECH SPEC 4.0.5 WERE NOT PERFORMED WITHIN THE REQUIRED TIME FRAME. TWO OF THE SURVEILLANCES INVOLVED EXERCISING THREE CHECK VALVES ON THE RHR AND HPCI SYSTEM KEEP-FILL LINES. THE CHECK VALVES WERE REQUIRED TO BE TESTED PRIOR TO THE END OF THE FIRST REFUELING OUTAGE WHICH WAS COMPLETED ON 6-8-85. HOWEVER, THE SURVEILLANCES FOR THE RHR AND HPCI SYSTEM KEEP-FILL CHECK VALVES WERE NOT COMPLETED UNTIL 9-20-85. THE 3 REMAINING SURVEILLANCES INVOLVED QUARTERLY VALVE EXERCISING AND STROKE TIME TESTING OF 8 AIR OPERATED ISOLATION VALVES IN THE EMERGENCY SERVICE WATER (ESW) SYSTEM. ALL 3 SURVEILLANCES HAD VIOLATION DATES (WHICH INCLUDE ALLOWABLE EXTENSIONS) OF 4-20-85. THE SURVEILLANCES WERE SATISFACTORILY COMPLETED ON 5-23-85. ALL OF THE ABOVE SURVEILLANCES WERE UNDER THE RESPONSIBILITY OF THE PLANT ENGINEERING GROUP. A REVIEW OF ALL SURVEILLANCES UNDER THE RESPONSIBILITY OF THE PLANT ENGINEERING GROUP HAS BEEN PERFORMED TO ENSURE OTHER SURVEILLANCE REQUIREMENTS HAVE NOT BEEN VIOLATED AND NONE WERE FOUND. SEVERAL ERRORS IN THE COMPUTER PRINTOUT LISTING THE SURVEILLANCES AND THEIR DUE DATES WERE FOUND AND ARE BEING CORRECTED. WEEKLY REPORTS ARE BEING DISTRIBUTED TO THE PLANT ENGINEERING GROUP WHICH IDENTIFY SURVEILLANCES DUE WITHIN 2 WEEKS AND ANY OVERDUE SURVEILLANCES.

[328] SUSQUEHANNA 1 DOCKET 50-387 LER 85-032
 TWO REACTOR WATER CLEAN-UP SYSTEM SPILLS AND ISOLATIONS OCCUR.
 EVENT DATE: 101185 REPORT DATE: 111385 NSSS: GE TYPE: BWR

(NSIC 196748) ON 10-11 AND 10-13-85, THE UNIT 1 RWCU SYSTEM ISOLATED WHEN PLACING THE 1A FILTER DEMINERALIZER IN SERVICE. BOTH EVENTS OCCURRED DUE TO ABNORMAL LEAKAGE THROUGH THE FV-14566A FLOW CONTROL VALVE (FCV) WHICH PRESSURIZED THE SYSTEM'S LOW PRESSURE PIPING AND CAUSED PRESSURE RELIEF VALVE PSV-14561 TO LIFT AND DISCHARGE. THE FIRST EVENT RESULTED IN SPILLAGE OF BOTH PROCESS WATER AND RESIN IN AREAS IMMEDIATE AND ADJACENT TO THE AFFECTED SYSTEM. AUTOMATIC SYSTEM ISOLATION ON HI-FLOW OCCURRED APPROX 1 MIN AFTER EVENT INITIATION AND TERMINATED THE SPILLAGE. SPILL COUNTER MEASURES INCLUDED THE ACTIVATION OF A SUPPORT TEAM. ONE INSTANCE OF PERSONNEL CONTAMINATION OCCURRED IN THAT AN OPERATOR'S SHOE CONTACTED SPILLAGE AND WAS CONTAMINATED. AN ESTIMATED 20 GALS OF RESIN SPILLED. APPROX 5 GALS OF WATER SPILLED THROUGH THE SAME RELIEF VALVE ON 10-13-85 DURING SYSTEM RESTORATION. THE SYSTEM ISOLATED AUTOMATICALLY ON 'RWCU HI LEAKAGE'. SUBSEQUENT REVIEW AND INVESTIGATION DETERMINED THAT THE FV-14566A VALVE SEAT WAS

ERODED AND THAT THE AS-DESIGNED SINGLE-VALVE ISOLATION BETWEEN THE HIGH AND LOW PRESSURE SYSTEMS WAS INADEQUATE. THE FV-14566A VALVE SEAT WAS REPLACED AND A MODIFICATION TO THE VALVE CONTROL CIRCUITRY INSTALLED TO PROVIDE DOUBLE VALVE ISOLATION BETWEEN THE HIGH AND LOW PRESSURE SYSTEMS.

[329] SUSQUEHANNA 1 DOCKET 50-387 LER 85-033
NOBLE GAS SAMPLE OBTAINED LATE DUE TO TECHNICIAN ERROR.
EVENT DATE: 102385 REPORT DATE: 112185 NSSS: GE TYPE: BWR

(NSIC 196685) ON 10-23-85 A NOBLE GAS SAMPLE WAS TAKEN 3 HRS, 45 MINS LATE DUE TO A COGNITIVE ERROR BY A CHEMISTRY TECHNICIAN-LEVEL II. THE UNIT WAS AT 100% POWER IN STEADY-STATE OPERATION THROUGHOUT THIS OCCURRENCE. THE SAMPLES WHICH WERE TAKEN BEFORE AND AFTER THE OVERDUE SAMPLE INDICATED THAT NO RELEASE LIMITS HAD BEEN APPROACHED. ON 10-24-85, THE CHEMISTRY FOREMAN PLACED GUIDANCE IN THE CHEMISTRY NIGHT ORDER BOOK INSTRUCTING THE TECHNICIANS TO MAINTAIN SEPARATE CHEMISTRY LCO SAMPLE LOG SHEETS FOR THE DURATION OF EACH TECH SPEC ACTION STATEMENT. A CHEMISTRY INSTRUCTION WILL BE WRITTEN TO PROVIDE BETTER GUIDANCE TO THE TECHNICIANS ON LCO SAMPLING AND RECORD-KEEPING.

[330] SUSQUEHANNA 1 DOCKET 50-387 LER 85-031
TURBINE TRIP/REACTOR SCRAM ON MOISTURE SEPARATOR 'B' DRAIN TANK HIGH LEVEL.
EVENT DATE: 103085 REPORT DATE: 112785 NSSS: GE TYPE: BWR

(NSIC 196684) ON 10-30-85, FOLLOWING A MOISTURE SEPARATOR 'B' DRAIN TANK HIGH LEVEL, A TURBINE TRIP INITIATED A REACTOR SCRAM FROM 64% POWER. THE UNIT RESPONDED TO THE TRANSIENT PER DESIGN. ALL CONTROL RODS INSERTED FULLY. VESSEL PRESSURE AND LEVEL WERE CONTROLLED WITHIN ACCEPTABLE VALUES. CONTAINMENT INTEGRITY AND ECCS WERE NOT CHALLENGED. THE ENGINEERING EVALUATION PERFORMED THEORIZES THAT THE DRAIN TANK HIGH LEVEL WAS CAUSED BY A SURGE OF 2 PHASE FLOW WHICH ACCUMULATED AT THE LOWEST LEVEL OF THE TURBINE CROSS-AROUND PIPING. A PROCEDURE CHANGE HAS BEEN MADE WHICH DIRECTS OPERATIONS PERSONNEL TO OPEN THE TURBINE CROSS-AROUND DRAIN VALVES FOR 15 MINS AT APPROX 30% POWER DURING POWER ASCENSION. THIS WILL GIVE ADDED ASSURANCE THAT ALL WATER IS REMOVED FROM THE HIGH PRESSURE TURBINE-TO-MOISTURE SEPARATOR CROSS-AROUND PIPES.

[331] SUSQUEHANNA 2 DOCKET 50-388 LER 85-025
REACTOR SCRAM INITIATED BY LIGHTNING STRIKE ON 500 KV TRANSMISSION LINE.
EVENT DATE: 100585 REPORT DATE: 110485 NSSS: GE TYPE: BWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196749) ON 10-5-85 AT 0837 A PHASE TO GROUND FAULT OCCURRED ON THE SUSQUEHANNA-ALBURTIS-WESCOSVILLE 500KV TRANSMISSION LINES DUE TO A LIGHTNING STRIKE. THIS CAUSED THE GENERATOR 2/WESCOSVILLE TIE CIRCUIT BREAKER (2T) TO OPEN. THE 2T BREAKER RECLOSED 2 SECS LATER BUT TRIPPED IMMEDIATELY WHEN A FAILURE OF THE 2T BREAKER WAS SENSED BY THE BREAKER FAILURE LOGIC. THE BREAKER FAILURE LOGIC IN TURN TRIPPED THE SUNBURY 2 NORTH CIRCUIT BREAKER (4T) ISOLATING THE UNIT 2 GENERATOR. THIS CAUSED A TURBINE TRIP AND REACTOR SCRAM ON TURBINE CONTROL VALVE FAST CLOSURE. THE PLANT RESPONDED AS DESIGNED. TWO SAFETY RELIEF VALVES ACTUATED TO LIMIT REACTOR PRESSURE TO 1085 PSIG AND RESEATED SATISFACTORILY. THE HIGHEST REACTOR WATER LEVEL DURING THE SCRAM WAS +41 INCHES AND THE LOWEST WATER LEVEL WAS +2 INCHES. THE SENSED BREAKER FAILURE CONDITION WAS CAUSED BY NORMALLY OPEN CONTACTS ON A RELAY IN THE BREAKER FAILURE LOGIC BEING STUCK CLOSED. THE RELAY FAILURE WAS UNRELATED TO THE LIGHTNING STRIKE. THE 2T BREAKER WAS ISOLATED, AND UNIT 2 WAS RESTARTED AND SYNCHRONIZED TO THE GRID AT APPROX 1850 ON 10-6-85. THE FAILED RELAY HAS SINCE BEEN REPAIRED AND THE 2T BREAKER RETURNED TO SERVICE.

[332] TROJAN DOCKET 50-344 LER 85-010
 HEAT TRACING SHORT CIRCUIT AND COINCIDENT SIGNAL DUE TO TESTING CAUSE REACTOR
 TRIP.
 EVENT DATE: 082685 REPORT DATE: 092585 NSSS: WE TYPE: PWR
 VENDOR: CHEMELEX CORP.

(NSIC 196745) AT 11:55 AM PDT ON 8-26-85 A REACTOR TRIP OCCURRED DUE TO
 OVERPOWER/DELTA-T AND OVERTEMPERATURE/DELTA-T TRIP SIGNALS. THE COINCIDENT
 SIGNALS WERE GENERATED BY I&C MAINTENANCE TESTING IN CONJUNCTION WITH A SHORT IN
 A HEAT TRACING CIRCUIT WHICH RESULTED IN A VOLTAGE DROP ON THE Y-13 PREFERRED
 INSTRUMENT BUS. ALL EQUIPMENT OPERATED AS REQUIRED FOLLOWING THE TRIP AND THE
 PLANT WAS SAFELY SHUTDOWN. CORRECTIVE ACTION WAS TAKEN TO REPAIR THE DAMAGED
 HEAT TRACING CIRCUIT. IN THE COURSE OF PLANT RECOVERY, WITH THE REACTOR AT 3%
 POWER, SG WATER LEVEL CONTROL WAS IN MANUAL FOR THE PERFORMANCE OF MAIN TURBINE
 STOP VALVE TESTING. DURING THE TESTING, THE 'C' SG LEVEL EXCEEDED THE HIGH-HIGH
 LEVEL SETPOINT RESULTING IN A MAIN FEEDWATER PUMP AND TURBINE TRIP AND AN
 AUTOMATIC START OF THE AUX FEEDWATER PUMPS. THE WATER LEVEL IN THE SG WAS
 RETURNED TO NORMAL AND THE PLANT RECOVERY WAS CONTINUED.

[333] TROJAN DOCKET 50-344 LER 85-011
 PRESSURIZER PRESSURE INSTRUMENTS INCORRECTLY CALIBRATED.
 EVENT DATE: 082885 REPORT DATE: 092785 NSSS: WE TYPE: PWR

(NSIC 196682) IN 6-85, THE PRESSURIZER PRESSURE TRANSMITTERS WERE DISCOVERED TO
 BE INCORRECTLY CALIBRATED. THE CALIBRATION OF THE TRANSMITTERS DID NOT ACCOUNT
 FOR THE HYDROSTATIC HEAD OF APPROX 20 PSI IMPOSED BY THE TRANSMITTER REFERENCE
 LEGS. THEREFORE, THE INDICATED PRESSURIZER PRESSURE WAS APPROX 20 PSI HIGHER
 THAN THE ACTUAL PRESSURIZER VAPOR SPACE PRESSURE. THE CALIBRATION ERROR WAS
 DETERMINED TO BE OF NEGLIGIBLE SAFETY SIGNIFICANCE. THE CAUSE OF THE CALIBRATION
 ERROR WAS DETERMINED TO HAVE BEEN A DEFICIENCY IN THE DATA SHEET USED FOR
 INSTRUMENT CALIBRATION. CORRECTIVE ACTION WAS TAKEN TO RAISE THE LOW PRESSURE
 REACTOR TRIP AND SAFETY INJECTION SETPOINTS BY 20 PSIG. THE PRESSURIZER PRESSURE
 CONTROL WAS ADJUSTED TO MAINTAIN RCS PRESSURE APPROX 20 PSIG HIGHER. ON 8-28-85,
 IT WAS DETERMINED THE CALIBRATION ERROR RESULTED IN A REPORTABLE VIOLATION OF THE
 TROJAN TECH SPECS SINCE THE LOW PRESSURE REACTOR TRIP SETPOINT REQUIREMENT HAD
 NOT BEEN COMPLIED WITH. THE PRESSURIZER PRESSURE TRANSMITTERS ARE SCHEDULED TO
 BE REPLACED DURING THE 1986 REFUELING OUTAGE. THE REPLACEMENT TRANSMITTERS WILL
 BE SPANNED TO ACCOUNT FOR THE HYDROSTATIC HEAD OF THE REFERENCE LEGS.

[334] TURKEY POINT 3 DOCKET 50-250 LER 85-021
 AUXILIARY FEEDWATER SYSTEM INITIATIONS OCCUR.
 EVENT DATE: 072285 REPORT DATE: 082185 NSSS: WE TYPE: PWR
 VENDOR: MASONEILAN INTERNATIONAL, INC.

(NSIC 196609) ON 7-22-85, WHILE UNIT 3 WAS IN HOT STANDBY AND UNIT 4 AT 100%
 POWER, TWO AUTOMATIC INITIATIONS OF THE APW SYSTEM OCCURRED. WHILE RECOVERING
 FROM A UNIT 3 REACTOR TRIP (LER 250-85-019) THE 'B' SG BYPASS FEEDWATER CONTROL
 VALVE (FCV-3-489) WOULD NOT OPEN. THE 'B' SG LEVEL DECREASED UNTIL IT REACHED
 THE LOW-LOW SG LEVEL SETPOINT (15%) WHICH RESULTED IN AN AUTOMATIC START OF THE
 APW PUMPS. LATER DURING THE UNIT RECOVERY THE 'C' SG BYPASS FEEDWATER CONTROL
 VALVE (FCV-3-499) WOULD NOT CLOSE. THIS RESULTED IN THE 'C' SG LEVEL INCREASING
 UNTIL IT REACHED THE HIGH-HIGH LEVEL SETPOINT (80%). THIS TRIPPED THE 'B' SG
 FEEDWATER PUMP THAT WAS IN OPERATION, THUS COMPLETING THE SG PROTECTION LOGIC AND
 THE APW SYSTEM AUTOMATICALLY STARTED. IN ADDITION, IT WAS DISCOVERED THAT THE
 TRAIN 2 APW FLOW CONTROL VALVE (CV-3-2833) WOULD NOT CLOSE. THE VALVE WAS
 DECLARED INOPERABLE AND A UNIT 3 COOLDOWN TO HOT SHUTDOWN CONDITIONS WAS
 COMMENCED AND COMPLETED. THE REASON FOR THE MALFUNCTION OF THE VALVES DESCRIBED
 ABOVE WAS DUE TO THE QUALITY OF INSTRUMENT AIR SUPPLIED TO THE VALVE ACTUATOR.
 CORRECTIVE ACTIONS: THE ACTUATORS FOR THE APW FLOW CONTROL VALVES ON BOTH UNITS,

PCV-3-489 AND PCV-3-499 WERE INSPECTED, CLEANED, AND VERIFIED TO OPERATE PROPERLY. A BLOWDOWN OF LOW POINTS IN THE INSTRUMENT AIR SYSTEM AND FLOW CONTROL VALVE ACTUATORS WAS DONE TO REMOVE ANY TRACES OF MOISTURE. THE DESICCANT WAS REPLACED IN BOTH UNITS AIR DRYERS.

[335] TURKEY POINT 3 DOCKET 50-250 LER 85-031
 LOSS OF RPI INVERTER CAUSES TURBINE RUNBACK.
 EVENT DATE: 100785 REPORT DATE: 110685 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC SUPPLY COMPANY

(NSIC 196944) ON 10-7-85 AT 0349 A TURBINE RUNBACK OCCURRED. OPERATIONS PERSONNEL WERE INVESTIGATING A GROUND ON THE 3A DC BUS USING OFF-NORMAL OPERATING PROCEDURE (ONOP) 9608.1, '125V DC SYSTEM - LOCATION OF GROUNDS', WHEN THEY CYCLED BREAKER 49 ON BUS 3D01 WHICH SUPPLIES THE UNIT 3 ROD POSITION INDICATION (RPI) INVERTER. WHEN BREAKER 49 WAS CYCLED, THE RPI ROD BOTTOM ALARM CAME IN, INITIATING A TURBINE RUNBACK TO APPROX 540 MWE. THE UNIT WAS STABILIZED BY PLACING THE STEAM DUMP TO CONDENSER VALVES IN MANUAL TO STOP LOAD SWINGS DUE TO VALVE MODULATIONS. TURBINE POWER AND REACTOR POWER WERE MATCHED TO FACILITATE UNIT STABILIZATION. THE CAUSE OF THE TURBINE RUNBACK WAS DUE TO A FAILURE OF THE RPI INVERTER. THE RPI INVERTER FAILED DUE TO A POSITIVE DC SPIKE COMING FROM THE 3AR2 RELAY COIL. THE 3AR2 RELAY COIL MONITORS THE DC INPUT SUPPLY TO THE INVERTER. THIS SPIKE CAUSED A CURRENT SURGE IN THE INVERTER WHICH BLEW FUSES 1FU AND 2FU AND RESULTED IN THE INVERTER FAILURE. THE RPI'S WERE PLACED ON THEIR ALTERNATE POWER SUPPLY AND THE UNIT WAS RETURNED TO FULL POWER. REPLACED FUSES 1FU AND 2FU, RELAY COIL 3AR2 AND THE LOGIC PRINTED CIRCUIT CARD ON THE RPI INVERTER. THE INVERTER WAS PLACED BACK IN SERVICE. A PROCEDURE CHANGE HAS BEEN MADE TO ONOP 9608.1 TO CAUTION PERSONNEL NOT TO CYCLE THE RPI INVERTER POWER SUPPLY BREAKER ON EITHER UNIT BECAUSE A TURBINE RUNBACK MAY OCCUR.

[336] TURKEY POINT 3 DOCKET 50-250 LER 85-033
 LOCA ANALYSIS DISCREPANCY.
 EVENT DATE: 101685 REPORT DATE: 111485 NSSS: WE TYPE: PWR

(NSIC 196994) THIS REPORT IS BEING SUBMITTED AS A MEANS TO ADVISE THE NRC OF A DISCREPANCY FLORIDA POWER AND LIGHT (FPL) HAS DISCOVERED BETWEEN THE MOST CURRENT WESTINGHOUSE LOCA ANALYSIS AND THE TURKEY POINT FSAR. THE WESTINGHOUSE LOCA ANALYSIS ASSUMES THE LOSS OF ONE OF FOUR HIGH HEAD SAFETY INJECTION PUMPS THROUGH A SINGLE ACTIVE FAILURE DURING A LOCA, WHILE THE FSAR AND PLANT DESIGN ARE BASED ON THE ASSUMPTION OF A LOSS OF TWO HIGH HEAD SAFETY INJECTION PUMPS. A PRELIMINARY SAFETY EVALUATION PERFORMED BY WESTINGHOUSE AND REVIEWED BY FLORIDA POWER AND LIGHT INDICATES THAT SUFFICIENT MARGIN EXISTS BETWEEN REPORTED VALUES OF PEAK CLAD TEMPERATURE (PCT) AND THE EMERGENCY CORE COOLING SYSTEM (ECCS) ACCEPTANCE CRITERIA STATED IN 10 CFR 50.46, I.E. PCT VALUES ACCEPTABLY LESS THAN 2200 F, SUCH THAT THIS LOCA ANALYSIS DISCREPANCY COULD BE ACCOMMODATED BY DESIGN MARGINS WITH NO SIGNIFICANT SAFETY IMPACT TO THE OPERATION OF THE PLANT. WESTINGHOUSE HAS ESTIMATED THAT THE INCREASE IN PEAK CLAD TEMPERATURE TO ACCOUNT FOR THIS LOCA ANALYSIS DISCREPANCY WOULD BE CONSIDERABLY LESS THAN 20 F. THEREFORE, THIS REPORT DOES NOT FALL UNDER THE REPORTABILITY CRITERIA OF 10 CFR 50.73 OR 10 CFR 50, APPENDIX K, BUT IS SUBMITTED ONLY TO ADVISE THE NRC OF FPL'S FINDINGS.

[337] TURKEY POINT 3 DOCKET 50-250 LER 85-034
 RESIDUAL HEAT REMOVAL PUMP INOPERABLE.
 EVENT DATE: 102385 REPORT DATE: 112285 NSSS: WE TYPE: PWR
 VENDOR: INGERSOL-RAND CO.

(NSIC 196945) ON 10-23-85 WHILE IN COLD SHUTDOWN. THE REQUIREMENTS OF TECH SPEC 3.4.1.E WERE EXCEEDED. AT 0915 ON 10-23-85 THE 3A RHR PUMP WAS DECLARED OUT OF

SERVICE WHEN IT DID NOT MEET THE SEAL LEAKOFF ACCEPTANCE CRITERIA DURING AN OPERABILITY TEST. AT THIS TIME, THE 'B' EMERGENCY DG WAS OOS FOR MAINTENANCE. THIS PLACED THE UNIT IN A CONDITION WHERE UPON A LOSS OF OFF-SITE POWER, NO RHR LOOP WOULD BE AVAILABLE FOR CORE COOLING FOR 18 HRS. PLANT MANAGEMENT DECIDED, SINCE THE 3A RHR PUMP COULD STILL OPERATE AND PUMP WATER, TO LEAVE IT LINED UP TO THE RHR SYSTEM UNTIL THE 'B' EDG WAS RETURNED TO SERVICE. THIS WOULD ALLOW FOR CORE COOLING IN THE EVENT THAT OFF-SITE POWER WAS LOST. TECH SPEC 3.4.1.E REQUIRES 2 COOLANT LOOPS TO BE OPERABLE AND 1 COOLANT LOOP IN OPERATION WHENEVER THE RCS TEMPERATURE IS LESS THAN 350 F. THE 3A RHR PUMP BEING OOS EXCEEDED TECH SPECS. THE CAUSE OF THE EVENT WAS THE FAILURE OF THE 3A RHR PUMP MECHANICAL SEAL. DURING THIS EVENT, UNIT 3 WAS IN COLD SHUTDOWN WITH THE 3B RHR PUMP PROVIDING CORE COOLING. THE 'A' EDG WAS OPERABLE AND THE 3A RHR PUMP WAS LINED UP TO THE RHR SYSTEM TO ALLOW FOR CORE COOLING IN THE EVENT OF A LOSS OF OFF-SITE POWER UNTIL THE 'B' EDG WAS PLACED BACK IN SERVICE. NO HEAT UP OF THE RCS WAS OBSERVED WHILE THE B EDG WAS OOS. THE 3A RHR PUMP IS A CENTRIFUGAL PUMP, MANUFACTURED BY INGERSOLL RAND CO., MODEL 8X20W. SIMILAR LER 251-83-018.

[338] TURKEY POINT 3 DOCKET 50-250 LER 85-036
 RESIDUAL HEAT REMOVAL SYSTEM FLOW INTERRUPTED.
 EVENT DATE: 102585 REPORT DATE: 112585 NSSS: WJ TYPE: PWR
 VENDOR: BUSSMANN MFG (DIV OF MCGRAW-EDISON)
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 196717) ON OCTOBER 25, 1985, WHILE UNIT 3 WAS IN SHUTDOWN, THE RESIDUAL HEAT REMOVAL (RHR) SYSTEM FLOW WAS INTERRUPTED FOR APPROXIMATELY 27 MINUTES DUE TO THE AUTOMATIC CLOSURE OF MOV-3-750. THIS VALVE IS LOCATED IN THE SINGLE RHR PUMP SUCTION LINE ORIGINATING FROM THE HOT LEG OF THE REACTOR COOLANT SYSTEM (RCS), AND IT IS DESIGNED TO CLOSE TO PROTECT THE RHR SYSTEM FROM OVER-PRESSURIZATION WHEN THE RCS PRESSURE EXCEEDS 465 PSIG. RHR WAS RE-ESTABLISHED APPROXIMATELY 27 MINUTES LATER BY OPENING THE VALVE AND REMOVING POWER TO THE VALVE'S MOTOR OPERATOR. DURING THE PERIOD IN WHICH THE VALVE REMAINED CLOSED, THE RCS TEMPERATURE ROSE 20F, I.E., FROM 110F TO 130F. MOV-3-750 WAS RETURNED TO SERVICE AND PERFORMED SATISFACTORILY AFTER REPLACING A MALFUNCTIONING RELAY. A FAILED RELAY, PC-403-A-2, IN THE PRESSURE COMPARATOR FOR THE PRESSURE CONTROLLER PC-403 CAUSED TWO BLOWN FUSES IN THE COMPARATOR, WHICH RESULTED IN AN ERRONEOUS HIGH PRESSURE SIGNAL CLOSING RHR VALVE MOV-3-750. IMMEDIATE CORRECTIVE ACTIONS TAKEN WERE AS FOLLOWS: 1) THE 3B RHR PUMP WAS STOPPED WHEN MOV-3-750 CLOSED. 2) MOV-3-750 WAS MANUALLY OPENED AND ITS POWER REMOVED BY RACKING OPEN ITS BREAKER. 3) RHR PUMP 3B WAS THEN RESTARTED. 4) FAILED RELAY PC-403-A-2 WAS REPLACED ALONG WITH TWO BLOWN FUSES AND MOV-3-750 WAS RESTORED TO SERVICE AFTER VERIFICATION OF OPERABILITY. SIMILAR OCCURRENCES: LERS 250 83-19 AND 251 84-27.

[339] TURKEY POINT 4 DOCKET 50-251 LER 84-021 REV 1
 UPDATE ON INVERTER FAILURE CAUSES TURBINE RUNBACK AND REACTOR TRIP.
 EVENT DATE: 092084 REPORT DATE: 040185 NSSS: WE TYPE: PWR
 VENDOR: SHAWMUT COMPANY

(NSIC 196658) ON SEPTEMBER 20, 1984, A TURBINE RUNBACK AND SUBSEQUENT REACTOR TRIP OCCURRED. DURING AN INVESTIGATION FOR A GROUND IN THE 3A DC BUS, THE "NORMAL" (4A) STATIC INVERTER (4Y01) TRIPPED DUE TO A BLOWN FUSE. THE 4A INVERTER WAS IN SERVICE SUPPLYING POWER TO A VITAL 120 VOLT (A.C.) INSTRUMENT BUS (PANEL 4P07). THE 4A INVERTER FAILURE RESULTED IN A LOSS OF POWER TO VITAL PANEL 4P07 WHICH CAUSED NUCLEAR INSTRUMENTATION SYSTEM (NIS) CHANNEL N-42 TO GENERATE AN "NIS ROD DROP" SIGNAL CAUSING A TURBINE RUNBACK TO 70% POWER. FOLLOWING THE TURBINE RUNBACK, A REACTOR TRIP OCCURRED WHEN THE REACTOR PROTECTION LOGIC OF STEAM FLOW GREATER THAN FEED FLOW, COINCIDENT WITH STEAM GENERATOR LOW LEVEL FOR THE "B" STEAM GENERATOR WAS MADE UP. IMMEDIATE CORRECTIVE ACTIONS INCLUDED STABILIZING THE UNIT AND RE-ENERGIZING VITAL PANEL 4P07. LONG TERM CORRECTIVE

ACTION IS TO REPLACE THE INVERTERS TO ENSURE A MORE RELIABLE POWER SUPPLY. ALL EQUIPMENT FUNCTIONED AS DESIGNED ON INITIATION OF THE ENGINEERED SAFETY FEATURE ACTUATION SIGNAL (ESFAS) GENERATED IN THE REACTOR PROTECTION SYSTEM. SIMILAR OCCURRENCES: LER 251-84-011.

[340] TURKEY POINT 4 DOCKET 50-251 LER 85-023
PRESSURIZER SAMPLE CONTAINMENT ISOLATION VALVE TEST NOT PERFORMED.
EVENT DATE: 082485 REPORT DATE: 112085 NSSS: WE TYPE: PWR

(NSIC 196947) WHILE UNIT 4 WAS IN HOT SHUTDOWN, THE CONTAINMENT ISOLATION VALVE REQUIREMENTS OF TECH SPEC 3.3.3 WERE EXCEEDED. THE TURKEY POINT INSERVICE TESTING (IST) PROGRAM REQUIRES QUARTERLY CYCLING OF CONTAINMENT ISOLATION VALVE CV-4-956A LOCATED IN THE PRESSURIZER STEAM SPACE SAMPLING LINE TO MAINTAIN VALVE OPERABILITY. THIS VALVE WAS NOT TESTED DURING THE SECOND QUARTER OF 1985 DUE TO BEING ON IN-PLANT EQUIPMENT CLEARANCE ORDER 85-4-28. THIS WAS DUE TO OPERABILITY PROBLEMS EXPERIENCED WITH CONTAINMENT BOUNDARY VALVE CV-4-951 LOCATED IN THE SAME LINE (LER 251-85-008). CV-4-951 WAS REPAIRED AND SATISFACTORILY TESTED ON 8-24-85 AND CLEARANCE 85-4-28 WAS RELEASED. THEREFORE, CV-4-956A REQUIRED AN IST TEST AFTER RELEASING THE CLEARANCE AND PRIOR TO THE UNIT ENTERING MODE 4 (HOT SHUTDOWN). THIS WAS NOT DONE, THUS EXCEEDING THE REQUIREMENTS OF TECH SPEC 3.3.3. SUBSEQUENT REVIEW OF APPENDIX H TESTING DATA IDENTIFIED THIS DISCREPANCY. AN EVALUATION OF THIS SEQUENCE OF EVENTS WAS PERFORMED AND ON 10-21-85, THIS EVENT WAS DETERMINED TO BE REPORTABLE AS A LER. WHEN CV-4-956A COULD NOT BE TESTED ON ITS QUARTERLY CYCLE, THIS WAS NOT REFLECTED ON THE CLEARANCE FOR THE VALVE. THEREFORE, WHEN THE CLEARANCE WAS RELEASED, IT WAS NOT REALIZED THAT THE VALVE REQUIRED TESTING. ON 9-1-85 CV-4-956A WAS SATISFACTORILY TESTED PER APPENDIX H OF OP 0209.1 THUS SATISFYING TECH SPEC 3.3.3.

[341] TURKEY POINT 4 DOCKET 50-251 LER 85-022
480 VOLT MOTOR CONTROL CENTER DEENERGIZES.
EVENT DATE: 101685 REPORT DATE: 111485 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: TURKEY POINT 3 (PWR)

(NSIC 196946) ON 10-16-85 THE 4A 4160V BREAKER, 4AA08, WHICH FEEDS THE 4A 4160 VOLT/480 VOLT TRANSFER, TRIPPED DE-ENERGIZING THE 4A 480V LOAD CENTER (LC). THIS DE-ENERGIZED THE VARIOUS LOADS FED BY THE LC INCLUDING THE 4A 480 VOLT MOTOR CONTROL CENTER (MCC). TECH SPEC 3.7.1.C REQUIRES 480V MCC'S A, B, OR C AND D OF THE ASSOCIATED UNIT TO BE ENERGIZED WHENEVER THE REACTOR IS ABOVE COLD SHUTDOWN. LOSS OF THE 4A MCC PLACED UNIT 4 IN A CONDITION PROHIBITED BY TECH SPEC THUS REQUIRING A UNIT SHUTDOWN. NO UNIT SHUTDOWN WAS COMMENCED DUE TO THE ABILITY TO RE-ENERGIZE THE 4A MCC WITHIN 40 MINS. THE LOSS OF THE 4A MCC REMOVED THE POWER SUPPLY TO THE SOAK-BACK OIL PUMP, IMMERSION HEATER, AND FUEL OIL SKID TANK FILL SOLENOID VALVE FOR THE 'B' EMERGENCY DG, THUS AFFECTING THE 'B' EDG OPERABILITY. THIS PLACED UNIT 3, WHICH WAS IN THE PROCESS OF A UNIT HEATUP OUTSIDE OF THE REQUIREMENTS OF TECH SPEC 3.7, THUS REQUIRING A UNIT COOLDOWN. NO COOLDOWN WAS COMMENCED DUE TO THE ABILITY TO RE-ENERGIZE THE 4A MCC WITHIN 40 MINS. THE CAUSE OF THE EVENT WAS TRIPPING OF BREAKER 4AA08 WHICH DE-ENERGIZED THE 4ALC AND MCC. THE CAUSE OF THE BREAKER TRIP COULD NOT BE IDENTIFIED. BREAKER 4AA08 AND THE 4A 480V LC WERE CHECKED AND NO OFF-NORMAL INDICATIONS OR PROBLEMS WERE FOUND, HOWEVER, BREAKER 4AA08 WILL BE REPLACED DURING THE NEXT OUTAGE OF SUFFICIENT DURATION. BREAKER 4AA08 WAS PLACED BACK IN SERVICE AND THE 4A 480V LC AND MCC WERE RE-ENERGIZED.

[342] TURKEY POINT 4 DOCKET 50-251 LER 85-024
INADVERTENT AUTO START OF COMPONENT COOLING WATERPUMP.
EVENT DATE: 110285 REPORT DATE: 120285 NSSS: WE TYPE: PWR
VENDOR: UNITED ELECTRIC CONTROLS COMPANY

(NSIC 196718) ON NOVEMBER 2, 1985, AN AUTOMATIC INITIATION OF THE 4A STANDBY COMPONENT COOLING WATER (CCW) PUMP OCCURRED. THE OTHER TWO CCW PUMPS 4B AND 4C CONTINUED OPERATING NORMALLY DURING AND SUBSEQUENT TO THIS AUTO-START OF THE 4A PUMP. AT THE TIME OF THIS EVENT, TECHNICIANS WERE REPLACING THE PRESSURE SWITCH FOR PRESSURE COMPARATOR PC-611, WHICH IS A PORTION OF THE AUTOMATIC STARTING CIRCUITRY FOR THIS PUMP. A LOW PRESSURE SIGNAL WAS GENERATED WHEN THE FUSES WERE REMOVED FROM A CONTROL POWER RELAY FOR THE 4A CCW PUMP TO TEST THE AUTO-START CIRCUITRY AFTER REPLACEMENT OF THE PRESSURE SWITCH. WHILE THE AUTOMATIC INITIATION OF THE 4A CCW PUMP WAS ANTICIPATED AFTER THE FUSE REMOVAL AND DURING THE TESTING, THIS EVENT IS CONSIDERED TO BE A REPORTABLE OCCURRENCE DUE TO THE LACK OF DOCUMENTATION IDENTIFYING THIS AUTO-START AS A "PRE-PLANNED SEQUENCE." THE AUTOMATIC START OF THE 4A CCW PUMP WAS THE RESULT OF MAINTENANCE AND POST-MAINTENANCE TESTING PERFORMED ON THE AUTO-START CIRCUITRY, PC-611. THE FOLLOWING CORRECTIVE MEASURES WERE TAKEN OR ARE PLANNED: 1) UPON AUTO-START, THE 4A CCW PUMP WAS LEFT RUNNING UNTIL THE AUTO-START CIRCUITRY WAS RETURNED TO SERVICE. 2) THE PERIODIC TESTING PROCEDURE FOR THE CCW SYSTEM WILL BE REVISED TO INCLUDE A TESTING SEQUENCE FOR THE AUTO-START FEATURE OF THE CCW PUMPS.

[343] VERMONT YANKEE DOCKET 50-271 LER 85-007
 NINE CONTAINMENT ISOLATION VALVES LEAK.
 EVENT DATE: 092685 REPORT DATE: 102885 NSSS: GE TYPE: BWR
 VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 196528) WHILE PERFORMING TYPE C LEAK RATE TESTING, MSIV-86C, MSD-77, FDW 96A, CRD-412A, CRD-413A, CRD-413B, CA-89B, RWCU-15 AND CRD-181 WERE FOUND TO HAVE SEAT LEAKAGE ABOVE THAT PERMITTED BY TECH SPEC SECTION 3.7.A.4. THIS RESULTED IN THE TOTAL APPENDIX J TYPE B AND C LIMIT OF 14.75 LBM/HR BEING EXCEEDED WHICH DOES NOT MEET TECH SPEC SECTION 3.7.A.3 REQUIREMENT. VERMONT YANKEE WILL PERFORM MAINTENANCE ON ALL OF THE ABOVE VALVES TO DETERMINE CAUSE OF FAILURE AND RETEST THEM TO ENSURE THAT SEAL LEAKAGE IS WITHIN TECH SPEC ALLOWABLES PRIOR TO PLANT STARTUP FOLLOWING THE 1985/86 REFUELING OUTAGE. NO SIMILAR EVENTS HAVE BEEN REPORTED ON MSIV-86C, CRD-413A, CRD-413B AND CA-89B IN THE LAST 5 YEARS. A SIMILAR EVENT WAS REPORTED ON CRD-412A AS LER 84-11. SIMILAR EVENTS WERE REPORTED ON FDW-96A AS LER 83-10 AND LER 84-11.

[344] VERMONT YANKEE DOCKET 50-271 LER 85-008
 INCORRECT NOBLE GAS EFFLUENT DOSE RATE CALCULATION.
 EVENT DATE: 092885 REPORT DATE: 102885 NSSS: GE TYPE: BWR

(NSIC 196464) DURING AN AUDIT ON 9-27-85, YANKEE ATOMIC PERSONNEL DISCOVERED AN ERROR IN THE OFFSITE DOSE RATE CALCULATION PROCEDURE, WHICH DID NOT CORRESPOND TO TECH SPECS SECTION 3.8.E REQUIREMENTS. THE CALCULATION USED AN EQUATION WHICH GAVE AN ANSWER WITH THE UNITS IN DOSE (MREM) INSTEAD OF DOSE RATE (MREM/YR). THE INCORRECT EQUATION HAD BEEN IN THE PROCEDURE SINCE 4-1-85. THE STACK RADIATION MONITORS HAVE BEEN MONITORING GASEOUS EFFLUENT AND NO LIMITS WERE EXCEEDED DURING THE PERIOD WHEN THE PROCEDURE WAS USED.

[345] VERMONT YANKEE DOCKET 50-271 LER 85-010
 ELECTRICAL PENETRATION CONDUCTOR INSULATION IS DEGRADED.
 EVENT DATE: 100385 REPORT DATE: 103085 NSSS: GE TYPE: BWR

(NSIC 196720) ON OCTOBER 3, 1985 WHILE SHUTDOWN, AN INSPECTION OF THE DRYWELL SIDE OF SIX GENERAL ELECTRIC PRIMARY CONTAINMENT ELECTRICAL PENETRATIONS WAS CONDUCTED. THE INSPECTION WAS INITIATED AS A RESULT OF PREVIOUSLY IDENTIFIED ELECTRICAL SHORTING BETWEEN TWO CONDUCTORS DUE TO INSULATION DAMAGE IN PRIMARY CONTAINMENT CONTROL AND INDICATION PENETRATION X105C. IT WAS DETERMINED IN ALL OF THE INSPECTED PENETRATIONS THAT THE CONDUCTORS WERE INSTALLED SUCH THAT SOME WERE IN CONTACT WITH THE SHARP EDGE OF THE END OF THE ELECTRICAL PENETRATION ASSEMBLY

SLEEVE. CONTACT WITH THE STEEL SLEEVE COULD RESULT IN ELECTRICAL SHORTS BETWEEN CONDUCTORS OR FROM CONDUCTORS TO GROUND. CORRECTIVE ACTION IS EXPECTED TO CONSIST OF ADDITIONAL PENETRATION INSPECTIONS AND THE INSTALLATION OF AN EDGE GUARD/INSULATING MATERIAL IN CONJUNCTION WITH INSULATION RESISTANCE TESTING AND/OR CONDUCTOR INSPECTION.

[346] VERMONT YANKEE DOCKET 50-271 LER 85-009
PERSONNEL ERROR DURING SCRAM AIR HEADER DUMP REMOVAL CAUSES REACTOR SCRAM.
EVENT DATE: 100785 REPORT DATE: 103085 NSSS: GE TYPE: BWR

(NSIC 196578) ON 10-7-85 AT 12:45 A FULL SCRAM SIGNAL WAS RECEIVED FROM THE MANUAL SCRAM CIRCUIT WHILE IMPLEMENTING A DESIGN CHANGE IN THE RPS SYSTEM. THE DESIGN CHANGE INVOLVES REMOVAL OF THE AUTOMATIC SCRAM AIR HEADER DUMP SYSTEM. THE REACTOR WAS SHUTDOWN AND ALL FUEL WAS REMOVED FROM THE CORE AT THE TIME OF THE SCRAM. THE SCRAM WAS INITIATED IN THE MANUAL SCRAM CIRCUIT AS A RESULT OF LIFTING A COIL WIRE ON AN SRM SCRAM SENSOR RELAY. THE DE-ENERGIZATION OF THE RELAY RESULTED IN A FULL SCRAM SIGNAL BECAUSE THE SRM SHORTING LINKS WERE REMOVED FOR NON-COINCIDENCE NEUTRON MONITORING PROTECTION. REMOVAL OF THE SHORTING LINKS WAS NOT ANTICIPATED WHEN THE INSTALLATION PROCEDURE FOR THE DESIGN CHANGE WAS PREPARED. AS A RESULT OF THE SCRAM SIGNAL SOME CONTAMINATED WATER LEAKED FROM THE ACCUMULATOR DRAIN VALVES (HCU-107) ONTO THE REACTOR BLDG FLOOR. PRIOR TO THE EVENT THE HCU'S WERE PARTIALLY ISOLATED AND THE WATER PRESSURE WAS DISCHARGED. HCU VALVES 101 AND 104 WERE OPEN TO PROVIDE COOLING WATER TO THE CONTROL ROD DRIVES. THE OPENING OF THE SCRAM INLET VALVE AS A RESULT OF THE SCRAM SIGNAL PROVIDED A PATH FOR REACTOR WATER TO FLOW OUT SOME OF THE ACCUMULATOR DRAIN VALVES (HCU-107). THE ACCUMULATOR DRAIN VALVES ON SOME OF THE HCU'S HAD INADVERTENTLY BEEN LEFT PARTIALLY OPEN AFTER HCU DEPRESSURIZATION AND ISOLATION.

[347] VERMONT YANKEE DOCKET 50-271 LER 85-011
SPURIOUS SIGNALS FROM REFUELING FLOOR RAD MONITOR CAUSES THREE CONTAINMENT ISOLATIONS.
EVENT DATE: 100885 REPORT DATE: 110685 NSSS: GE TYPE: BWR

(NSIC 196529) ON 10-8-85, 10-19-85 AND 10-20-85 SPURIOUS SIGNALS ON REFUEL FLOOR ZONE RADIATION MONITOR 17-453A RESULTED IN ISOLATION OF THE REACTOR BLDG VENTILATION SYSTEM AND ACTIVATION OF THE STANDBY GAS TREATMENT SYSTEM. THE ISOLATION WAS RESET AND PLANT PERSONNEL VERIFIED THAT THE RADIOLOGICAL CONDITIONS IN THE AREA WERE SATISFACTORY. THE SIGNAL WAS DETERMINED TO NOT BE THE RESULT OF A SPECIFIC REFUEL ACTIVITY AND VERMONT YANKEE IS CURRENTLY ASSESSING THE POSSIBILITY OF AN EQUIPMENT PROBLEM.

[348] VERMONT YANKEE DOCKET 50-271 LER 85-012
FREON RELEASE CAUSES SPURIOUS TOXIC GAS ISOLATION SIGNAL.
EVENT DATE: 102885 REPORT DATE: 112685 NSSS: GE TYPE: BWR

(NSIC 196669) ON 10-28-85 WHILE PERFORMING MAINTENANCE ON THE SERVICE AIR CONDITIONERS, FREON WAS RELEASED IN THE VICINITY OF THE CONTROL ROOM AIR INTAKE DUCT. THE FREON ACTIVATED THE CONTROL ROOM TOXIC GAS MONITORS WHICH SUBSEQUENTLY ACTIVATED THE CONTROL ROOM HABITABILITY SYSTEM AND PLACED THE CONTROL ROOM IN RECIRCULATION-VENTILATION MODE AS DESIGNED. THE TOXIC GAS MONITORS/CONTROL ROOM HABITABILITY SYSTEMS WERE RESET AFTER PLANT PERSONNEL DETERMINED THE SOURCE AND SUBSTANCE THAT ACTIVATED THE SYSTEM.

[349] WATERFORD 3 DOCKET 50-382 LER 85-044
REACTOR TRIP DUE TO OVER FEEDING THE STEAM GENERATORS.
EVENT DATE: 101085 REPORT DATE: 110885 NSSS: CE TYPE: PWR

(NSIC 196485) AT 1637 HRS ON 10-10-85 AN UNCOMPLICATED REACTOR TRIP OCCURRED DUE TO A HIGH WATER LEVEL IN SG NUMBER 2. THE TRIP OCCURRED WHILE OPERATIONS PERSONNEL WERE ATTEMPTING TO CONTROL SG WATER LEVELS WITH THE FEEDWATER CONTROL SYSTEM IN THE MANUAL MODE. AS THE CONTROL BOARD OPERATOR ATTEMPTED TO INCREASE FEEDWATER FLOW TO THE SG'S, AN EXCESS AMOUNT OF WATER WAS ADDED TO SG 2, WHICH IN TURN CAUSED THE WATER LEVEL TO RISE TO THE REACTOR TRIP SETPOINT. IN AN EFFORT TO PREVENT RECURRENCE OF THIS EVENT, THE OPERATIONS SUPERVISOR HAS ISSUED A SET OF GUIDELINES ON SG LEVEL CONTROL WHILE THE REACTOR IS AT LOW POWER LEVELS. SIMILAR EVENTS: 382/85-008 AND 382/85-018.

[350] WOLF CREEK 1 DOCKET 50-482 LER 85-066
 TECHNICAL SPECIFICATION VIOLATION.
 EVENT DATE: 080385 REPORT DATE: 100385 NSSS: WE TYPE: PWR

(NSIC 197020) ON SEPTEMBER 6, 1985, IT WAS DISCOVERED THAT A VIOLATION OF TECH SPEC 3.5.2 MAY HAVE OCCURRED DURING PERFORMANCE OF SURVEILLANCE TEST STS EJ-100, REQUIRED BY TECH SPEC 3.5.2 TO VERIFY RESIDUAL HEAT REMOVAL PUMP OPERABILITY. A SUBSEQUENT EVALUATION CONFIRMED THAT A VIOLATION HAD OCCURRED. THIS EVENT OCCURRED ON AUGUST 3, 1985, WITH THE PLANT IN MODE 1, POWER OPERATION, AT A REACTOR POWER OF 30 PERCENT. THE SURVEILLANCE TEST OPERATED EACH RESIDUAL HEAT REMOVAL PUMP USING A RECIRCULATION LINE TO THE REFUELING WATER STORAGE TANK WHICH IS COMMON TO BOTH PUMPS. DURING THE TIME THAT THIS RECIRCULATION FLOW PATH WAS OPEN FOR EACH INDIVIDUAL PUMP TEST, PART OF THE FLOW FROM THE OTHER RESIDUAL HEAT REMOVAL EMERGENCY CORE COOLING SUBSYSTEM REQUIRED FOR INJECTION INTO THE REACTOR COOLANT SYSTEM WOULD HAVE BEEN DIVERTED TO THE REFUELING WATER STORAGE TANK. THIS EVENT OCCURRED DUE TO AN INAPPROPRIATE SURVEILLANCE TEST PROCEDURE WHICH WAS SUBSEQUENTLY REVISED TO PREVENT RECURRENCE. THERE HAVE BEEN NO PREVIOUS SIMILAR OCCURRENCES. THE DEGRADED CONDITION OF THE RESIDUAL HEAT REMOVAL EMERGENCY CORE COOLING SUBSYSTEM EXISTED TWICE FOR APPROXIMATELY 20 MINUTES. ALL OTHER REQUIRED PORTIONS OF THE EMERGENCY CORE COOLING SYSTEMS WERE OPERABLE DURING THESE TIMES.

[351] WOLF CREEK 1 DOCKET 50-482 LER 85-070
 FAILURE TO RECORD CONTAINMENT AIR TEMPERATURE READINGS WHILE FIRE DETECTOR WAS INOPERABLE.
 EVENT DATE: 081385 REPORT DATE: 111985 NSSS: WE TYPE: PWR
 VENDOR: PROTECTOWIRE

(NSIC 196652) ON 8-13-85, A TECH SPEC VIOLATION OCCURRED WHEN HOURLY CONTAINMENT TEMPERATURE READINGS WERE NOT RECORDED FOR APPROX 8 HRS. THE HOURLY READINGS WERE REQUIRED BY TECH SPEC 3.3.3.8 ACTION STATEMENT (B) DUE TO THE FAILURE OF A CONTAINMENT ZONE FIRE DETECTOR. HOURLY CONTAINMENT TEMPERATURE READINGS WERE RESUMED IMMEDIATELY UPON DISCOVERY OF THE ERROR. THE CAUSE OF THIS EVENT WAS A PROCEDURAL PERSONNEL ERROR. AN ONCOMING SHIFT OPERATOR FAILED TO ADEQUATELY REVIEW REQUIRED CONTROL ROOM LOGS, RESULTING IN OVERLOOKING THE REQUIREMENT FOR HOURLY CONTAINMENT AIR TEMPERATURE READINGS. THE INDIVIDUAL HAS BEEN COUNSELED CONCERNING THIS ERROR AND A REVIEW OF THE REQUIREMENTS FOR SHIFT-TURNOVERS HAS BEEN ASSIGNED TO ALL OPERATING PERSONNEL. OTHER FIRE DETECTION EQUIPMENT WITHIN THE CONTAINMENT WAS OPERABLE AND A CONTAINMENT ENTRY AND SHIFT CONTAINMENT AIR TEMPERATURE READINGS CONFIRMED THAT NO FIRE EXISTED IN THE CONTAINMENT. THE FAILED CONTAINMENT ZONE FIRE DETECTOR WAS SUBSEQUENTLY REPAIRED AND RETURNED TO SERVICE.

[352] WOLF CREEK 1 DOCKET 50-482 LER 85-064
 LACK OF PREHEATED FEEDWATER CAUSES SG LEVEL PROBLEMS DURING STARTUP.
 EVENT DATE: 090285 REPORT DATE: 093085 NSSS: WE TYPE: PWR

(NSIC 196756) AT 2100 CDT ON SEPTEMBER 2, 1985, A REACTOR TRIP, TURBINE TRIP, STEAM GENERATOR BLOWDOWN AND SAMPLE ISOLATION, FEEDWATER ISOLATION, AND AUXILIARY

FEEDWATER ACTUATION OCCURRED AS THE RESULT OF A LOW-LOW WATER LEVEL IN STEAM GENERATOR (S/G) "C". SHORTLY THEREAFTER, A SECOND STEAM GENERATOR ("A") REACHED THE LOW-LOW WATER LEVEL SETPOINT, ACTUATING THE TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP. ALL REQUIRED ENGINEERED SAFETY FEATURES AND REACTOR PROTECTION SYSTEM EQUIPMENT RESPONDED PROPERLY. AT THE TIME OF THE EVENT, THE PLANT WAS IN MODE 1 WITH THE MAIN TURBINE BEING WARMED. THE STEAM GENERATORS WERE BEING SUPPLIED WITH UNPREHEATED FEEDWATER BY ONE MAIN FEEDWATER PUMP THROUGH THE FEEDWATER CONTROL BYPASS VALVES. THE LACK OF PREHEAT IN THE FEEDWATER WAS DUE TO HEAT EXCHANGER BEING OUT OF SERVICE, AND RESULTED IN INCREASING THE EFFECTS OF "SHRINK" AND "SWELL" ON THE STEAM GENERATOR LEVEL CONTROLS, LEADING TO THE TRIP. PLANT RESPONSE TO THE REACTOR TRIP WAS NORMAL AND THE ACTUATED SYSTEMS WERE RETURNED TO NORMAL CONFIGURATIONS BY APPROXIMATELY 2155 CDT. THE FEEDWATER PREHEAT PROBLEM WAS CORRECTED BY A PROCEDURAL CHANGE THAT INITIATED ALTERNATE FEEDWATER HEATING. TWO PREVIOUS SIMILAR EVENTS RELATED TO FEEDWATER HEATING ARE DESCRIBED IN LICENSEE EVENT REPORT 85-042-00.

[353] WOLF CREEK 1 DOCKET 50-482 LER 85-065
 LOSS OF EHC OIL PRESSURE RESULTS IN TURBINE TRIP.
 EVENT DATE: 090585 REPORT DATE: 100285 NSSS: WE TYPE: PWR
 VENDOR: BALKSDALE VALVE COMPANY
 SPERRY VICKERS (SPERRY RAND CORP)

(NSIC 196757) ON SEPTEMBER 5, 1985, AT APPROXIMATELY 1022 CDT, A MAIN TURBINE TRIP OCCURRED DUE TO LOW ELECTRO-HYDRAULIC CONTROL (EHC) OIL PRESSURE. THIS OCCURRENCE RESULTED IN A REACTOR TRIP, FEEDWATER ISOLATION, AUXILIARY FEEDWATER ACTUATION, AND STEAM GENERATOR BLOWDOWN AND SAMPLE ISOLATION. ALL REQUIRED REACTOR PROTECTION SYSTEM AND ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY. PRIOR TO THIS EVENT, POST-MAINTENANCE TESTING ON ELECTRO-HYDRAULIC CONTROL PUMP "A" WAS IN PROGRESS. A FAULTY DISCHARGE RELIEF VALVE PREVENTED THE PUMP FROM PROVIDING SUFFICIENT DISCHARGE PRESSURE, AND A DRIFT IN THE ELECTRO-HYDRAULIC CONTROL SYSTEM PRESSURE SWITCH SETTINGS PREVENTED THE STANDBY ELECTRO-HYDRAULIC CONTROL PUMP "B" FROM RAISING SYSTEM PRESSURE SOON ENOUGH TO AVERT THE TURBINE TRIP. THE RELIEF VALVE HAS BEEN REPAIRED AND THE PRESSURE SWITCHES HAVE BEEN RECALIBRATED. IN ADDITION, THE PRESSURE SWITCH CALIBRATION HAS BEEN INCLUDED IN THE PREVENTATIVE MAINTENANCE PROGRAM.

[354] WOLF CREEK 1 DOCKET 50-482 LER 85-073
 FIVE CONTROL ROOM FIRE ALARMS DISABLED FIRE ALARM CONTROL PANEL.
 EVENT DATE: 091185 REPORT DATE: 110685 NSSS: WE TYPE: PWR

(NSIC 196502) AT APPROX 0830 ON 10-11-85, A VIOLATION OF TECH SPEC 3.3.3.8 WAS DISCOVERED WHEN 5 TRANSMITTER/RECEIVERS ASSOCIATED WITH THE CONTROL ROOM FIRE ALARM CONTROL PANEL WERE FOUND DISABLED. THIS CONDITION HAD EXISTED SINCE APPROX 9-11-85, WHEN THE FIRST TRANSMITTER/RECEIVER WAS DISABLED. WHEN A TRANSMITTER/RECEIVER IS DISABLED, ALARM/STATUS SIGNALS ARE PREVENTED FROM REACHING THE CONTROL ROOM. DISABLING HAS NO EFFECT ON THE OPERABILITY OF THE FIRE DETECTION INSTRUMENTS OR FIRE SUPPRESSION SYSTEMS AND ALL NORMAL FUNCTIONS OF FIRE DETECTION, LOCAL ALARM, AND FIRE SUPPRESSION SYSTEM AUTOMATIC ACTUATION REMAIN FULLY OPERABLE. THE CAUSE OF THIS EVENT WAS OPERATOR ERROR IN ENTERING KEYBOARD COMMANDS AT THE FIRE ALARM CONTROL PANEL. TO PREVENT RECURRENCE, INSTRUCTIONS HAVE BEEN ISSUED TO CONTROL ROOM PERSONNEL LIMITING THE USE OF THE CONTROL PANEL KEYBOARD FUNCTIONS. DURING THE TIME THAT TRANSMITTER/RECEIVERS WERE DISABLED, PLANT CONDITIONS RANGED FROM MODE 3, HOT STANDBY, TO MODE 1, POWER OPERATION.

[355] WOLF CREEK 1 DOCKET 50-482 LER 85-071
 SPURIOUS RADIATION MONITOR SIGNAL CAUSES CONTROL ROOM VENTILATION ISOLATION.
 EVENT DATE: 100985 REPORT DATE: 110685 NSSS: WE TYPE: PWR

(NSIC 196480) ON 10-9-85, AT 1015 CDT A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS) WAS INITIATED DUE TO A RADIATION MONITOR IN THE CONTROL BLDG HEATING, VENTILATING AND AIR CONDITIONING SYSTEM SENSING A MOMENTARY LOW VOLTAGE CONDITION. ALL REQUIRED ESP'S EQUIPMENT RESPONDED PROPERLY. DURING THIS EVENT THE PLANT WAS IN MODE 3, HOT STANDBY. THE EVENT OCCURRED DUE TO A NEARBY LIGHTNING STRIKE CAUSING A MOMENTARY LOW VOLTAGE CONDITION AT THE RADIATION MONITOR WHICH RESPONDED PER DESIGN BY INITIATING THE CRVIS. THE LOW VOLTAGE CONDITION IMMEDIATELY CLEARED AND THE MONITOR RETURNED TO NORMAL OPERATION INDICATING NORMAL BACKGROUND RADIATION LEVELS. NO RADIATION ABOVE NORMAL BACKGROUND WAS PRESENT AS CONFIRMED BY A REDUNDANT CONTROL BLDG VENTILATION RADIATION MONITOR. A PREVIOUS SIMILAR OCCURRENCE IS DESCRIBED IN LER 85-55-0. A DESIGN CHANGE WHICH SHOULD INDIRECTLY MINIMIZE FUTURE OCCURRENCES DUE TO LIGHTNING STRIKES IN THE GENERAL PLANT AREA IS CURRENTLY BEING EVALUATED. ALSO REPORTABLE PURSUANT TO 10CFR50.72.

[356] WOLF CREEK 1 DOCKET 50-482 LER 85-072
 INADVERTENT LOW LEVELS IN STEAM GENERATORS CAUSE TURBINE/REACTOR TRIP.
 EVENT DATE: 101085 REPORT DATE: 110685 NSSS: WE TYPE: PWR

(NSIC 196481) AT 0223 CDT ON 10-10-85 A HIGH WATER LEVEL CONDITION IN SG 'C' INITIATED A MAIN TURBINE TRIP, A FEEDWATER ISOLATION AND A MAIN FEEDWATER PUMP TURBINE TRIP. THE MAIN FEEDWATER PUMP TURBINE TRIP INITIATED A MOTOR-DRIVEN AUX FEEDWATER ACTUATION AND A SG BLOWDOWN AND SAMPLE ISOLATION. SHORTLY THEREAFTER, A REACTOR TRIP OCCURRED WHEN THE WATER LEVEL IN SG 'B' REACHED THE LOW-LOW LEVEL SETPOINT AND A TURBINE-DRIVEN AUX FEEDWATER ACTUATION WAS INITIATED WHEN A SECOND SG ('D') REACHED THE LOW-LOW-WATER LEVEL SETPOINT. THE CAUSE OF THIS EVENT WAS A COGNITIVE PERSONNEL ERROR IN ALLOWING INSUFFICIENT TIME FOR SG LEVELS TO STABILIZE DURING THE STARTUP. THE INVOLVED INDIVIDUAL HAS BEEN COUNSELED AND ADDITIONAL GUIDANCE HAS BEEN ADDED TO THE CONTROLLING PROCEDURE. THIS EVENT IS SIMILAR TO PREVIOUS OCCURRENCES DISCUSSED IN LER 85-042 AND 85-064.

[357] WPPSS 2 DOCKET 50-397 LER 84-027 REV 2
 UPDATE ON GROUNDS IN MSRV SOLENOIDS.
 EVENT DATE: 032284 REPORT DATE: 091784 NSSS: GE TYPE: EWR
 VENDOR: CROSBY VALVE & GAGE CO.

(NSIC 196458) ON 3-10-84 AND 3-14-84, GROUNDS ON THE 125V DC INSTRUMENT BUS WERE TRACED TO MAIN STEAM RELIEF SOLENOID VALVES MSRV-4B AND MSRV-3C. PREVIOUSLY, DURING THE STARTUP TEST PROGRAM, FIVE MSRV SOLENOIDS HAD BEEN DETERMINED TO HAVE GROUNDS AND WERE REPLACED. ALL INSTALLED MSRV SOLENOIDS (BOTH THE 18 MSRV AND 14 ADS SOLENOIDS) HAD VOLTAGE SPIKE SUPPRESSION DIODES INSTALLED ACROSS EACH SOLENOID CIRCUIT. IN ADDITION, EACH SOLENOID WAS MEGGER TESTED FOR INTERNAL GROUNDING AND COIL RESISTANCE WAS MEASURED. EACH ADS SOLENOID WAS THEN CYCLED 10 TIMES AND A FINAL GROUND CHECK WAS PERFORMED. REV 1 REPORTED ON GE'S REVIEW OF THESE FAILURES AND SIMILAR EVENTS AT LASALLE AND SUSQUEHANNA. AT THAT TIME GE HAD ISSUED AN INTERIM REPORT WHICH JUSTIFIED CONTINUED PLANT OPERATION. THE 10CFR21 EVALUATION WAS NOT THEN COMPLETE. GE HAS SINCE ISSUED AN UPDATE ON THE FAILURES WHICH CONFIRMS THE ADEQUACY OF THESE SOLENOIDS IN EXISTING CIRCUIT CONFIGURATIONS AND HAS CONCLUDED THAT THIS EQUIPMENT PROBLEM IS NOT REPORTABLE PER THE REQUIREMENTS OF 10CFR21.

[358] WPPSS 2 DOCKET 50-397 LER 84-033 REV 1
 UPDATE ON FOUR ISOLATIONS OF THE RWCU DUE TO LEAK DETECTION TEMPERATURE MONITORS.
 EVENT DATE: 041984 REPORT DATE: 083084 NSSS: GE TYPE: BWR
 VENDOR: RILEY COMPANY, THE - PANALARM DIVISION

(NSIC 196459) DURING PLANT HEATUP FOUR ISOLATIONS OF THE RWCU HAVE OCCURRED DUE TO CONSERVATIVE INITIAL SETPOINTS OF THE TEMPERATURE MONITORING SWITCHES WHICH ACTUATE THE NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM (NSSSS). THE ISOLATIONS WERE CAUSED BY THE LEAK DETECTION TEMPERATURE MONITORS WHOSE SETPOINTS WILL BE DETERMINED DURING THE STARTUP TEST PROGRAM. THE PRESENT SETPOINTS ARE SET CONSERVATIVELY LOW AND ARE ADJUSTED TO HIGHER VALUES WHEN THE EXISTING SETPOINT IS APPROACHED OR REACHED. ACTUATIONS ON 4-12-84, 4-18-84, 4-19-84 AND 8-14-84 CAUSED ISOLATION OF THE RWCU SYSTEM. THE AREA OF THE ALARM WAS INSPECTED TO VERIFY THERE WAS NO STEAM LEAKAGE. NEW SETPOINTS WERE DETERMINED, THE SWITCHES RESET, AND THE RWCU SYSTEM RETURNED TO SERVICE.

[359] WPPSS 2 DOCKET 50-397 LER 84-047 REV 1
 UPDATE ON SIGNIFICANT DESIGN DEFICIENCY ON BIOLOGICAL SHIELD WALL FIRE BARRIER PENETRATIONS (APPENDIX R).
 EVENT DATE: 052584 REPORT DATE: 012585 NSSS: GE TYPE: BWR

(NSIC 196460) DURING A CROSS-DISCIPLINE REVIEW OF RADIATION SHIELDING FOR PENETRATIONS THROUGH THE BIOLOGICAL SHIELD WALL, IT WAS DETERMINED THAT THE PREVIOUS DESIGN DID NOT CONSIDER RADIANT HEAT FROM ADJACENT FIRE ZONES TO POSSIBLY IGNITE THE UREATHANE FOAM SEPARATING THE BIOLOGICAL SHIELD WALL AND PRIMARY CONTAINMENT VESSEL. THE RESULTANT FIRE COULD INCAPACITATE THE ELECTRICAL PENETRATIONS REQUIRED FOR SAFE SHUTDOWN. THE WNP-2 FSAR COMMITTED THAT THE BIOLOGICAL SHIELD WALL PENETRATIONS MUST BE SEALED TO MAINTAIN THE 3 HR MARGIN REQUIRED BY 10CFR50, APPENDIX R. ALL BUT 1 OF THE PENETRATIONS DETERMINED TO NEED SEALS (122) WERE SEALED WITH A MINIMUM OF 4 INCHES OF APPROVED SEALING MEDIA WHICH PROVIDED NOT LESS THAN 3 HRS OF FIRE PROTECTION OF THE CONTAINMENT PRESSURE VESSEL. ENGINEERING DIRECTION TO SEAL THE REMAINING ONE PENETRATION HAS BEEN IMPLEMENTED AND RESULTED IN 100% SEALING. ALL OTHER BIOLOGICAL SHIELD WALL PENETRATIONS WITHIN THE PLANT HAVE BEEN REVIEWED FOR THIS CONDITION AND IT HAS BEEN DETERMINED NO FURTHER SEALING IS REQUIRED. THIS EVENT IS CONSIDERED TO BE UNIQUE TO THE BIOLOGICAL SHIELD WALL AND THE RESULT OF A SPECIFIC DESIGN DEFICIENCY.

[360] WPPSS 2 DOCKET 50-397 LER 84-073 REV 1
 UPDATE ON SPURIOUS HI CHLORINE ALARM.
 EVENT DATE: 070884 REPORT DATE: 110884 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 196461) A SPURIOUS HI CHLORINE ALARM FROM WOA-SR-15 CAUSED THE CONTROL ROOM EMERGENCY FILTRATION SYSTEM TO AUTO START. THIS IS CONSIDERED AN AUTOMATIC ACTUATION OF AN ESF SYSTEM. THE HI CHLORINE ALARM WAS CAUSED BY A COMPONENT FAILURE IN THE ELECTRONICS MODULE ON THE CHLORINE ANALYZER. THE IMMEDIATE CORRECTIVE ACTION WAS TO RESET THE ALARM AND TO RETURN THE CONTROL ROOM VENTILATION TO ITS NORMAL CONFIGURATION.

[361] WPPSS 2 DOCKET 50-397 LER 84-075 REV 1
 UPDATE ON STANDBY DIESEL GENERATOR FAILURE.
 EVENT DATE: 070984 REPORT DATE: 112184 NSSS: GE TYPE: BWR
 VENDOR: PARSONS PEBBLES-ELEC PRODS INC

(NSIC 196933) ON 7/9/84, DURING MONTHLY SURVEILLANCE TESTING, STANDBY DIESEL GENERATOR 1B (DG1B) INCURRED A HIGH VIBRATION ALARM. FOLLOWUP INVESTIGATION REVEALED THAT THE SLIP RING END BEARING HAD TURNED ON THE SHAFT INSULATION, THUS

DESTROYING THE INSULATION AND ALLOWING THE SHAFT TO DROP SLIGHTLY AND RUB ON THE BEARING HOUSING. ROOT CAUSE OF THE FAILURE WAS DETERMINED TO BE A BASIC DESIGN WEAKNESS IN THE APPLICATION OF FIBERGLASS INSULATION BETWEEN THE GENERATOR ROTOR AND INNER RACE OF THE LINE BEARING. THE PLANT WAS SHUT DOWN, PLACED IN MODE IV, AND AN INSPECTION OF STANDBY DIESEL GENERATOR 1A (DG1A) COMMENCED CONCURRENT WITH REPAIRS TO DG1B. ON 7/13/84 DG1A WAS DECLARED INOPERABLE AFTER PRELIMINARY CHECKS REVEALED IT MAY HAVE SUFFERED A SIMILAR FAILURE. THE 500 KV:25 KV ELECTRICAL SYSTEM WAS THEN SETUP TO PROVIDE BACKFEED CAPABILITY, THUS ASSURING AVAILABILITY OF THREE INDEPENDENT OFFSITE POWER SOURCES. VERBAL NOTIFICATION, VIA ENS, WAS PROVIDED AT 1741 HOURS ON 7/13/84. CORRECTIVE ACTION INCLUDED MODIFICATION OF THE BEARING INSULATION.

[362] WPPSS 2 DOCKET 50-397 LER 84-079 REV 1
 UPDATE ON REACTOR SCRAM DUE TO LOW REACTOR WATER LEVEL.
 EVENT DATE: 080984 REPORT DATE: 121384 NSSS: GE TYPE: BWR

(NSIC 196934) A REACTOR SCRAM OCCURRED AUTOMATICALLY ON LOW REACTOR WATER LEVEL AFTER THE REACTOR FEED WATER (RFW) PUMP TRIPPED DUE TO LOSS OF CONTROL POWER. WHILE PREPARING TO ROLL THE TURBINE IN A NORMAL RAMP UP MODE THE CONTROL ROOM OPERATOR STARTED THE THIRD LARGE CIRCULATING WATER PUMP. AT THIS TIME, THE PLANT WAS BEING SUPPLIED BY THE STARTUP TRANSFORMER (TR-S) WHICH WAS HEAVILY LOADED. THE LARGE STARTING CURRENT FOR THIS MOTOR (APPROX 3300 AMPS) COINCIDENT WITH THE HEAVILY LOADED CONDITION OF THE STARTUP TRANSFORMER, RESULTED IN A VOLTAGE DROP ON THE SECONDARY OF THE TRANSFORMER. THIS VOLTAGE DROPPED BELOW THE SETPOINT FOR THE SECOND LEVEL (DEGRADED) UNDERVOLTAGE PROTECTION. THE VOLTAGE HAD NOT EXCEEDED THE RESET SETPOINT WITHIN THE EIGHT SECOND PROTECTION. THE VOLTAGE HAD NOT EXCEEDED THE RESET SETPOINT WITHIN THE EIGHT SECOND TIME DELAY AND THE SECOND LEVEL UNDERVOLTAGE CIRCUITRY INITIATED LOAD SHEDDING AS DESIGNED ON DIV. I AND DIV. III. THE TEMPORARY LOSS OF POWER TO THE CONTROL CIRCUITRY RESULTED IN TRIPPING OF THE RFW PUMP. THE LOSS OF FEEDWATER TO THE REACTOR RESULTED IN A DROP OF REACTOR WATER LEVEL TO LEVEL THREE (+12") AND THE REACTOR SCRAMMED AS DESIGNED. REACTOR WATER LEVEL WAS RESTORED USING THE RCIC SYSTEM. THE PLANT ELECTRICAL LINEUP WAS RESTORED TO A NORMAL CONFIGURATION.

[363] WPPSS 2 DOCKET 50-397 LER 84-087 REV 1
 UPDATE ON ROD MOVEMENT NOT VERIFIED.
 EVENT DATE: 081884 REPORT DATE: 121384 NSSS: GE TYPE: BWR

(NSIC 196935) DURING PERFORMANCE OF A SURVEILLANCE PROCEDURE IT WAS NOTED THAT THE ROD WORTH MINIMIZER (RWM) DID NOT INITIATE A SELECT ERROR LIGHT WHEN AN OUT OF SEQUENCE ROD WAS SELECTED. A PROCEDURE DEVIATION WAS IMPLEMENTED WHICH DELETED THE PORTION WHICH VERIFIED THE SELECT ERROR. THUS THE "SELECT ERROR" WAS NOT CONFIRMED PRIOR TO AUTOMATIC INITIATION OF RWM. SINCE THE REVISED SURVEILLANCE PROCEDURE NOW DID NOT SPECIFY SELECT ERROR VERIFICATION, THE RWM WAS NOT DECLARED INOPERABLE AND A SECOND LICENSED OPERATOR WAS NOT STATIONED TO VERIFY CONTROL ROD MOVEMENT AND PATTERN.

[364] WPPSS 2 DOCKET 50-397 LER 84-100 REV 1
 UPDATE ON VALVE CLOSING TIMES NOT MET.
 EVENT DATE: 091984 REPORT DATE: 112184 NSSS: GE TYPE: BWR
 VENDOR: BORG-WARNER CORP.

(NSIC 196936) FOLLOWING AN APPARENT FAILURE OF 2 ISOLATION VALVES TO MEET THE CLOSING TIME CRITERIA OF A SURVEILLANCE TEST, PREVIOUS SURVEILLANCE TESTS OF THESE ISOLATION VALVES WERE REVIEWED. TWO REACTOR RECIRCULATION (RRC) SYSTEM PRIMARY CONTAINMENT VALVES (RRC-V-16A AND RRC-V-16B, CONTROL ROD DRIVE SEAL PURGE TO RRC PUMPS) FAILED TO MEET THE SPECIFIED MAXIMUM CLOSING TIME DURING A 9-11-84 SURVEILLANCE TEST. IT WAS FOUND THAT THE CLOSING TIME CRITERIA WAS NOT SATISFIED

OR NOTED AS UNACCEPTABLE ON ONE PREVIOUS TEST (6-6-84). AT THE TIME OF DISCOVERY, RECENT CHANGES TO PLANT TECH SPECS MADE THE OBSERVED VALUES ACCEPTABLE. FURTHER REVIEW IDENTIFIED 6 ADDITIONAL SURVEILLANCE PROCEDURES WHICH HAD NOT BEEN PERFORMED IN ACCORDANCE WITH TECH SPEC TIME REQUIREMENTS.

[365] WPPSS 2 DOCKET 50-397 LER 84-130 REV 1
 UPDATE ON PRIMARY CONTAINMENT INTEGRITY VALVES POSITIONS NOT BEING VERIFIED AS REQUIRED.
 EVENT DATE: 122084 REPORT DATE: 012585 NSSS: GE TYPE: BWR

(NSIC 196937) ON 12-20-84, A CONTAINMENT INTEGRITY VERIFICATION PROCEDURE REVISION WAS UNDERGOING REVIEW PRIOR TO PLANT OPERATIONS COMMITTEE (POC) APPROVAL. THIS REVIEW PROCESS IDENTIFIED 25 VALVES, ALL OUTSIDE THE PRIMARY CONTAINMENT, WHICH WERE NOT PART OF THE VERIFICATION BUT SHOULD HAVE BEEN INCLUDED. EIGHT OF THE 25 VALVES ARE LISTED IN FSAR TABLE 6.2-16 AS BEING PRIMARY CONTAINMENT ISOLATION VALVES AND HAD BEEN OVERLOOKED DURING DEVELOPMENT OF THIS PROCEDURE. SEVEN OF THESE 8 VALVES WERE MOTOR OPERATED VALVES (MOV'S) WHICH HAD BEEN CLOSED AND THE MOTOR POWER SUPPLY DEENERGIZED. THIS WAS THE RESULT OF PLANT CHANGES WHICH DELETED THE RHR STEAM CONDENSING MODE OF OPERATION. THE 8TH VALVE WAS NOT IN THE ORIGINAL DESIGN AND WAS ADDED JUST PRIOR TO PLANT FUEL LOAD. THE REMAINING 17 VALVES WERE NOT PREVIOUSLY IDENTIFIED BY THE FSAR AS PRIMARY CONTAINMENT ISOLATION VALVES. THESE 17 ARE COMPRISED OF VARIOUS VENT, DRAIN AND TEST CONNECTION VALVES. ADDITIONALLY, THIS PROCEDURE REVIEW IDENTIFIED APPROX 12 TEST CONNECTION, VENT AND DRAIN VALVES INSIDE CONTAINMENT WHICH WERE NOT BEING VERIFIED. THE TECH SPEC REQUIRES THESE VALVE POSITIONS TO BE VERIFIED ONCE PER 92 DAYS PROVIDED THE REACTOR IS IN COLD SHUTDOWN (CSD) AND THE CONTAINMENT DE-INERTED. THE PRIMARY CONTAINMENT INTEGRITY VERIFICATION PROCEDURE HAS BEEN REVISED TO INCLUDE ALL OUTSIDE CONTAINMENT VALVE VERIFICATION REQUIREMENTS.

[366] WPPSS 2 DOCKET 50-397 LER 85-001 REV 1
 UPDATE ON HIGH ENERGY LINE BREAK ANALYSIS DEFICIENCIES.
 EVENT DATE: 011185 REPORT DATE: 030885 NSSS: GE TYPE: BWR

(NSIC 197012) SIMILAR TO THE CONDITION NOTED IN IE INFORMATION NOTICE 84-90, NON-CONSERVATIVE ASSUMPTIONS WERE FOUND IN THE REACTOR CORE ISOLATION COOLING (RCIC) AND REACTOR WATER CLEANUP (RWCU) HIGH ENERGY LINE BREAK (HELB) CALCULATIONS WHICH DETERMINED THE REACTOR BUILDING ENVIRONMENTAL PROFILES USED IN DETERMINING EQUIPMENT QUALIFICATION PER 10 CFR 50.49. FURTHER ANALYSIS HAS DETERMINED THAT CORRECTION OF THESE NON-CONSERVATIVE ASSUMPTIONS DID RESULT IN PREDICTED ENVIRONMENTAL CONDITIONS MORE SEVERE THAN THOSE USED IN THE EQUIPMENT QUALIFICATION. HOWEVER, A REVIEW OF THE EQUIPMENT INVOLVED HAS DETERMINED THAT REQUIRED EQUIPMENT COULD BE QUALIFIED OR JUSTIFIED FOR INTERIM OPERATION TO THE MORE SEVERE CONDITIONS, AND THAT MITIGATION OF THE EVENT AND SAFE SHUTDOWN WOULD NOT BE COMPROMISED.

[367] WPPSS 2 DOCKET 50-397 LER 85-055
 ITT HYDRAMOTOR VALVE OPERATORS REQUIRED SEAL REPLACEMENT TO MEET POST-LOCA REQUIREMENTS.
 EVENT DATE: 091085 REPORT DATE: 100985 NSSS: GE TYPE: BWR
 VENDOR: ITT FLUID HANDLING DIVISION

(NEIC 196472) ON 7-29-85 A DESIGN REVIEW OF VENDOR SUPPLIED QUALIFICATION DATA FOR ITT HYDRAMOTOR VALVE ACTUATORS INSTALLED ON DRYWELL/WETWELL PENETRATIONS FOR THE HYDROGEN RECOMBINER SYSTEM INDICATED THE QUALIFIED LIFE TO BE 76 DAYS IN A POST LOCA ENVIRONMENT. THE VALVE ACTUATORS (CAC-EHO-FCV/1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B) ARE REQUIRED TO BE OPERATIONAL FOR 6 MONTHS POST LOCA. VERIFICATION TESTING AND ANALYSIS OF QUALIFICATION DATA WAS COMPLETED AND EVALUATED RESULTING

IN THE DETERMINATION ON 9-10-85 THAT THE ACTUATOR SEALS HAD EXCEEDED THEIR QUALIFIED LIFE BY 14 MONTHS. AN OPERABILITY DETERMINATION WAS MADE FOR THE HYDROGEN RECOMBINER SYSTEM. DIV 1 WAS FOUND TO BE OPERABLE DUE TO RECENT SEAL REPLACEMENT. DIV 2 WAS SECURED AND IN THE PROCESS OF HAVING ITS ACTUATOR SEALS REPLACED.

[368] WPPSS 2 DOCKET 50-397 LER 85-056
 BROKEN CHLORINE DETECTOR TAPE CAUSES AUTOSTART OF THE CREFS.
 EVENT DATE: 093085 REPORT DATE: 101885 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 196473) AN ERRONEOUS HIGH CHLORINE SIGNAL FROM THE VENTILATION CHLORINE DETECTOR, ON SAMPLE RACK WOA-SR-16, STARTED THE CONTROL ROOM EMERGENCY FILTRATION SYSTEM (CREFS). THE FALSE CHLORINE SIGNAL WAS A RESULT OF BREAKAGE OF THE CHLORINE SENSITIVE PAPER TAPE WHICH DISCOLORS ON CONTACT WITH CHLORINE OR EXTENDED EXPOSURE TO MOISTURE. THE PAPER TAPE WAS REPLACED IN WOA-SR-16, ALARMS RESET, AND THE CONTROL ROOM EMERGENCY FILTRATION SYSTEM RETURNED TO ITS NORMAL STANDBY CONFIGURATION. SIMILAR EVENTS: 397/84-057, 397/84-093, 397/84-128 AND 397/85-026.

[369] WPPSS 2 DOCKET 50-397 LER 85-057
 REACTOR BUILDING VENTILATION FIRE DAMPER NOT INSTALLED.
 EVENT DATE: 101185 REPORT DATE: 110885 NSSS: GE TYPE: BWR

(NSIC 196645) ON 10-11-85, DURING PERFORMANCE OF THE FIRE DAMPER INSPECTION SURVEILLANCE, IT WAS DISCOVERED THAT ROA-FD-12 (REACTOR BLDG OUTSIDE AIR FIRE DAMPER NUMBER 12) HAD NOT BEEN INSTALLED. THE 'B' RHR HEAT EXCHANGER PASSAGEWAY AREA WAS IMMEDIATELY PLACED ON THE FIRE WATCH TOUR. PROCUREMENT OF THE FIRE DAMPER WAS INITIATED. THE INSPECTION WAS CONTINUED TO VERIFY THE PRESENCE OF ALL FIRE DAMPERS REQUIRED BY DESIGN. THE AREA WILL REMAIN ON THE FIRE WATCH TOUR UNTIL THE DAMPER IS INSTALLED AND IS OPERATIONAL OR UNTIL A TEMPORARY 3 HR FIRE BARRIER IS INSTALLED IN THE DUCT AS AN INTERIM CORRECTIVE ACTION.

[370] WPPSS 2 DOCKET 50-397 LER 85-058
 LOSS OF STANDBY GAS TREATMENT DURING PRIMARY CONTAINMENT PURGING.
 EVENT DATE: 101485 REPORT DATE: 111385 NSSS: GE TYPE: BWR

(NSIC 196687) ON 10-14-85, WHILE PERFORMING A PURGE OF PRIMARY CONTAINMENT, STANDBY GAS TREATMENT FAN 1B2 (SGT-FN-1B2) STOPPED, ALLOWING THE NITROGEN INERTED PRIMARY CONTAINMENT AREA TO PURGE DIRECTLY TO THE SECONDARY CONTAINMENT. THIS RESULTED IN UNCONTROLLED QUANTITIES OF PRIMARY CONTAINMENT ATMOSPHERE BEING RELEASED TO SECONDARY CONTAINMENT AND SUBSEQUENTLY BEING RELEASED TO THE ENVIRONMENT WITHOUT BEING TREATED DURING THE FIRST 24 HRS OF A PURGE OPERATION AS REQUIRED BY TECH SPECS. OPERATIONS PERSONNEL RESTARTED THE FAN AND TERMINATED THE PURGING EVOLUTION. TROUBLESHOOTING DID NOT REVEAL ANY EQUIPMENT FAILURES BUT DID SHOW THAT IF THE CONTROL CIRCUITRY WAS 'BUMPED', THE SGT FAN FAILURE REPEATED. STUDIES WILL BE CONDUCTED TO EVALUATE THE ABILITY TO PURGE WITHOUT USING SGT FANS AND TO EVALUATE THE OPTIONS OF IMPROVING CIRCUIT LOGIC AND METHODS OF REPAIR TO PRECLUDE RECURRENCE OF THIS TYPE OF EVENT.

[371] ZION 1 DOCKET 50-295 LER 85-025
 MANUAL REACTOR TRIP.
 EVENT DATE: 062785 REPORT DATE: 072685 NSSS: WE TYPE: PWR

(NSIC 197000) SHORTLY AFTER TAKING UNIT 1 OFF LINE, FOR REPAIRS TO A FEEDWATER REGULATING VALVE, A CONTROL ROD URGENT FAILURE WAS RECEIVED. THE OPERATOR WAS MOVING CONTROL RODS TO ADJUST REACTOR POWER TO MATCH STEAM LOADS. STEAM LOADS

WERE IN THE PROCESS OF BEING REDUCED. THE IMBALANCE BETWEEN REACTOR POWER AND STEAM LOADS WAS SUCH THAT THE REACTOR COOLANT SYSTEM (RCS) AVERAGE TEMPERATURE WAS DROPPING. BECAUSE THE RCS TEMPERATURE WAS NEARING POSITIVE MODERATOR TEMPERATURE COEFFICIENT LIMITS, THE UNIT OPERATOR INITIATED A MANUAL REACTOR TRIP AND STABILIZED THE UNIT PER APPLICABLE PROCEDURES. ALL SYSTEMS FUNCTIONED NORMALLY. THE URGENT ALARM WAS DETERMINED TO BE SPURIOUS.

[372] ZION 1 DOCKET 50-295 LER 85-032
 INADVERTENT CLOSURE OF CONTAINMENT ISOLATION VALVES DURING TEST.
 EVENT DATE: 090985 REPORT DATE: 100985 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 196581) WHILE PERFORMING PERIODIC TEST PT-1- 'SAFEGUARDS ACTUATION UNIT 1', STEPS 16.E SIX CONTAINMENT ISOLATION PHASE A VALVES INADVERTENTLY STROKED CLOSED. THE VALVES WERE 1AOV-VC8149B, 1AOV-VC8153, 1FCV-SS02, 1FCV-SS03, 1FCV-SS04 AND 1FCV-SS05. INVESTIGATION BY TECH STAFF WITH ELECTRICAL MAINTENANCE DID NOT DISCLOSE ANY COMPONENT FAILURES. FROM TEST CIRCUIT CONDITIONS THE INVESTIGATORS OBSERVED THAT RESET FROM RESET BUTTON #54 IN STEP 16.E.5 OF PT-10 COULD NOT HAVE OPERATED. OPERATOR WAS REQUESTED TO DEPRESS RESET BUTTON #54 AND WHEN THIS WAS PERFORMED ALL THE ABOVE VALVES AND TEST COMPONENTS RETURNED TO NORMAL. THE RESET CIRCUIT WAS TESTED TWO MORE TIMES BY REPEATING 16.E STEPS AND ALL OF SECTION 16 (PT-10) WITH NO PROBLEMS. THE OPERATOR INDICATED THAT TEST LIGHT #44 DID NOT ENERGIZE IN STEP 16.E.5 BEFORE STEP 16.E.6 WAS PERFORMED. TEST LIGHT #44 VERIFIES RESET WHEN ENERGIZED. RETURNING TEST SWITCH #54 TO NORMAL POSITION WITHOUT PROPER RESET WOULD HAVE CAUSED THE ABOVE VALVES TO CLOSE. THE OPERATOR WAS ADVISED THAT TESTING SHOULD HAVE STOPPED AT THE RESET STEP. ALSO, A MEMORANDUM WILL BE FORWARDED TO ALL TEST OPERATORS CAUTIONING THEM ON PROCEDURE PERFORMANCE AND THE CONSEQUENCES OF IMPROPER TEST COMPONENT RESET. NO FURTHER ACTION IS BEING CONSIDERED.

[373] ZION 1 DOCKET 50-295 LER 85-033
 MISSED QUADRANT POWER TILT RATIO (QPTR) SURVEILLANCE.
 EVENT DATE: 091385 REPORT DATE: 101185 NSSS: WE TYPE: PWR

(NSIC 196724) ON SEPTEMBER 13, 1985, WITH UNIT 1 AT FULL POWER, ONE DETECTOR CURRENT COMPARATOR CHANNEL ON THE NUCLEAR INSTRUMENTATION SYSTEM (NIS) WAS PLACED IN DEFEAT. THIS HAS THE EFFECT THAT AN ABNORMAL QUADRANT POWER TILT RATIO (QPTR) ON THE DEFEATED CHANNEL WOULD NOT BE AUTOMATICALLY DETECTED AND ALARMED. TECH SPECS REQUIRE THE OPERATOR TO PERFORM MANUAL QPTR CALCULATIONS FOUR TIMES PER SHIFT IF A QPTR ALARM IS INOPERABLE. THIS SURVEILLANCE WAS NOT PERFORMED AS REQUIRED. THE CHANNEL HAD BEEN PLACED IN DEFEAT AS PART OF AN APPROVED INSTRUMENT MAINTENANCE PROCEDURE, WHICH REQUIRES THAT THE CHANNEL BE RETURNED TO NORMAL ON COMPLETION. THAT PROCEDURE HAS BEEN REVISED TO REQUIRE DOUBLE VERIFICATION THAT ALL CHANNELS ARE IN NORMAL WHEN THE PROCEDURE IS COMPLETED. THE OPERATOR WAS COGNIZANT OF THE STATUS OF THE SYSTEM, BUT WAS NOT AWARE OF THE TECH SPEC REQUIREMENT. SHIFT MEETINGS, INVOLVING ALL UNIT OPERATORS AND LICENSED SHIFT SUPERVISORS, WILL BE HELD, THIS LER AND THE QPTR TECH SPEC REQUIREMENT WILL BE DISCUSSED AT THESE MEETINGS. THE NORMAL SHIFTLY QPTR CALCULATION WAS PERFORMED FOR THAT SHIFT AND INDICATED NO ABNORMAL TRENDS IN CORE.

[374] ZION 1 DOCKET 50-295 LER 85-034
 TEMPORARY PROCEDURE CHANGE NOT SIGNED BY STATION SUPERINTENDENT WITHIN 14 DAYS.
 EVENT DATE: 092085 REPORT DATE: 101885 NSSS: WE TYPE: PWR

(NSIC 196615) A TEMPORARY PROCEDURE CHANGE WRITTEN TO AMEND THE PROCEDURE FOR THE HYDROTEST OF THE SERVICE WATER PIPING TO AND FROM THE CONTAINMENT FAN COOLERS (INCLUDING THE COOLERS) WAS TECHNICALLY REVIEWED AND APPROVED BY 2 LICENSED SRO'S

AS REQUIRED BY THE TECH SPECS BUT WAS NOT REVIEWED BY ON-SITE REVIEW WITHIN 14 DAYS OF THE CHANGE INITIATION, ALSO AS REQUIRED BY TECH SPECS.

[375] ZION 2 DOCKET 50-304 LER 85-016
 TESTS NOT PERFORMED IN ACCORDANCE WITH ASME SECTION XI.
 EVENT DATE: 081585 REPORT DATE: 091885 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: ZION 1 (PWR)

(NSIC 196725) AS A RESULT OF A DEVIATION INVESTIGATION AND NRC QUESTIONS ANSWERED IN A 1-25-85 LETTER TO H.R. DENTON FROM R.N. CASCARANO, ZION REVIEWED IT'S IST PROGRAM. THE FOLLOWING ITEMS WERE FOUND TO BE NOT IN ACCORDANCE WITH THE ASME CODE. ANNUAL BEARING TEMPERATURES AND PUMP SUCTION PRESSURES WITH PUMP IDLE WERE NOT TAKEN BECAUSE ZION DID NOT REALIZE THEY WERE REQUIREMENTS. BOTH OF THESE REQUIREMENTS WILL BE ADDED TO PERIODIC TESTS. DUE TO ADMINISTRATIVE OVERSIGHT SEVERAL CHECK VALVES WERE NOT TESTED PER THE ASME CODE OR IST PROGRAM. SOME OF THESE VALVES WERE NOT DOCUMENTED IN PERIODIC TESTS. SOME CHECK VALVES WERE NOT TESTED DUE TO LACK OF INSTRUMENTATION. SOME WERE TO BE PARTIAL STROKED WHEN IN FACT THEY COULD NOT BE TESTED. OTHERS WERE NOT PARTIAL STROKED PER THE IST PROGRAM. THE NECESSARY CHANGES WILL BE MADE TO THE PERIODIC TESTS AND THE IST PROGRAM. RELIEF WAS NOT REQUESTED TO LEAK TEST SEVERAL VALVES IN SERIES. RELIEF WILL BE REQUESTED IN THE IST PROGRAM. ZION ALSO FAILED TO ADHERE TO THE CODE BY NOT MEETING VALVE STROKE TRENDING REQUIREMENTS. A METHOD HAS BEEN DEvised TO IMPLEMENT TRENDING REQUIREMENTS. FINALLY DUE TO ADMINISTRATIVE OVERSIGHT, PUMP DATA WAS NOT ANALYZED WITHIN 96 HRS. A METHOD HAS BEEN DEvised TO INSURE PROMPT ANALYSIS.

[376] ZION 2 DOCKET 50-304 LER 85-017
 PURGE VALVES CLOSE DUE TO PERSONNEL ERROR.
 EVENT DATE: 090985 REPORT DATE: 100985 NSSS: WE TYPE: PWR
 VENDOR: PRATT, HENRY COMPANY

(NSIC 196582) ON 9-9-85 AT 8:26 AM THE UNIT 2 PURGE VALVES TRIPPED SHUT. THE SUSPECTED CAUSE OF THE PURGE VALVE TRIP IS WORK WHICH WAS BEING PERFORMED ON THE PURGE VALVE CIRCUITRY. WHILE PROPER PERFORMANCE OF THE WORK IN QUESTION WOULD NOT CAUSE THE PURGE VALVES TO CLOSE, IT IS BELIEVED THAT THE WORKERS PERFORMING THE JOB INADVERTENTLY ACTUATED THE HIGH RADIATION PROTECTION CIRCUITRY LOCATED IN THE SAME CABINET. SINCE THIS REPRESENTS AN UNANTICIPATED ACTUATION OF AN ESP IT IS REPORTABLE UNDER 10CFR50.73(A)(2)(IV).

[377] ZION 2 DOCKET 50-304 LER 85-019
 INADVERTENT TRIP OF UNIT 2 PURGE.
 EVENT DATE: 091185 REPORT DATE: 101185 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: ZION 1 (PWR)
 VENDOR: NUCLEAR MEASUREMENTS CORP.

(NSIC 196726) ON 9-11-85 UNIT 2 WAS IN COLD SHUTDOWN AND UNIT 1 WAS AT POWER OPERATION. DURING THE PROCESS OF VENTING UNIT 1 CONTAINMENT TO THE ATMOSPHERE, A HIGH PARTICULATE ALARM OCCURRED. PER ZION PROCEDURE AOP-5, THE VENT WAS SECURED AND THE RADIATION CHEMISTRY DEPARTMENT WAS NOTIFIED TO SAMPLE THE DISCHARGE. DUE TO A PERSONNEL ERROR, A SAMPLE WAS OBTAINED FROM UNIT 2, WHICH WAS THEN IN A CONTAINMENT PURGE AT COLD SHUTDOWN. PULLING THIS SAMPLE INTERRUPTED THE FLOW PAST RAD MONITOR 2RT-PR09C, CAUSING IT TO FAIL ON LOW FLOW. AT THIS POINT, AN AS YET UNDETERMINED INTERACTION IN THE RAD MONITOR'S ALARM CIRCUITRY ALSO RESULTED IN TRIPPING OF THE PURGE FANS AND CLOSURE OF THE PURGE VALVES. THE EXACT NATURE OF THIS CIRCUIT DEFECT IS STILL BEING INVESTIGATED, AND WILL BE DOCUMENTED IN A SUPPLEMENTAL LER. RADIOACTIVITY IN EXCESS OF TECH SPEC LIMITS WAS NOT RELEASED TO THE ENVIRONMENT. ALL PERSONNEL INVOLVED IN THE EVENT HAVE BEEN COUNSELED ON THE IMPORTANCE OF CLEAR COMMUNICATION.

[378] ZION 2 DOCKET 50-304 LER 85-018
 INADEQUATE DOCUMENTATION FOR E.Q. VALVE MOTOR OPERATOR WIRING.
 EVENT DATE: 093085 REPORT DATE: 100485 NSSS: WE TYPE: PWR
 VENDOR: LIMITORQUE CORP.

(NSIC 196675) DURING THE CURRENT UNIT 2 OUTAGE INSPECTION OF ENVIRONMENTALLY QUALIFIED (EQ) MOV OPERATORS, IT WAS DISCOVERED THAT FOUR LIMITORQUE VALVE OPERATORS HAD JUMPER WIRES DIFFERENT FROM THOSE TESTED BY LIMITORQUE IN THEIR ENVIRONMENTAL QUALIFICATION PROGRAM. THE FOUR VALVES FOUND WITH THIS TYPE OF JUMPER WIRE ARE 2MOV-SI8813 AND 2MOV-SI8814, SAFETY INJECTION PUMP DISCHARGE TO REFUELING WATER STORAGE TANK RECIRCULATION ISOLATION VALVES; 2MOV-8923B, REFUELING WATER STORAGE TANK TO SAFETY INJECTION PUMP 2B SUCTION; AND 2MOV-9010A, SAFETY INJECTION PUMP 2A TO COLD LEG INJECTION HEADER. OTHER UNIT 2 EQ RELATED VALVE MOTOR OPERATORS MAY ALSO HAVE THIS TYPE OF JUMPER WIRE. ALL EQ VALVE OPERATORS WILL BE INSPECTED DURING THE CURRENT UNIT 2 REFUELING OUTAGE. VALVE OPERATOR WIRING WILL BE REPLACED, IF NECESSARY, WITH WIRES WHICH HAVE BEEN SHOWN TO BE ENVIRONMENTALLY QUALIFIED. ADEQUACY OF ENVIRONMENTAL QUALIFICATION AND ASSOCIATED DOCUMENTATION FOR LIMITORQUE VALVE OPERATOR WIRING IS BEING REVIEWED FOR BOTH UNITS 1 AND 2. A FOLLOWUP LER WILL BE ISSUED BASED ON THE CONTINUING REVIEW. THIS PROBLEM IS BEING REPORTED AS A GENERIC PROBLEM PER 10CFR21.

[379] ZION 2 DOCKET 50-304 LER 85-022
 HIGH RADIATION ALARM ON FUEL HANDLING AREA MONITOR CAUSES INADVERTENT TRIP OF CONTAINMENT PURGE.
 EVENT DATE: 101585 REPORT DATE: 111485 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 196950) ON 10-15-85, UNIT 2 WAS IN MODE 6. DURING THE PREREFUELING ACTIVITY OF REMOVING REACTOR UPPER INTERNALS, FUEL HANDLING ACCIDENT RADIATION MONITOR 2RT-AR04B EXCEEDED ITS HIGH ALARM SETPOINT OF 300 MREM/HR DUE TO THE HIGH EXPOSURE RATE FROM OF THE UPPER INTERNALS. AS PER DESIGN THE MONITOR'S AUTOMATIC ACTION OCCURRED, THEREBY RESULTING IN THE CLOSURE OF CONTAINMENT PURGE SUPPLY AND EXHAUST VALVES AND TRIPPING OF THE PURGE FANS. DUE TO PROCEDURAL DEFICIENCIES, THE RADIATION MONITOR'S AUTOMATIC ACTIONS WERE NOT BLOCKED DURING MOVEMENT OF REACTOR UPPER INTERNALS. STATION PROCEDURES WILL BE CHANGED TO PREVENT FUTURE RECURRENCE. NO RELEASE OF AIRBORNE RADIOACTIVE MATERIAL TO THE ENVIRONMENT OCCURRED AS A RESULT OF THE INCIDENT.

[380] ZION 2 DOCKET 50-304 LER 85-023
 PROCEDURE DEFICIENCY IN ELECTRICAL TEST CAUSES CLOSURE OF CONTAINMENT ISOLATION VALVES.
 EVENT DATE: 101685 REPORT DATE: 111585 NSSS: WE TYPE: PWR

(NSIC 196951) ON OCTOBER 16, 1985 WITH ZION UNIT TWO IN THE REFUELING MODE, A TECH STAFF SPECIAL PROCEDURE WAS BEING PERFORMED WHICH INVOLVED DROPPING THE ENGINEERED SAFETY FEATURE (ESF) ELECTRICAL BUSES ONE AT A TIME. WHEN BUS 247 WAS DROPPED, CONTAINMENT ISOLATION VALVE 2FCV PR24A WENT CLOSED, AND WHEN BUS 248 WAS DROPPED, CONTAINMENT ISOLATION VALVE 2FCV PR24B WENT CLOSED. THESE VALVES WENT SHUT BECAUSE THE ESF ELECTRICAL BUSES WERE FEEDING THE INSTRUMENT BUSES THAT CONTROL THESE VALVES. NORMALLY THE INSTRUMENT BUSES ARE FED FROM THE INSTRUMENT INVERTERS WHICH WILL REVERT TO THE DC BATTERY SYSTEM DURING THE LOSS OF AN ESF BUS AND REMAIN OPERABLE. THE INSTRUMENT INVERTERS WERE OUT OF SERVICE AT THE TIME FOR MAINTENANCE AND TESTING. THE VALVE CLOSURES WERE ANTICIPATED BY THE LICENSED OPERATOR PRIOR TO DROPPING THE BUSES. THE TECH SPEC PROCEDURE IN USE REFERENCED THE ZION ELECTRICAL DISTRIBUTION PROCEDURE WHICH IDENTIFIED THE ESF COMPONENTS WHICH WOULD ACTUATE. THE PROCEDURE STATED THAT THE VALVES WOULD GO CLOSED WHEN THE BUSES WERE DROPPED.

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