
Licensee Event Report (LER) Compilation

For month of August 1985

Oak Ridge National Laboratory

Prepared for
U.S. Nuclear Regulatory
Commission

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Abstract

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

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

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[1] ARKANSAS NUCLEAR 1 DOCKET 50-313 LER 85-002
 REACTOR TRIP DUE TO INADVERTENT ISOLATION OF FEEDWATER FLOW INSTRUMENTATION.
 EVENT DATE: 012985 REPORT DATE: 022885 NSSS: BW TYPE: PWR

(NSIC 194700) INATTENTION TO DETAIL DURING THE ROOT VALVE REPLACEMENT IS THE SUSPECTED CAUSE OF THE VALVE ID TAG REVERSAL. THE LEAKING INSTRUMENT ISOLATION VALVE WAS REPLACED AND THE SENSING LINE ROOT VALVES WERE PROPERLY LABELED. ON 1/29/85, AT 1417 HOURS, A REACTOR TRIP OCCURRED DURING STEADY STATE OPERATION AT 30% FULL POWER. I&C PERSONNEL WERE CALIBRATING A MAIN FEEDWATER (MFW) TRAIN 'A' FLOW INSTRUMENT AND NOTED THAT ONE OF THE INSTRUMENT'S ISOLATION VALVES WAS LEAKING BY THE STEM. OPERATIONS PERSONNEL WERE REQUESTED TO ISOLATE THE INSTRUMENT BY CLOSING THE SENSING LINE ROOT VALVE WHILE THE I&C TECHNICIANS OBTAINED A REPLACEMENT INSTRUMENT ISOLATION VALVE. DUE TO INCORRECT LABELING OF THE SENSING LINE ROOT VALVES, THE REDUNDANT MFW TRAIN 'A' FLOW INSTRUMENT WAS ISOLATED. THE INTEGRATED CONTROL SYSTEM (ICS) AUTOMATICALLY INCREASED MFW FLOW UPON DETECTING NO FLOW IN MFW TRAIN 'A' AS A RESULT OF THE FLOW CONTROL INSTRUMENT BEING ISOLATED. RECOGNIZING THE ICS RESPONSE, OPERATIONS PERSONNEL PLACED MFW CONTROL IN THE MANUAL MODE TO PREVENT SG OVERFEED. OPERATOR ACTIONS TO CORRECT THE FEEDWATER FLOW TRANSIENT LED TO A SG UNDERFEED RESULTING IN A HIGH RCS PRESSURE TRIP. NO POST TRIP CONTROL PROBLEMS WERE EXPERIENCED. INVESTIGATION OF THE EVENT REVEALED, FOR BOTH MFW TRAINS, THAT THE FLOW INSTRUMENT SENSING LINE ROOT VALVE IDENTIFICATION (ID) TAGS CORRESPONDED TO THE REDUNDANT FLOW INSTRUMENT.

[2] ARKANSAS NUCLEAR 1 DOCKET 50-313 LER 85-003
 REACTOR TRIP DUE TO INTEGRATED CONTROL SYSTEM FAILURES.
 EVENT DATE: 040985 REPORT DATE: 050985 NSSS: BW TYPE: PWR
 VENDOR: BAILEY METER COMPANY

(NSIC 194673) ON 4/9/85, AT 1914 HOURS, AN AUTOMATIC REACTOR TRIP OCCURRED DUE TO HIGH REACTOR COOLANT SYSTEM (RCS) PRESSURE AS A RESULT OF A LOSS OF 'A' MAIN FEEDWATER PUMP (MFWP). THE UNIT WAS AT 100% POWER WITH THE INTEGRATED CONTROL SYSTEM (ICS) IN AUTOMATIC EXCEPT FOR THE DELTA TCOLD CONTROL MODULE, WHICH WAS IN MANUAL, WHEN THE STATIC ANALOG MEMORY FOR THE DELTA TCOLD CONTROL CIRCUITRY FAILED. THE DELTA TCOLD CONTROL CIRCUIT PROVIDES STEAM GENERATOR HEAT LOAD RATIO CONTROL. FAILURE OF THIS CIRCUIT CAUSED A LOAD RATIO MISMATCH RESULTING IN THE 'A' LOOP FEEDWATER (FW) FLOW DEMAND TO DECREASE WHILE THE 'B' FW FLOW DEMAND INCREASED. OPERATIONS PERSONNEL PLACED THE 'A' MFWP CONTROL IN MANUAL AND INCREASED THE DEMAND TO SUPPLY FLOW TO 'A' STEAM GENERATOR. THE PUMP INITIALLY RESPONDED BUT THEN RAN BACK. FLOW DEMAND WAS INCREASED AGAIN BUT AGAIN THE PUMP RAN BACK. THE CAUSE OF THIS ANOMALY WAS A HIGH RESISTANCE CONTACT ON AN AUXILIARY RELAY IN THE 'A' MFWP CONTROL, LIMITING THE DEMAND SIGNAL EVEN IN MANUAL. SUBSEQUENTLY THE 'A' MFWP TRIPPED ON LOW SUCTION PRESSURE WHICH CAUSED THE RCS OVERHEATING TRANSIENT. EMERGENCY FEEDWATER (EFW) ACTUATED AS A RESULT OF LOW 'A' STEAM GENERATOR WATER LEVEL. THE ANALOG MEMORY MODULE FOR THE DELTA TCOLD CONTROL AND THE RELAY MODULE FOR THE 'A' MFWP CONTROL WERE REPLACED AND TESTED. NO SIMILAR OCCURRENCES HAVE BEEN REPORTED.

[3] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 85-010
 REMOTE SHUTDOWN MONITORING INSTRUMENTATION RANGE NOT IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
 EVENT DATE: 110782 REPORT DATE: 051485 NSSS: CE TYPE: PWR

(NSIC 1948#4) DURING A REVIEW OF TECH SPEC, IT WAS DISCOVERED THAT THE RANGE FOR STARTUP CHANNEL INDICATION (2JI-9000) LOCATED ON THE REMOTE SHUTDOWN PANEL HAD NOT MET THE RANGE REQUIRED BY TECH SPEC 3.3.3.5 DURING CYCLE 3. THE STARTUP RANGE EX-CORE NEUTRON DETECTORS AND ASSOCIATED SIGNAL PROCESSING EQUIPMENT HAD BEEN REPLACED DURING THE SECOND REFUELING OUTAGE (FALL 1982). THE RANGE OF 1.03-8 TO 200 PERCENT POWER WAS CHOSEN TO SUPPLY 2JI-9000. APPARENTLY, DURING

THE DESIGN CHANGE PROCESS, IT WAS NOT RECOGNIZED THAT THIS RANGE DID NOT SATISFY THE 1.0 TO 1.0E5 COUNTS PER SECOND RANGE REQUIRED BY TECH SPEC 3.3.3.5. DURING THE THIRD REFUELING OUTAGE THE RANGE DISCREPANCY WAS CORRECTED AS A RESULT OF DESIGN MODIFICATIONS TO BRING THE PLANT INTO COMPLIANCE WITH APPENDIX R REQUIREMENTS. ORGANIZATIONAL AND PROCEDURAL CHANGES MADE SINCE THIS DESIGN CHANGE SHOULD PREVENT RECURRENCE.

[4] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 85-009
INADVERTENT ESF ACTUATIONS DURING DESIGN CHANGE MODIFICATIONS.
EVENT DATE: 040985 REPORT DATE: 050985 NSSS: CE TYPE: PWR

(NSIC 194029) ON 4-9-85, AT 1030 HRS, I&C AND VENDOR PERSONNEL DE-ENERGIZED 'B' PPS IN PREPARATION FOR A DESIGN MODIFICATION. THIS DESIGN MODIFICATION WAS TO PROVIDE WIRING FROM PPS RELAY CONTACTS TO COMPUTER POINTS SO THAT START TIMES COULD BE GATHERED FOR RESPONSE TIME TESTING OF RTB. MULTIPLE CONNECTORS IN THE 'B' PPS PANEL WERE DISCONNECTED IN PREPARATION FOR WIRING CHANGES AS CALLED FOR IN THE DESIGN MODIFICATION PACKAGES. AT 1055 HRS ALARMS WERE RECEIVED IN THE CONTROL ROOM WHICH INDICATED THAT VARIOUS ES ACTUATIONS HAD OCCURRED. ES ACTUATION SIGNALS THAT OCCURRED WERE SIAS, CIAS, RAS, CSAS, AND CCAS. AT THE TIME OF THE OCCURRENCE, THE ENTIRE CORE HAD BEEN UNLOADED INTO THE SPENT FUEL POOL. MOST ES EQUIPMENT HAD BEEN DEACTIVATED FOR REFUELING ACTIVITIES, HOWEVER 1 DG STARTED, AND CONTAINMENT ISOLATION OCCURRED. ECCS INJECTION DID NOT OCCUR. THE CONNECTORS WERE RECONNECTED AND THE 'B' PPS WAS RE-ENERGIZED. EQUIPMENT WAS RE-ALIGNED TO THE PRE-ACTUATED CONFIGURATION. THE DESIGN MODIFICATION INSTALLATION INSTRUCTIONS WERE FOUND TO BE IN ERROR AND WERE SUBSEQUENTLY MODIFIED. THE DESIGN MODIFICATION WAS THEN COMPLETED WITHOUT FURTHER PROBLEMS. NO SIMILAR OCCURRENCES HAVE BEEN REPORTED.

[5] ARNOLD DOCKET 50-331 LER 85-012
MAINTENANCE ERROR CAUSES CONTAINMENT ISOLATION AND SBGTS STARTUP.
EVENT DATE: 042585 REPORT DATE: 052485 NSSS: GE TYPE: BWR

(NSIC 194583) ON 4-25-85 AT 0045 HRS, WITH THE REACTOR SHUTDOWN AND DEFUELED, A GROUP III ISOLATION AND BOTH STANDBY GAS TREATMENT SYSTEMS WERE AUTO-INITIATED ON DOWNSCALE REACTOR BLDG VENT RADIATION MONITOR TRIPS. AN OPERATOR, AFTER CONSULTING AN ELECTRICAL DISTRIBUTION LIST, DEENERGIZED 2 INSTRUMENT AC CIRCUITS WHICH PROVIDE POWER FOR SEVERAL DRYWELL COOLING MOTOR-OPERATED VALVES UPON WHICH MAINTENANCE WAS TO BE PERFORMED. THE LIST DID NOT INDICATE TO THE OPERATOR THAT THE REACTOR BLDG VENT RADIATION MONITORS WERE ALSO POWERED OFF THESE 2 CIRCUITS. THE BREAKERS WERE CLOSED, AND THE ISOLATIONS AND INITIATIONS WERE RESET BY THE OPERATORS. THE LIST CONSULTED HAS BEEN ANNOTATED TO INDICATE THE POWER SOURCE OF THE REACTOR BLDG VENT RADIATION MONITORS. AS A LONG-TERM CORRECTIVE ACTION, A COMPREHENSIVE ELECTRICAL DISTRIBUTION INFORMATION SYSTEM CONTINUES TO BE DEVELOPED.

[6] ARNOLD DOCKET 50-331 LER 85-013
UNPLANNED REACTOR WATER CLEANUP ISOLATION.
EVENT DATE: 050185 REPORT DATE: 053085 NSSS: GE TYPE: BWR

(NSIC 194728) ON MAY 1, 1985, WITH THE PLANT SHUT DOWN FOR REFUELING, THE REACTOR WATER CLEANUP (RWCU) SYSTEM ISOLATED ON A HIGH DIFFERENTIAL FLOW CONDITION. OPERATIONS PERSONNEL WERE DISPATCHED TO THE AREA IMMEDIATELY TO INVESTIGATE THE SOURCE OF THE HIGH DIFFERENTIAL FLOW INDICATION. THE PUMP SPEED CONTROLLER WAS FOUND SET AT A SIGNIFICANTLY HIGHER SETTING THAN IT HAD BEEN EARLIER. IT IS BELIEVED THAT MAINTENANCE PERSONNEL WORKING IN THE AREA OF THE CONTROLLER INADVERTENTLY BUMPED THE SPEED CONTROLLER LEADING TO A RAPID CHANGE IN FLOW RATE. THIS CHANGE IN FLOW RATE WAS SENSED BY THE LEAK DETECTION SYSTEM AS A HIGH DIFFERENTIAL FLOW.

[7] ARNOLD DOCKET 50-331 LER 85-014
INADVERTENT STANDBY GAS TREATMENT ACTUATION.
EVENT DATE: 050685 REPORT DATE: 060585 NSSS: GE TYPE: BWR

(NSIC 194491) ON 5-6-85, WITH THE REACTOR SHUT DOWN AND DEFUELED FOR A REFUELING OUTAGE, A JUMPER WHICH HAD BEEN TEMPORARILY INSTALLED WHILE RELOCATING GROUP III BYPASS SWITCHES BECAME DISCONNECTED WHEN AN ELECTRICIAN OPENED THE PANEL DOOR. AS A RESULT, THE 'A' SIDE OF THE STANDBY GAS TREATMENT SYSTEM ACTUATED AND A HALF (INBOARD VALVES ONLY) GROUP III ISOLATION OCCURRED. THE JUMPER WAS REINSTALLED WITH A MORE SECURE MECHANISM, THE HALF GROUP III ISOLATION WAS RESET, AND THE VENTILATION SYSTEM WAS RETURNED TO NORMAL.

[8] BEAVER VALLEY 1 DOCKET 50-334 LER 85-009
DISCREPANCIES IN REACTOR TRIP RESPONSE TIME TESTING.
EVENT DATE: 042985 REPORT DATE: 052285 NSSS: WE TYPE: PWR

(NSIC 194619) ON 2-21-85, BEAVER VALLEY'S TESTING AND PLANT PERFORMANCE GROUP ISSUED THEIR REACTOR TRIP RESPONSE TIME EVALUATION REPORT. TWO POTENTIAL DISCREPANCIES WERE NOTED AT THIS TIME: 1) IN ONE INSTANCE, THE LOGIC TRAIN TESTING HAD NOT BEEN PERFORMED ON A STAGGERED TEST BASIS, AND 2) ONE OVER TEMPERATURE/DELTA TEMPERATURE (OT-DELTA-T) CHANNEL RESPONSE TIME WAS IN EXCESS OF THE UFSAR ASSUMPTIONS ALTHOUGH IT WAS WITHIN THE TECH SPECS REQUIREMENTS. BEAVER VALLEY'S LICENSING DEPARTMENT DETERMINED ON 4-29-85 THAT TESTING THE LOGIC TRAINS ON A NON-STAGGERED BASIS HAD RESULTED IN NOT COMPLETING THE TRAIN A TEST WITHIN ITS REQUIRED FREQUENCY. IT WAS ALSO DETERMINED THAT THE TECH SPEC OT-DELTA-T LIMIT WAS INCORRECT AND THAT THE UFSAR LIMIT SHOULD BE FOLLOWED. AN IN-DEPTH INVESTIGATION REVEALED THAT THE CAUSE OF THE LOGIC TESTING BEING PERFORMED ON A NON-STAGGERED TEST BASIS WAS A TRACKING DEFICIENCY CONCERNING REACTOR TRIP RESPONSE TIME TESTING. ACTION HAS BEEN INITIATED TO CORRECT THIS SCHEDULING PROBLEM. A TECH SPEC CHANGE IS BEING ISSUED TO CORRECT THE DISCREPANCY BETWEEN THE TECH SPECS AND THE UFSAR. THE TRANSMITTER WHOSE RESPONSE TIME WAS GREATER THAN THE UFSAR REQUIREMENTS WAS REPLACED IN APR OF 1982 DUE TO ENV QUALIFICATION CONSIDERATIONS.

[9] BEAVER VALLEY 1 DOCKET 50-334 LER 85-008
AUTOMATIC ACTUATION OF REACTOR PROTECTION SYSTEM.
EVENT DATE: 050285 REPORT DATE: 052885 NSSS: WE TYPE: PWR

(INSIC 194618) ON 5-2-85 AT 0134 A SPURIOUS REACTOR TRIP OCCURRED WITHOUT A VALID SIGNAL. A MAINTENANCE SURVEILLANCE PROCEDURE IN PROGRESS ON ONE CHANNEL OF STEAMLINE PRESSURE PROTECTION WAS HALTED AND REVIEWED FOR PROCEDURAL ERRORS THAT MAY HAVE CAUSED THE SPURIOUS SIGNAL. INITIAL INVESTIGATION FOCUSED ON THE MULTIPLEXER TEST SWITCH. SUBSEQUENT CYCLING FAILED TO CAUSE A SIMILAR TRIP SIGNAL. FURTHER INVESTIGATION WAS UNDERTAKEN BY OPERATIONS AND I&C PERSONNEL WHO DETERMINED THAT REACTOR TRIP ACTUATION WAS DUE TO THE RESET OF PERMISSIVE P-7 (ONE OF TWO IMPULSE PRESSURE CHANNELS GREATER THAN 10%) AND NOT THE MULTIPLEXER TEST SWITCH. A RECORDER WAS INSTALLED ON EACH OF THE IMPULSE PRESSURE CHANNELS. TESTS WERE CONDUCTED BY KEYING RADIO TRANSMITTERS, AND STRIKING WELDING ARCS NEAR THE PRESSURE TRANSMITTERS. NO NOISE SIGNALS WERE RECORDED. MECHANICALLY EXERCISING THE TRANSMITTER HOUSING DID CAUSE NOISE SIGNALS EQUIVALENT TO APPROX 5% OF THE NORMAL OPERATING SIGNAL. THE RECORDERS WERE MAINTAINED BY OPERATION'S REQUEST UNTIL MODE 1 WAS ACHIEVED. NO SPIKES WERE RECORDED OVER THE ENSUING 4 DAY PERIOD.

[10] BEAVER VALLEY 1 DOCKRT 50-334 LER 85-010
REACTOR TRIP DUE TO LO-LO STEAM GENERATOR LEVEL.
EVENT DATE: 050685 REPORT DATE: 052185 NSSS: WE TYPE: PWR

(NSIC 194835): A PLANT STARTUP WAS IN PROGRESS FOLLOWING MAINTENANCE ON THE PRESSURIZER MANWAY, WITH SYNCHRONIZATION TO THE POWER GRID AT 1141 HOURS. POWER ASCENT WAS IN PROGRESS AND PREPARATION TO CONTROL STEAM GENERATOR LEVEL CONTROL WAS PERFORMED BY MANUAL OPERATION OF THE FEEDWATER REGULATING BYPASS VALVES. WHEN TRANSFERRING LEVEL CONTROL FOR THE "B" STEAM GENERATOR, A LEVEL DECREASE OCCURRED WHICH THE OPERATOR WAS UNABLE TO RESPOND TO QUICKLY ENOUGH, RESULTING IN A REACTOR TRIP DUE TO LO-LO LEVEL IN "B" STEAM GENERATOR AT 1150 HOURS. THE APPARENT CAUSE OF THE TRIP WAS A COMBINATION OF INADEQUATE COMMUNICATION BETWEEN THE REACTOR AND TURBINE OPERATORS, AND INADEQUATE RESPONSE OF THE BYPASS FEEDWATER REGULATING VALVES. THE OPERATIONS SUPERVISOR IS MEETING WITH EACH SHIFT TO DISCUSS THE EVENT, AND PROVIDE ADDITIONAL DETAILS CONCERNING STEAM GENERATOR LEVEL CONTROLS DURING PLANT STARTUP.

[11] BROWNS FERRY 1 DOCKET 50-259 LER 83-059 REV 1
UPDATE ON CONTAINMENT AIR MONITOR PUMP DRIVE BELT FAILURE.
EVENT DATE: 101583 REPORT DATE: 030685 NSSS: GE TYPE: BWR
VENDOR: SCHWITZER

(NSIC 194559) DURING REFUELING, WHILE PERFORMING SI 4.8.B.2-1B AND 4.8.B.2-2A, AN ANALYST DISCOVERED A BROKEN VACUUM PUMP DRIVE BELT ON 1-RM-90-251 (TECH SPEC 3.8.B.8). THERE IS NO INDICATION THAT THE CONTROL ROOM DOWN SCALE ANNUNCIATOR ALARMED. THE CAM COULD HAVE BEEN INOPERABLE FOR A MAXIMUM OF 24 HRS. 1-RM-90-250 AND 1-RM-90-249 WERE OPERABLE DURING THE EVENT AND INDICATED NO INCREASE IN ACTIVITY. THERE ARE NO REDUNDANT SYSTEMS. THE CAUSE WAS NORMAL WEAR DUE TO CONTINUOUS OPERATION. THE STANDARD V-BELT FOR THE SCHWITZER MODEL 325 SERIES AIR PUMP WAS REPLACED (MR #210388). NO FURTHER RECURRENCE CONTROL IS REQUIRED. THE DRIVE BELTS ARE CHECKED PERIODICALLY FOR WEAR AS SPECIFIED BY SI 4.8.B.4.2.A. PROCEDURES HAVE BEEN ISSUED TO ENSURE CONSISTENT OPERATOR RESPONSE TO ANNUNCIATORS. PREVIOUS SIMILAR EVENTS: 259/81-051, 82-008, 82-061, 83-051; 260/82-036, 83-003, AND 296/81-063, 81-067.

[12] BROWNS FERRY 1 DOCKET 50-259 LER 84-012 REV 2
UPDATE ON FAILURE OF SHUTDOWN COOLING SYSTEM.
EVENT DATE: 021484 REPORT DATE: 021585 NSSS: GE TYPE: BWR
VENDOR: LIMITORQUE CORP.
 RELIANCE ELECTRIC COMPANY
 WALWORTH COMPANY

(NSIC 194162) ON 2-14-84, WHILE BRINGING UNITS 1 AND 2 TO COLD SHUTDOWN (BECAUSE OF THE RESIDUAL HEAT REMOVAL SERVICE WATER SYSTEM AIR RELEASE VALVES NOT BEING PROPERLY CERTIFIED FOR THE DESIGN PRESSURE (REF BPRO-50-259/84-013)), RHR VALVE FCV-1-74-48 ON UNIT 1 FAILED TO OPEN, MAKING IT IMPOSSIBLE TO ACHIEVE COLD SHUTDOWN USING NORMAL METHODS. AN ALERT WAS DECLARED PER THE RADIOLOGICAL EMERGENCY PLAN. THE PLANT WAS BROUGHT TO COLD SHUTDOWN THROUGH ALTERNATE MEANS AND THE ALERT WAS CANCELLED AFTER THE VALVE WAS OPENED MANUALLY AND SHUTDOWN COOLING RESTORED. AN INVESTIGATION OF THIS EVENT REVEALED THAT THE 'B' PHASE WINDING OF THE MOTOR ON VALVE FCV-74-48 FAILED. APPARENTLY, THE GATE STUCK IN THE VALVE SEAT AND THE MOTOR COULD NOT GENERATE ENOUGH TORQUE TO OPEN THE VALVE. THE INVESTIGATION REVEALED THAT THE 'CLOSE' TORQUE SWITCH FOR FCV-74-48 WAS SET AT A SETTING THAT IS HIGHER THAN RECOMMENDED CAUSING THE VALVE TO STICK CLOSED DUE TO OVERTIGHTENING.

[13] BROWNS FERRY 1 DOCKET 50-259 LER 85-016
AUTOMATIC REACTOR SCRAM DUE TO LOSS OF FEEDWATER.
EVENT DATE: 011685 REPORT DATE: 053185 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.
 TECHNOLOGY FOR ENERGY CORP.
 TERRY STEAM TURBINE COMPANY

[illegible]

[15] BROWNS FERRY 1 DOCKET 50-259 LER 85-013
TEMPORARY STARTUP TEST PANELS NOT SEISMICALLY QUALIFIED.
EVENT DATE: 041885 REPORT DATE: 051485 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
 BROWNS FERRY 3 (BWR)

(NSC 194568) TVA'S OFFICE OF ENGINEERING DETERMINED THAT THE EXISTING CONFIGURATION OF THE STARTUP TEST INSTRUMENTATION PANELS CANNOT BE DETERMINED TO BE SEISMICALLY QUALIFIED. THE SUBJECT PANELS WERE ORIGINALLY INSTALLED TO FACILITATE MONITORING AND CALIBRATION OF VARIOUS PLANT PROCESS INSTRUMENTS DURING THE ORIGINAL STARTUP OF EACH UNIT. THE PANELS WERE SUBSEQUENTLY RETAINED TO ACCOMMODATE REQUIRED STARTUP TESTING FOLLOWING ROUTINE REFUELING OUTAGES AND TO PROVIDE SPECIAL TEST CAPABILITIES. BECAUSE THE PANELS WERE INTENDED TO BE REMOVED AFTER INITIAL STARTUP, THEIR INSTALLATION WAS FIELD IMPROVISED. THE PANELS CONSIST OF PLYWOOD WITH A SHEET METAL ENCLOSURE AND ARE FASTENED TO A MASONRY WALL USING SIMPLE MASONRY ANCHORS WHICH ARE NOT LOAD RATED. CABLES ARE ROUTED FROM VARIOUS LOCATIONS TO THE STARTUP TEST PANELS USING CABLE TRAYS WHICH REST UNSECURED ON TOP OF THE MAIN CONTROL ROOM PANELS. IMPROPER MOUNTING OF THE PANELS AND CABLE RACEWAYS POSE A POTENTIAL HAZARD TO OTHER MAIN CONTROL ROOM PANELS DURING A SEISMIC EVENT. THE STARTUP TEST PANEL CONFIGURATION WILL BE MODIFIED TO MEET SEISMIC REQUIREMENTS PRIOR TO RESTART OF EACH UNIT. PROCEDURES FOR TEMPORARY INSTALLATION OF EQUIPMENT HAVE SINCE BEEN ADOPTED WHICH REQUIRE AN UNREVIEWED SAFETY QUESTION DETERMINATION.

[16] BROWNS FERRY 3 DOCKET 50-296 LER 85-006
 MISMATCH OF REACTOR WATER LEVEL INDICATORS.
 EVENT DATE: 021385 REPORT DATE: 031585 NSSS: GE TYPE: BWR

(NSIC 194574) DURING THE STARTUP OF UNIT 3, A MISMATCH BETWEEN WATER LEVEL INDICATORS DEVELOPED WHILE AT LOW PRESSURE AND SUBSEQUENTLY DIMINISHED. AT 2130, THE UNIT OPERATOR NOTICED THE B GEMAC WATER LEVEL INDICATOR, LI-3-60, WAS INDICATING APPROX 17 INCHES LESS THAN A AND C GEMACS, LI-3-53 AND LI-3-206. AT 2136, A HALF SCRAM WAS INITIATED BY LIS-3-203D. THE UNIT OPERATOR IMMEDIATELY RAISED WATER LEVEL WHICH CLEARED THE HALF SCRAM. BY 2230, ALL 3 CONTROL ROOM INDICATORS WERE INDICATING THE SAME LEVEL. THE APPARENT CAUSE OF THE EVENT WAS A PARTIAL LOSS OF WATER IN THE A GEMAC REFERENCE LEG CAUSING LI-3-53 AND LI-3-206 TO INDICATE ERRONEOUSLY. THE REFERENCE LEG REFILLED AS THE EFFICIENCY OF THE HEADPOT INCREASED WITH INCREASED REACTOR PRESSURE. POST EVENT REVIEW INDICATED THAT SIMILAR PHENOMENA HAVE BEEN OBSERVED AT SEVERAL BWR FACILITIES AND WAS USUALLY DUE TO A SMALL LEAK IN ASSOCIATED VALVES OR PRESSURE GAUGES. SINCE THE EVENT, TRAINING HAS BEEN RECEIVED BY OPERATORS, PLANT MANAGEMENT AND SHIFT TECHNICAL ADVISORS TO ENABLE THEM TO MORE RAPIDLY DIAGNOSE WATER LEVEL INDICATION PROBLEMS DURING STARTUP OPERATIONS. THE UNIT WAS SHUTDOWN ON 3-9-85, TO INSPECT INSTRUMENTS AND INSTRUMENT LINES FOR ANY PROBLEMS WHICH COULD HAVE CAUSED A LOSS OF WATER IN THE REFERENCE LEG. SIMILAR EVENTS - 296/81-027 AND 260/77-011.

[17] BROWNS FERRY 3 DOCKET 50-296 LER 85-008
 INITIATION OF MANUAL SCRAM FOLLOWING ROD WORTH MINIMIZER INOPERABILITY.
 EVENT DATE: 030985 REPORT DATE: 040585 NSSS: GE TYPE: BWR

(NSIC 194172) AT 2134 ON 3-9-85, OPERATIONS PERSONNEL ELECTED TO MANUALLY SCRAM THE REACTOR WHEN PROBLEMS WITH THE ROD WORTH MINIMIZER PROGRAM WERE ENCOUNTERED DURING A CONTROLLED SHUTDOWN. UNIT 3 WAS BEING SHUT DOWN TO INVESTIGATE PROBLEMS ASSOCIATED WITH REACTOR VESSEL LEVEL INSTRUMENTATION (REFERENCE LER 296/85-003). PREVIOUS EVENT - 259/84-004.

[18] BROWNS FERRY 3 DOCKET 50-296 LER 85-012
 MOMENTARY LOSS OF SECONDARY CONTAINMENT DUE TO FAILED DOORLOCK.
 EVENT DATE: 042585 REPORT DATE: 052485 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BROWNS FERRY 1 (BWR)

(NSIC 194173) SECONDARY CONTAINMENT WAS LOST MOMENTARILY IN 3 SEPARATE EVENTS DUE TO PERSONNEL AIRLOCK DOOR PROBLEMS. A. THE ELECTRIC STRIKE ON UNIT 3 AIRLOCK DOOR HAD A BROKEN LEVER SPRING. THE ELECTRIC STRIKE WAS REPLACED AND THE DOOR RETURNED TO SERVICE. B. THE ELECTRIC STRIKE WAS BROKEN AND THE DOOR CLOSURE NEEDED ADJUSTMENT ON UNIT 1 PERSONNEL AIRLOCK DOOR. THE ELECTRIC STRIKE WAS REPLACED, AND THE DOOR CLOSURE ADJUSTED BEFORE RETURNING THE DOOR TO SERVICE. C. THE PERMISSIVE LIMIT SWITCH ON UNIT 1 PERSONNEL AIRLOCK DOOR, SAME AS B ABOVE, NEEDED ADJUSTMENT. THE LIMIT SWITCH WAS ADJUSTED BEFORE RETURNING THE DOOR TO SERVICE. THE ABOVE LISTED PROBLEMS ARE NOT RELATED AND ARE CONSIDERED RANDOM FAILURES WITH NO RECURRENCE CONTROL REQUIRED.

[19] BROWNS FERRY 3 DOCKET 50-296 LER 85-014
 TEST ERROR CAUSES CONTAINMENT ISOLATION INITIATION.
 EVENT DATE: 042985 REPORT DATE: 052485 NSSS: GE TYPE: BWR

(NSIC 194475) DURING PERFORMANCE OF INSTRUMENT CHECK SURVEILLANCE INSTRUCTION, RADIATION MONITOR RI-90-142 WAS TAKEN TO THE 'ZERO' POSITION TO CHECK RECORDER READING RESULTING IN AN INADVERTENT INITIATION OF GROUP 6 CONTAINMENT ISOLATION LOGIC. WHEN THE MODE SWITCH WAS PLACED IN THE 'ZERO' POSITION AN UPSCALE TRIP WAS ACCORDINGLY GENERATED. THE SURVEILLANCE INSTRUCTION DID NOT CAUTION THE OPERATOR ABOUT THE POSSIBILITY OF GENERATING A CONTAINMENT ISOLATION SIGNAL. A

CAUTION NOTE WAS ADDED TO THE APPLICABLE PLANT SURVEILLANCE INSTRUCTION TO PREVENT SIMILAR OCCURRENCES IN THE FUTURE. THE CONTAINMENT ISOLATION SIGNAL WAS RESET AND EQUIPMENT RETURNED TO NORMAL AFTER VERIFYING THE AFFECTED SAFETY SYSTEMS AVAILABILITY.

[20] BROWNS FERRY 3 DOCKET 50-296 LER 85-013
EXCESSIVE PRIMARY CONTAINMENT ISOLATION VALVE CLOSURE TIME.
EVENT DATE: 043085 REPORT DATE: 052985 NSSS: GE TYPE: BWR

(NSIC 194174) FOUR PRIMARY CONTAINMENT ISOLATION BUTTERFLY VALVES FAILED THEIR CLOSURE TIME SURVEILLANCE TEST. THIS SURVEILLANCE WAS BEING PERFORMED BECAUSE OF DISCOVERED TIMING TEST METHODOLOGY DEFICIENCIES FOR THE SURVEILLANCE. THE ROOT CAUSE FOR THE SLOW OPERABILITY OF THESE VALVES WAS A REVISED TIMING PROCEDURE. THE TECH SPEC MAXIMUM OPERATING TIME IS 2.5 SECS. THE MAXIMUM CLOSURE TIME RECORDED WAS 10 SECS FOR A SUPPRESSION CHAMBER PURGE INLET VALVE (PCV-64-19). MAINTENANCE WAS PERFORMED ON THIS VALVE AND IT LATER PASSED THE TEST. THE REMAINING 3 VALVES TIMED AT SUPPRESSION CHAMBER PURGE INLET (PCV-64-19), 10 SECS; DRYWELL MAIN EXHAUST ISOLATION (PCVS-64-29 AND 30) 3.3 SECS AND 3.0 SECS, RESPECTIVELY. THE 4 VALVES WILL BE ADJUSTED, AS REQUIRED, AND THE TIMING CHECKED BELOW 2.5 SECS PRIOR TO STARTUP OF UNIT 3.

[21] BROWNS FERRY 3 DOCKET 50-296 LER 85-015
SETPOINT DRIFT OF TURBINE FIRST-STAGE PERMISSIVE SWITCHES.
EVENT DATE: 051585 REPORT DATE: 061185 NSSS: GE TYPE: BWR

(NSIC 194609) ON 3-15-85 DURING PERFORMANCE OF SURVEILLANCE INSTRUCTION 4.1.A.14, TURBINE FIRST-STAGE PRESSURE PERMISSIVE FUNCTIONAL TEST AND/OR CALIBRATION, ALL 4 TURBINE FIRST-STAGE PRESSURE PERMISSIVE SWITCHES (PS-1-81A, PS-1-81B, PS-1-91A, AND PS-1-90B) WERE FOUND TO BE OUT OF CALIBRATION. THE SWITCHES WERE INSPECTED, RECALIBRATED, AND FUNCTIONALLY TESTED. THE CAUSE OF THE EVENT CAN BE ATTRIBUTED TO INSTRUMENT DRIFT.

[22] BROWNS FERRY 3 DOCKET 50-296 LER 85-016
EMERGENCY DIESEL GENERATOR FUEL LINE LEAK.
EVENT DATE: 051785 REPORT DATE: 060785 NSSS: GE TYPE: BWR
VENDOR: ELECTRO - MOTIVE DIV. OF GM
 GENERAL MOTORS

(NSIC 194610) DURING THE MONTHLY TEST OF EMERGENCY DG 3D, A PINHOLE LEAK DEVELOPED AT THE FUEL LINE/FILTER WELD. THE TEST WAS STOPPED, AND THE DIESEL WAS DECLARED INOPERATIVE. INSPECTION DETERMINED THAT A VIBRATION INDUCED CRACK IN THE FUEL FILTER MANIFOLD BRACKET TO BASE PLATE WELD CAUSED FATIGUE AND SUBSEQUENT LEAKAGE AT THE WELD IN THE FUEL LINE. ALL OTHER DIESELS IN THE PLANT WERE INSPECTED FOR THE SAME PROBLEM, AND VISUAL INDICATIONS OF BASE PLATE WELD CRACKS WERE FOUND ON DGS 3A AND 3B. SEISMIC INTEGRITY OF THESE DIESELS WAS NOT AFFECTED, SO THEY WERE MAINTAINED OPERABLE. THE FUEL LINE AND ALL BASE PLATE WELD CRACKS HAVE BEEN WELD REPAIRED.

[23] BRUNSWICK 1 DOCKET 50-325 LER 85-018
MAINTENANCE ERRORS CAUSE TWO PRIMARY CONTAINMENT ISOLATIONS.
EVENT DATE: 042085 REPORT DATE: 052085 NSSS: GE TYPE: BWR

(NSIC 194577) ON 4-20-85 AT 0330, A UNIT 1 PRIMARY CONTAINMENT GROUP 6 ISOLATION OF THE CONTAINMENT ATMOSPHERE CONTROL SYSTEM OCCURRED AND WOULD NOT RESET. ON 4-26-85, AT 0047, A UNIT 1 PRIMARY CONTAINMENT GROUP 3 ISOLATION OF THE REACTOR WATER CLEANUP (RWCU) SYSTEM INBOARD PRIMARY CONTAINMENT ISOLATION VALVE OCCURRED. BOTH EVENTS OCCURRED DURING A UNIT 1 REFUEL/MAINTENANCE OUTAGE. THE 4-20-85

EVENT RESULTED FROM 2 OPEN POWER SUPPLY CIRCUIT BREAKERS TO THE GROUP 6 ISOLATION LOGIC. AN INVESTIGATION WAS INCONCLUSIVE IN DETERMINING THE CAUSE OF THE OPEN CIRCUIT BREAKERS. THE BREAKERS WERE CLOSED AND THE ISOLATION SIGNAL WAS RESET. AS A RESULT OF THIS EVENT, APPROPRIATE PERSONNEL WILL BE MADE AWARE OF POWER SUPPLY PANEL CIRCUIT BREAKER ALIGNMENTS RELATIVE TO PLANT MODIFICATION WORK. THE 4-26-85 EVENT RESULTED FROM A BLOWN ELECTRICAL FUSE IN THE RWCU DIFFERENTIAL FLOW SENSING LOGIC CAUSED BY ACCIDENTAL SHORTING OF ELECTRICAL TERMINALS IN A POWER SUPPLY PANEL DURING PLANT MODIFICATION WORK. THE BLOWN FUSE WAS REPLACED. THE INVOLVED CRAFTSMAN WAS APPROPRIATELY DISCIPLINED.

[24] BRUNSWICK 1 DOCKET 50-325 LER 85-021
FIVE SPURIOUS FIRE ALARMS AND ONE SPURIOUS CHLORINE ALARM OCCUR.
EVENT DATE: 050185 REPORT DATE: 053185 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)
VENDOR: WALLACE & TIEMAN, INC.

(NSIC 194578) ON MAY 1, 2, 10, 14, AND 16, 1985, AUTOMATIC INITIATIONS OR ISOLATIONS OF THE UNITS 1 AND 2 COMMON CONTROL BLDG HEATING, VENTILATION, AND AIR CONDITIONING (CB HVAC) SYSTEM OCCURRED FOR CUMULATIVE TOTALS OF 5 INITIATIONS AND 1 ISOLATION. DURING EACH EVENT, UNIT 1 WAS IN A REFUEL/MAINTENANCE OUTAGE AND UNIT 2 WAS AT POWER OPERATION. CB HVAC AUTOMATIC INITIATIONS AND ISOLATIONS PLACE THE SYSTEM INTO ITS MOST CONSERVATIVE CONDITION FOR EACH RESPECTIVE TYPE SIGNAL. FOUR OF THE CB HVAC INITIATIONS WHICH STARTED THE UNITS' SELECTED CONTROL BLDG EMERGENCY AIR FILTRATION (CB EAF) COMMON TRAIN 2A OR 2B RESULTED FROM SPURIOUS CONTROL BLDG FIRE ALARMS. THE REMAINING CB HVAC INITIATION RESULTED FROM ACTUATION OF A CONTROL BLDG FIRE DETECTOR DUE TO DUST FROM ONGOING PLANT MODIFICATION WORK IN THE VICINITY OF THE DETECTOR. AFTER EACH CB HVAC INITIATION, THE AFFECTED CB EAF WAS RETURNED TO STANDBY FOLLOWING VERIFICATION THAT ACTUAL FIRE CONDITIONS DID NOT EXIST. THE CB HVAC ISOLATION WAS CAUSED BY SPURIOUS ACTUATION OF THE SYSTEM AIR INTAKE PLENUM CHLORINE DETECTOR, 1X-AT-2977, RESULTING FROM AN INCREASED SENSITIVITY DUE TO A LACK OF ELECTROLYTE IN THE DETECTOR. A STICKING LEVEL INDICATOR FLOAT IN THE DETECTOR ELECTROLYTE RESERVOIR HAD CAUSED A FALSE INDICATION OF SUFFICIENT RESERVOIR HAD CONSEQUENTLY GONE DRY. THE SAME PROBLEM WAS ALSO FOUND TO AFFECT THE SYSTEM REDUNDANT DETECTOR 2X-AT-2977.

[25] BRUNSWICK 1 DOCKET 50-325 LER 85-022
BURNING RELAY CAUSES SBTG STARTUP.
EVENT DATE: 050285 REPORT DATE: 053085 NSSS: GE TYPE: BWR
VENDOR: ALLEN-BRADLEY CO.

(NSIC 194579) DURING A UNIT 1 REFUEL/MAINTENANCE OUTAGE, ON 5-02-85, AT 1407, A PRIMARY CONTAINMENT GROUP 6 ISOLATION OCCURRED, THE REACTOR BLDG VENTILATION SYSTEM AUTOMATICALLY ISOLATED, AND TRAIN 1B OF THE REACTOR BLDG STANDBY GAS TREATMENT SYSTEM AUTOMATICALLY STARTED. A REACTOR BLDG FIRE WATCH HAD OBSERVED SMOKE EMANATING FROM SBTG TRAIN 1A AND REPORTED THE DISCOVERY TO THE CONTROL ROOM. OPERATIONS PERSONNEL ASSESSED THE PROBLEM AND DEENERGIZED THE POWER SUPPLY TO TROUBLE START CONTROL RELAY CR-4 OF SBTG TRAIN 1A, THEREBY RESULTING IN THE EVENT. CR-4, WHICH IS IN THE CIRCUITRY TO THE UNIT SBTG TRAINS' HIGH TEMPERATURE CONTROL ROOM ANNUNCIATOR, HAD OVERHEATED AND CAUGHT FIRE. THE FIRE WAS REPORTED OUT AT 1418. SBTG TRAIN 1B WAS SECURED AND RETURNED TO STANDBY, AND THE ISOLATION SIGNALS WERE RESET. THE INVOLVED SMOKE DID NOT AFFECT OPERABILITY OF SBTG TRAIN 1B. ON 5-7-85, CR-4 (ALLEN-BRADLEY PART NO. 696-521-39) TO SBTG 1A WAS REPLACED. THE FAILURE OF CR-4 IS ATTRIBUTED TO RELAY COIL INSULATION BREAKDOWN RESULTING FROM INDETERMINATE CAUSES. THE CR-4 RELAYS IN SBTG 1B AND UNIT 2 SBTG'S 2A AND 2B WERE VISUALLY INSPECTED FOR SIGNS OF OVERHEATING OR PHYSICAL DEGRADATION WITH NO PROBLEMS FOUND.

[26] BRUNSWICK 1 DOCKET 50-325 LER 85-023
 SPURIOUS REACTOR PRESSURE SIGNAL CAUSES ISOLATION OF REACTOR SHUTDOWN COOLING.
 EVENT DATE: 050285 REPORT DATE: 053185 NSSS: GE TYPE: BWR

(NSIC 194580) DURING A UNIT 1 REFUELING/MAINTENANCE OUTAGE ON 5-2-85, AT 1538, THE UNIT CONTROL OPERATOR DISCOVERED THAT A PRIMARY CONTAINMENT GROUP 8 ISOLATION OF THE RHR SYSTEM'S SHUTDOWN COOLING INBOARD PRIMARY CONTAINMENT ISOLATION VALVE, 1-E11-P009, HAD OCCURRED. THE UNIT REACTOR CAVITY WAS FLOODED, THE FUEL POOL GATES WERE REMOVED, AND THE FUEL POOL COOLING SYSTEM AND RWCU SYSTEM WERE AVAILABLE FOR REACTOR DECAY HEAT REMOVAL. RHR FLOW RECORDER TRACES SHOWED THE ISOLATION WAS SEALED IN FOR APPROX 15 TO 20 MINS BEFORE DISCOVERY OF THE EVENT. WITHIN 5 MINS OF THE EVENT DISCOVERY, THE ISOLATION WAS RESET AND RHR SHUTDOWN COOLING WAS REESTABLISHED FOLLOWING DETERMINATION THAT AN ACTUAL ISOLATION CONDITION DID NOT EXIST. THIS EVENT IS ATTRIBUTED TO A SPURIOUS INTERRUPTION OF THE LOGIC CIRCUITRY TO THE REACTOR STEAM DOME PRESSURE INSTRUMENT, 1-B32-PS-N018A-1. AN INVESTIGATION WAS INCONCLUSIVE IN DETERMINING WHETHER ONGOING WORK ACTIVITIES IN THE VICINITY OF THE ASSOCIATED CONTROL ROOM RHR ISOLATION ACTUATION RELAYS RESULTED IN THE EVENT. THE INSTRUMENT ACTUATION SETPOINT OF N018A0-1 WAS ALSO CHECKED AND FOUND WITHIN REQUIRED TOLERANCES.

[27] BRUNSWICK 1 DOCKET 50-325 LER 85-025
 FAILURE TO VERIFY WEIGHTS OF CARBON DIOXIDE STORAGE CYLINDERS.
 EVENT DATE: 051085 REPORT DATE: 060785 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 194766) ON 5/10/85, A ROUTINE CORPORATE QUALITY ASSURANCE AUDIT OF PLANT PERIODIC TEST PERFORMANCES REVEALED THAT FROM 1/28/85 UNTIL 3/21/85, THE HIGH PRESSURE CARBON DIOXIDE FIRE EXTINGUISHING SYSTEMS OF THE UNITS 1 AND 2 COMMON CONTROL BUILDING WERE INOPERABLE, DUE TO FAILURE TO PERFORM REQUIRED ONCE PER SIX MONTHS VERIFICATIONS OF THE SYSTEMS CARBON DIOXIDE STORAGE CYLINDERS' MINIMUM WEIGHT. THE APPLICABLE TECH SPEC REQUIREMENT IS 4.7.7.3A. THE SUBJECT SURVEILLANCE IS ACCOMPLISHED BY PERIODIC TEST (PT) - 35.10. FROM 1/28/85 THROUGH 3/21/85, BOTH UNITS, AT VARIOUS TIMES, WERE AT POWER, REACTOR STARTUP, OR SHUTDOWN. ON 1/14/85, PLANT OPERATIONS PERSONNEL, WHO PERFORMED PT-35.10, DID NOT PROPERLY COMPLETE SURVEILLANCE TEST EXCEPTION DOCUMENTATION TO REFLECT THAT THE SYSTEMS WERE INOPERABLE DUE TO THE CARBON DIOXIDE WEIGHING DEVICE BEING OUT OF SERVICE FOR REPAIRS. CONSEQUENTLY, CONTROL ROOM OPERATIONS PERSONNEL WERE UNAWARE OF THE SYSTEMS' INOPERABILITY AND PROPER DOCUMENTATION OF THE LIMITING CONDITION FOR OPERATION WAS NOT INITIATED. IN ADDITION, THE REQUIRED SPECIAL REPORT PURSUANT TO TECH SPEC 6.9.2 WAS MISSED ON 2/27/85.

[28] BRUNSWICK 1 DOCKET 50-325 LER 85-028
 DESIGN INADEQUACY OF STANDBY GAS TREATMENT SYSTEM CONTROL LOGIC.
 EVENT DATE: 051485 REPORT DATE: 061385 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 194767) ON 5/14/85, IT WAS DETERMINED THAT A DESIGN ERROR WITH THE STANDBY GAS TREATMENT (SBGT) SYSTEMS OF UNITS 1 AND 2 WOULD HAVE PREVENTED AUTOMATIC INITIATION FOLLOWING A TEMPORARY LOSS OF OFF-SITE POWER. OPERATOR ACTION WOULD HAVE BEEN REQUIRED TO RESET THE SYSTEMS, WHICH CONFLICTS WITH SYSTEM DESIGN INTENT AS DESCRIBED IN THE PLANT FINAL SAFETY ANALYSIS REPORT REQUIRING AUTOINITIATION. CONTROL ROOM ALARM ANNUNCIATIONS WOULD HAVE ALERTED CONTROL OPERATORS OF BOTH UNITS THAT THE SYSTEMS WERE NOT RESET. AT THE TIME OF THIS DETERMINATION, UNIT 1 WAS IN A REFUEL/MAINTENANCE OUTAGE AND UNIT 2 WAS AT 100%. RELAY CR1, WHICH TRIPS OR PREVENTS STARTING OF THE SBGT'S FANS ON HIGH SYSTEM TEMPERATURE, WAS DESIGNED WITH SEAL-IN CONTACTS IN ITS COIL CIRCUIT TO ALLOW SYSTEM RESTART EITHER MANUALLY OR AUTOMATICALLY ONLY AFTER MANUAL RESETTING. A LOSS OF OFF-SITE POWER DEENERGIZES CR1, PRODUCING THE SAME EFFECT AS A SYSTEM HIGH TEMPERATURE CONDITION. THIS DESIGN DEFICIENCY WOULD ALSO PREVENT THE

REACTOR BUILDING SUPPLY AND EXHAUST DAMPERS FROM ISOLATING ON A HIGH DRYWELL PRESSURE OR LOW VESSEL LEVEL, AS THESE ISOLATION SIGNALS TO THESE DAMPERS ARE INITIATED THROUGH THE SBTG LOGIC. HIGH REACTOR BUILDING RADIATION WOULD INITIATE ITS DESIGN ISOLATION.

[29] BRUNSWICK 1 DOCKET 50-325 LER 85-019
TWO SPURIOUS ACTUATIONS OF CONTROL BUILDING EMERGENCY AIR FILTRATION SYSTEM.
EVENT DATE: 051585 REPORT DATE: 061285 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 194765) ON 5-15-85, AT 1400, AND 5-21-85, AT 1050 AND 1136, TRAIN 2A OF THE UNITS 1 AND 2 COMMON CONTROL BUILDING EMERGENCY AIR FILTRATION (CBEAF) SYSTEM AUTOMATICALLY INITIATED DUE TO CONTROL BUILDING FIRE ALARMS. IN EACH CASE, THE REDUNDANT CBEAF TRAIN 2B WAS IN STANDBY AND UNIT 1 WAS IN A REFUEL/MAINTENANCE OUTAGE WHILE UNIT 2 WAS OPERATING AT OR NEAR 100%. AFTER EACH EVENT, THE FIRE ALARM WAS RESET AND CBEAF TRAIN 1A WAS RETURNED TO STANDBY FOLLOWING A VERIFICATION THAT AN ACTUAL FIRE CONDITION DID NOT EXIST. CONTROL OPERATORS OF BOTH UNITS BECAME AWARE OF THESE EVENTS THROUGH APPROPRIATE CONTROL ROOM ALARM ANNUNCIATIONS. THE 5-15-85 EVENT RESULTED FROM ACCIDENTAL SHORTING OF A FIRE DETECTOR IN THE CONTROL BUILDING CABLE SPREAD AREA. WHILE CLIMBING IN CLOSE CONFINES MONITORED BY THE DETECTOR DURING IDENTIFICATION LABELING OF FIRE DETECTORS, A PLANT AUXILIARY OPERATOR INADVERTENTLY TOUCHED THE DETECTOR. THE EVENT ON 5-21-85, AT 1050, RESULTED FROM ACCIDENTAL MECHANICAL SHOCK OF A CONTROL BUILDING CABLE SPREAD FIRE DETECTOR BY A CONTRACT MAINTENANCE WORKER. THE EVENT ON 5-21-85, AT 1136, IS ATTRIBUTED TO SPURIOUS ACTUATION OF A CONTROL BUILDING CABLE SPREAD FIRE DETECTOR.

[30] BRUNSWICK 1 DOCKET 50-325 LER 85-029
MAINTENANCE ERROR CAUSES PRIMARY CONTAINMENT GROUP 1 ISOLATION SIGNAL.
EVENT DATE: 051585 REPORT DATE: 061385 NSSS: GE TYPE: BWR

(NSIC 194768) ON 5/15/85, AT 1600, A UNIT 1 PRIMARY CONTAINMENT GROUP 1 ISOLATION SIGNAL OCCURRED WHILE THE UNIT MAIN STEAM LINE ISOLATION VALVES (MSIVS) WERE CLOSED. UNIT 1 WAS IN A REFUEL/MAINTENANCE OUTAGE. REPLACEMENT OF THE MSIV LOGIC HFA RELAY, B21-K22, WAS IN PROGRESS WHEN AN ACCIDENTAL SHORTING OF A TEST LEAD TO K22 CAUSED LOGIC CIRCUITRY FUSE F6C TO BLOW, INITIATING A CHANNEL "A" LOGIC TRIP SIGNAL. PRIOR TO THIS EVENT, A CHANNEL "B" LOGIC TRIP SIGNAL HAD BEEN SEALED IN DUE TO A BLOWN FUSE. THIS EVENT IS ATTRIBUTED TO PERSONNEL ERROR DURING REPLACEMENT AND WIRE TERMINATIONS. THE FUSES WERE REPLACED AND THE GROUP 1 WAS RESET.

[31] BRUNSWICK 2 DOCKET 50-324 LER 82-071 REV 1
UPDATE ON CONTAINMENT ISOLATION VALVE AND PENETRATION LEAKS.
EVENT DATE: 070182 REPORT DATE: 032885 NSSS: GE TYPE: BWR

(NSIC 194556) DURING THE PERFORMANCE OF TYPE C LOCAL LEAK RATE TESTING OF CONTAINMENT ISOLATION VALVES, PT-20.3, PRIMARY CONTAINMENT PENETRATIONS AND ISOLATION VALVES WERE FOUND TO HAVE LEAK RATES THAT WHEN ADDED TO THE PREVIOUSLY KNOWN PRIMARY CONTAINMENT LEAK RATE, RESULTED IN A TOTAL LEAKAGE RATE GREATER THAN 0.60 LA FOR PENETRATIONS AND VALVES. TECH SPECS 3.6.1.2B, 6.9.1.9B. THE VALVES AND PENETRATIONS WERE REPAIRED AND RETURNED TO SERVICE AND AN INTEGRATED LEAK RATE TEST (ILRT) OF THE PRIMARY CONTAINMENT VERIFIED CONTAINMENT OPERABILITY. SIGNIFICANT IMPROVEMENTS IN THE LEAK RATE PROGRAM AND MAINTENANCE OF LEAK RATE ASSOCIATED COMPONENTS HAVE BEEN MADE SINCE THIS EVENT. IN 1984, PRIMARY CONTAINMENT WAS AGAIN VERIFIED BY PERFORMANCE OF AN LLRT AND AN ILRT. NO FURTHER ACTION IS PLANNED.

[32] BRUNSWICK 2 DOCKET 50-324 LER 83-045 REV 1
 UPDATE ON ERRONEOUS REACTOR LEVEL INDICATION.
 EVENT DATE: 040883 REPORT DATE: 090684 NSSS: GE TYPE: BWR
 VENDOR: ROSEMOUNT, INC.

(NSIC 194153) DURING UNIT POWER OPERATION, A ROUTINE CHANNEL CHECK OF REACTOR LEVEL INSTRUMENTATION REVEALED REACTOR LEVEL INSTRUMENT 2-B21-LT-N017D-1 WAS INDICATING A LEVEL OF 194" WHILE REDUNDANT INSTRUMENTATION INDICATED A LEVEL OF 187". N017D-1 SUPPLIES A LOW LEVEL INPUT TO THE RPS AND PCIS TO INITIATE A REACTOR SCRAM AND A GROUP 2, 6, 7, AND 8 ISOLATION SIGNAL AT 162.5". TECH SPECS 2.2.1, 3.3.2, 6.9.1.9B. INITIAL INVESTIGATION OF THIS EVENT REVEALED SMALL LEAKS ON THE VALVE PACKING NUT OF THE N017D-1 REFERENCE LEG FLOW BYPASS VALVE. THE LEAKS WERE SUSPECTED OF ALLOWING THE INSTRUMENT REFERENCE LEG LEVEL TO DECREASE AND CAUSE N017D-1 TO SENSE A HIGHER THAN ACTUAL REACTOR LEVEL. THE LEAKS WERE ELIMINATED, THE REFERENCE LEG WAS REFILLED TO COMPENSATE FOR LEVEL DECREASE, AND N017D-1, ROSEMOUNT INC., MODEL NO. 1152, WAS RETURNED TO SERVICE. IN ADDITION, DURING SUBSEQUENT SHUTDOWN OF UNIT 2 ON 4-8-83, THE N017D-1 REFERENCE AND VARIABLE SENSING LEG TUBING WAS FLUSHED TO ENSURE THE TUBING WAS CLEAR OF ANY POSSIBLE CRUD ACCUMULATION WHICH MAY HAVE CAUSED OR CONTRIBUTED TO THE EVENT.

[33] BYRON 1 DOCKET 50-454 LER 85-050
 FAILURE TO TEST FOR T(AVERAGE).
 EVENT DATE: 022485 REPORT DATE: 060485 NSSS: WE TYPE: PWR

(NSIC 194646) ON 5-5-85 AT 1930 HRS THE UNIT 1 OPERATOR DISCOVERED THAT PART OF THE SURVEILLANCE REQUIREMENTS OF TECH SPEC 3/4.2.5 WERE NOT BEING ADDRESSED. TECH SPEC 3/4.2.5 REQUIRES THAT DNB RELATED PARAMETERS T-AVG AND PRESSURIZER PRESSURE, BE MAINTAINED WITHIN THE LIMITS OF LESS THAN OR EQUAL TO 591.2 AND GREATER THAN OR EQUAL TO 2219 PSIG, RESPECTIVELY, AND THAT THEY BE VERIFIED TO BE WITHIN THEIR LIMITS AT LEAST ONCE PER 12 HRS. T-AVE WAS NOT DOCUMENTED TO BE LESS THAN OR EQUAL TO 591.2 F EVERY 12 HRS AS REQUIRED SINCE ENTRY INTO MODE 1. THE STEP TO VERIFY THE VALUE OF T-AVG HAD BEEN INADVERTENTLY DELETED DURING A REVISION OF THE DAILY OPERATING SURVEILLANCE. IT WAS VERIFIED THAT T-AVE HAS NEVER EXCEEDED THE TECH SPEC LIMIT AND THE SURVEILLANCE REQUIREMENTS FOR T-AVE HAVE BEEN PERMANENTLY ADDED TO THE DAILY OPERATING SURVEILLANCES.

[34] BYRON 1 DOCKET 50-454 LER 85-023
 FAILURE OF GOVERNOR VALVES CAUSES LOW STEAMLINE PRESSURE.
 EVENT DATE: 022785 REPORT DATE: 031985 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194735) AT 2217 HOURS, AN AUTOMATIC SAFETY INJECTION ACTUATION OCCURRED. THIS RESULTED WHEN 2 OUT OF 3 CHANNELS ON 1 OUT OF 4 STEAMLINES INDICATED LOW STEAMLINE PRESSURE SATISFYING THE SI ACTUATION LOGIC. THE EVENT OCCURRED WHILE ATTEMPTING TO TRANSFER TURBINE SPEED CONTROL FROM THE THROTTLE TO THE GOVERNOR VALVES IN THE MANUAL MODE. WHEN THE CONTROLLER WAS RETURNED TO THE AUTO MODE AFTER THE TRANSFER WAS BELIEVED TO BE COMPLETED, THE GOVERNOR VALVES OPENED ABRUPTLY TO APPROXIMATELY 50%. THE RESULTING HIGH STEAM FLOW PRODUCED THE STEAMLINE PRESSURE DROP WHICH IN TURN CAUSED THE SI ACTUATION. FOLLOWING THIS EVENT, ALL THROTTLE AND GOVERNOR VALVE POSITION INDICATIONS WERE RECALIBRATED. IN ADDITION, THE GOVERNOR VALVE POSITION VERSUS SPEED CURVE SOFTWARE FOR THE DIGITAL ELECTRO-HYDRAULIC CONTROLLER WAS REVISED.

[35] BYRON 1 DOCKET 50-454 LER 85-024
 TURBINE TRIP/REACTOR TRIP DURING SYNCHRONIZATION.
 EVENT DATE: 030185 REPORT DATE: 031985 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194689) DURING THE FIRST ATTEMPT TO SYNCHRONIZE THE MAIN GENERATOR TO THE GRID, A TURBINE TRIP/REACTOR TRIP OCCURRED. THIS RESULTED FROM A MECHANICAL ANTI-MOTING TRIP CAUSED BY THE INABILITY OF THE TURBINE'S DIGITAL ELECTRO HYDRAULIC CONTROLLER TO PROPERLY POSITION THE GOVERNOR VALVES IN ORDER TO PICK-UP GENERATOR LOAD. THE LOAD VERSUS GOVERNOR VALVE POSITION CURVE IN THE DIGITAL ELECTRO HYDRAULIC CONTROLLER HAS BEEN REVISED. THE GENERATOR HAS BEEN SUCCESSFULLY SYNCHRONIZED FOLLOWING THE IMPLEMENTATION OF THE REVISED VALVE POSITION CURVE.

[36] BYRON 1 DOCKET 50-454 LER 85-029
IMPULSE PRESSURE CHANNEL IN TEST/REACTOR TRIP.
EVENT DATE: 030585 REPORT DATE: 040185 NSSS: WE TYPE: PWR

(NSIC 194690) DURING REACTOR STARTUP, A REACTOR TRIP OCCURRED AS THE RESULT OF TROUBLESHOOTING BEING DONE BY INSTRUMENT MAINTENANCE (IM) PERSONNEL. THIS EVENT RESULTED FROM THE FAILURE OF PERSONNEL TO COMPLY WITH A PROCEDURAL PREREQUISITE PRIOR TO THE ATTEMPTED TROUBLESHOOTING. A REACTOR TRIP SIGNAL WAS GENERATED. THIS OCCURRED WHEN IM PERSONNEL PLACED ONE OF THE TURBINE IMPULSE PRESSURE CHANNELS (P-505) IN "TEST" WHICH ENABLED THE TURBINE POWER GREATER THAN 10% PERMISSIVE (P-13). P-13 THEN ENABLED THE AT POWER PERMISSIVE (P-7). P-7 UNBLOCKED THE TURBINE TRIP INPUT TO REACTOR TRIP AND, WITH ALL FOUR TURBINE STOP/THROTTLE VALVES CLOSED, THE TURBINE TRIP SIGNAL CAUSED THE REACTOR TRIP. CORRECTIVE ACTIONS WILL CONSIST OF A TRAINING CLASS FOR IM CONTROL SYSTEM TECHNICIANS CONCERNING REACTOR TRIP LOGIC AND THE INCLUSION OF HIGH VISIBILITY COVER SHEETS ON SURVEILLANCE PROCEDURES THAT IMPACT EQUIPMENT WITH REACTOR TRIP INPUTS. ALSO, THIS LER WILL BE REQUIRED READING FOR ALL LICENSED OPERATORS.

[37] BYRON 1 DOCKET 50-454 LER 85-030
MANUAL AUX FEED INITIATION.
EVENT DATE: 031385 REPORT DATE: 040585 NSSS: WE TYPE: PWR

(NSIC 194189) DURING AN UP-POWER MANEUVER TO 10%, SG NARROW RANGE LEVELS DECREASED TO 4% ABOVE THE LO LO SETPOINT AS EXCESSIVE PRESSURE DROP ACROSS THE CONDENSATE POLISHERS CAUSED SUCTION PRESSURE AT THE STARTUP FEEDWATER PUMP TO DECREASE. THE 1A AUX FEED PUMP WAS MANUALLY STARTED. ALSO, A LOW PRESSURE DROP FLOW PATH IN PARALLEL WITH THE POLISHERS WAS THROTTLED OPEN (A GLAND STEAM CONDENSER OUTLET VALVE) INCREASING FW SUCTION PRESSURE. SG LEVELS WERE RECOVERED AND AUX FEED WAS SECURED. TWO CONDITIONS LED TO THIS EVENT: 1ST THE CONDENSATE POLISHERS WERE IMPOSING AN EXCESSIVE PRESSURE DROP ON THE CONDENSATE/CONDENSATE BOOSTER SYSTEM WHICH DEGRADED THE PERFORMANCE OF THE START-UP FEEDWATER PUMP. POLISHER FLOWS WERE AT MAXIMUM IN SUPPORT OF SECONDARY CLEANUP EFFORTS TO MEET CHEMISTRY RESTRICTIONS. 2ND THE RECIRCULATION VALVE FOR THE START-UP FEEDWATER PUMP IS NOT CURRENTLY THROTTABLE. DUE THE PUMP'S LARGE RECIRCULATION FLOW REQUIREMENT, DISCHARGE FLOW NEVER REACHES THE POINT WHERE THE RECIRCULATION VALVE CLOSES AUTOMATICALLY. A MODIFICATION IS IN PROGRESS TO PROVIDE FOR AUTOMATIC POLISHER BYPASS ON LOW CONDENSATE BOOSTER PUMP SUCTION PRESSURE.

[38] BYRON 1 DOCKET 50-454 LER 85-032
IMPROPER ORIENTATION OF NON-RETURN CHECK VALVE.
EVENT DATE: 031485 REPORT DATE: 040285 NSSS: WE TYPE: PWR
VENDOR: ATWOOD & MORRILL CO., INC.

(NSIC 194691) ON MARCH 14, 1985 AT 4:35 P.M. CST, WHILE OPERATING IN MODE 1 AT A REACTOR POWER OF 20%, IT WAS DISCOVERED DURING A SYSTEM WALKDOWN THAT THE 14C LOW PRESSURE FEEDWATER HEATER NON-RETURN CHECK VALVE WAS INSTALLED IMPROPERLY. THIS VALVE IS PART OF THE TURBINE OVERSPEED PROTECTION SYSTEM; THEREFORE, THE TECH SPEC ACTION STATEMENT WAS INITIATED. CORRECTIVE ACTION HAS BEEN TAKEN BY REINSTALLING THIS NON-RETURN CHECK VALVE IN ITS CORRECT ORIENTATION.

[39] BYRON 1 DOCKET 50-454 LER 85-035
 LOW STEAMLINE PRESSURE SAFETY INJECTION.
 EVENT DATE: 031485 REPORT DATE: 041285 NSSS: WE TYPE: PWR

(NSIC 194706) DURING PLANT RECOVERY FOLLOWING A LOSS OF OFFSITE POWER TEST ON MARCH 14, 1985 A SAFETY INJECTION OCCURRED AT 2153 HOURS. THE ACTUATION SIGNAL WAS INITIATED BY ACTUAL LOW STEAM GENERATOR PRESSURE WHICH EXISTED AT THE TIME. THE PLANT WAS OPERATING IN MODE 3. THE CAUSE OF THE EVENT WAS DIRECTLY RELATED TO THE OPERATIONAL CONDITION OF THE PLANT AT THE TIME. THE LOSS OF OFFSITE POWER TEST HAD JUST BEEN SUCCESSFULLY COMPLETED. THE FOUR REACTOR COOLANT PUMPS AND THE NORMAL FEEDWATER PUMPS WERE NOT OPERATING. THE REACTOR TRIP CAUSED AN IMMEDIATE DECREASE IN PRESSURIZER PRESSURE. AS SOON AS POWER WAS RESTORED TO THE APPROPRIATE BUSES VIA THE DIESEL GENERATORS, THE PRESSURIZER HEATERS WERE ENERGIZED TO INCREASE REACTOR COOLANT PRESSURE. THE ATMOSPHERIC RELIEF VALVES WERE USED SEVERAL TIMES TO CONTROL THE REACTOR COOLANT PRESSURE. THIS CAUSED STEAM GENERATOR PRESSURE TO DECREASE TO APPROXIMATELY 680 PSIG. THE RATE COMPENSATED PORTION OF THE STEAM GENERATOR PRESSURE CHANNELS ANTICIPATED A STEAM GENERATOR PRESSURE OF 640 PSIG AND THIS INITIATED THE SAFETY INJECTION AND MAIN STEAM ISOLATION SIGNALS. SUBSEQUENT EVENTS INCLUDED THE LIFTING OF THE PRESSURIZER POWER OPERATED RELIEF VALVES AND RESTORING OF THE PRESSURIZER SPRAY VALVES TO CONTROL REACTOR COOLANT PRESSURE. AN ORDERLY SHUTDOWN OF THE UNIT WAS INITIATED AFTER THE PLANT STABILIZED.

[40] BYRON 1 DOCKET 50-454 LER 85-037
 CONTROL ROOM VENTILATION ISOLATION ON RADIATION MONITOR FAILURE.
 EVENT DATE: 032385 REPORT DATE: 041685 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 194190) RADIATION MONITOR OPR33J, MAIN CONTROL ROOM OUTSIDE AIR INTAKE 'B', WENT INTO THE INTERLOCK MODE DUE TO A HIGH VACUUM ALARM CAUSED BY A DIRTY PARTICULATE FILTER ON INTAKE RADIATION MONITOR (OPR33J). THIS CAUSED THE B TRAIN OF THE MAIN CONTROL ROOM VENTILATION SYSTEM TO TRANSFER TO ITS ESF CONFIGURATION. THE RADIATION CHEMISTRY DEPARTMENT IS NOW CHANGING THE FILTERS ON ALL 4 MAIN CONTROL ROOM VENTILATION SYSTEM RADIATION MONITORS ON A DAILY BASIS TO PREVENT RECURRENCE OF THIS EVENT.

[41] BYRON 1 DOCKET 50-454 LER 85-036
 ESF ACTUATION DUE TO RADIATION MONITOR POWER FAILURE.
 EVENT DATE: 032785 REPORT DATE: 041885 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 194692) RADIATION MONITORS OPR34J (MAIN CONTROL ROOM OUTSIDE AIR INTAKE "B"), 1RT-AR011 (CONTAINMENT FUEL HANDLING ACCIDENT), AND 1RT-AR012 (CONTAINMENT FUEL HANDLING ACCIDENT) WENT INTO THE INTERLOCK MODE DUE TO A POWER FAIL ALARM CAUSED BY A VOLTAGE TRANSIENT ON THE CECO 345KV SYSTEM. THE VOLTAGE TRANSIENT WAS CAUSED BY A BUSHING FAILURE ON A 345/138 KV TRANSFORMER AT AN OFFSITE TRANSMISSION SUBSTATION. THIS CAUSED THE B TRAIN OF THE MAIN CONTROL ROOM VENTILATION SYSTEM TO TRANSFER TO ITS ESF CONFIGURATION. MODIFICATIONS ARE IN PROGRESS TO LOWER THE POWER FAIL ALARM SETPOINT TO A LOWER VOLTAGE IN ORDER TO REDUCE THE SENSITIVITY OF THE PROCESS AND AREA RADIATION MONITORING SYSTEM TO VOLTAGE TRANSIENTS.

[42] BYRON 1 DOCKET 50-454 LER 85-042
 REACTOR TRIPS TWICE DUE TO DROPPED RODS.
 EVENT DATE: 032985 REPORT DATE: 042585 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194785) WHILE THE UNIT WAS OPERATING AT 18% POWER A REACTOR TRIP OCCURRED

(INSIC 194784) ON 4/2/85 AT 2:10 PM CST, THE REACTOR TRIPPED ON LOW SG LEVEL. PER BYRON GENERAL PROCEDURE 100-3 (POWER ASCENSION), THE MASTER FEEDWATER PUMP SPEED CONTROLLER WAS PLACED FROM MANUAL CONTROL INTO AUTOMATIC CONTROL. IMMEDIATELY THE 1B FEEDWATER PUMP (TURBINE DRIVEN) SPEED AND FLOW RATE BEGAN TO OSCILLATE. THE UNIT OPERATOR, NOTICING THIS TRANSIENT, PLACED THE SPEED CONTROLLER BACK IN MANUAL CONTROL IN AN ATTEMPT TO DAMPEN THE OSCILLATIONS AND BRING THE PUMP UNDER CONTROL. THESE OSCILLATIONS CAUSED THE HIGH PRESSURE STEAM SUPPLY STOP VALVE TO CLOSE, ELIMINATING THE PUMPING CAPABILITY OF THE PUMP. THE UNIT OPERATOR SUCCESSFULLY STARTED THE 1A MOTOR DRIVEN FEEDWATER PUMP, BUT IT TRIPPED ON LOW SUCTION PRESSURE. THE REACTOR THEN TRIPPED DUE TO 1C STEAM GENERATOR LO-2 LEVEL. THE 1A MOTOR DRIVEN FEEDWATER PUMP LOW SUCTION PRESSURE WAS DUE TO A THROTTLED CONDENSATE POLISHING SYSTEM SUPPLY VALVE. IT INDICATED OPEN BUT HAD A BROKEN VALVE STEM KEY AND THE VALVE WAS THROTTLED 20% OPEN. THIS STARVED THE FEEDPUMP SUCTION. IT WAS DETERMINED THAT THE MASTER FEEDWATER PUMP SPEED CONTROLLER SHOULD NOT BE PLACED IN AUTOMATIC UNTIL THE MAIN FEEDWATER REGULATING VALVES ARE IN SERVICE AND THE MAIN FEEDWATER ISOLATION VALVES ARE OPEN. THE BYRON GENERAL PROCEDURE HAS BEEN REVISED ACCORDINGLY. THIS EVENT, THE LOSS OF A FEEDWATER PUMP, HAS OCCURRED BEFORE AT BYRON (LER #85-031-00).

(NSIC 194597) A TECH SPEC LCO ACTION REQUIREMENT WAS NOT INITIATED WHEN MAINTENANCE WAS STARTED ON A CONTAINMENT ISOLATION VALVE. AS A RESULT, THE APPROPRIATE SURVEILLANCE WHICH VERIFIES VALVE ISOLATION TIME UPON COMPLETION OF MAINTENANCE WORK WAS NOT PERFORMED IN A TIMELY MANNER. OPERATING PERSONNEL WILL BE ISSUED REQUIRED READING REGARDING CLARIFICATION OF CONDITIONS WHICH MAKE AN ISOLATION VALVE INOPERABLE, AND TESTING REQUIRED TO DECLARE IT OPERABLE.

(NSIC 194786) ON APRIL 10, 1985, BYRON UNIT 1 REACTOR TRIPPED FROM A POWER OF 28%. IN ACCORDANCE WITH TECH SPEC 3/4.4.8, TABLE 4.4-4, STEP 4-B, A REACTOR COOLANT SAMPLE SHOULD HAVE BEEN DRAWN AND ANALYZED BETWEEN TWO AND SIX HOURS FOLLOWING THE TRIP. CONTRARY TO THE TECH SPEC, THE SAMPLE WAS TAKEN 7 HOURS, 45 MINUTES AFTER THE REACTOR TRIP. THE RESPONSIBLE FOREMAN DID NOT INSTRUCT THE COUNTING ROOM TECHNICIANS TO REVIEW THE APPLICABLE SURVEILLANCE THAT HAD BEEN INITIATED. TO PREVENT A RECURRENCE OF THIS EVENT, THE TECHNICIANS WILL BE INSTRUCTED ON A PERIODIC BASIS BY THE FOREMAN TO READ ALL SURVEILLANCE PROCEDURES

THAT ARE INITIATED AND PLACED IN THE COUNTING ROOM. IN ADDITION, A FILE ORGANIZER HAS BEEN PLACED IN THE STATION COUNTING ROOM FOR INITIATED SURVEILLANCE PROCEDURES.

[46] BYRON 1 DOCKET 50-454 LER 85-046
 REACTOR TRIP ON LO-LO STEAM GENERATOR LEVEL.
 EVENT DATE: 042185 REPORT DATE: 050385 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC SUPPLY COMPANY

(NSIC 194852) WITH THE PLANT OPERATING IN MODE 1, A REACTOR TRIP OCCURRED DUE TO STEAM GENERATOR LO-2 LEVEL. THE STEAM GENERATOR LEVEL DROP WAS CAUSED BY AN AUXILIARY RELAY STICKING IN THE ENERGIZED POSITION DURING A FEEDWATER ISOLATION VALVE SLAVE RELAY SURVEILLANCE AND PRODUCING AN ACTUAL ISOLATION OF THE FEEDWATER CONTROL VALVES. THE REACTOR TRIP PRODUCED A VOLTAGE FLUCTUATION ON THE ESF BUS SUPPLYING A CONTROL ROOM VENTILATION INTAKE RADIATION MONITOR. THIS CAUSED THE RADIATION MONITOR TO ENTER AN INTERLOCK CONDITION WHICH IN TURN PLACED THE CONTROL ROOM VENTILATION SYSTEM IN THE MAKE-UP MODE. THE POWER FAILURE SETPOINTS ON THE RADIATION MONITORS ARE BEING LOWERED TO MAKE THE MONITORS LESS SENSITIVE TO VOLTAGE SWINGS (SEE ALSO LER 85-036-00). THE FAULTY RELAY WAS SUBSEQUENTLY REPLACED AND THE SYSTEM RETESTED SUCCESSFULLY.

[47] BYRON 1 DOCKET 50-454 LER 85-048
 AUTO START OF MAIN CONTROL ROOM VENTILATION FAN.
 EVENT DATE: 042485 REPORT DATE: 051785 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 194505) RADIATION MONITOR OPR32J (MAIN CONTROL ROOM OUTSIDE AIR INTAKE 'A') WENT INTO THE INTERLOCK MODE DUE TO A HIGH VACUUM ALARM CAUSED BY A DIRTY PARTICULATE FILTER. THIS CAUSED THE A TRAIN OF THE MAIN CONTROL VENTILATION SYSTEM TO TRANSFER TO ITS ESF CONFIGURATION. RADIATION CHEMISTRY AND TECHNICAL STAFF PERSONNEL WILL REVIEW, AND REVISE IF NECESSARY, THE CURRENT FILTER CHANGE INTERVAL TO PREVENT RECURRENCE OF THIS EVENT. MAIN CONTROL ROOM VENTILATION SYSTEM ACTUATIONS HAVE OCCURRED DUE TO ERRANT FILTER CHANGE PROCEDURES AND ONE HAS OCCURRED BECAUSE OF A DIRTY PARTICULATE FILTER (LER 85-037).

[48] BYRON 1 DOCKET 50-454 LER 85-049
 AUTO START OF MAIN CONTROL ROOM VENTILATION SYSTEM.
 EVENT DATE: 042485 REPORT DATE: 052085 NSSS: WE TYPE: PWR

(NSIC 194506) THE TRAIN A MAIN CONTROL ROOM VENTILATION SYSTEM TRANSFERRED TO THE MAKEUP MODE OF OPERATION, WHICH IS ITS ESF CONFIGURATION. THE CAUSE OF THIS ACTUATION IS UNKNOWN SINCE NO AUTOMATIC START INPUT SIGNALS WERE IDENTIFIED. THE CONTROL ROOM VENTILATION ISOLATION WAS RESET AND VENTILATION WAS RETURNED TO NORMAL OPERATING STATUS. SIMILAR EVENT: 454/84-035.

[49] BYRON 1 DOCKET 50-454 LER 85-055
 INOPERABILITY OF 2 CONTAINMENT ISOLATION VALVES (FLOOR DRAINS).
 EVENT DATE: 051585 REPORT DATE: 061285 NSSS: WE TYPE: PWR
 VENDOR: XOMOX CORP.

(NSIC 194647) THE UNIT 1 CONTAINMENT FLOOR DRAIN ISOLATION VALVES WERE DECLARED INOPERABLE WHEN THE XOMOX VALVE MANUFACTURER REPORTED THAT THEY COULD NOT BE CONSIDERED SEISMICLY QUALIFIED AS ACTIVE VALVES DURING A SEISMIC EVENT. THE PLANT WAS IN MODE 1 AT 50% POWER AT THE TIME OF NOTIFICATION. THE VALVES WERE TAKEN OUT OF SERVICE IN THE CLOSED POSITION AND LCOAR 1BOS 6.3.1A WAS INITIATED. THE PLANT CONTINUED TO OPERATE AS NO SAFETY SYSTEM WAS AFFECTED OR REDUCED IN ITS ABILITY TO OPERATE DURING AN ACCIDENT. A JUSTIFICATION FOR INTERIM OPERATION

(JIO) WAS VERBALLY APPROVED BY THE NRC TO ALLOW INTERMITTENT OPENING OF THE VALVES DURING PLANT OPERATION. XOMOX SUPPLIED DRAWINGS FOR INSTALLATION OF BRACKETS ON THE VALVES THAT WOULD BRING THEM WITHIN SPEC. A MODIFICATION WAS PERFORMED ON THESE VALVES TO INSTALL THE BRACKETS AND THE VALVES RETURNED TO SERVICE.

[50] BYRON 1 DOCKET 50-454 LER 85-056
UNANALYZED CONDITION AFFECTING AUX BUILDING ENVIRONMENT.
EVENT DATE: 051585 REPORT DATE: 061285 NSSS: WE TYPE: PWR

(NSIC 194648) THE STATION WAS NOTIFIED BY CECO ENGINEERING THAT A RUPTURE OF EITHER THE COMMON BLOWDOWN LINE TO THE CONDENSER OR A HIGH-ENERGY, AUX STEAM SYSTEM LINE COULD PRODUCE AN UNACCEPTABLY HARSH ENVIRONMENT IN THE AUX BLDG. A RUPTURE OF THE BLOWDOWN LINE HAD BEEN PREVIOUSLY EVALUATED AND FOUND TO BE ACCEPTABLE, BUT THE MAXIMUM BLOWDOWN FLOW ASSUMED WAS 15 GPM PER SG. MORE RECENT EMPHASIS ON MAINTAINING PROPER SECONDARY CHEMISTRY HAS LED TO NORMAL BLOWDOWN FLOWRATES OF 60 TO 90 GPM PER SG. A RUPTURE OF THE COMMON LINE WHILE OPERATING AT THESE HIGHER FLOWRATES COULD CAUSE AUX BLDG TEMPERATURES TO EVENTUALLY EXCEED EQUIPMENT QUALIFICATION TEMPERATURES IF THE BREAK IS NOT ISOLATED. FURTHER REVIEW OF THIS FINDING REVEALED THAT A SIMILAR HARSH ENVIRONMENT COULD BE PRODUCED BY POSTULATED LINE BREAKS IN THE AUX STEAM SYSTEM. MODIFICATIONS ARE BEING PROVIDED TO PROTECT THE AFFECTED EQUIPMENT. THE NRC HAS ALLOWED CONTINUED, NORMAL OPERATION OF THE BLOWDOWN SYSTEM AND AUX STEAM SYSTEM THROUGH 8-31-85 IF PERSONNEL ARE POSTED IN THE AUX BLDG TO DETECT A RUPTURE IF ONE SHOULD OCCUR.

[51] BYRON 1 DOCKET 50-454 LER 85-059
HOURLY FIRE WATCH DELAYED DUE TO SECURITY COMPUTER FAILURE.
EVENT DATE: 051785 REPORT DATE: 061485 NSSS: WE TYPE: PWR

(NSIC 194649) ON 5-17-85 A SECURITY COMPUTER FAILURE REQUIRED DUAL VERIFICATION THAT SECURITY DOORS WERE LEFT SHUT AND LOCKED BY THE FIRE WATCH PATROLS. TO PROVIDE THIS DUAL VERIFICATION AT 2210 HRS A SECURITY SUPERVISOR DIRECTED 2 FIRE WATCH PATROLS TO BE COMBINED AND THE 2 FIRE WATCHES TO WALK THE COMBINED ROUTE JOINTLY BELIEVING THE TIME CONSTRAINTS COULD BE MET IN PLACE OF ASSIGNING SEPARATE SECURITY OFFICERS. THIS RESULTED IN ONE OF THE TWO PATROL'S NORMAL ROUNDS BEING PERFORMED 36 MINS LATE. THE FIRE WATCH PATROL, HAD BEEN ESTABLISHED DUE TO PENETRATIONS IN THE PLANT'S FIRE BARRIERS DUE TO CONSTRUCTION WORK IN PROGRESS. TO PREVENT RECURRENCE, THE LOCKS ON THE SECURITY DOORS HAVE BEEN CHANGED TO A SELF-LOCKING VARIETY, ELIMINATING THE REQUIREMENT OF DUAL VERIFICATION ON A SECURITY COMPUTER OUTAGE. SECURITY SUPERVISORS HAVE BEEN DIRECTED AGAINST REVISING THE ESTABLISHED FIRE WATCH ROUTES WITHOUT APPROVAL OF THE STATION'S FIRE MARSHAL. THE INSTALLED FIRE DETECTION INSTRUMENTATION SYSTEMS FOR THE AFFECTED AREAS WERE OPERABLE, INSURING THAT PLANT SAFETY WAS NOT AFFECTED. THERE HAS BEEN 1 PRIOR INSTANCE OF FIRE WATCH PATROLS BEING DELAYED DUE TO A SECURITY COMPUTER FAILURE. THIS WAS REPORTED IN LER 85-021.

[52] BYRON 1 DOCKET 50-454 LER 85-058
MISSED HOURLY FIRE WATCH.
EVENT DATE: 051985 REPORT DATE: 061485 NSSS: WE TYPE: PWR

(NSIC 194710) ON MAY 19, 1985 AT 1410 WHILE IN MODE 3, ONE HOURLY FIRE WATCH PATROL WAS NOT CONDUCTED DUE TO A PERSONNEL ASSIGNMENT ERROR BY THE DUTY SECURITY SERGEANT. UPON SHIFT TURNOVER, AFTER DISMISSING THE OFF-GOING FIRE WATCH PATROLS ONE OF THE ON COMING FIRE WATCHES WAS INCORRECTLY ASSIGNED ALTERNATE DUTIES WITHOUT RELIEF ASSIGNED TO CONDUCT THE FIRE WATCH. WHEN THE FIRE WATCHES' LOGS WERE REVIEWED BETWEEN ROUNDS THE OMISSION WAS DETECTED AND ADDITIONAL PERSONNEL ASSIGNED. APPROPRIATE DISCIPLINARY ACTIONS WERE TAKEN AGAINST THE SERGEANT INVOLVED. ADDITIONALLY TO PRECLUDE RECURRENCE AN ADDITIONAL SECURITY SERGEANT HAS

BEEN ASSIGNED TO SOLELY SUPERVISE AND INSURE PROPER FIRE WATCH PERFORMANCE. THE FIRE WATCHES WERE IN EFFECT DUE TO PENETRATIONS IN THE STATION'S FIRE BARRIERS FROM CONSTRUCTION WORK IN PROGRESS. ONE PRIOR OCCURRENCE OF A MISSED FIRE WATCH DUE TO A LACK OF PERSONNEL WAS REPORTED IN LER 84-001-00.

[53] BYRON 1 DOCKET 50-454 LER 85-054
REACTOR TURBINE TRIP DUE TO LOW LUBE OIL RESERVOIR.
EVENT DATE: 052485 REPORT DATE: 062185 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194708) ON MAY 24, 1985 AT 0903, WITH UNIT 1 OPERATING AT 50 PERCENT POWER, A REACTOR TRIP OCCURRED DUE TO A TURBINE TRIP. THE TURBINE TRIPPED ON LOW AUTO STOP OIL PRESSURE. DUE TO FOULED RETURN LINE STRAINERS AND INADEQUATE OVERFLOW CAPACITY, THE MAIN TURBINE LUBE OIL RESERVOIR OVERFLOWED CAUSING THE RESERVOIR LEVEL TO DROP. THIS CAUSED THE MAIN TURBINE OIL PUMP TO CAVITATE. AS A RESULT OF THIS EVENT AN INSPECTION AND CLEANING PROGRAM FOR THE RETURN LINE STRAINERS HAS BEEN ESTABLISHED. IN ADDITION, A MODIFICATION HAS BEEN INITIATED TO INCREASE THE OVERFLOW CAPACITY OF THE OIL RETURN SYSTEM.

[54] BYRON 1 DOCKET 50-454 LER 85-057
MISSED FIRE WATCHES DUE TO AUXILIARY BUILDING AIRBORNE ACTIVITY.
EVENT DATE: 052885 REPORT DATE: 061785 NSSS: WE TYPE: PWR

(NSIC 194709) ON MAY 28, 1985, FIRE WATCH PATROLS WERE RESTRICTED FROM PERFORMING THEIR ASSIGNED ROUNDS OF THE AUXILIARY BUILDING. THE RESTRICTIONS RESULTED FROM ALARA CONCERNS DUE TO A RELEASE OF GASEOUS RADIATION WHILE PERFORMING A VENTING OF THE VOLUME CONTROL TANK OF THE CHEMICAL AND VOLUME CONTROL SYSTEM. DUE TO THE AIRBORNE ACTIVITY ALARMS RECEIVED, PERSONNEL ACCESS TO THE AUXILIARY BUILDING WAS RESTRICTED TO ALLOW THE SHORT-LIVED ACTIVITY TO DECAY AND THE AFFECTED LEVELS TO BE SURVEYED AND RELEASED TO NORMAL USAGE. UPON RESTORATION, NORMAL FIRE WATCHES WERE RESUMED.

[55] CALLAWAY 1 DOCKET 50-483 LER 85-011
MANUAL REACTOR TRIP DURING LOSS OF STARTUP TRANSFORMER.
EVENT DATE: 022285 REPORT DATE: 032585 NSSS: WE TYPE: PWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 194795) DURING A REACTOR STARTUP ON 2/22/85, THE REACTOR WAS MANUALLY TRIPPED AND EMERGENCY DIESEL GENERATOR (D/G) "B" AUTOMATICALLY STARTED AND LOADED WHEN THE STARTUP TRANSFORMER WAS LOST. THE REQUIRED SAFETY-RELATED EQUIPMENT PERFORMED AS DESIGNED DURING THE INCIDENT. THE STARTUP TRANSFORMER WAS TRIPPED OFF BY AN INTERLOCK BETWEEN THE TRANSFORMER AND ITS DELUGE SYSTEM DUE TO WATER LEAKAGE INTO THE HAND PULL STATION FOR THE DELUGE SYSTEM. POWER WAS LOST TO THE MOTOR/GENERATOR SETS WHICH SUPPLY POWER TO THE CONTROL RODS THUS PREVENTING ROD MOVEMENT. WHEN THE OPERATORS ATTEMPTED TO MOVE RODS IN AND NO MOVEMENT OCCURRED, THE REACTOR WAS MANUALLY TRIPPED. THE MAUAL REACTOR TRIP IS CONSIDERED APPROPRIATE OPERATOR ACTION FOR WHICH NO CORRECTIVE ACTION IS NECESSARY. THE PULL STATION WAS REPLACED AND SEALED AND THE TRANSFORMER/DELUGE SYSTEM INTERLOCK HAS BEEN MODIFIED SUCH THAT THE TRANSFORMER MUST BE TRIPPED BEFORE THE DELUGE SYSTEM WILL ACTUATE.

[56] CALLAWAY 1 DOCKET 50-483 LER 85-019
LOW STEAMLINE PRESSURE CAUSES SAFETY INJECTION ACTUATION.
EVENT DATE: 033085 REPORT DATE: 042985 NSSS: WE TYPE: PWR

(NSIC 194737) ON 3/30/85 AT APPROXIMATELY 0613 CST AN INADVERTENT SAFETY INJECTION ACTUATION WAS INITIATED FROM A LOW STEAMLINE PRESSURE SIGNAL. AN

UNUSUAL EVENT WAS DECLARED AT 0620 AND THE FEDERAL, STATE, AND LOCAL AGENCIES WERE NOTIFIED IN ACCORDANCE WITH EMERGENCY PLAN PROCEDURES. THE APPROPRIATE PROCEDURAL STEPS WERE FOLLOWED TO ASSURE THE PLANT WAS IN A STABLE CONDITION AND THE UNUSUAL EVENT WAS TERMINATED AT 0639. THE ATMOSPHERIC STEAM DUMP VALVES WERE BEING CONTROLLED IN AUTOMATIC WITH MANUAL ADJUSTMENTS TO THE STEAM PRESSURE SETPOINTS IN ORDER TO SUSTAIN THE DESIRED PRIMARY SYSTEM COOLDOWN RATE DURING A PLANNED SHUTDOWN. THE REACTOR HAD BEEN SHUTDOWN AT 0230 ON 3/30/85. WHEN THE REACTOR OPERATOR ADJUSTED THE STEAM DUMP VALVES, THE STEAM PRESSURE DECREASED ON THE ORDER OF 10 TO 15 P.S.I. THE STEAM PRESSURE SIGNAL FED INTO THE ENGINEERED SAFETY FEATURE LOGIC IS RATE SENSITIVE AND AMPLIFIED BY A FACTOR OF 10. THUS, THE 10 TO 15 P.S.I. DECREASE IN STEAM PRESSURE APPEARED TO BE A 100 OR 150 P.S.I. DECREASE, WHICH WAS SUFFICIENT TO CAUSE A SAFETY INJECTION.

[57] CALLAWAY 1 DOCKET 50-483 LER 85-021
 INADEQUATE SEISMIC QUALIFICATION OF CLASS IE BATTERIES.
 EVENT DATE: 040485 REPORT DATE: 050685 NSSS: WE TYPE: PWR
 VENDOR: GOULD-NATIONAL BAIT

(NSIC 194513) ON 4-4-85 UNION ELECTRIC WAS NOTIFIED OF A POTENTIAL PROBLEM CONCERNING THE SPACING BETWEEN THE CLASS IE BATTERIES AND THE BATTERY RACKS. THIS NOTIFICATION WAS A FOLLOW-UP EFFORT ON AN EVENT AT LASALLE PLANT. THE LETTER DESCRIBING THIS POTENTIAL PROBLEM GAVE A RECOMMENDED SPACING OF A MAX OF 1/4 INCH GAP BETWEEN THE BATTERY END CELLS AND THE BATTERY RACK END STRINGERS. THIS RECOMMENDATION WAS BASED ON SPACING USED DURING SEISMIC TESTING CONDUCTED BY GNB BATTERIES INC. UPON NOTIFICATION, UE TOOK PROMPT CONSERVATIVE ACTION TO ENSURE SPACING MET THE CRITERIA SPECIFIED. FIRE RETARDANT PLYWOOD SPACERS WERE INSTALLED BETWEEN THE BATTERY END CELLS AND THE BATTERY RACK END STRINGERS. CONCURRENTLY, EVALUATIONS WERE INITIATED TO DETERMINE IF THIS CRITERIA WAS APPLICABLE TO CALLAWAY. THESE EVALUATIONS WERE A JOINT EFFORT OF UNION ELECTRIC AND BECHTEL CORP. ON 4-25-85, IT WAS DETERMINED THAT THE SPACING REQUIREMENTS WERE APPLICABLE TO THE CALLAWAY PLANT BATTERIES AND THEREFORE REPORTABLE UNDER 10 CFR 50.73(A)(2)(V). THE IMMEDIATE ACTION TAKEN ON 4-4-85 WAS CONSIDERED SUFFICIENT TO RESOLVE THE PROBLEM; HOWEVER, A MODIFICATION REQUEST IS BEING EVALUATED TO PROVIDE PERMANENT SPACERS.

[58] CALLAWAY 1 DOCKET 50-483 LER 85-022
 REACTOR TRIPS FOLLOWING CRD MOTOR-GENERATOR OUTPUT BREAKER TRIP.
 EVENT DATE: 041085 REPORT DATE: 051085 NSSS: WE TYPE: PWR

(NSIC 194650) ON 4-10-85 THE PLANT WAS IN MODE 3 WITH THE SHUTDOWN BANKS WITHDRAWN AND ROD DRIVE POWER BEING SUPPLIED BY MOTOR GENERATOR SET #2. AT 1400 CST THE OUTPUT BREAKER FOR MG SET #2 TRIPPED OPEN CAUSING THE SHUTDOWN BANKS TO DROP. UPON OBSERVING THE SHUTDOWN BANKS DROP, THE REACTOR OPERATOR MANUALLY OPENED THE REACTOR TRIP BREAKERS WHICH RESULTED IN A FEEDWATER ISOLATION. THE OPERATORS RECOVERED FROM THE TRIP PER PLANT PROCEDURES AND STABILIZED PLANT CONDITIONS. AN INVESTIGATION INTO THE INCIDENT REVEALED THAT THE EXCITER OVERCURRENT RELAYS FOR BOTH MG SETS WERE PICKED UP. AN EXCITER OVERCURRENT CONDITION ALONG WITH A BUS OVERVOLTAGE CONDITION TRIPS THE MG SET OUTPUT BREAKER. THE INVESTIGATION COULD NOT VERIFY THE PRESENCE OF A BUS OVERVOLTAGE CONDITION AT THE TIME OF THE INCIDENT SINCE THE BUS OVERVOLTAGE RELAY WAS DE-ENERGIZED BY THE TRIP. TO PREVENT RECURRENCE, THE PICKUP SETTING ON THE EXCITER OVERCURRENT RELAYS WILL BE INCREASED.

[59] CALLAWAY 1 DOCKET 50-483 LER 85-023
 INADVERTENT ENGINEERED SAFETY FEATURES ACTUATION.
 EVENT DATE: 041385 REPORT DATE: 051385 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: BYRON 1 (PWR)
 WOLF CREEK 1 (PWR)

VENDOR: GENERAL ATOMIC CO.

(NSIC 194696) ON 4/13/85, 4/17/85, AND 5/6/85 CONTAINMENT PURGE ISOLATION SIGNALS (CPIS) AND INADVERTENT CONTROL ROOM VENTILATION ISOLATION SIGNALS (CRVIS) WERE RECEIVED. ALL SAFETY EQUIPMENT FUNCTIONED AS DESIGNED. IN ALL THREE EVENTS, IT IS BELIEVED THAT THE CPIS'S AND CRVIS'S RESULTED FROM A FAULTY VACUUM TRANSDUCER IN CONTAINMENT RADIATION MONITOR GT-RE-31. THE FAULTY VACUUM TRANSDUCER CAUSED AN ERRONEOUS HIGH RADIATION SIGNAL WHICH INITIATED THE CPIS'S AND CRVIS'S. THIS SAME PROBLEM HAS ALSO BEEN IDENTIFIED AT THE WOLF CREEK PLANT AND THE BYRON PLANT. A JOINT EFFORT BETWEEN THE THREE PLANTS AND THE VENDOR (GA TECHNOLOGIES, INC.) HAS RESULTED IN A NEWLY DESIGNED TRANSDUCER. A CALLAWAY MODIFICATION PACKAGE HAS BEEN INITIATED TO CHANGE OUT THE VACUUM TRANSDUCER TO THIS MORE RELIABLE TYPE WHEN THEY BECOME AVAILABLE. IN THE INTERIM A PLANT WORK REQUEST WAS INITIATED TO REPLACE THE FAULTY VACUUM TRANSDUCER WITH A NEW LIKE KIND VACUUM TRANSDUCER. THERE WAS NO DAMAGE TO PLANT EQUIPMENT OR RELEASE OF RADIOACTIVITY AS A RESULT OF THESE INCIDENTS.

[60] CALLAWAY 1 DOCKET 50-483 LER 85-025
SPURIOUS INTERMEDIATE RANGE HI FLUX SIGNAL CAUSES REACTOR TRIP AND ESF ACTUATION.
EVENT DATE: 050685 REPORT DATE: 060385 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: INDIAN POINT 3 (PWR)
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194797) ON 5/6/85 AT 2115 CDT A REACTOR TRIP, FEEDWATER ISOLATION, AND AUXILIARY FEEDWATER ACTUATION OCCURRED DURING A REACTOR STARTUP. THE PLANT WAS IN MODE 2, STARTUP, AT THE TIME OF THE EVENT. THE REACTOR TRIP WAS INITIATED BY A SPURIOUS INTERMEDIATE RANGE HI FLUX SIGNAL THAT WAS CAUSED BY A BLOWN FUSE IN THE EX-CORE NEUTRON MONITORING CHANNEL SE-NI-36. THE SPURIOUS HI FLUX SIGNAL ALSO INITIATED AN AUTOMATIC TRANSFER OF CHARGING PUMP SUCTION FROM THE VOLUME CONTROL TANK TO THE REFUELING WATER STORAGE TANK. THE FUSE WAS REPLACED AND BY 0947 ON 5/7/85 NORMAL REACTOR STARTUP WAS COMMENCED. DISCUSSIONS WITH WESTINGHOUSE ELECTRIC CORPORATION HAVE INDICATED THAT A POSSIBLE LEAK PATH EXISTS FOR AN ALTERNATING CURRENT TO BE SUPERIMPOSED ONTO THE DIRECT CURRENT IN THE LOG AMPLIFIER. THE RESULTANT CURRENT FLOW COULD THEN BE SUFFICIENT TO BLOW THE CONTROL POWER FUSE. UNTIL A PERMANENT SOLUTION IS IDENTIFIED A TEMPORARY PROCEDURE CHANGE HAS BEEN MADE WHICH WILL REMOVE THE TEST SIGNAL TO THE LOG AMPLIFIER DURING REACTOR STARTUPS.

[61] CALLAWAY 1 DOCKET 50-483 LER 85-027
RHR SURVEILLANCE PROCEDURE HAS ERROR.
EVENT DATE: 053085 REPORT DATE: 062885 NSSS: WE TYPE: PWR

(NSIC 194817) AT 1030 CDT ON 5/30/85, IT WAS DISCOVERED THAT SURVEILLANCE PROCEDURE, OSP-E-P001A, REQUIRED BY TECH SPEC 3.5.2 TO VERIFY RESIDUAL HEAT REMOVAL (RHR) PUMP 'A' OPERABILITY, ISOLATED TWO OF THE FOUR REACTOR COOLANT SYSTEM COLD LEG INJECTION PATHWAYS. THIS RENDERS BOTH EMERGENCY CORE COOLING SYSTEMS (ECCS) INOPERABLE SINCE FOUR LEG INJECTION FROM RHR IS ASSUMED IN THE SAFETY ANALYSIS. IMMEDIATE CORRECTIVE ACTION WAS TO INITIATE A TEMPORARY CHANGE NOTICE FOR OSP-EJ-P001A TO ALLOW SURVEILLANCE TESTING WHILE MAINTAINING RHR TRAIN 'B' LINE-UP TO 4 COLD LEG INJECTION PATHWAYS. THE SURVEILLANCE WAS SATISFACTORILY COMPLETED ON 5/30/85. THIS INCIDENT OCCURRED AS A RESULT OF MISINTERPRETING OPERABILITY CRITERIA FOR THE RHR SYSTEM. FORMERLY, ONE RHR TRAIN WAS DEEMED TO INCLUDE INJECTION FOR ONLY 2 OF 4 COLD LEGS. THIS FORMER CRITERIA HAD AFFECTED ALL SURVEILLANCES PERFORMED PRIOR TO 5/30/85. TO PREVENT RECURRENCE, OPERATIONS PERSONNEL WERE INFORMED OF THE NEW INTERPRETATION AND PROCEDURE REVISIONS FOR BOTH TRAINS WERE INITIATED. THIS EVENT DID NOT PRESENT A SIGNIFICANT SAFETY CONCERN SINCE THE PROCEDURE DID NOT PREVENT OTHER PORTIONS OF THE ECCS TO PERFORM AS DESIGNED.

[62] CALVERT CLIFFS 1 DOCKET 50-317 LER 85-002
 REACTOR TRIP ON LOW STEAM GENERATOR WATER LEVEL CONDITION RESULTING FROM A
 TEMPORARY LOSS OF MAIN FEEDWATER.
 EVENT DATE: 020585 REPORT DATE: 030785 NSSS: CE TYPE: PWR

(NSIC 194176) AT 1658 ON 2-5-85, CALVERT CLIFFS UNIT 1 REACTOR TRIPPED FROM 100% POWER ON A LOW SG WATER LEVEL CONDITION CAUSED BY A TEMPORARY REDUCTION AND SUBSEQUENT LOSS OF MAIN FEEDWATER FLOW. THE UNIT 1 AUX BLDG OPERATOR INCORRECTLY DEENERGIZED A PORTION OF THE FEEDWATER REGULATING SYSTEM WHILE ATTEMPTING TO DEENERGIZE #11 INSTRUMENT AIR COMPRESSOR. THIS CAUSED THE STEAM GENERATOR FEED PUMPS TO SLOW DOWN EVEN THOUGH REACTOR POWER REMAINED AT 100%. REALIZING HE HAD OPENED THE WRONG BREAKER, THE AUX BLDG OPERATOR RESHUT THE BREAKER TO THE DEENERGIZED PORTION OF THE FEEDWATER REGULATING SYSTEM. THIS SENT THE ACTUAL 100% FEEDWATER DEMAND SIGNAL TO THE SG FEED PUMPS SPEED CONTROL SYSTEM AND CAUSED THE SG FEED PUMPS TO RAPIDLY ACCELERATE. THIS EXTREME TRANSIENT CAUSED THE SG FEED PUMPS TO TRIP ON LOW SUCTION PRESSURE. UNIT 1 THEN TRIPPED ON LOW SG WATER LEVEL.

[63] CALVERT CLIFFS 1 DOCKET 50-317 LER 85-007
 HPSI INJECTION LEGS' FLOW IMBALANCED.
 EVENT DATE: 041585 REPORT DATE: 051585 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: CALVERT CLIFFS 2 (PWR)

(NSIC 194763) AT 1120, ON 4/15/85, DURING THE PERFORMANCE OF UNIT 1 SURVEILLANCE TEST STP-0-67-1, THE HIGH PRESSURE SAFETY INJECTION (HPSI) SYSTEM (BQ) INJECTION LEGS' FLOW RATES WERE OUTSIDE THE TECH SPEC 4.5.2.H REQUIREMENT OF 170 > OR EQUAL TO 5 GPM TO EACH OF THE FOUR (4) LEGS. WHILE IN MODE 5, ON 4/27/85 AT 2115, DURING THE PERFORMANCE OF STP-0-67-2, UNIT 2 EXPERIENCED A SIMILAR OCCURRENCE. MAINTENANCE PERSONNEL ADJUSTED THE LIMIT SWITCHES OF THE UNIT 2 THROTTLE VALVES TO OBTAIN THE REQUIRED BALANCED FLOW RATES. SIMILAR EVENTS WERE REPORTED IN LERS 50-317/83-64, 50-318/83-64 AND 50-317/84-16. CHANGE TO THE TECH SPECS WILL BE INCORPORATED WITH CHANGES ASSOCIATED WITH THE UNIT 1, CYCLE 8 RELOAD SUBMITTAL TO REQUIRE A MINIMUM ADDITIVE FLOW RATE FOR THE LOWEST THREE (3) INJECTION LEG FLOWS. THE UNIT 1 VALVES WILL BE SET FOR FULL OPEN WHEN THE TECH SPEC CHANGES ARE IMPLEMENTED. A SAFETY ANALYSIS HAS BEEN SATISFACTORILY PERFORMED USING THIS NEW FLOW RATE. THE RESULTS OF THE 4/15 AND 4/24 TESTS WOULD HAVE SATISFACTORILY MET THE HPSI FLOW REQUIREMENTS OF THE NEW TECH SPEC.

[64] CALVERT CLIFFS 1 DOCKET 50-317 LER 85-006
 UGS REMOVAL WITHOUT FUEL HANDLING SUPERVISOR PRESENT.
 EVENT DATE: 041885 REPORT DATE: 051685 NSSS: CE TYPE: PWR

(NSIC 194764) ON APRIL 18, 1985 THE PLANT WAS SHUTDOWN IN MODE 6 PRIOR TO REFUELING. REACTOR DISASSEMBLY WAS IN PROGRESS WITH THE NEXT SCHEDULED EVOLUTION BEING REMOVAL OF UPPER GUIDE STRUCTURE (UGS) FROM THE REACTOR VESSEL. MAINTENANCE PERSONNEL REMOVED THE UGS FROM THE REACTOR VESSEL WITHOUT A FUEL HANDLING SUPERVISOR (FHS) PRESENT TO MONITOR THE EVOLUTION. THIS VIOLATED TECH SPEC 6.2.2.E WHICH REQUIRES A FHS TO BE PRESENT DURING EVOLUTIONS WHICH CONSTITUTE A CORE ALTERATION. TO PREVENT RECURRENCE OF THIS EVENT, THE PROCEDURES FOR REMOVAL AND INSTALLATION OF THE UGS HAVE BEEN MODIFIED TO REQUIRE THAT THE FHS SIGN THE PROCEDURE ONCE ON STATION TO MONITOR INSTALLATION OR REMOVAL OF THE UGS.

[65] CALVERT CLIFFS 2 DOCKET 50-318 LER 85-005
 INADVERTENT REFUELING WATER TANK LOW LEVEL TRIP CAUSES RECIRCULATION ACTUATION.
 EVENT DATE: 052385 REPORT DATE: 062185 NSSS: CE TYPE: PWR
 VENDOR: MAGNETROL, INC.

(NSIC 194821) AT 1631, ON MAY 23, 1985, DURING SURVEILLANCE TESTING OF THE

REFUELING WATER (RWT) TANK LOW LEVEL TRIP INPUT TO THE ENGINEERED SAFETY FEATURES ACTUATION SYSTEM (ESPAS), INSTRUMENT TECHNICIANS INADVERTENTLY INITIATED A RECIRCULATION ACTUATION SIGNAL (RAS). THE RAS AUTOMATICALLY INITIATES OPERATION OF THE EQUIPMENT REQUIRED TO MAINTAIN A CONTINUOUS SOURCE OF COLD WATER FOR CONTAINMENT SPRAY AND FOR EMERGENCY CORE COOLING UPON LOW LEVEL IN THE RWT. THE TECHNICIANS VIOLATED A PRECAUTION IN THE PROCEDURE, WHICH STIPULATES THAT ONLY ONE CHANNEL SHALL BE IN TEST AT A TIME, BY HAVING ONE CHANNEL IN TEST AND PERFORMING EVOLUTIONS ON ANOTHER CHANNEL THAT CAUSED THE RAS INITIATION. IN ADDITION, THE TECHNICIANS DID NOT ADHERE TO VERBAL DIRECTION FROM THE SUPERVISOR THAT HE BE INFORMED PRIOR TO TESTING IN ORDER THAT HE COULD BE PRESENT. PERSONNEL ACTION WAS TAKEN WITH THE TECHNICIANS INVOLVED, AND ALL INSTRUMENT TECHNICIANS HAVE BEEN COUNSELED ON THIS LER. THE RAS WAS RESET AT 1640, MAY 23, 1985, AND THE EVENT WAS TERMINATED.

[66] CATAWBA 1 DOCKET 50-413 LER 85-018
DIESEL GENERATOR AND TURBINE DRIVEN AUXILIARY FEEDWATER PUMP CONCURRENTLY INOPERABLE.
EVENT DATE: 030785 REPORT DATE: 040585 NSSS: WE TYPE: PWR

(NSIC 194686) ON MARCH 7, 1985, AT 0910 HOURS, THE TRAIN A DIESEL GENERATOR CONTROL POWER BATTERIES WERE PLACED ON EQUALIZE CHARGE FOLLOWING MAINTENANCE ON THE BATTERIES, RENDERING TRAIN A DIESEL GENERATOR INOPERABLE. ALSO AT 0910 HOURS ON MARCH 7, 1985, THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP WAS DECLARED INOPERABLE SO THAT A REQUIRED PERIODIC PUMP PERFORMANCE TEST COULD BE PERFORMED. FROM 0910 HOURS TO 1945 HOURS ON MARCH 7, 1985, TRAIN A DIESEL GENERATOR AND THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP WERE CONCURRENTLY INOPERABLE. PERSONNEL FAILED TO RECOGNIZE THE CONSEQUENCES OF PLACING THE BATTERIES ON EQUALIZE CHARGE. THEREFORE, THIS INCIDENT IS CLASSIFIED AS A PERSONNEL ERROR. AT 1945 HOURS ON MARCH 7, 1985, AFTER REALIZING THAT THE DIESEL GENERATOR WAS INOPERABLE, THE BATTERIES WERE PLACED BACK IN SERVICE, TERMINATING THE INCIDENT. ALSO, AVAILABLE POWER SOURCE OPERABILITY CHECK WAS PERFORMED AS REQUIRED BY TECH SPEC 3.8.1.1.A. UNIT 1 WAS AT 30% REACTOR POWER AT THE TIME OF THE INCIDENT. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I)(B).

[67] CATAWBA 1 DOCKET 50-413 LER 85-019
INOPERABLE STEAM GENERATOR CHANNEL NOT TRIPPED WITHIN ONE HOUR.
EVENT DATE: 030785 REPORT DATE: 040585 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194186) ON 3-7-85, AT 1630 HRS, SG C LEVEL CHANNEL 4 WAS FOUND TO BE INOPERABLE DURING THE PERFORMANCE OF THE ANALOG CHANNEL OPERATIONAL TEST CHANNEL 4. PER TECH SPECS, POWER OPERATION CAN PROCEED PROVIDED THE INOPERABLE CHANNEL IS PLACED IN THE TRIP CONDITION WITHIN 1 HR OF THE DISCOVERY OF ITS INOPERABILITY. POWER OPERATION CONTINUED, BUT THE CHANNEL WAS NOT TRIPPED UNTIL 3-8-85, AT 0700 HRS. THIS INCIDENT IS CLASSIFIED AS A PERSONNEL ERROR. THE TECHNICIAN PERFORMING THE TEST AND HIS SUPERVISOR FAILED TO RECOGNIZE THE INOPERABLE CHANNEL AS A POTENTIAL TECH SPEC VIOLATION, AND DID NOT IMMEDIATELY NOTIFY THE APPROPRIATE PERSONNEL SO THAT CORRECTIVE ACTION COULD BE TAKEN. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73, SECTION (A)(2)(I)(B).

[68] CATAWBA 1 DOCKET 50-413 LER 85-021
INOPERABLE TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP.
EVENT DATE: 031385 REPORT DATE: 041285 NSSS: WE TYPE: PWR

(NSIC 194687) ON MARCH 13, 1985, AT APPROXIMATELY 1215 HOURS, DURING PERFORMANCE OF THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP (CA PUMP NO. 1) OPERABILITY TEST, IT WAS DISCOVERED THAT CA PUMP NO. 1 HAD ACTUALLY FAILED THE PREVIOUS OPERABILITY TEST PERFORMED ON MARCH 9, 1985. THEREFORE, CA PUMP NO. 1 WAS TECHNICALLY

INOPERABLE FROM MARCH 7, 1985, AT 0910 HOURS, UNTIL THE OPERABILITY TEST WAS COMPLETED WITH ACCEPTABLE RESULTS ON MARCH 13, 1985, AT 1300 HOURS. CATAWBA UNIT 1 WAS IN MODE 1 AT 49% REACTOR POWER WHEN THIS INCIDENT WAS DISCOVERED. AFTER DISCOVERY OF THIS INCIDENT, CA PUMP NO. 1 WAS DECLARED INOPERABLE AND THE UNIT COMMENCED REDUCING REACTOR POWER AT 10% PER HOUR. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73, SECTION (A)(2)(I)(B) AND 10 CFR 50.72, SECTION (B)(1)(I)(A). WHEN THE CA PUMP NO. 1 OPERABILITY TEST WAS PERFORMED ON MARCH 9, 1985, THE INDIVIDUAL PERFORMING THE TEST COMPARED THE PUMP HEAD PRESSURE ACCEPTANCE CRITERIA TO THE PUMP DISCHARGE PRESSURE INSTEAD OF THE CALCULATED PUMP HEAD PRESSURE. THIS RESULTED IN CA PUMP NO. 1 BEING DECLARED OPERABLE WHEN IN FACT, IT WAS INOPERABLE. THEREFORE, THIS INCIDENT IS CLASSIFIED AS A PERSONNEL ERROR.

[69] CATAWBA 1 DOCKET 50-413 LER 85-023
 REACTOR POWER EXCEEDS SEVENTY-FIVE PERCENT POWER DURING TESTING.
 EVENT DATE: 032985 REPORT DATE: 042985 NSSS: WE TYPE: PWR

(NSIC 194032) ON 3-29-85, AT 1625 HRS, REACTOR POWER EXCEEDED 75%. AT THE TIME, ONLY 2 OF 3 REQUIRED TEST RUNS FOR REACTOR COOLANT (RC) SYSTEM FLOW HAD BEEN PERFORMED TO MEET THE ACCEPTANCE CRITERIA SPECIFIED IN THE CALIMETRIC REACTOR COOLANT FLOW MEASUREMENT PERIODIC TEST. THIS TEST IS CONDUCTED TO COMPLY WITH TECH SPEC 4.2.3.2, WHICH REQUIRES THAT RC SYSTEM FLOW BE WITHIN CERTAIN LIMITS. THE TEST WAS BEING PERFORMED IN ANTICIPATION OF INCREASING REACTOR POWER ABOVE 75% AFTER THE REQUIRED POWER ESCALATION TESTING AT THE 75% PLATEAU WAS COMPLETED. REACTOR POWER WAS BEING BROUGHT TO APPROX 74.5% BY DEBORATING THE RC SYSTEM, TO PERFORM THE REQUIRED TESTING AT THIS PLATEAU. THE THERMAL BEST ESTIMATE, FROM THE OPERATOR AID COMPUTER WAS BEING OBSERVED SINCE IT IS THE MOST ACCURATE INDICATION OF REACTOR POWER. HOWEVER, AT 1600 HRS, THERMAL BEST ESTIMATE STOPPED TRENDING UPWARD AND INDICATED AN INCORRECT REACTOR POWER DUE TO SOFTWARE PROBLEMS. DUE TO PERIODIC DEBORATION, REACTOR POWER INCREASED, BUT THERMAL BEST ESTIMATE DID NOT REFLECT THIS. THEREFORE, THIS INCIDENT IS CLASSIFIED AS A DESIGN DEFICIENCY. WHEN THE SOFTWARE PROBLEM WAS RECOGNIZED, REACTOR POWER WAS DECREASED, AND BY 2352 HRS, WAS BELOW 75%. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I)(B).

[70] CATAWBA 1 DOCKET 50-413 LER 85-025
 REACTOR TRIP DUE TO STEAM GENERATOR LOW-LOW LEVEL.
 EVENT DATE: 041585 REPORT DATE: 051585 NSSS: WE TYPE: PWR

(NSIC 194808) ON APRIL 15, 1985 AT APPROXIMATELY 0522 HOURS, THE UNIT 1 REACTOR TRIPPED DUE TO A LOW-LOW LEVEL SIGNAL FROM STEAM GENERATOR (S/G) 'A'. THE LOW-LOW LEVEL WAS CAUSED BY INSUFFICIENT MAIN FEEDWATER FLOW TO S/G 'A'. DURING POWER ESCALATION TESTING, THE MAIN STEAM FLOW TRANSMITTERS WERE NOT CALIBRATED AS REQUIRED BY PERIODIC TEST PT/1/B/4150/16, UNIT LOAD STEADY STATE. THIS RESULTED IN MAIN STEAM FLOW BEING APPROXIMATELY 10% HIGHER THAN CONTROL ROOM INDICATION. PRIOR TO THE REACTOR TRIP, THE OPERATOR HAD BEEN EXPERIENCING VIBRATION PROBLEMS WITH MAIN FEEDWATER PUMP TURBINE 'A'. IN AN EFFORT TO MAINTAIN S/G LEVELS, THE NUCLEAR CONTROL OPERATOR PLACED FIRST PUMP 'B' AND THEN FEEDWATER REGULATING VALVES 1CF27 AND 1CF28 IN MANUAL. THE OPERATOR ATTEMPTED TO MAINTAIN A DECREASING S/G 'A' LEVEL BY INCREASING FEEDWATER FLOW TO A VALUE APPROXIMATELY 4% GREATER THAN MAIN STEAM FLOW FROM S/G 'A'. SINCE THE OPERATOR WAS NOT AWARE OF THE ERROR IN CONTROL ROOM INDICATION OF MAIN STEAM FLOW, FEEDWATER FLOW TO S/G 'A' WAS ACTUALLY ABOUT 7% LOWER THAN MAIN STEAM FLOW. THIS CAUSED S/G 'A' LEVEL TO DECREASE TO LOW-LOW LEVEL SETPOINT OF 50% WHICH RESULTED IN A REACTOR TRIP. THIS INCIDENT IS CLASSIFIED AS AN ADMINISTRATIVE ERROR SINCE ADEQUATE ADMINISTRATIVE CONTROLS DID NOT EXIST TO ENSURE THAT TRANSMITTERS WERE CALIBRATED AFTER TESTING WAS COMPLETED AT EACH POWER PLATEAU, OR PERSONNEL WERE MADE AWARE OF THE SPECIFIC AMOUNT OF MISMATCH.

[71] CATAWBA 1 DOCKET 50-413 LER 85-026
 LOW PIT WATER LEVEL DURING SERVICE WATER SWAPOVER TO STANDBY POND.
 EVENT DATE: 042285 REPORT DATE: 052285 NSSS: WE TYPE: PWR
 VENDOR: ALLIS CHALMERS

(NSIC 194701) ON APRIL 22, 1985, AT 1310 HOURS, THE NUCLEAR SERVICE WATER (NSW) SYSTEM ALIGNED TO THE STANDBY NUCLEAR SERVICE WATER POND (SNSWP), THE ASSURED SUCTION SOURCE, ON PUMPHOUSE PIT B LOW-LOW LEVEL. THE LOW-LOW LEVEL OCCURRED WHEN VALVE 1RN4B, "NSW PUMPHOUSE PIT B ISOLATION FROM SNSWP", WAS BEING OPENED FROM THE CONTROL ROOM TO FACILITATE PERFORMANCE OF THE NSW SYSTEM FLOW BALANCE TO THE SNSWP. THE VALVE STROKED TO THE INTERMEDIATE POSITION, WHILE CONTROL ROOM INDICATIONS INCORRECTLY SHOWED THE VALVE AS BEING FULLY OPEN. THE NORMAL SUCTION FROM THE LAKE WAS SUBSEQUENTLY ISOLATED WITH NEW PUMP 1 B STILL OPERATING, THUS CAUSING A DECREASE IN PIT LEVEL TO THE LOW-LOW LEVEL SETPOINT. A SUBSEQUENT INVESTIGATION REVEALED THAT THE TORQUE SWITCH FOR VALVE 1RN4B WAS SET TO THE LOW END OF ALLOWABLE TOLERANCE. THIS SETTING DID NOT ALLOW 1RN4B TO COMPLETELY OPEN. ALSO, THE "CLOSED" INDICATION FOR 1RN4B WAS NOT FUNCTIONING PROPERLY, LEADING THE OPERATOR TO BELIEVE THAT THE VALVE WAS FULLY OPEN, RATHER THAN IN INTERMEDIATE POSITION. THEREFORE, THIS INCIDENT IS CLASSIFIED AS A COMPONENT MALFUNCTION. UNIT 1 WAS IN MODE 5, COLD SHUTDOWN, AT THE TIME OF THE INCIDENT. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73, SECTION (A)(2)(IV), AND 10 CFR 50.72, SECTION (B)(2)(II).

[72] CATAWBA 1 DOCKET 50-413 LER 85-029
 IMPROPER CLEARANCES BETWEEN THE VITAL BATTERIES.
 EVENT DATE: 042385 REPORT DATE: 052385 NSSS: WE TYPE: PWR
 VENDOR: GOULD-NATIONAL BAIT

(NSIC 194504) ON 3-18-85 DUKE POWER COMPANY WAS ADVISED OF A POTENTIAL MANUFACTURER'S DEFICIENCY CONCERNING INSTALLATION CLEARANCES IN THE VITAL INSTRUMENTATION AND CONTROL POWER SYSTEM BATTERIES. THE MANUFACTURER'S (GNB BATTERIES, INC.) DRAWINGS DETAILING INSTALLATION OF THE SEISMIC RACKS INDICATE THAT A MINIMUM CLEARANCE OF 1/8 INCH MUST BE MAINTAINED BETWEEN THE END CELL AND THE END STRINGER. THIS IS ACTUALLY A TYPICAL DIMENSION, AND ACCORDING TO GNB THE DRAWINGS SHOULD INDICATE A 0-1/4 INCH CLEARANCE RANGE. THE BATTERIES THAT WERE INSTALLED IN ACCORDANCE WITH THE DRAWINGS HAD NO DOCUMENTED MAXIMUM CLEARANCE REQUIREMENT, AND UPON INSPECTION IT WAS NOTED THAT THE END CLEARANCE EXCEEDED 1/4 INCH IN SEVERAL AREAS. THE POSSIBILITY OF BATTERY FAILURE DURING A SEISMIC EVENT EXISTS IN INSTALLATIONS WITH EXCESSIVE END CLEARANCES, DUE TO IMPACT OF THE END CELL AGAINST THE END STRINGER AND RESULTANT FAILURE OF CELL JAR INTEGRITY. A TEMPORARY MODIFICATION WAS INITIATED AND PERMANENT MODIFICATION WILL BE MADE TO CORRECT THE SPACING OF THE END CELLS.

[73] CONNECTICUT YANKEE DOCKET 50-213 LER 85-010
 FAILURE OF SERVICE WATER VALVE MOTOR OPERATORS.
 EVENT DATE: 082484 REPORT DATE: 052085 NSSS: WE TYPE: PWR
 VENDOR: LIMITORQUE CORP.

(NSIC 194740) DURING SURVEILLANCE TESTING ON AUGUST 28, 1984, WITH THE PLANT SHUT DOWN FOR A PLANNED REFUELING AND MAINTENANCE OUTAGE, BOTH MOTOR-OPERATED SERVICE WATER OUTLET ISOLATION VALVES, FOR THE COMPONENT COOLING WATER HEAT EXCHANGERS, FAILED TO OPERATE WHEN ENERGIZED. PER PLANT SURVEILLANCE PROCEDURE, BOTH VALVES ARE REQUIRED TO CLOSE WITHIN NINETY (90) SECONDS. BOTH MOTOR OPERATORS WERE IMMEDIATELY REPAIRED AND RETESTED SATISFACTORILY. THIS EVENT IS REPORTABLE PURSUANT TO 10CFR50.73(A)(2)(V)(D). ONE VALVE FAILED DUE TO A BROKEN GEAR LIMIT SWITCH ROTOR CAUSED BY CYCLIC FATIGUE. THE CAUSE FOR THE OTHER VALVE FAILURE HAS NOT BEEN DETERMINED.

[74] CONNECTICUT YANKEE DOCKET 50-213 LER 85-003
 LOW REACTOR COOLANT FLOW TRIP SETPOINT.
 EVENT DATE: 021285 REPORT DATE: 031285 NSSS: WE TYPE: PWR

(NSIC 194717) WHILE AT 100% POWER, TWO CHANNELS OF THE LOW REACTOR COOLANT FLOW TRIP LOGIC OF THE REACTOR PROTECTION SYSTEM WERE DISCOVERED TO HAVE TRIP SETPOINTS THAT WERE NOT IN ACCORDANCE WITH TECH SPECS. THE TECH SPEC STATES THAT THE LOW REACTOR COOLANT FLOW TRIP SHALL BE SET AT GREATER THAN OR EQUAL TO 90% OF NORMAL LOOP FLOW. THE IMMEDIATE CORRECTIVE ACTION TAKEN WAS TO REDUCE POWER BELOW THE P8 PERMISSIVE (84% POWER) TO ALLOW RECALIBRATION OF AFFECTED TRIP LOGIC RELAYS. THE ROOT CAUSE OF THE TRIP SETPOINT ERROR WAS INADEQUATE DEFINITION OF THE ACCEPTANCE CRITERIA IN THE CALIBRATION PROCEDURE. ADDITIONAL CORRECTIVE ACTION WHICH WILL BE TAKEN INCLUDES (1) CLARIFICATION OF THE ACCEPTANCE CRITERIA IN THE INSTRUMENT AND CONTROL PROCEDURES USED TO SET THE LOW FLOW TRIP SETPOINT BEFORE THESE PROCEDURES ARE USED AGAIN, (2) REVIEW OF ALL SURVEILLANCES BY MAY 1, 1985 TO DETERMINE WHICH PROCEDURES MUST HAVE THEIR ACCEPTANCE CRITERIA UPGRADED AND CLARIFIED, AND (3) TRENDING THE RCS FLOW RATE.

[75] CONNECTICUT YANKEE DOCKET 50-213 LER 85-004
 DRIFT OF OVERPOWER TRIP SETPOINTS FOR TWO POWER RANGE CHANNELS.
 EVENT DATE: 021485 REPORT DATE: 031385 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194825) DURING PERFORMANCE TESTING OF THE NUCLEAR INSTRUMENTATION SYSTEM (NIS), A REACTOR OPERATOR DISCOVERED THAT THE OVERPOWER TRIP SETPOINTS FOR TWO OF THE FOUR POWER RANGE CHANNELS WERE ABOVE TECH SPEC LIMITS. THE IMMEDIATE CORRECTIVE ACTION TAKEN WAS TO VERIFY CALIBRATION OF THE TRIP SETPOINTS. THE PLANNED LONG-TERM CORRECTIVE ACTION IS TO VERIFY THE SETPOINTS' POWER SUPPLIES AND OTHER PARAMETERS ASSOCIATED WITH THE NIS. THE SETPOINT POTENTIOMETERS ON THESE CHANNELS WILL BE REPLACED. SIMILAR EVENTS - 213/84-027 AND 213/84-209.

[76] CONNECTICUT YANKEE DOCKET 50-213 LER 85-007
 REACTOR TRIP DUE TO RECIRCULATION VALVE OPENING ON RUPTURE OF AIR LINE.
 EVENT DATE: 031285 REPORT DATE: 041285 NSSS: WE TYPE: PWR

(NSIC 194656) ON MARCH 12, 1985 A REACTOR TRIP OCCURRED WHILE THE PLANT WAS OPERATING AT 50% POWER. THIS UNPLANNED TRIP WAS INITIATED BY A FAILURE OF A STEAM GENERATOR FEEDWATER PUMP RECIRCULATION CONTROL VALVE WHICH RESULTED IN INCREASED RECIRCULATION FLOW AND A DECREASE IN THE FEEDWATER PUMP SUCTION HEADER PRESSURE. SUBSEQUENTLY, PLANT LOAD WAS REDUCED IN AN ATTEMPT TO RESTORE THE FEEDWATER PUMP SUCTION PRESSURE, HOWEVER, THE RESULTANT INCREASE IN THE REACTOR COOLANT SYSTEM PRESSURE EXCEEDED THE PRESSURIZER HIGH PRESSURE REACTOR TRIP SETPOINT. AUTOMATIC INITIATION OF THE REACTOR PROTECTION SYSTEM WAS FOLLOWED BY MANUAL ACTUATION OF THE REACTOR AND TURBINE TRIP BUTTONS. THE FAILURE OF THE RECIRCULATION VALVE IN THE OPEN POSITION WAS DETERMINED TO BE CAUSED BY A FRACTURE OF THE CONTROL AIR SUPPLY LINE TO THE VALVE OPERATOR INDUCED BY HIGH CYCLE FATIGUE. IMMEDIATE CORRECTIVE ACTION TAKEN INCLUDES REPLACEMENT OF THE CONTROL AIR LINE. PLANNED LONG TERM CORRECTIVE ACTION INVOLVES IMPLEMENTATION OF A PLANT DESIGN CHANGE TO UPGRADE THE RECIRCULATION VALVE CONTROL AIR SUPPLY LINE DESIGN. A SIMILAR EVENT OCCURRED ON THE HEATER DRAIN TANK NORMAL LEVEL CONTROL VALVE APPROXIMATELY FIVE YEARS AGO.

[77] CONNECTICUT YANKEE DOCKET 50-213 LER 85-009
 FIRE DOOR FOUND INOPERABLE.
 EVENT DATE: 031485 REPORT DATE: 041285 NSSS: WE TYPE: PWR

(NSIC 194657) WITH THE PLANT OPERATING AT 25 PERCENT POWER, A FIRE DOOR SEPARATING A SAFETY RELATED FROM A NON-SAFETY RELATED AREA WAS DISCOVERED WITH AN

INOPERABLE LATCHING MECHANISMS. A FIRE WATCH WAS ESTABLISHED (HOURLY PATROL) UNTIL THE DOOR WAS REPAIRED AND RETURNED TO SERVICE. SINCE THE LENGTH OF TIME THE HATCH WAS INOPERABLE COULD NOT BE DETERMINED, IT IS ASSUMED IT WAS GREATER THAN THE PERIOD OF TIME ALLOWED BY TECH SPEC, SECTION 3.22.F, AND THIS INCIDENT IS REPORTABLE UNDER 10CFR50.73(A)(2)(I).

[78] CONNECTICUT YANKEE DOCKET 50-213 LER 85-008
CONTAINMENT CABLE VAULT FIRE PROTECTION SYSTEM TEST.
EVENT DATE: 032085 REPORT DATE: 041285 NSSS: WE TYPE: PWR
VENDOR: STONE & WEBSTER ENGINEERING CORP.

(NSIC 194165) WHILE PERFORMING THE ANNUAL TEST OF THE FIRE PROTECTION SYSTEM FOR THE CONTAINMENT CABLE VAULT, THE ACTUATION OF THE CARBON DIOXIDE SYSTEM DID NOT SHUT OFF THE CONTAINMENT CABLE VAULT EXHAUST FAN. THE SCHEMATIC DRAWING FOR THE FAN CONTROLS SHOWS THAT BOTH THE SUPPLY AND EXHAUST FAN ARE CONTROLLED BY THE SAME CIRCUIT BREAKER (52) AND CONTACTOR (29). IN THE EVENT OF A CARBON DIOXIDE SYSTEM ACTUATION, THE CONTACTOR WOULD TRIP THEM BOTH OFF, AS WELL AS CLOSE THE ELECTRO-PNEUMATICALLY CONTROLLED INTAKE DAMPER. IN REALITY, THE EXHAUST FAN WAS WIRED DIRECTLY TO THE LINE SIDE OF THE CONTACTOR AFTER THE CIRCUIT BREAKER THEREBY VOIDING ANY CONTROL THE CONTACTOR MAY HAVE HAD OVER THE EXHAUST FAN'S OPERATION. IMMEDIATE CORRECTIVE ACTION TAKEN WAS TO CORRECTLY WIRE THE EXHAUST FAN CONTROLS TO MATCH DESIGN DOCUMENTS AND THEN TO VERIFY THAT THE FAN WOULD OPERATE AS REQUIRED.

[79] CONNECTICUT YANKEE DOCKET 50-213 LER 85-011
MANUAL TRIP FOLLOWING TWO DROPPED CONTROL RODS.
EVENT DATE: 051685 REPORT DATE: 061485 NSSS: WE TYPE: PWR

(NSIC 194741) WHILE OPERATING AT 100% POWER, THE OPERATOR WAS MANUALLY MOVING CONTROL RODS WHEN ALARMS AND INDICATORS SHOWED TWO CONTROL RODS HAD DROPPED AND AN AUTOMATIC LOAD RUNBACK HAD BEEN INITIATED. OPERATORS MANUALLY TRIPPED THE REACTOR AND TURBINE. IMMEDIATE INVESTIGATION FOUND NO APPARENT CAUSE FOR THE DROPPED RODS, AND THEY WERE SUCCESSFULLY EXERCISED. THE REACTOR WAS RETURNED TO CRITICALITY ABOUT 13 HOURS AFTER THE TRIP. SIMILAR INCIDENTS HAD OCCURRED THREE TIMES-AUGUST 1969, NOVEMBER 1969, AND NOVEMBER 1980. ABNORMAL OCCURRENCE NO. 69-11, ABNORMAL OCCURRENCE NO. 69-18, AND LER NO. 80-16/32 WERE ALL MANUAL PLANT TRIPS PRECEDED BY THE DROPPING OF CONTROL ROD PAIRS.

[80] CONNECTICUT YANKEE DOCKET 50-213 LER 85-012
REACTOR COOLANT PUMP HEAT DETECTORS SURVEILLANCE TEST NOT PERFORMED.
EVENT DATE: 052085 REPORT DATE: 061985 NSSS: WE TYPE: PWR

(NSIC 194826) DURING A REVIEW OF SURVEILLANCE PROCEDURES AS A RESULT OF LER 50-213/85-003-00, LOW REACTOR COOLANT FLOW TRIP SETPOINT ON 5/20/85, IT WAS DISCOVERED THAT THE TECH SPEC SURVEILLANCE FREQUENCY REQUIREMENT WAS NOT BEING MET IN THE PERFORMANCE OF PROCEDURE SUR 5.5-26, REV. 2, PERIODIC CHANNEL FUNCTIONAL TEST OF THE REACTOR COOLANT PUMP HEAT DETECTORS. THE TECH SPEC REQUIRES THAT THE FIRE DETECTION INSTRUMENTS BE DEMONSTRATED OPERABLE AT LEAST ONCE PER 6 MONTHS BY THE PERFORMANCE OF A CHANNEL FUNCTIONAL TEST IF ACCESSIBLE. IF INACCESSIBLE (I.E., IN CONTAINMENT), THE INSTRUMENT SHOULD BE DEMONSTRATED OPERABLE DURING EACH COLD SHUTDOWN EXCEEDING 24 HOURS UNLESS PERFORMED IN THE PREVIOUS 6 MONTHS. ALSO REQUIRED IS A 6 MONTH CHECK OF THE SUPERVISORY CIRCUIT. DUE TO MISINTERPRETATION OF THE TECH SPEC WHEN THE PROCEDURE WAS ORIGINATED, THE SURVEILLANCE WAS ONLY BEING PERFORMED DURING PLANT SHUTDOWNS (REFUELING OUTAGES). IT SHOULD BE NOTED THAT THE PROCEDURE ITSELF WAS NOT INCORRECT BUT THE FREQUENCY WITH WHICH IT WAS IMPLEMENTED WAS. AS THIS DOES NOT COMPLY WITH THE SURVEILLANCE REQUIREMENTS OF TECH SPEC 4.15 E.1 AND E.2, THIS EVENT IS REPORTABLE PER

10CFR50.73(A)(2)(I)(B). AS A RESULT OF THE DISCOVERY, THE REQUIRED SURVEILLANCE OF THE SUPERVISORY CIRCUIT WAS IMMEDIATELY PERFORMED.

[81] COOK 1 DOCKET 50-315 LER 85-008
 INOPERABLE LOW PRESSURE CARBON DIOXIDE SYSTEMS.
 EVENT DATE: 031485 REPORT DATE: 041285 NSSS: WE TYPE: PWR

(NSIC 194674) ON MARCH 14, 1985 AT APPROXIMATELY 1615 HOURS, WITH UNIT 1 AT 100 PERCENT REACTOR THERMAL POWER, IT WAS DISCOVERED THAT THE LOW PRESSURE CARBON DIOXIDE FIRE SUPPRESSION SYSTEMS FOR THE U-1 AB AND CD EMERGENCY DIESEL GENERATOR ROOMS WERE REMOVED FROM SERVICE WITHOUT PROPER FIRE WATCH COVERAGE. THE FIRE WATCH COVERAGE EMPLOYED CONSISTED OF A ROVING INSPECTION AT A FREQUENCY OF ONCE EVERY THIRTY MINUTES. IN ADDITION, A SECURITY GUARD WAS POSTED IN THE AREA THROUGHOUT THE ENTIRE INCIDENT. A CONTINUOUS FIRE WATCH, HOWEVER, WAS NOT ESTABLISHED AS REQUIRED BY TECH SPEC 3.7.9.3.B. ON MARCH 13, 1985 AT 0900 HOURS THE ENTRANCE DOORS TO THE UNIT 1 AB AND CD EMERGENCY DIESEL GENERATOR ROOMS WERE REMOVED TO ALLOW INSTALLATION OF NEW DOORS. THE REMOVAL OF THESE DOORS RENDERED THE LOW PRESSURE CARBON DIOXIDE FIRE SUPPRESSION SYSTEMS INOPERABLE FOR THE AREAS INVOLVED. THE ERROR WAS RECOGNIZED AT APPROXIMATELY 1615 HOURS ON MARCH 14, 1985. THE CAUSE OF THIS INCIDENT WAS PERSONNEL ERROR. IT WAS NOT RECOGNIZED THAT REMOVAL OF THE DOORS MADE THE LOW PRESSURE CARBON DIOXIDE FIRE SUPPRESSION SYSTEMS INOPERABLE. THOSE INDIVIDUALS INVOLVED ARE NOW AWARE OF THE REQUIREMENTS OF TECH SPEC 3.7.9.3 AND HAVE BEEN COUNSELED ON THE NECESSITY TO ACCURATELY DEFINE TECH SPEC LIMITATIONS WHEN INITIATING JOB ORDERS.

[82] COOK 1 DOCKET 50-315 LER 85-011
 CONTAINMENT PURGE PROCEDURE DOES NOT AGREE WITH TECHNICAL SPECIFICATIONS.
 EVENT DATE: 040785 REPORT DATE: 050785 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 194761) ON 04/07/85 AT 2035 HOURS WITH UNIT 1 IN MODE 3 (HOT STANDBY) IN PREPARATION FOR A REFUELING OUTAGE, A CONTAINMENT PURGE WAS BEGUN IN ACCORDANCE WITH AN APPROVED PROCEDURE WHICH ESTABLISHED MORE THAN ONE PURGE SUPPLY AND EXHAUST PATH. TECH SPEC 3.6.1.7 ONLY ALLOWS ONE PURGE SUPPLY AND EXHAUST PATH WHEN IN MODES 1 - 4. AT 2155 ON 04/07/85 THE CONTAINMENT PURGE WAS REDUCED TO ONE SUPPLY AND EXHAUST PATH AFTER THE ON DUTY SHIFT TECHNICAL ADVISOR DISCOVERED THE DISPARITY BETWEEN THE SYSTEM LINE UP AND THE TECH SPECS. THE PROCEDURES FOR CONTAINMENT PURGE HAVE BEEN CHANGED FOR BOTH UNITS TO INCORPORATE THE TECH SPEC LIMITATIONS. BASED ON ALL INFORMATION AVAILABLE AT THAT TIME, ALL OF THE CONTAINMENT PURGE ISOLATION VALVES WERE OPERABLE DURING THIS EVENT AND WOULD HAVE BEEN CAPABLE OF CLOSING ON CONTAINMENT ISOLATION SIGNAL. SUBSEQUENT LEAK TESTING CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF 10 CFR 50 APPENDIX J (TYPE B & C TESTING) REVEALED EXCESSIVE SEAT LEAKAGE ON VCR-105, WHICH WAS PART OF THE OPERATING PURGE PATH. THE DETAILS OF THAT EVENT WILL BE DISCUSSED IN A SEPARATE LER.

[83] COOK 1 DOCKET 50-315 LER 85-013
 FIRE DOOR BLOCKED OPEN.
 EVENT DATE: 040785 REPORT DATE: 050785 NSSS: WE TYPE: PWR

(NSIC 194479) ON 4-7-85, AT 1800 HRS, WITH THE RCS IN MODE 3 (HOT STANDBY), THE SPRAY ADDITIVE TANK ROOM FIRE DOOR (IEEE/DR), NO. 529, WAS FOUND BLOCKED OPEN WITHOUT FIRE WATCH COVERAGE AS REQUIRED BY TECH SPEC 3.7.10.A. THE BLOCKAGE CONSISTED OF A LEAD BRICK POSITIONED ON THE FLOOR PREVENTING DOOR CLOSURE. IT WAS PROMPTLY REMOVED UPON DISCOVERY AND THE DOOR RETURNED TO OPERABLE STATUS. THE FIRE DETECTION SYSTEM IN THE AREA WAS OPERATIONAL AT ALL TIMES. PERSONNEL RESPONSIBLE FOR POSITIONING THE BLOCKAGE COULD NOT BE DETERMINED. CONSEQUENTLY,

NO PREVENTATIVE ACTION WAS TAKEN. THERE WERE NO ADVERSE CONSEQUENCES DUE TO THIS INCIDENT.

[84] COOK 1 DOCKET 50-315 LER 85-014
MISSED HOURLY INSPECTIONS OF INOPERABLE FIRE SEALS.
EVENT DATE: 040785 REPORT DATE: 050785 NSSS: WE TYPE: PWR

(NSIC 194480) ON 4-7-85, AT 1730 HRS, WITH THE RCS IN MODE 3 (HOT STANDBY), A FIRE WATCH WAS UNABLE TO CONDUCT INSPECTIONS OF SEISMIC GAP FIRE BARRIER SEALS AS REQUIRED BY TECH SPEC 3.7.10. THE INCIDENT OCCURRED DUE TO A BROKEN LOCKING MECHANISM OF FIRE DOOR NO. 325 (IEEE/DR). ENTRY WAS GAINED TO THE AREA AND THE REQUIRED INSPECTIONS STARTED AT 2230 HRS, 4-7-85. THE FIRE DETECTION SYSTEM IN THE AREA WAS OPERATIONAL AT ALL TIMES. THERE WERE NO ADVERSE CONSEQUENCES DUE TO THIS INCIDENT.

[85] COOK 1 DOCKET 50-315 LER 85-015
CONTAINMENT PURGE ISOLATION OCCURS.
EVENT DATE: 040885 REPORT DATE: 050785 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: COOK 2 (PWR)
VENDOR: EBERLINE INSTRUMENT CORP.

(NSIC 194611) ON APR 8, 9, AND 11, 1985 WITH THE RCS IN MODE 3 (HOT STANDBY), SEVERAL SPURIOUS HIGH ALARMS WERE RECEIVED ON THE LOWER CONTAINMENT RADIATION MONITOR PARTICULATE CHANNELS, ERS 1301 AND EPS 1401, THAT RESULTED IN A CONTAINMENT ISOLATION, AN AUTOMATIC ACTUATION OF AN ESP. REVIEW OF THE DATA FROM THE RADIATION MONITORS REVEALED THAT AT CERTAIN INPUT COUNT RATES A JUMP IN COUNT RATE WOULD OCCUR WITH NO INCREASE IN CONTAINMENT AIRBORNE RADIOACTIVITY. THE JUMP IN COUNT RATE RESULTED IN A SPURIOUS ALARM CAUSING THE AUTOMATIC CLOSURE OF THE CONTAINMENT PURGE ISOLATION VALVES. TO PREVENT RECURRENCE, EBERLINE CORP HAS SUPPLIED THE PLANT WITH NEW PROGRAM CHIPS WITH THE CORRECTION TO THE SOFTWARE. THESE HAVE BEEN INSTALLED IN THE LOWER CONTAINMENT MONITORS AND HAVE BEEN TESTED SATISFACTORILY.

[86] COOK 1 DOCKET 50-315 LER 85-012
MISSED SURVEILLANCES REQUIRED BY TECH SPECS.
EVENT DATE: 041085 REPORT DATE: 050785 NSSS: WE TYPE: PWR

(NSIC 194478) ON 4-10-85 AT ABOUT 0600 HRS WITH THE UNIT IN MODE 3 (HOT STANDBY) FOR AN ABNORMALLY EXTENDED PERIOD IN PREPARATION FOR A REFUELING OUTAGE, CONTROL OF CONTAINMENT ACCESS WAS TRANSFERRED FROM THE CONTROL ROOM TO SECURITY PERSONNEL POSTED AT THE CONTAINMENT AIR LOCKS. THE UNIT SUPERVISOR (SENIOR REACTOR OPERATOR LICENSED) MISINTERPRETED A PLANT INSTRUCTION WHICH RESULTED IN THE SECURITY PERSONNEL NOT BEING INSTRUCTED TO DOCUMENT PERFORMANCE OF THE CONTAINMENT AIR LOCK SEAL VISUAL INSPECTION AND THE CONTAINMENT CLEANLINESS INSPECTION REQUIRED BY TECH SPECS DURING MODE 3 OPERATION. THE UNIT SUPERVISOR (SENIOR REACTOR OPERATOR LICENSED) FROM THE FOLLOWING SHIFT REALIZED THIS MISINTERPRETATION AT ABOUT 1350 HRS AFTER A REVIEW OF THE PLANT INSTRUCTION. AT THIS TIME DOCUMENTATION OF THE SURVEILLANCES WAS RESUMED. A LETTER WAS WRITTEN TO OPERATIONS PERSONNEL EMPHASIZING THE REQUIREMENTS OF CONTAINMENT ACCESS. NO ADVERSE SAFETY CONSEQUENCES RESULTED FROM THIS EVENT.

[87] COOK 1 DOCKET 50-315 LER 85-016
LOSS OF CONTAINMENT INTEGRITY.
EVENT DATE: 041285 REPORT DATE: 050985 NSSS: WE TYPE: PWR

(NSIC 194832) ON 04-12--85 AT 1030 HOURS, WITH THE REACTOR COOLANT SYSTEM IN MODE 3 (HOT STANDBY) AN EQUIPMENT CLEARANCE WAS BEING PLACED ON THE RESIDUAL HEAT

REMOVAL SYSTEM FOR RESTORATION FOLLOWING A HYDRO TEST. A VENT INSIDE CONTAINMENT WAS OPENED TO DRAIN THE HEADER, SIMULTANEOUSLY A VENT WAS OPENED OUTSIDE CONTAINMENT TO DRAIN THE HEAT EXCHANGERS. THIS CREATED A POTENTIAL FLOW PATH FROM INSIDE TO OUTSIDE CONTAINMENT. THIS IS NONCONSERVATIVE WITH RESPECT TO TECH SPEC 3.6.1.1. THE TOTAL TIME OF THIS EVOLUTION WAS 45 MINUTES. THE POTENTIAL FOR OBTAINING THIS FLOWPATH ALSO EXISTED DURING PREPARATION FOR THE TEST, HOWEVER, IT WAS NOT NOTED AT THAT TIME. TO PREVENT RECURRENCE THE HYDRO PROCEDURE HAS BEEN REVISED TO: 1) REQUIRE THE EQUIPMENT CLEARANCE TO INCLUDE GUIDANCE ON BOTH THE INSTALLATION AND REMOVAL OF THE BLANK FLANGES UTILIZED TO CONDUCT THE TEST, AND 2) INCLUDE AN ADDITIONAL PRECAUTION ON MAINTAINING CONTAINMENT INTEGRITY DURING THE TEST.

[88] COOK 1 DOCKET 50-315 LER 85-018
 INOPERABLE FIRE BARRIER IN AUX FEED PUMP ROOMS.
 EVENT DATE: 041685 REPORT DATE: 051385 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 194482) ON 4-16-85 AT 1146 HRS WITH UNIT 1 IN MODE 5 (COLD SHUTDOWN) AND UNIT 2 IN MODE 1 AT 95% REACTOR THERMAL POWER, IT WAS DISCOVERED DURING SYSTEM WALKDOWNS FOR FLOW DIAGRAM VERIFICATIONS THAT THE FIRE SEALANT MATERIAL WAS ABSENT FROM 2 FLOOR PENETRATIONS (IEEE/SEAL). THE LACK OF SEAL MATERIAL CONSTITUTES AN INOPERABLE FIRE BARRIER AS ADDRESSED IN TECH SPEC 3.7.10. A FIRE WATCH WAS IMMEDIATELY POSTED IN THE AFFECTED AREAS. THE PENETRATIONS WERE BOTH 8 INCH PIPE SLEEVES, LOCATED IN EACH OF THE TURBINE-DRIVEN AUX FEED PUMP (TDAFP) ROOMS. THE OPEN PENETRATIONS WERE SEALED AND DECLARED OPERABLE ON 4-17-85, AND WERE ADDED TO THE SURVEILLANCE PROGRAM. THE SUBJECT PENETRATIONS WERE NOT PREVIOUSLY IDENTIFIED DURING INSPECTIONS OF THE PENETRATIONS IN THE TDAFP ROOMS. THESE OPEN PENETRATIONS DID NOT AFFECT THE OPERABILITY OF THE FIRE SUPPRESSION SYSTEM, AS THE TDAFP ROOMS ARE PROTECTED BY A WATER SUPPRESSION SYSTEM. THE LIKELIHOOD OF A FIRE PROPAGATING THROUGH THE OPEN PENETRATIONS WAS MINIMAL DUE TO A LOW COMBUSTIBLE MATERIALS LOADING IN THE AREA BELOW THE AFFECTED FIRE ZONE. PREVIOUS SIMILAR EVENTS INCLUDE 316/85-06.

[89] COOK 1 DOCKET 50-315 LER 85-017
 CONTAINMENT PENETRATIONS FAIL TYPE B AND C LEAK TESTS.
 EVENT DATE: 041785 REPORT DATE: 050985 NSSS: WE TYPE: PWR

(NSIC 194481) ON 4-17-85 AT 0250 HRS WITH THE RCS IN MODE 5 (COLD SHUTDOWN), THE ACCUMULATED LEAKAGE FOUND WHILE PERFORMING THE TYPE B AND C LEAK RATE TESTS ON CONTAINMENT PENETRATIONS EXCEEDED THE LCO VALUE (0.60 LA) OF TECH SPEC 3.6.1.2.B. THOSE CONTAINMENT ISOLATION VALVES THAT EXHIBIT EXCESSIVE LEAK RATES ARE BEING REPAIRED AND RETESTED TO ENSURE THE COMBINED LEAK RATES ARE WITHIN ALLOWABLE LIMITS. THE B AND C LEAK RATE TESTING IS STILL IN PROGRESS AND WILL NOT BE COMPLETED UNTIL THE END OF THE REFUELING OUTAGE. THIS IS AN INTERIM REPORT. THE FINAL REPORT WILL BE SUBMITTED BY 10-1-85, FOLLOWING COMPLETION OF THE B AND C LEAK RATE TESTS. PREVIOUS OCCURRENCES OF A SIMILAR NATURE INCLUDE, 315/83-072, 315/82-058, 315/81-025, 316/81-018, 315/81-011, 316/79-053, 315/79-034; AND 316/79-020.

[90] COOK 1 DOCKET 50-315 LER 85-020
 INADVERTENT ISOLATION OF LOW PRESSURE CARBON DIOXIDE SYSTEM.
 EVENT DATE: 042985 REPORT DATE: 052485 NSSS: WE TYPE: PWR

(NSIC 194484) ON 4-29-85 AT 0825 HRS, WITH THE RCS IN MODE 6 (REFUELING), THE LOW PRESSURE CARBON DIOXIDE FIRE SUPPRESSION SYSTEM (IEEE/KQ) FOR QUADRANT ONE OF THE REACTOR CABLE TUNNEL, WAS ISOLATED WITHOUT FIRE WATCH COVERAGE AS REQUIRED BY TECH SPEC 3.7.9.3. THE SYSTEM WAS RETURNED TO NORMAL AT 1120 HRS, 4-29-85 AFTER IT WAS DISCOVERED TO HAVE BEEN INADVERTENTLY ISOLATED. THE INCIDENT OCCURRED DUE

TO PERSONNEL ERROR. IT WAS THE RESULT OF; 1) UNFAMILIARITY WITH THE LOW PRESSURE CARBON DIOXIDE FIRE SUPPRESSION SYSTEM ISOLATION POINTS, AND 2) INADEQUATE COMMUNICATIONS BETWEEN CRAFT PERSONNEL REQUESTING THE ISOLATION AND SECURITY PERSONNEL WHO CARRIED OUT THE REQUEST. WHILE THE FIRE PROTECTION SYSTEM WAS ISOLATED FOR APPROX 3 HRS, THE FIRE DETECTION SYSTEM REMAINED OPERABLE. CONSEQUENTLY, IT IS CONCLUDED THAT THERE WAS NO SUBSTANTIAL DEGRADATION OF FIRE PROTECTION CAPABILITY DUE TO THIS EVENT. THOSE INDIVIDUALS INVOLVED ARE NOW AWARE OF CORRECT ISOLATION POINTS FOR AREAS WITHIN THE REACTOR CABLE TUNNEL AND HAVE BEEN COUNSELLED ON THE IMPORTANCE OF PROPER CONTROL OF THE LOW PRESSURE CARBON DIOXIDE FIRE SUPPRESSION SYSTEM. PREVIOUS OCCURRENCES OF A SIMILAR NATURE INCLUDE: 316/84-009 AND 316/84-027.

[91] COOK 1 DOCKET 50-315 LER 85-021
DILUTION OF REACTOR COOLANT SYSTEM BORON CONCENTRATION.
EVENT DATE: 042985 REPORT DATE: 052485 NSSS: WE TYPE: PWR

(NSIC 194762) ON APRIL 29, 1985, AT 0422 HOURS WITH THE UNIT IN MODE 6 (REFUELING), THE CONTROL ROOM OPERATOR TRANSFERRED WATER FROM THE REFUELING WATER STORAGE TANK (RWST) TO THE REACTOR COOLANT SYSTEM (RCS). THE RCS BORON CONCENTRATION WAS 2084 PPM WHILE THE RWST BORON CONCENTRATION WAS 2069 PPM. LITERAL INTERPRETATION CONCLUDES THAT THIS IS A DILUTION OF THE RCS. THE REACTOR VESSEL FLOW REQUIREMENT, SPECIFIED IN TECH SPEC 3.1.1.3, WAS NOT VERIFIED PRIOR TO THE DILUTION. THE ACTION STATEMENT REQUIRES IMMEDIATE SUSPENSION OF ALL BORON CONCENTRATION REDUCTION ACTIVITIES. THE DILUTION WAS INITIALLY IDENTIFIED BY THE NRC RESIDENT INSPECTOR ON MAY 1, 1985. CONSEQUENTLY, THE ACTION STATEMENT REQUIREMENTS WERE NOT MET. THERE WERE NO ADVERSE SAFETY CONSEQUENCES DUE TO THIS INCIDENT. TECH SPEC 3.9.1 REQUIRES A BORON CONCENTRATION OF $> \text{OR} = 2000$ PPM FOR ADEQUATE SHUTDOWN MARGIN. THIS REQUIREMENT WAS SATISFIED THROUGHOUT THE EVENT. TO PREVENT RECURRENCE, THE PROCEDURE FOR FILLING THE REACTOR REFUELING CAVITY HAS BEEN REVISED TO INCLUDE VERIFICATION/DOCUMENTATION OF THE REACTOR VESSEL FLOW IN THE EVENT A RCS DILUTION OCCURS.

[92] COOK 1 DOCKET 50-315 LER 85-023
TRAVEL OF HEAVY LOAD OVER SPENT FUEL.
EVENT DATE: 050285 REPORT DATE: 053185 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 194486) ON 5-2-85 WITH THE UNIT 1 RCS IN MODE 6 (REFUELING) AND UNIT 2 REACTOR IN MODE 1 (POWER OPERATION) AT 100% THERMAL POWER, DISCUSSIONS WERE BEING HELD REGARDING AUX BLDG CRANE (LEE/CRN) TRAVEL LIMITS. IT BECAME APPARENT THAT THE DESIGNATION OF THE AUX BLDG CRANE LOAD BLOCK AS A 'HEAVY LOAD' *UNDER NUREG-0612) WAS NOT GENERALLY KNOWN. CONSEQUENTLY, MOVEMENT OF THE LOAD BLOCK OVER RACKS CONTAINING FUEL OCCURRED ON AT LEAST ONE OCCASION WHEN THE CRANE WAS USED AS A WORK PLATFORM TO FACILITATE REPAIRS TO AUX BLDG HIGH BAY LIGHTS IN 8-84. NO LOADS OTHER THAN THE LOAD BLOCK WERE MOVED. THIS EVENT MAY NOT BE IN COMPLIANCE WITH THE REQUIREMENTS OF TECH SPEC 3.9.7. AN EVALUATION IS CURRENTLY BEING PERFORMED TO DETERMINE IF, IN FACT, THE LOAD BLOCK POSTULATED LOAD DROP IMPACT ENERGY EXCEEDS THE LIMIT OF TECH SPEC 3.9.7. THE DEFINITION OF THE LOAD BLOCK AS BEING A HEAVY LOAD WAS NOT SPECIFICALLY EMPHASIZED IN PLANT PROCEDURES. AS A PRECAUTIONARY MEASURE, CAUTIONS ARE BEING ADDED TO APPLICABLE PLANT PROCEDURES AND WILL BE IN PLACE BY 6-15-86. ADDITIONALLY, A MEMO HAS BEEN ISSUED TO ALL PLANT DEPARTMENT HEADS AND MAINTENANCE DEPARTMENT EMPLOYEES WHICH CLEARLY DESCRIBES THE LOAD BLOCK 'HEAVY LOAD' DESIGNATION.

[93] COOK 1 DOCKET 50-315 LER 85-024
INOPERABLE FIRE BARRIER IN THE CONTROL ROOM CABLE VAULT.
EVENT DATE: 050785 REPORT DATE: 060685 NSSS: WE TYPE: PWR

(NSIC 194612) ON 5-7-85 AT 1039 HRS WITH UNIT 1 IN MODE 5, OPERATIONS PERSONNEL DISCOVERED A DEFECTIVE FIRE SEAL IN THE CEILING OF THE CONTROL ROOM CABLE VAULT. THE DEFECTIVE FIRE SEAL CONSTITUTED AN INOPERABLE FIRE BARRIER AS ADDRESSED IN TECH SPEC 3.7.10. CONTINUOUS FIRE WATCH COVERAGE WAS ESTABLISHED AT 1039 HRS, 5-7-85. THE SEAL WAS DECLARED OPERABLE AT 1334 HRS FOLLOWING TEMPORARY REPAIRS. PERMANENT REPAIRS WERE COMPLETED ON 5-17-85. THE DEFECT CONSISTED OF AN UNSEALED HOLE, OF APPROX 0.75 INCHES IN DIAMETER. DISCUSSIONS WITH ALL GROUPS WHO WERE WORKING IN THIS AREA AND A REVIEW OF SELECTIVE DOCUMENTATION COULD NOT POSITIVELY IDENTIFY THE GROUP RESPONSIBLE FOR BREACHING THIS PENETRATION. HOWEVER, AN 4-18-85, INSPECTION OF THE PENETRATIONS IN THIS FIRE ZONE DID NOT IDENTIFY THIS DEFICIENCY. TO PREVENT RECURRENCE, THE MANAGEMENT OF BOTH CONSTRUCTION AND MAINTENANCE DEPARTMENTS HAVE BEEN REQUESTED TO REVIEW THIS EVENT WITH SUPERVISORY PERSONNEL RESPONSIBLE FOR PERFORMING SIMILAR WORK. SINCE THE OPEN PENETRATION WAS LOCATED IN THE CEILING OF THE PROTECTED AREA AND WOULD HAVE HAD A MINIMAL EFFECT ON THE CO2 CONCENTRATION WITHIN THAT AREA AND THE FIRE DETECTION SYSTEM WAS OPERABLE THROUGHOUT THE PERIOD IN QUESTION, IT IS CONCLUDED THAT THERE WAS NO APPRECIABLE DEGRADATION OF THE CONTROL ROOM CABLE VAULT FIRE SUPPRESSION SYSTEM. PREVIOUS SIMILAR EVENTS INCLUDE: 316/85-006 AND 315/85-018.

[94] CRYSTAL RIVER 3 DOCKET 50-302 LER 84-023
DEVIATION FROM ADMINISTRATIVE CONTROLS FOR LOW TEMPERATURE OVERPRESSURIZATION PROTECTION.
EVENT DATE: 121184 REPORT DATE: 053185 NSSS: BW TYPE: PWR

(NSIC 194655) THE SAFETY EVALUATION REPORT PREPARED BY THE NRC IN SUPPORT OF LICENSE AMENDMENT 21 DESCRIBES SEVERAL ADMINISTRATIVE CONTROLS TO PREVENT LOW TEMPERATURE OVERPRESSURIZATION EVENTS AT CRYSTAL RIVER UNIT 3. SUBSEQUENT TO COMMITTING TO THOSE CONTROLS, FLORIDA POWER CORPORATION IDENTIFIED ON DECEMBER 11, 1984 THAT THEY ARE IN CONFLICT WITH SOME EXISTING PLANT PRACTICES. IT SHOULD BE NOTED THAT OTHER ADMINISTRATIVE CONTROLS ARE IN PLACE THAT HAVE SUCCESSFULLY PREVENTED LOW TEMPERATURE OVERPRESSURIZATION EVENTS. CORRECTIVE ACTIONS INCLUDE SUBMISSION OF A REQUEST FOR CHANGE TO APPLICABLE TECH SPECS. A SUPPLEMENT TO THIS LER DESCRIBING OTHER AREAS OF CONFLICT WILL BE SUBMITTED. LER 84-023 IS SUBMITTED VOLUNTARILY FOR INFORMATION.

[95] CRYSTAL RIVER 3 DOCKET 50-302 LER 85-003
FAILURE TO FULLY INSPECT STEAM GENERATOR TUBE.
EVENT DATE: 040385 REPORT DATE: 050685 NSSS: BW TYPE: PWR

(NSIC 194668) ON APRIL 3, 1985, IT WAS DETERMINED THAT A 1980 INSERVICE INSPECTION OF THE "B" ONCE THROUGH STEAM GENERATOR HAD NOT FULLY EXAMINED THE ENTIRE LENGTH OF THE GENERATOR TUBES AS REQUIRED BY TECH SPEC 4.4.5.4.A.8. THE CAUSE OF THE EVENT WAS FAILURE BY TESTING PERSONNEL TO RECOGNIZE THAT COMPLETE PENETRATION OF THE WATER ENTRY REGION WAS REQUIRED. COMPLETE PENETRATION WAS NOT POSSIBLE DUE TO DAMAGE OF THE TUBES IN 1978. A PROPOSED CHANGE TO THE TECH SPEC HAS BEEN SUBMITTED TO MODIFY THE STEAM GENERATOR TUBE INSPECTION REQUIREMENTS.

[96] DAVIS-BESSE 1 DOCKET 50-346 LER 85-005
FEEDWATER LEVEL CONTROLLER FAILS CAUSING LOW STEAM GENERATOR LEVEL.
EVENT DATE: 032185 REPORT DATE: 041885 NSSS: BW TYPE: PWR
VENDOR: BAILEY METER COMPANY

(NSIC 194818) ON MARCH 21, 1985, DAVIS-BESSE UNIT 1 WAS DECREASING POWER IN PREPARATION FOR A MAINTENANCE OUTAGE. AT 1954 HOURS ON MARCH 21, 1985, THE UNIT WAS AT APPROXIMATELY 28 PERCENT POWER WHEN AN ERRONEOUS SIGNAL IN THE INTEGRATED CONTROL SYSTEM CAUSED RAPID OSCILLATIONS IN THE MAIN FEEDWATER SYSTEM, WHICH RESULTED IN A STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM ACTUATION ON LOW OTSG LEVEL. THE REACTOR WAS TRIPPED BY THE ANTICIPATORY REACTOR TRIP SYSTEM. THE

APPARENT CAUSE OF THE ERRONEOUS INTEGRATED CONTROL SYSTEM SIGNAL WAS FOUND TO BE A FAULTY CONTROLLER IN THE FEEDWATER LEVEL CONTROL CIRCUIT FOR MAIN FEEDWATER LOOP #2. THE FAULTY CONTROLLER WAS REPLACED. A MODIFICATION TO THE PLANT SHUTDOWN PROCEDURE, PP 1102.10, WILL BE SUBMITTED TO HELP REDUCE THE SUSCEPTIBILITY TO FEED PUMP OSCILLATIONS, DUE TO EITHER DEFECTIVE MODULES OF CONTROL OSCILLATIONS BY PLACING THE OPERATING MAIN FEED PUMP INTO MANUAL PRIOR TO REACHING LOW LEVEL LIMITS.

[97] DAVIS-BESSE 1 DOCKET 50-346 LER 85-006
FAILURE OF CONTROL ROD DRIVE E-3 TO MEET TRIP TIME.
EVENT DATE: 032285 REPORT DATE: 041985 NSSS: BW TYPE: PWR
VENDOR: DIAMOND POWER SPECIALTY CORP.

(NSIC 194809) DURING ROD DROP TIME TESTING ON MARCH 22, 1985, THE CONTROL ROD AT CORE LOCATION F-3 FAILED TO MEET THE TECH SPEC REQUIREMENT OF 1.58 SECONDS. SUBSEQUENT DISASSEMBLY OF THE CONTROL ROD DRIVE MECHANISM REVEALED A SETSCREW FRAGMENT HAD JAMMED INSIDE, PREVENTING DISENGAGEMENT OF THE LATCHING ASSEMBLY. THIS SETSCREW WAS DETERMINED TO HAVE FALLEN FROM A CONTROL ROD DRIVE MECHANISM HANDLING TOOL. A LEAF SPRING INTERNAL TO THE CONTROL ROD DRIVE MECHANISM WAS FOUND TO BE BROKEN. THIS FAILURE DID NOT AFFECT THE DRIVE'S OPERATION, ALTHOUGH IT COULD POTENTIALLY HAVE CAUSED A FAILURE SIMILAR TO THE SETSCREW. THE MOST PROBABLE CAUSE OF THIS LEAF SPRING BREAKAGE IS MECHANICAL INTERFERENCE WITH THE CONTROL ROD DRIVE MECHANISM INTERNALS. INDICATIONS ON A DRIVE COMPONENT, AND INSPECTIONS WHICH REVEALED FIVE LEAF SPRINGS TO BE IMPROPERLY SEATED, SUPPORT THIS CONCLUSION. CORRECTIVE ACTION TAKEN INCLUDES REPLACEMENT OF THE E-3 CONTROL ROD DRIVE MECHANISM, INSPECTION AND EXERCISING OF THE REMAINING LEAF SPRINGS, INSPECTION OF CONTROL ROD HANDLING TOOLS, AND MODIFICATIONS TO CONTROL ROD DRIVE MECHANISM TOOLS AND PROCEDURES. FURTHER ANALYSIS IS BEING CONDUCTED.

[98] DAVIS-BESSE 1 DOCKET 50-346 LER 85-007
AUXILIARY FEED PUMP TURBINE HAS RESPONSE TIME PROBLEMS.
EVENT DATE: 032385 REPORT DATE: 041985 NSSS: BW TYPE: PWR
VENDOR: WOODWARD GOVERNOR COMPANY

(NSIC 194820) ON MARCH 23, 1985, THE POST TRIP REVIEW OF A STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM TRIP FROM 25% RATED THERMAL POWER, NOTED AN APPARENT RESPONSE TIME PROBLEM FOR AUXILIARY FEEDWATER PUMP 1-2. INVESTIGATION DETERMINED THAT THERE WERE A COUPLE OF CONTRIBUTING FACTORS, INCLUDING AN IMPROPERLY SIZED SPEED BUSHING IN A NEW GOVERNOR INSTALLED ON AUXILIARY FEED PUMP TURBINE 1-2. IN ADDITION, A STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM LOGIC CHANGE ALSO MADE DURING THE 1984 REFUELING OUTAGE, WAS A POSSIBLE CAUSE OF WATER FLOW FORCES IN THE MAIN STEAM CROSSOVER SUPPLY LINES WHICH WAS LOOSENING HANGERS AND DAMAGING SUPPORTS. CHANGES WERE MADE TO ENSURE THE RESPONSE TIME REQUIREMENT WOULD BE MET, AS WELL AS TO REDUCE THE WATER FLOW FORCES. THE EVENT WAS REPORTABLE PER 10CFR50.73(A)(2)(II)(A).

[99] DIABLO CANYON 1 DOCKET 50-275 LER 85-013
TWO LOAD SEQUENCER TIMERS MISSET.
EVENT DATE: 043085 REPORT DATE: 060785 NSSS: WE TYPE: PWR

(NSIC 194814) AT 2309 PDT, APRIL 30, 1985, UNIT 1 ENTERED MODE 4 WITH TWO ESF TIMER SETTINGS OUTSIDE ACCEPTABLE LIMITS AS SPECIFIED IN TABLE 4.8-2 OF THE TECH. SPECS. THESE TIMERS ARE SPECIFIED IN THE TECH SPECS FOR SURVEILLANCE OF DIESEL GENERATORS, AND SHOULD HAVE RESULTED IN DG 1-3 BEING DECLARED INOPERABLE FOR MODES 1-4. THIS CONDITION IS NOT PERMITTED BY TECH SPEC 3.0.4. THIS EVENT WAS CAUSED BY PERSONNEL ERROR. PLANT PERSONNEL FAILED TO VERIFY THAT THE TIMERS HAD BEEN RESET IN ACCORDANCE WITH SURVEILLANCE TEST PROCEDURE (STP) M-13B, "ENGINEERED SAFEGUARDS AUTOMATIC TIMERS SETTING VERIFICATION." THIS EVENT WAS

DISCOVERED ON MAY 10, 1985, DURING A REVIEW OF OUTSTANDING PROBLEM REPORTS. TO PREVENT RECURRENCE, APPROPRIATE PERSONNEL RECEIVED ADDITIONAL TRAINING ON THE IMPORTANCE OF VERIFYING DATA. STP M-13B WAS REVISED TO REQUIRE TESTING PERSONNEL TO DECLARE THE APPLICABLE DIESEL GENERATOR INOPERABLE PER TECH SPEC REQUIREMENTS IF AN OUT OF TOLERANCE CONDITION OR A FAILURE IS DISCOVERED DURING PERFORMANCE OF THE PROCEDURE.

[100] DIABLO CANYON 1 DOCKET 50-275 LER 85-014
 INVERTER TRANSFORMER FAILS CAUSING SCRAM.
 EVENT DATE: 051885 REPORT DATE: 061885 NSSS: WE TYPE: PWR
 VENDOR: SOLA ELECTRIC COMPANY

(NSIC 194748) AT 0714 PDT, MAY 18, 1985, WHILE IN MODE 1 (POWER OPERATION), UNIT 1 HAD A REACTOR TRIP FOLLOWED BY A SAFETY INJECTION. ALL AUTOMATIC EQUIPMENT RESPONDED AS DESIGNED EXCEPT FOR DIESEL GENERATOR 1-3 WHICH FAILED TO MAINTAIN SPEED (SEE SPECIAL REPORT SR 85-04 DATED JUNE 17, 1985). THE PLANT WAS STABILIZED IN MODE 3 (HOT STANDBY) IN ACCORDANCE WITH PROCEDURES. ALL SYSTEMS AND EQUIPMENT AFFECTED BY THIS EVENT WERE RETURNED TO NORMAL OPERATION. THIS EVENT WAS CAUSED BY THE FAILURE OF THE SLAVE 2.5 KVA REGULATING TRANSFORMER FOR INSTRUMENT INVERTER IY-1-3. THE FAILED TRANSFORMER WAS REPLACED WITH A SPARE AND THE INVERTER WAS RETURNED TO SERVICE. THIS WAS THE SIXTH EMERGENCY CORE COOLING SYSTEM (ECCS) ACTUATION CYCLE TO DATE THAT HAS RESULTED IN THE DISCHARGE OF WATER INTO THE REACTOR COOLANT SYSTEM. ON JUNE 6, 1985, FIVE SNUBBERS ON THE STEAM LINES TO THE AUXILIARY FEEDWATER PUMP WERE FOUND TO BE INOPERABLE. THE TURBINE DRIVEN AUXILIARY FEEDWATER PUMP WAS DECLARED INOPERABLE IN ACCORDANCE WITH THE TECH SPECS. AN INVESTIGATION OF THE SNUBBER DAMAGE HAS SHOWN THAT IT WAS CAUSED BY A WATER-HAMMER TRANSIENT. CONDENSED WATER WAS IN A STEAM SUPPLY LINE DURING THE TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP START ON LO-LO STEAM GENERATOR LEVEL FOLLOWING THE REACTOR TRIP AND SAFETY INJECTION OF MAY 18, 1985. MORE DETAIL ON THE SNUBBER DAMAGE WILL BE PROVIDED IN A SUPPLEMENTAL REPORT WHEN THE FINAL ENGINEERING EVALUATION HAS BEEN COMPLETED.

[101] DRESDEN 2 DOCKET 50-237 LER 84-006 REV 1
 UPDATE ON LPCI ROOM SUBMARINE DOOR NOT CLOSED.
 EVENT DATE: 020884 REPORT DATE: 080984 NSSS: GE TYPE: BWR

(NSIC 194563) DURING NORMAL OPERATION, THE EAST LPCI CORNER ROOM SUBMARINE DOOR TO THE TORUS BASEMENT WAS FOUND OPEN AND UNATTENDED, IN VIOLATION OF THE TECH SPECS. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE OPERABILITY OF LPCI OR CORE SPRAY WAS NOT AFFECTED. THE DOOR WAS PROBABLY LEFT OPEN BY CONTRACTOR PERSONNEL. THE DOOR WAS IMMEDIATELY CLOSED AND SECURED, AND SIGNS WERE HUNG EMPHASIZING THE TECH SPEC REQUIREMENTS. THIS REPORT IS SUBMITTED AS A RESULT OF AN INVESTIGATION WHICH REVEALED THAT THE EVENT IS REPORTABLE PER 10 CFR 50.73(A)(2)(I)(B). ORIGINALLY THE EVENT WAS MISTAKENLY CLASSIFIED AS NON-REPORTABLE. REVIEW OF THE CIRCUMSTANCES WHICH LED TO THE MISCLASSIFICATION INDICATE THAT STATION PERSONNEL INVOLVED WERE NOT COMPLETELY FAMILIAR WITH THE RECENT CHANGES TO 10 CFR 50.73. ALL PERSONNEL DIRECTLY INVOLVED IN DETERMINING REPORTABILITY WILL RECEIVE ADDITIONAL TRAINING.

[102] DRESDEN 2 DOCKET 50-237 LER 84-003 REV 1
 UPDATE ON CORE SPRAY VALVE FAILURE.
 EVENT DATE: 022184 REPORT DATE: 091984 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 3 (BWR)
 VENDOR: LIMITORQUE CORP.

(NSIC 194160) DURING NORMAL OPERATION, CORE SPRAY VALVE M02-1402-25A FAILED TO OPERATE FROM THE CONTROL ROOM. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE REDUNDANT CORE SPRAY 'B' LOOP WAS OPERABLE TO PROVIDE CORE COOLING. CAUSE OF THE

EVENT WAS A MECHANICAL FAILURE OF THE GEAR HOUSING OF THE VALVE, PROBABLY CAUSED BY MECHANICAL OVERLOAD DURING OPERATION. A CONTRIBUTING FACTOR TO THIS OVERLOAD IS THE VALVE CONTROL CIRCUITRY, WHICH CAN ALLOW THE VALVE TO REPEATEDLY CLOSE AFTER ALREADY BEING CLOSED. THIS CREATES A HAMMERING EFFECT ON THE VALVE AND OPERATOR. WORK REQUESTS (WR 33853 AND 34302) HAVE BEEN WRITTEN TO MODIFY THE EXISTING CIRCUITRY TO PREVENT THIS EFFECT. THE MODIFICATION FOR UNIT 2 (M12-2-84-9) WILL BE COMPLETED DURING THE FALL 1984 REFUELING OUTAGE. THE MODIFICATION FOR UNIT 3 (M12-3-84-9) WILL BE COMPLETED DURING THE FALL 1985 OUTAGE. FINALLY AS INTERIM CORRECTIVE ACTION UNTIL THE VALVE CONTROL CIRCUITRY IS MODIFIED, CAUTION CARDS WERE PUT ON THE 1402-25A AND B VALVES FOR BOTH UNITS 2 AND 3. THESE CAUTION CARDS WILL WARN THE OPERATOR NOT TO HOLD ONTO THE CONTROL SWITCH WHEN CLOSING THESE VALVES IN ORDER TO LIMIT ANY HAMMERING EFFECT.

[103] DRESDEN 2 DOCKET 50-237 LER 85-018
SERVICE WATER SAMPLE MISSED.
EVENT DATE: 041585 REPORT DATE: 051385 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: DRESDEN 3 (BWR)

(NSIC 194567) DURING UNIT 2 STARTUP FOLLOWING A REFUEL OUTAGE, AND NORMAL UNIT 3 OPERATIONS, A RADIATION CHEMISTRY TECHNICIAN (RCT) FAILED TO OBTAIN SERVICE WATER EFFLUENT SAMPLES FOR ACTIVITY LEVEL ANALYSIS UNTIL 6 HRS AFTER THE TECH SPEC LIMIT OF 12 HRS HAD EXPIRED. THE RCT WAS RETRAINED ON SAMPLING REQUIREMENTS, IN PARTICULAR ON THOSE SAMPLES THAT HAVE RECENTLY BEEN ADDED TO THE LIST OF REQUIRED SAMPLES. IN ADDITION, THE RCT ROUTINE CHECKLIST HAS BEEN REVISED TO INCLUDE ALL OF THE CURRENTLY REQUIRED SAMPLES, IN ORDER TO PREVENT FUTURE SIMILAR OCCURRENCES BY OTHERS.

[104] DRESDEN 2 DOCKET 50-237 LER 85-023
TESTING ERROR CAUSES REACTOR SCRAM ON MSL RADIATION MONITOR TRIP.
EVENT DATE: 050285 REPORT DATE: 052985 NSSS: GE TYPE: BWR

(NSIC 194467) DURING UNIT 2 SHUTDOWN, MAIN STEAM LINE (MSL) RADIATION MONITOR SCRAM AND ISOLATION FUNCTIONAL TEST (DOS 1700-1) WAS PERFORMED AND A FULL SCRAM OCCURRED WHEN THE 'D' CHANNEL MSL RADIATION MONITOR WAS TRIPPED. THE 'D' CHANNEL TRIP PRODUCED THE EXPECTED HALF SCRAM; HOWEVER, A 'C' CHANNEL TRIP ALSO OCCURRED RESULTING IN THE REACTOR SCRAM. BOTH CHANNELS WERE RESET AND 'D' CHANNEL WAS TRIPPED AGAIN WITH ONLY THE HALF SCRAM OCCURRING. THE 'C' CHANNEL WAS TESTED AGAIN AND THE EXPECTED HALF SCRAM OCCURRED AND WAS RESET; HOWEVER, A SECOND HALF SCRAM OCCURRED 7 SECS LATER. THE 'C' CHANNEL MSL MONITOR WAS INSPECTED AND IT WAS DETERMINED THAT THE MONITOR PRODUCES A SPURIOUS TRIP SIGNAL DURING PERFORMANCE OF DOS 1700-1 AT LOW POWER LEVELS. THE SIGNAL IS PRODUCED FOLLOWING SATURATION OF THE MSL RADIATION MONITOR'S INDICATOR. A CAUTION CARD WAS PLACED ON THE 'C' MSL RAD MONITOR TO PROVIDE INSTRUCTIONS TO ALLOW AMPLE TIME FOR THE MONITOR TO RETURN TO ITS NORMAL SETTING. A PROCEDURE INQUIRY WAS WRITTEN TO ENSURE THE PROCEDURE REFLECTS THE TIME REQUIRED FOR THE INDICATION TO RETURN TO NORMAL.

[105] DRESDEN 3 DOCKET 50-249 LER 84-018 REV 1
UPDATE ON REACTOR SCRAMS ON LOW WATER LEVEL.
EVENT DATE: 102084 REPORT DATE: 121284 NSSS: GE TYPE: BWR
VENDOR: COPES-VULCAN, INC.
GENERAL ELECTRIC CO.

(NSIC 194161) UNIT 3 WAS AT STEADY POWER ON 10-20-84 WITH 3A FEEDWATER REGULATING VALVE (FWRV) IN AUTO WHEN THE REACTOR SCRAMMED BECAUSE OF LOW WATER LEVEL. APPARENT ROOT CAUSE OF SCRAM WAS DECIDED AS A MASTER CONTROLLER PROBLEM SINCE A BAD SWITCH WAS FOUND IN THE RESET CIRCUITRY OF THE CONTROLLER. THE MASTER CONTROLLER WAS REPLACED AND THE REACTOR WAS STARTED UP USING 3B FWRV. ON 11-2-84

THE 3A FWRV WAS AGAIN PLACED IN AUTO AND AFTER A FEW HRS HAD TO BE TAKEN OUT OF SERVICE. THE STEM TO DISC WAS FOUND SEPARATED DUE TO A CRACK IN THE STEM. THE STEM-DISC ASSEMBLY WAS REPLACED WITH AN ADDED PROTECTION OF WELDING THE STEM TO THE DISC FOR THIS NEW ASSEMBLY TO PREVENT FUTURE SEPARATION. DURING THE REACTOR SCRAM, HOWEVER, CRD J-7 ONLY SCRAMMED FROM POSITION 48 TO 46. A MINIMAL SAFETY SIGNIFICANCE RESULTED SINCE THE REACTOR SHUTDOWN AS ANALYZED PER TECH SPEC 3.3.A.1. REASON FOR CONTROL ROD NOT INSERTING TO POSITION 00 WAS DUE TO THE DISC SEPARATING FROM THE STEM IN THE 112 MANUAL VALVE. MORE DETAILS ON THIS CRD J-7 CAN BE FOUND IN DEVIATION REPORT #12-3-84-49. THE LAST SIMILAR FWRV OCCURRENCE WAS REPORTED BY DEVIATION REPORT #12-3-83-39.

[106] DRESDEN 3 DOCKET 50-249 LER 85-013
 REACTOR BUILDING VENT AND REFUELING FLOOR RAD MONITORS HAVE INCORRECT SETPOINTS.
 EVENT DATE: 051685 REPORT DATE: 061085 NSSS: GE TYPE: BWR

(NSIC 194603) DURING NORMAL OPERATION IT WAS DISCOVERED THAT BOTH CHANNELS OF ARM 3-1705-16 WERE SET TO TRIP AT 120 MR/HR WHICH IS IN EXCESS OF THE TECH SPEC LIMIT (3.2.D.4) OF 100 MR/HR. THE REACTOR BLDG VENTILATION SYSTEM WAS ISOLATED IMMEDIATELY AND THE EFFLUENT FLOW WAS REDIRECTED TO THE STANDBY GAS TREATMENT (SBGT) SYSTEM. SUBSEQUENTLY, THE MONITORS WERE RECALIBRATED AND THE REACTOR BLDG VENTILATION AND SBGT SYSTEMS WERE RETURNED TO NORMAL. THE CAUSE WAS DETERMINED TO BE PERSONNEL ERROR. THE INSTRUMENT USED TO CALIBRATE THE ARM DETECTORS WAS IMPROPERLY CALIBRATED. NO NEGATIVE SAFETY CONSEQUENCES RESULTED. THE REFUELING FLOOR RADIATION LEVEL REMAINED BELOW THE TECH SPEC LIMIT FOR THE DURATION OF THE EVENT (1600 HRS ON 5-15-85 THROUGH 1025 HRS ON 5-16-85). THE LAST SIMILAR OCCURRENCE (I.E., BOTH ARM CHANNELS SET TO TRIP AT GREATER THAN 100 MR/HR) IS REPORTED IN LER 80-12 ON DOCKET 50-249.

[107] FARLEY 1 DOCKET 50-348 LER 85-002
 REACTOR TRIP FOLLOWING INADVERTENT RAPID LOAD REJECTION.
 EVENT DATE: 031385 REPORT DATE: 041285 NSSS: WE TYPE: PWR
 VENDOR: NAMCO CONTROLS

(NSIC 194180) AT 0050 ON 3-13-85, THE REACTOR TRIPPED DUE TO LOW-LOW WATER LEVELS IN SGS 1B AND 1C. THE LOW-LOW SG WATER LEVELS WERE CAUSED BY A RAPID LOAD REDUCTION AND RESULTING SHRINK OF SG LEVELS. THE LOSS OF LOAD WAS DUE TO A SPURIOUS ACTUATION OF A LIMIT SWITCH ON A MSIV WHICH CAUSED THE MAIN TURBINE GOVERNOR AND INTERCEPT VALVES TO CLOSE. THE PLANT OPERATORS IMPLEMENTED FNP-1-EEP-0 (REACTOR TRIP OR SAFETY INJECTION) AND FNP-1-ESP-0.1 (REACTOR TRIP RESPONSE) PLACING THE UNIT SAFELY IN MODE 3. ALL SAFETY SYSTEMS FUNCTIONED AS DESIGNED. THE LIMIT SWITCH WAS REPLACED AND ALL MSIV LIMIT SWITCH TURBINE/REACTOR TRIP FUNCTIONS WERE VERIFIED PRIOR TO RETURNING TO OPERATION ON 3-15-85.

[103] FARLEY 1 DOCKET 50-348 LER 85-007
 INOPERABLE FIRE DOOR.
 EVENT DATE: 041185 REPORT DATE: 051085 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: FARLEY 2 (PWR)

(NSIC 194494) AT 0005 ON 4-011-85, FIRE DOOR 401 WAS DECLARED INOPERABLE AND COULD NOT BE REPAIRED WITHIN 7 DAYS. THEREFORE, THIS SPECIAL REPORT IS SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF TECH SPEC 3.7.12. TECH SPEC 3.7.12 REQUIREMENTS FOR VERIFYING THE OPERABILITY OF FIRE DETECTORS ON AT LEAST ONE SIDE OF THE NON-FUNCTIONAL FIRE BARRIER AND ESTABLISHING AN HOURLY FIRE WATCH WERE MET. THE FIRE DOOR WAS DECLARED INOPERABLE DUE TO A LOOSE AUTO-CLOSURE MECHANISM AND LOOSE ASTRAGAL. WHILE ATTEMPTING TO REPAIR THE DOOR, ADDITIONAL PROBLEMS WERE FOUND AND IT WAS DETERMINED THAT THE DOOR ASSEMBLY SHOULD BE REPLACED. A NEW DOOR ASSEMBLY HAS BEEN ORDERED AND IS EXPECTED TO BE RECEIVED ON 6-24-85.

REPAIRS WILL BE COMPLETED AS SOON AS PRACTICABLE AFTER THE DOOR HAS BEEN RECEIVED. FIRE WATCH REQUIREMENTS CONTINUE TO BE MET AND A FIRE WATCH WILL BE MAINTAINED UNTIL THE DOOR IS REPLACED AND DETERMINED FUNCTIONAL.

[109] FARLEY 1 DOCKET 50-348 LER 85-004
CONTAINMENT AIR LOCK DOORS OPEN.
EVENT DATE: 041585 REPORT DATE: 051585 NSSS: WE TYPE: PWR

(NSIC 194493) AT 1020 ON 4-15-85 DURING CORE ALTERATIONS, IT WAS DISCOVERED THAT BOTH DOORS OF THE CONTAINMENT AUX AIR LOCK WERE OPEN. TECH SPEC 3.9.4 REQUIRES THAT AT LEAST ONE DOOR OF EACH AIR LOCK BE CLOSED. UPON DISCOVERY, CORE ALTERATIONS AND MOVEMENT OF IRRADIATED FUEL IN CONTAINMENT WERE SUSPENDED IMMEDIATELY. BOTH AUX AIR LOCK DOORS WERE CLOSED AND CORE ALTERATIONS RESUMED AT 1035 ON 4-15-85. AN INVESTIGATION REVEALED THAT A WORKER HAD EXITED CONTAINMENT VIA THE AUX AIR LOCK AT 0630 ON 4-15-85. THE WORKER UTILIZED THE AUX AIR LOCK IMPROPERLY AND LEFT BOTH DOORS OF THE AIR LOCK OPEN. THE DOORS REMAINED OPEN UNTIL THEY WERE DISCOVERED AT 1020. TO PREVENT RECURRENCE, A CAUTION TAG WAS PLACED ON THE INTERIOR DOOR OF THE AUX AIR LOCK. THIS TAG STATED THAT THE AUX AIR LOCK WAS TO BE USED ONLY IN AN EMERGENCY AND THE TAG WAS MAINTAINED ON THE DOOR UNTIL CORE ALTERATIONS HAD BEEN COMPLETED. THE INDIVIDUAL INVOLVED IN THIS INCIDENT HAS BEEN COUNSELED CONCERNING PROPER UTILIZATION OF THE AUX AIR LOCK.

[110] FARLEY 1 DOCKET 50-348 LER 85-005
ALL CHARGING PUMPS WERE INOPERABLE.
EVENT DATE: 041585 REPORT DATE: 050985 NSSS: WE TYPE: PWR

(NSIC 194770) AT 0237 ON 4/15/85, DURING CORE ALTERATIONS, IT WAS RECOGNIZED THAT THE TECH SPEC 3.1.2.1 REQUIREMENT FOR A BORON INJECTION FLOWPATH THROUGH AN OPERABLE CHARGING PUMP AND THE TECH SPEC 3.1.2.3 REQUIREMENT FOR AN OPERABLE CHARGING PUMP WERE NOT MET BECAUSE ALL OF THE CHARGING PUMPS HAD BEEN TAGGED OUT. A BORON INJECTION FLOW PATH VIA THE RESIDUAL HEAT REMOVAL PUMP WAS AVAILABLE. UPON DISCOVERY, TECH SPEC ACTION STATEMENTS WERE COMPLIED WITH IN THAT CORE ALTERATIONS WERE SUSPENDED IMMEDIATELY. ON 4/14/85, IN ACCORDANCE WITH TECH SPEC REQUIREMENTS, ONLY ONE CHARGING PUMP (THE 1A CHARGING PUMP) WAS OPERABLE. THE SHIFT SUPERVISOR AUTHORIZED A TAGGING ORDER FOR REPAIR OF SEVERAL VALVES ON THE CHARGING LINE WHICH, AT 2242, MADE THE 1A CHARGING PUMP INOPERABLE. FUEL MOVEMENT BEGAN AT 2303. AT APPROXIMATELY 0200 ON 4/15/85, THE SHIFT SUPERVISOR REQUESTED A REVIEW OF TAGGING ORDERS AFFECTING THE BORON INJECTION FLOW PATHS. AT 0237, THIS REVIEW DETERMINED THAT NO CHARGING PUMPS WERE OPERABLE. ACTIONS WERE TAKEN TO RESTORE THE 1A CHARGING PUMP TO OPERABILITY AND THESE WERE COMPLETED AT 0424 ON 4/15/85. THIS EVENT WAS CAUSED BY PERSONNEL ERROR. THE SHIFT SUPERVISOR FAILED TO PERFORM A SUFFICIENTLY DETAILED REVIEW OF THE TAGGING ORDER BEING AUTHORIZED. THE SHIFT SUPERVISOR INVOLVED IN THIS INCIDENT HAS BEEN COUNSELED.

[111] FARLEY 1 DOCKET 50-348 LER 85-008
ISOLATION OF A AND B TRAIN RHR SUCTION VALVES DUE TO SINGLE CAUSE.
EVENT DATE: 050685 REPORT DATE: 060585 NSSS: WE TYPE: PWR

(NSIC 194771) AT 0925 ON 5/6/85, BOTH TRAINS OF THE RESIDUAL HEAT REMOVAL SYSTEM (RHR) AND THE OVERPRESSURE MITIGATION SYSTEM (OMS) WERE MADE INOPERABLE BY A COMMON CAUSE. AT 0920 ON 5/6/85, THE SUCTION VALVE FOR THE "A" TRAIN RHR SYSTEM CLOSED. ATTEMPTS TO OPEN THE VALVE FROM THE MAIN CONTROL BOARD WERE UNSUCCESSFUL AND THE OPERATORS STOPPED THE "A" TRAIN RHR PUMP. SIMILARLY, THE SUCTION VALVE FOR THE "B" TRAIN RHR SYSTEM CLOSED. ATTEMPTS TO OPEN THIS VALVE FROM THE MAIN CONTROL BOARD WERE UNSUCCESSFUL AND THE OPERATORS STOPPED THE "B" TRAIN RHR PUMP AT 0925. CLOSING OF THESE VALVES ALSO ISOLATED THE OMS RELIEF VALVES. POWER WAS REMOVED FROM THE TWO VALVES AND THEY WERE MANUALLY OPENED ALLOWING THE "A" TRAIN

RHR PUMP TO BE RE-STARTED AT 1012 ON 5/6/85 AND THE "B" TRAIN RHR PUMP TO BE RESTARTED AT 1020. THIS RESTORED BOTH TRAINS OF RHR AND OMS TO OPERABILITY. THIS EVENT WAS CAUSED BY PROCEDURAL INADEQUACY AND PERSONNEL ERROR. POWER WHICH HAD BEEN PROCEDURALLY REMOVED FROM THE VALVES WAS INCORRECTLY RESTORED WHILE AN AUTO CLOSE SIGNAL FROM THE RCS PRESSURE TRANSMITTERS WAS PRESENT.

[112] FARLEY 2 DOCKET 50-364 LER 85-008
 REACTOR TRIP CAUSED BY OPERATOR ERROR.
 EVENT DATE: 032885 REPORT DATE: 042285 NSSS: WE TYPE: PWR

(NSIC 194683) AT 0427 ON 3-28-85, THE REACTOR TRIPPED DUE TO LOW-LOW LEVEL IN STEAM GENERATOR 2A. PRIOR TO THE TRIP, REACTOR POWER HAD BEEN REDUCED TO 24% IN PREPARATION FOR THE TURBINE OVERSPEED TEST AND THE STEAM GENERATOR LEVELS WERE BEING CONTROLLED MANUALLY USING THE MAIN FEED REGULATING VALVES AND 2B STEAM GENERATOR FEED PUMP (SGFP). A TECHNICIAN, WHILE TROUBLESHOOTING A PROBLEM WITH THE 2A SGFP, WAS ASSIGNED TO PULL PRINTED CIRCUIT CARDS C8-230 AND C8-231 FROM 7300 PROCESS CONTROL CABINET NUMBER EIGHT. HOWEVER, HE MISTAKENLY PULLED CARDS C8-231 AND C8-232. PULLING CARD C8-232 CAUSED THE 2B SGFP TO SLOW TO APPROXIMATELY 3000 RPM, REDUCING STEAM GENERATOR FEED FLOW AND CAUSING STEAM GENERATOR LEVELS TO DECREASE. UPON RECEIPT OF STEAM GENERATOR LEVEL DEVIATION ALARMS, MANUAL CONTROL OF 2B SGFP WAS TAKEN, BUT OPERATORS WERE UNABLE TO PREVENT THE STEAM GENERATOR LEVELS FROM DECREASING TO THE LOW-LOW LEVEL REACTOR TRIP SETPOINT. FOLLOWING THE TRIP, THE OPERATORS IMPLEMENTED FNP-2-EEP-0 (REACTOR TRIP OR SAFETY INJECTION) AND FNP-2-ESP-0.1 (REACTOR TRIP RESPONSE), ENSURING THAT THE UNIT WAS SAFELY IN MODE 3. ALL SAFETY SYSTEMS FUNCTIONED AS DESIGNED. THIS EVENT WAS CAUSED BY PERSONNEL ERROR. THE TECHNICIAN INVOLVED HAS BEEN COUNSELED CONCERNING HIS ACTION.

[113] FERMI 2 DOCKET 50-341 LER 85-006
 DIVISION I SGTS AND FIRE PROTECTION SYSTEM INOPERABLE DUE TO MAINTENANCE ERRORS.
 EVENT DATE: 040785 REPORT DATE: 052485 NSSS: GE TYPE: BWR

(NSIC 194589) DIVISION I OF THE STANDBY GAS TREATMENT SYSTEM (SGTS) AND ITS ASSOCIATED CARBON DIOXIDE FIRE PROTECTION SYSTEM WERE NOT RECOGNIZED AS BEING INOPERABLE FOR APPROX 15 DAYS AND 13 DAYS, RESPECTIVELY. THE PLANT WAS IN OPERATIONAL CONDITION 5 AND CORE ALTERATIONS WERE PERFORMED DURING THIS TIME THUS VIOLATING TECH SPECS. THE CAUSE WAS FAILURE TO PROPERLY ALIGN BOTH SYSTEMS WHEN RETURNED TO SERVICE FOLLOWING MINOR MODIFICATIONS. A MEMO DESCRIBING THE INCIDENT AND ITS CAUSE HAS BEEN PLACED ON THE REQUIRED READING LIST FOR LICENSED OPERATORS AND THE PROCEDURE FOR RETURNING SYSTEMS TO SERVICE IS BEING REVISED TO MORE EXPLICITLY DISCUSS VERIFICATIONS REQUIRED TO ENSURE SYSTEM OPERABILITY.

[114] FERMI 2 DOCKET 50-341 LER 85-007
 TWO GRAB SAMPLES MISSED DURING RADWASTE DISCHARGE.
 EVENT DATE: 042485 REPORT DATE: 052485 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 194590) ON 2 OCCASIONS BETWEEN APR 23 AND 25, 1985, TECH SPEC 3.3.7.11.B WAS VIOLATED IN THAT GRAB SAMPLES WERE NOT TAKEN WITHIN THE REQUIRED 8 HR PERIOD WHEN DISCHARGING EFFLUENT FROM THE CIRCULATING WATER RESERVOIR DECANT LINE WITH THE RADIATION MONITOR INOPERABLE. THE CAUSES OF THESE VIOLATIONS WERE FAILURE TO RECOGNIZE THE REQUIREMENT TO SAMPLE IN ONE INSTANCE AND FAILURE TO ALLOW FOR DELAYS IN OBTAINING THE SAMPLE IN THE OTHER INSTANCE. PERSONNEL INVOLVED EITHER HAVE OR WILL BE REQUIRED TO REVIEW THE EVENTS AND THEIR CAUSES. IN ADDITION, A PROCEDURE TO GOVERN THE PERFORMANCE OF TECH SPEC SURVEILLANCES AND ACTION STATEMENTS BY CHEMISTRY SECTION PERSONNEL HAS BEEN WRITTEN AND APPROVED.

[115] FERM 2 DOCKET 50-341 LER 85-008
 MAINTENANCE WORK CAUSES TWO SPURIOUS IRM TRIPS AND REACTOR SCRAMS.
 EVENT DATE: 042585 REPORT DATE: 052585 NSSS: GE TYPE: BWR

(NSIC 194591) ON 4-25-85, WITH THE PLANT IN MODE 5 AND CONTROL ROD DRIVE REFURBISHMENT UNDERWAY BENEATH THE REACTOR VESSEL, THE RPS WAS ACTUATED TWICE WHEN WORKERS BUMPED AN IRM CABLE, CAUSING A FALSE UPSCALE TRIP ON IRM H (RPS CHANNEL B2). THIS UNANTICIPATED HALF-SCRAM COMBINED, WITH AN ANTICIPATED HALF-SCRAM IN RPS A FROM MAINTENANCE ON THE MAIN STEAM LINE RADIATION MONITORS, PRODUCED A FULL SCRAM SIGNAL. ALL SYSTEMS RESPONDED AS EXPECTED TO THE SCRAM. THE IRM TRIP RESULTED FROM THE RESPONSE OF THE IRM DETECTOR TO THE CHANGE IN CAPACITANCE CAUSED BY THE SLIGHT DEFORMATION OF THE CABLE INSULATION WHEN THE CABLE WAS BUMPED. BECAUSE THIS OCCURS ONLY WHERE THERE IS A LOT OF WORK UNDER THE VESSEL, IRM TRIPS DUE TO BUMPING THE CABLES ARE NOT EXPECTED TO OCCUR DURING NORMAL OPERATION AND HAVE NOT OCCURRED SINCE THE CONTROL ROD DRIVE REFURBISHMENT WAS COMPLETED.

[116] FERM 2 DOCKET 50-341 LER 85-009
 CONTROL ROD DRIVE FRICTION TESTING PERFORMED WITH RPS SHORTING LINKS INSTALLED.
 EVENT DATE: 042685 REPORT DATE: 052685 NSSS: GE TYPE: BWR

(NSIC 194592) ON 4-26-85 AT 0940 HRS, WITH THE PLANT IN OPERATIONAL CONDITION 5 AND CONTROL ROD DRIVE FRICTION TESTING IN PROGRESS, CONTROL ROOM PERSONNEL SUSPENDED TESTING WHEN THEY NOTED THAT THE CONDITION 5 SURVEILLANCE LOG INDICATED THE RPS SHORTING LINKS WERE NOT REMOVED AS REQUIRED BY TECH SPEC 3.9.2.C. ALL CONTROL RODS WERE INSERTED OR VERIFIED TO BE FULLY INSERTED AND PERSONNEL WERE DIRECTED TO SUSPEND CORE ALTERATIONS. PLANT STAFF REVIEWED TECH SPECS 3.9.2 AND 3.9.3 WITH THE RESIDENT INSPECTOR AND NRR IN WASHINGTON TO RESOLVE AN APPARENT CONFLICT BETWEEN SPEC 3.9.2.C AND SURVEILLANCE REQUIREMENT 4.9.2.D. THE PLANT WAS LATER INFORMED THAT NRR'S INTERPRETATION OF SPEC 3.9.2.C REQUIRED THAT THE SHORTING LINKS BE REMOVED DURING SINGLE CONTROL ROD WITHDRAWALS. THE NUCLEAR SHIFT SUPERVISOR AUTHORIZED REMOVAL OF THE SHORTING LINKS AT 0130 ON 4-27 AND CONTROL ROD DRIVE FRICTION TESTING RECOMMENCED AT 0545 HRS THAT DAY. THIS EVENT WILL BE REVIEWED WITH ALL LICENSED PERSONNEL AND A TECH SPEC CHANGE WILL BE REQUESTED TO RESOLVE THE CONFLICT BETWEEN SPECS 3.9.2 AND 4.9.2.

[117] FERM 2 DOCKET 50-341 LER 85-010
 NUMEROUS PERSONNEL ERRORS CAUSE FOUR REACTOR SCRAMS AND ONE CONTAINMENT ISOLATION.
 EVENT DATE: 042785 REPORT DATE: 052885 NSSS: GE TYPE: BWR
 VENDOR: AMPHENOL

(NSIC 194620) ON APRIL 27, 1985, AT 0844 HOURS WHILE IN OPERATIONAL CONDITION 5, AN RPS TRIP OCCURRED CAUSED BY AN APRM "E" UPSCALE TRIP. WITHIN A FEW SECONDS OF RESETTING THE TRIP, A SECOND TRIP OCCURRED FROM THE SAME CAUSE. AFTER RESETTING THE SECOND TRIP, A THIRD WAS CAUSED BY A SCRAM DISCHARGE VOLUME HIGH WATER LEVEL SIGNAL. WHEN MARKING THE EVENTS ON THE APRM CHART RECORDER PAPER, ANOTHER RPS TRIP WAS CAUSED BY THE RECORDER DOOR STRIKING THE "B" BACKUP MANUAL SCRAM PUSHBUTTON. AN OPERATOR SENT TO RESET THE "B" MANUAL SCRAM BREAKER RESET BOTH "A" AND "B" RESULTING IN NUMEROUS ISOLATIONS AND ACTUATIONS. THE RECORDER DOOR HAS BEEN MODIFIED; ALL OPERATORS WILL BE CAUTIONED TO ENSURE PROPER COMMUNICATION PROCEDURES ARE FOLLOWED AND THE LPRM CABLES WHICH CAUSED THE SPURIOUS APRM SIGNALS ARE BEING REPAIRED.

[118] FERM 2 DOCKET 50-341 LER 85-011
 NOISE FROM TEST EQUIPMENT CAUSES TWO REACTOR SCRAMS.
 EVENT DATE: 042785 REPORT DATE: 052785 NSSS: GE TYPE: BWR

(NSIC 194621) ON 4-27-85, AT 1106 HRS AND 1406 HRS, TWO RPS ACTUATIONS OCCURRED

FROM SOURCE RANGE MONITOR (SRM) UPSCALE TRIPS. THE PLANT WAS IN OPERATIONAL CONDITION 5 WITH THE RPS SHORTING LINKS REMOVED. ALL CONTROL RODS WERE FULLY INSERTED AT THE TIME OF THE RPS ACTUATIONS. THE SRM UPSCALE TRIPS WERE CAUSED BY A RADIO-FREQUENCY SIGNAL GENERATED BY TEST EQUIPMENT BEING USED TO TROUBLESHOOT IRM CIRCUITRY LOCATED IN THE SAME CABINET AS THE SRM CIRCUITRY. A PRECAUTION IS BEING ADDED TO THE APPROPRIATE PROCEDURE TO PREVENT A RECURRENCE.

[119] FERM 2 DOCKET 50-341 LER 85-013
SECONDARY CONTAINMENT NOT ESTABLISHED PRIOR TO STARTING CORE ALTERATIONS.
EVENT DATE: 042785 REPORT DATE: 052885 NSSS: GE TYPE: BWR

(NSIC 194623) ON THE MORNING OF 4-28-85 WITH THE PLANT IN OPERATIONAL CONDITION 5 AND CONTROL ROD DRIVE FRICTION TESTING IN PROGRESS, OPERATORS BECAME AWARE THAT SECONDARY CONTAINMENT INTEGRITY HAD NOT BEEN MAINTAINED DURING CORE ALTERATIONS, AS REQUIRED BY TECH SPEC 4.6.5.1.A, FOR A PERIOD OF APPROX 7 HRS ON 4-27. PLANT PERSONNEL MISINTERPRETED THE WORDING OF SURVEILLANCE PROCEDURE 24.000.03 AND INCORRECTLY CONSIDERED A SECONDARY CONTAINMENT DIFFERENTIAL PRESSURE OF 0.100" VAC WATER GUAGE (WG) TO MEET THE ACCEPTANCE CRITERION OF VACUUM GREATER THAN OR EQUAL TO -0.125" VAC WG. TO PREVENT RECURRENCE OF THIS EVENT, PROCEDURE 24.000.03 HAS BEEN REVISED TO CLARIFY THE WORDING OF THE ACCEPTANCE CRITERION AND THE SETPOINTS ON THE ANNUNCIATORS FOR HIGH AND LOW DIFFERENTIAL PRESSURE HAVE BEEN REVISED TO ENSURE MORE RELIABLE ANNUNCIATION. THIS EVENT WILL BE REVIEWED WITH ALL LICENSED PERSONNEL THROUGH THE REQUIRED READING PROGRAM AND THE REQUALIFICATION TRAINING PROGRAM.

[120] FERM 2 DOCKET 50-341 LER 85-012
REACTOR SCRAMS DURING RPS SHORTING LINK INSTALLATION.
EVENT DATE: 042885 REPORT DATE: 052885 NSSS: GE TYPE: BWR

(NSIC 194622) ON 4-28-85 AT 0132 HRS WITH THE PLANT IN OPERATIONAL CONDITION 5, A REACTOR SCRAM OCCURRED DURING INSTALLATION OF THE RPS SHORTING LINKS. A SECOND SCRAM OCCURRED SOON AFTER RESET OF THE FIRST SCRAM, WHILE THE SECOND SHORTING LINK WAS BEING INSTALLED IN PANEL H11-P611. THE ROOT CAUSE OF THESE SCRAMS WAS PERSONNEL FAILURE TO COMPLY WITH WRITTEN PROCEDURES. THE LATEST REV OF THE PROCEDURE REQUIRED THE OPERATOR TO INSTALL ONE LINK IN PANEL H11-P609 THEN ONE IN H11-P611, THEN ANOTHER IN P609 AND ANOTHER IN P611. INSTEAD, WORKING TO AN EARLIER VERSION OF THE PROCEDURE, THE OPERATOR INSTALLED THE 2 LINKS FOR PANEL P609 AND THEN ATTEMPTED TO INSTALL THE 2 LINKS FOR PANEL P611. THE 2 SCRAMS OCCURRED WHILE THE 2 LINKS IN PANEL P611 WERE BEING INSTALLED. TO PREVENT RECURRENCE, THIS EVENT IS BEING REVIEWED WITH ALL LICENSED PERSONNEL.

[121] FERM 2 DOCKET 50-341 LER 85-014
INADVERTENT RPS ACTUATION WHILE VALVING IN REACTOR LEVEL REFERENCE LEG.
EVENT DATE: 050185 REPORT DATE: 053185 NSSS: GE TYPE: BWR

(NSIC 194838) ON MAY 1, 1985, WITH THE PLANT IN OPERATIONAL CONDITION 5 AND NO CORE ALTERATIONS IN PROGRESS, AN RPS ACTUATION OCCURRED ON AN ERRONEOUS INDICATION OF REACTOR VESSEL LEVEL 3. THE PLANT RESPONDED AS DESIGNED, INITIATING A FULL SCRAM AND ISOLATION SIGNALS FOR VALVE GROUPS 4, 13, AND 15. A SIMILAR EVENT WAS REPORTED IN LER 85-005-00. THE SCRAM OCCURRED WHEN PERSONNEL MISINTERPRETED THE PROCEDURE FOR VALVING REACTOR LEVEL INSTRUMENT (C32-N004B) BACK INTO SERVICE. THE PRESSURE DIFFERENCE BETWEEN THE REFERENCE LEG AND THE INSTRUMENT UNDER TEST CAUSED A PERTURBATION IN THE INDICATED LEVEL WHEN THE INSTRUMENT WAS VALVED BACK IN. THE PROCEDURE HAS BEEN FURTHER REVISED TO CLARIFY THE IMPORTANCE OF PRESSURIZING THE LEVEL INSTRUMENTS BEFORE RETURNING THEM TO SERVICE. ALSO, A MOCKUP HAS BEEN CONSTRUCTED TO AID IN TRAINING THE INSTRUMENT REPAIRMEN IN THE PROPER TECHNIQUE FOR RETURNING THE INSTRUMENTS TO SERVICE.

TRAINING WILL BE STARTED AS SOON AS MORE SUITABLE VALVES CAN BE INSTALLED IN THE MOCKUP.

[122] FERMI 2 DOCKET 50-341 LER 85-015
INADVERTENT ACTUATION OF REACTOR WATER LEVEL INSTRUMENTS WHILE VALVING IN
REFERENCE LEG.
EVENT DATE: 050685 REPORT DATE: 053185 NSSS: GE TYPE: BWR

(NSIC 194624) ON 5-6-85 AT 1401 HRS, A FULL SCRAM SIGNAL WAS GENERATED WHILE RESTORING A REACTOR VESSEL LEVEL INSTRUMENT TO SERVICE FOLLOWING CALIBRATION. THE PLANT WAS IN OPERATIONAL CONDITION 5 WITH ALL CONTROL RODS INSERTED AND NO CORE ALTERATIONS IN PROGRESS. THE SCRAM WAS CAUSED BY AN ERRONEOUS INDICATION OF LOW REACTOR VESSEL WATER LEVEL (LEVEL 3) RESULTING FROM A PRESSURE TRANSIENT INDUCED BY INCORRECT VALVING TECHNIQUE. CORRECTIVE ACTION IDENTIFIED IN 2 PREVIOUS SIMILAR LERS (85-005 AND 85-014) HAD NOT BEEN COMPLETED AT THE TIME OF THIS EVENT BUT IS EXPECTED TO PREVENT RECURRENCE OF THIS EVENT. THE CORRECTIVE ACTION INCLUDES CLARIFICATION OF THE PROCEDURE FOR VALVING IN THE INSTRUMENTS (COMPLETED 5-11) AND TRAINING I&C PERSONNEL IN PROPER VALVING TECHNIQUE ON A MOCKUP OF THE VALVES AND INSTRUMENTS (IN PROGRESS AT THIS TIME). ONLY PERSONNEL TRAINED IN THE PROPER VALVING TECHNIQUE ARE NOW PERMITTED TO VALVE REACTOR VESSEL LEVEL INSTRUMENTS IN AND OUT OF SERVICE.

[123] PERMI 2 DOCKET 50-341 LER 85-016
REACTOR SCRAM DUE TO INSTRUMENT VALVING ERROR.
EVENT DATE: 050985 REPORT DATE: 061085 NSSS: GE TYPE: BWR

(NSIC 194707) A SCRAM AND SEVERAL PRIMARY CONTAINMENT ISOLATIONS OCCURRED ON MAY 9, 1985 WHILE THE REACTOR WAS IN THE REFUELING MODE WHEN A NON-LICENSED OPERATOR PERFORMED IMPROPER VALVING ON A REACTOR WATER LEVEL INSTRUMENT. HE WAS ATTEMPTING TO REMOVE A TEMPORARY NITROGEN SUPPLY THAT HAD BEEN USED TO SUPPLY A SIMULATED REFERENCE LEG SIGNAL FOR THE FLOOD UP RANGE WATER LEVEL INSTRUMENTATION WITH THE VESSEL HEAD NOT INSTALLED. APPROPRIATE PERSONNEL ARE BEING INFORMED OF THE EVENT VIA A REQUIRED READING LIST. A MORE PERMANENT TYPE INSTALLATION WITH APPROPRIATE PROCEDURES FOR ITS USE IS PLANNED TO PREVENT RECURRENCE.

[124] FITZPATRICK DOCKET 50-333 LER 85-010
INADVERTENT LIFTING OF FUEL ASSEMBLY FROM REACTOR CORE.
EVENT DATE: 042185 REPORT DATE: 051485 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 194584) DURING A REFUELING OUTAGE, WHILE CONDUCTING CONTROL ROD DRIVE MAINTENANCE, A FUEL ASSEMBLY WAS INADVERTENTLY LIFTED FROM THE REACTOR VESSEL WITH THE FUEL SUPPORT GRAPPLE. VISUAL CONTACT WITH THE FUEL SUPPORT GRAPPLE HAD BEEN LOST AS A RESULT OF A GRAPPLE AIR LEAK. THE REACTOR BLDG VENTILATION WAS ISOLATED AND THE STANDBY GAS TREATMENT SYSTEM HAD BEEN PLACED IN OPERATION PRIOR TO THE EVENT. A SAFETY LINE WAS ATTACHED TO THE FUEL ASSEMBLY AND THE FUEL ASSEMBLY WAS THEN TRANSPORTED TO THE SPENT FUEL POOL. THE INCIDENT PROBABLY WOULD NOT HAVE OCCURRED HAD THE OPERATOR STOPPED HOIST MOTION AS SOON AS VISUAL CONTACT WITH THE GRAPPLE WAS LOST. ALL LICENSED OPERATORS HAVE BEEN COUNSELLED ON THIS INCIDENT AND THE IMPORTANCE OF STOPPING MOVEMENT OF REFUELING EQUIPMENT WHEN VISUAL CONTACT IS LOST.

[125] FITZPATRICK DOCKET 50-333 LER 85-012
PERSONNEL ERRORS CAUSE TWO REACTOR SCRAMS DURING SHUTDOWN.
EVENT DATE: 050385 REPORT DATE: 053085 NSSS: GE TYPE: BWR

(NSIC 194586) DURING A SCHEDULED OUTAGE FOR MAINTENANCE, 2 REACTOR SCRAMS

OCCURRED WITHIN AN APPROXIMATE PERIOD OF 8 HRS. AT THE TIME OF THE FIRST EVENT, THE OPERATORS WERE PERFORMING A VALVE LINEUP ON INSTRUMENT ROOT VALVES FOR REACTOR PRESSURE VESSEL LEVEL INSTRUMENTS. THE INSTRUMENTS THAT GENERATE THE LOW LEVEL SIGNAL TO THE RPS WERE IMPROPERLY VALVED IN, CAUSING THE LEVEL INSTRUMENT TO SENSE A FALSE LOW LEVEL SIGNAL AND GENERATE A TRIP SIGNAL TO THE RPS. IN THE SECOND SCRAM EVENT, A FALSE LOW REACTOR LEVEL SIGNAL GENERATED A REACTOR SCRAM DUE TO AN INSTRUMENT TECHNICIAN BACKFILLING AN INSTRUMENT LINE WHICH IS COMMON WITH THE INSTRUMENTS WHICH GENERATE A SCRAM ON REACTOR VESSEL LOW LEVEL. THE INITIAL ACTION WAS TO RESET THE SCRAMS. THE OPERATORS AND TECHNICIANS INVOLVED WERE COUNSELLED ON THE EVENTS.

[126] FITZPATRICK DOCKET 50-333 LER 85-011
NINE INOPERABLE SNUBBERS FOUND.
EVENT DATE: 050685 REPORT DATE: 051785 NSSS: GE TYPE: BWR
VENDOR: BERGEN-PATTERSON PIPE SUPPORT CORPORATION
GRINNELL INDUSTRIAL PIPING, INC.

(NSIC 194585) DURING THE 1985 REFUEL OUTAGE, FUNCTIONAL TESTING OF HYDRAULIC SNUBBERS WAS PERFORMED AS REQUIRED BY TECH SPEC 4.6.I.3. NINE SNUBBERS WERE FOUND WITH LOCKUP AND BLEED RATES OUTSIDE THE ACCEPTANCE RANGE AND WERE DETERMINED TO BE INOPERABLE. 5 UNITS WERE FOUND TO HAVE IMPROPER LOCKUP AND BLEED RATE SETTINGS. 1 GRINNELL SNUBBER WAS FOUND TO HAVE AIR ENTRAPPED IN THE VALVE BODY DUE TO A SCORED CYLINDER TO VALVE BODY TUBE AT THE LENZ FITTING. THIS SNUBBER WAS AN OBSOLETE DESIGN. 3 BERGEN-PATERSON SNUBBERS WERE FOUND WITH A POPPET SPRING LODGED BETWEEN THE VALVE POPPET AND VALVE BODY. SNUBBERS WERE ON THE RECIRC., CONTROL ROD DRIVES, RHR AND CORE SPRAY SYSTEMS. ALL INOPERABLE SNUBBERS WERE OVERHAULED, TO BE LATER USED AS SPARES. REBUILT AND FUNCTIONALLY TESTED SPARE UNITS WERE INSTALLED IN PLACE OF THE FAILED UNITS. ALL REMAINING HYDRAULIC SNUBBERS WERE FUNCTIONALLY TESTED PER TECH SPEC SECTION 4.6.I.3, WITH SATISFACTORY RESULTS.

[127] FITZPATRICK DOCKET 50-333 LER 85-014
GENERIC SETPOINT DRIFT OF PRESSURE SWITCHES.
EVENT DATE: 051185 REPORT DATE: 061085 NSSS: GE TYPE: BWR

(NSIC 194617) WITH THE PLANT SHUTDOWN FOR REFUELING AND WHILE PERFORMING A FUNCTIONAL/CALIBRATION SURVEILLANCE TEST REACTOR HIGH PRESSURE LC SWITCH, 02 PS 128A WAS FOUND TO ACTUATE AT 81 PSIG. THE OPERATING TECH SPEC TABLE 3.2-2 VALUE IS 50 LESS THAN OR EQUAL TO P LESS THAN OR EQUAL 75 PSIG. THE REDUNDANT SWITCH 02 PS 128 B WAS FOUND TO ACTUATE AT 82 PSIG. THESE SWITCHES SERVE AS A PERMISSIVE FOR OPENING THE LPCI VALVES 10MOV25 A & B WHEN THE SHUTDOWN COOLING MODE IS INITIATED PROVIDED A LOCA SIGNAL IS NOT PRESENT AND REACTOR PRESSURE IS LESS THAN 450 PSIG. THE SWITCHES WERE IMMEDIATELY RECALIBRATED AND TESTED SUCCESSFULLY PER THE SURVEILLANCE PROCEDURE. AN INCREASED SURVEILLANCE FREQUENCY OF ONCE PER WEEK WAS ALSO ESTABLISHED FOR TREND OBSERVATION. FOUR SURVEILLANCE TESTS HAVE BEEN COMPLETED SINCE THE 5-11-85, OCCURRENCE AND NO DRIFT OUTSIDE THE ESTABLISHED BAND OF 62 (54-70) PSIG HAS BEEN OBSERVED. DUE TO THIS SATISFACTORY BEHAVIOR, SWITCHES WILL BE RETURNED TO THE REQUIRED MONTHLY FUNCTIONAL SURVEILLANCE FREQUENCY.

[128] FT. CALHOUN 1 DOCKET 50-285 LER 85-001
VIAS ACTUATION DUE TO RADIATION.
EVENT DATE: 030385 REPORT DATE: 040285 NSSS: CE TYPE: PWR

(NSIC 194170) ON 3-3-85 AT 0112 HRS, AN ACTUATION OF THE VENTILATION ISOLATION ACTUATION SIGNAL (VIAS) BY RADIATION MONITOR RM-060 OCCURRED. THE ACTUATION OCCURRED COINCIDENT WITH NORMAL PURGING OF THE REACTOR COOLANT SAMPLE LINE IN A VENTILATION HOOD IN PREPARATION FOR DRAWING A DEPRESSURIZED REACTOR COOLANT

SAMPLE. THE GASES RELEASED FROM THE LIQUID SAMPLE WERE DRAWN, AS DESIGNED, THROUGH THE VENTILATION HOOD INTO THE AUX BLDG VENTILATION SYSTEM AND INTO THE VENTILATION DISCHARGE STACK. RM-060 OPERATES TO ANALYZE IODINE-131 IN GASEOUS EFFLUENTS. THE MONITOR RESPONDED TO RADIONUCLIDES OTHER THAN I-131 AND INITIATED THE VIAS. SAMPLING OF REACTOR COOLANT WAS IMMEDIATELY SUSPENDED. THE ACTIVITY INDICATED BY RM-060 RAPIDLY DECREASED AFTER SAMPLING WAS STOPPED. RM-060 WAS RESET AT 0115 HRS ON 3-3-85, THREE MINS AFTER VIAS WAS INITIATED. THERE WERE NO OPERATOR ERRORS OR VIOLATIONS OF PROCEDURES. REACTOR COOLANT SAMPLING PROCEDURES INCLUDING SAMPLE PURGE TIMES WERE REVIEWED FOR ADEQUACY AND FOUND TO BE APPROPRIATE. OTHER LERS WRITTEN AS A RESULT OF VIAS ACTUATIONS ARE AS FOLLOWS: 84-005, 84-006, 84-007, 84-010, 84-014, 84-017, 84-018, 84-019, 84-023, 84-024, AND 84-025.

[129] FT. CALHOUN 1 DOCKET 50-285 LER 85-002
UNPLANNED ACTUATION OF CONTAINMENT ISOLATION SYSTEM.
EVENT DATE: 030685 REPORT DATE: 040885 NSSS: CE TYPE: PWR

(NSIC 194666) DURING NORMAL PLANT OPERATION AT 100% POWER, AN UNPLANNED ACTUATION OF THE VENTILATION ISOLATION ACTUATION SIGNAL (VIAS) OCCURRED AT 1735 ON MARCH 6, 1985. THE VIAS, AN ENGINEERED SAFETY FEATURE (ESF), WAS INITIATED BY CONTAINMENT STACK PARTICULATE MONITOR RM-061. FOLLOWING RECEIPT OF THE VIAS, EMERGENCY PROCEDURE EP-11 (HIGH RADIOACTIVITY) WAS IMPLEMENTED. PER EP-11, THE DAMPERS AND FANS OF THE AUXILIARY BUILDING VENTILATION SYSTEM WERE CYCLED THROUGH VARIOUS LINEUPS TO TRY AND IDENTIFY THE SOURCE OF THE HIGH AIRBORNE ACTIVITY. ON THE MORNING OF MARCH 7, 1985, A SMALL REACTOR COOLANT LEAK WAS IDENTIFIED AT THE SUCTION OF THE "B" CHARGING PUMP. THE PUMP WAS SHUT DOWN, ISOLATED AND DRAINED. A MAINTENANCE ORDER WAS ISSUED AND THE PUMP SUCTION LINE WAS REPAIRED. FOLLOWING THE REPAIRS, NORMAL VENTILATION WAS RESTORED TO THE AUXILIARY BUILDING. THE VIAS TRIP SIGNAL WAS RESET AT 1917 ON MARCH 7, 1985. QUANTITATIVE ANALYSES OF GRAB AIR SAMPLES AND VENTILATION STACK PROCESS MONITOR READINGS INDICATED THAT NO TECH SPEC OR 10CFR20 LIMITS WERE EXCEEDED. NO OPERATOR ERRORS OCCURRED. ALL ENGINEERED SAFETY FEATURES FUNCTIONED AS DESIGNED.

[130] FT. CALHOUN 1 DOCKET 50-285 LER 85-003
TWO VENTILATION ISOLATIONS.
EVENT DATE: 032185 REPORT DATE: 041985 NSSS: CE TYPE: PWR

(NSIC 194813) DURING NORMAL PLANT OPERATION AT 100% POWER, TWO UNPLANNED ACTUATIONS OF THE VENTILATION ISOLATION ACTUATION SIGNAL (VIAS) OCCURRED AT 1338 HOURS ON MARCH 21, 1985, AND AT 0817 HOURS ON MARCH 22, 1985. EACH VIAS, AN ENGINEERED SAFETY FEATURE (ESF), WAS INITIATED BY CONTAINMENT STACK PARTICULATE MONITOR RM-061. BOTH ACTUATIONS OCCURRED AS A RESULT OF THE PERFORMANCE OF THE SAME TASK. PRIOR TO THE INCIDENT, SPENT RESIN HAD BEEN TRANSFERRED FROM PURIFICATION ION EXCHANGER A (CH-8A) TO THE SPENT RESIN STORAGE TANK (SRST). AT THE TIME OF THE VIAS, THE OPERATOR WAS DRAINING THE REMAINDER OF THE FLUSH WATER FROM CH-8A IN ACCORDANCE WITH OPERATING INSTRUCTION OI-CH-6, SPENT RESIN TRANSFER. IN BOTH INCIDENTS, SOME OF THE RADIOACTIVE GAS NITROGEN FROM THE ION EXCHANGER CARRIED THROUGH THE DRAIN LINE TO THE SPENT REGENERANT TANKS (SRT'S). THE SRT'S ARE VENTED TO THE VENTILATION EXHAUST DUCT WORK, AND THUS, RM-061 DETECTED THE HIGHER THAN BACKGROUND RADIATION LEVELS IN THE PLANT STACK AND INITIATED THE VIAS. PEAK ACTIVITY FOR THE FIRST INCIDENT REACHED APPROXIMATELY 10,000 CPM, AND APPROXIMATELY 5,000 CPM FOR THE SECOND. IN BOTH CASES, THE ION EXCHANGER DRAIN WAS IMMEDIATELY ISOLATED AND THE RADIATION MONITOR READINGS DECREASED TO NORMAL. VIAS WAS RESET AT 1530 HOURS ON MARCH 21, 1985, AND AT 1004 HOURS ON MARCH 22, 1985, AFTER RM-061 RADIATION MONITOR READINGS DECREASED BELOW THE ALARM SETPOINT.

[131] FT. ST. VRAIN DOCKET 50-267 LER 80-041 REV 2
 UPDATE ON DRIFT IN CIRCULATOR SEAL PRESSURE SWITCH.
 EVENT DATE: 072480 REPORT DATE: 062283 NSSS: GA TYPE: HTGR

(NSIC 194602) 1 OF 12 HELIUM CIRCULATOR SEAL MALFUNCTION PRESSURE DIFFERENTIAL SWITCH UNITS WAS DISCOVERED TO HAVE A TRIP POINT OUTSIDE THE LIMITS OF LCO 4.4.1, TABLE 4.4-3. DURING AUGUST'S TESTING, 4 OF THE 12 SWITCH UNITS WERE FOUND TO TRIP OUTSIDE THESE LIMITS. THESE ARE REPORTABLE PER TECH SPECS AC 7.5.2(B)1 AND AC 7.5.2(B)2. SIMILAR REPORTS ARE RO'S 77-47, 78-27, 79-32, 79-56, 80-07, 80-16, 80-20, 80-026, AND 80-34. ITT BARTON MODEL 289 PRESSURE DIFFERENTIAL SWITCHES FAILED TO ACTUATE AT TRIP POINT DUE TO DIRT ACCUMULATION IN ELECTRICAL SWITCHES. THE ITT BARTON PRESSURE DIFFERENTIAL INDICATING SWITCHES WERE REPLACED WITH ITT BARTON MODEL 752 PRESSURE TRANSMITTERS AND BISTABLE TRIP MODULES (MODEL PT-3D, MANUFACTURED BY GENERAL ATOMIC CO) VIA CHANGE NOTICE 1110.

[132] FT. ST. VRAIN DOCKET 50-267 LER 80-047 REV 1
 UPDATE ON SHUTDOWN DUE TO INOPERABLE SNUBBERS.
 EVENT DATE: 082580 REPORT DATE: 102783 NSSS: GA TYPE: HTGR

(NSIC 194601) A SCHEDULED SURVEILLANCE SHOWED SEVERAL HYDRAULIC SNUBBERS TO BE INOPERABLE. NINE OF THE SNUBBERS COULD NOT BE REPAIRED IN THE 72 HR PERIOD ALLOWED BY LCO 4.3.10, AND AN ORDERLY SHUTDOWN BEGAN. THE REACTOR WAS MANUALLY SCRAMMED AT 1740 HRS ON 8-29-80. THE SHUTDOWN WAS REQUIRED BY LCO 4.3.10 AND REPORTABLE PER TECH SPEC AC 7.5.2(B)2. INVESTIGATION REVEALED THAT CONSTANT SUPPORT HANGERS (SPRING HANGERS) WERE NOT PROPERLY ADJUSTED FOR THE HOT POSITION AND WERE NOT CARRYING THE APPROPRIATE LOADS. THE AFFECTED SNUBBERS WERE REPAIRED, READJUSTED, OR REPLACED AS REQUIRED AND THE PLANT WAS SHUTDOWN IN ACCORDANCE WITH THE REQUIREMENTS OF LCO 4.3.10. REPAIRS WERE COMPLETED DURING SCHEDULED MAINTENANCE SHUTDOWN PERIOD. THE SURVEILLANCE INTERVAL WAS ADJUSTED TO 31 DAYS PLUS OR MINUS 25%.

[133] FT. ST. VRAIN DOCKET 50-267 LER 80-051 REV 1
 UPDATE ON DRIFT IN CIRCULATOR SEAL PRESSURE SWITCHES.
 EVENT DATE: 092280 REPORT DATE: 060683 NSSS: GA TYPE: HTGR

(NSIC 194600) DURING TESTING, 5 OF 12 HELIUM CIRCULATOR SEAL MALFUNCTION PRESSURE DIFFERENTIAL SWITCH UNITS WERE DISCOVERED TO HAVE A TRIP POINT OUTSIDE THE LIMITS OF LCO 4.4.1, TABLE 4.4-3. THESE ARE REPORTABLE PER TECH SPECS AC 7.5.2(B)1 AND AC 7.5.2(B)2. SIMILAR REPORTS ARE RO'S 77-47, 78-27, 79-32, 79-56, 80-07, 80-16, 80-20, 80-26, 80-34, AND 80-41. ITT BARTON MODEL 289 PRESSURE DIFFERENTIAL SWITCHES FAILED TO ACTUATE AT TRIP POINT DUE TO DIRT ACCUMULATION IN ELECTRICAL SWITCHES. THE ITT BARTON PRESSURE DIFFERENTIAL INDICATING SWITCHES WERE REPLACED WITH ITT BARTON MODEL 752 PRESSURE TRANSMITTERS AND BISTABLE TRIP MODULES (MODEL PT-3D, MANUFACTURED BY GENERAL ATOMIC CO) VIA CHANGE NOTICE 1110.

[134] FT. ST. VRAIN DOCKET 50-267 LER 80-062 REV 1
 UPDATE ON FAILURE OF PURIFICATION ISOLATION VALVE.
 EVENT DATE: 102280 REPORT DATE: 112383 NSSS: GA TYPE: HTGR

(NSIC 194599) THE ISOLATION VALVE FOR THE 'A' PURIFICATION TRAIN (HV-2301) WOULD NOT CLOSE EITHER ELECTRICALLY OR BY THE HANDJACK AND WAS THEREFORE CONSIDERED INOPERABLE AT THAT TIME. THE VALVE WAS OPERATED BY MEANS OF THE HANDJACK AND WAS MANUALLY CLOSED. THIS EVENT IS REPORTABLE PER TECH SPEC AC 7.5.2(A)9. SIMILAR RO'S: 77-09, 77-12. THE CAUSE OF THE VALVE FAILURE COULD NOT BE DETERMINED AT THE TIME. FOLLOW-UP INVESTIGATION AND TESTING OF HV-2301 REVEALED NO BINDING OR OTHER MECHANICAL PROBLEMS INDICATING A POSSIBLE LACK OF KNOWLEDGE/EXPERIENCE IN THE OPERATION OF A VALVE OF THIS TYPE. HV-2301 WAS TESTED DURING A SUBSEQUENT REFUELING OUTAGE AND FOUND TO BE OPERABLE, EITHER ELECTRICALLY OR MANUALLY.

[135] FT. ST. VRAIN DOCKET 50-267 LER 80-072 REV 1
 UPDATE ON PRESSURE SWITCH SET POINT DRIFT.
 EVENT DATE: 111780 REPORT DATE: 060683 NSSS: GA TYPE: HTGR

(NSIC 194515) DURING TESTING, 3 OF THE 12 HELIUM CIRCULATOR SEAL MALFUNCTION PRESSURE DIFFERENTIAL SWITCH UNITS WERE DISCOVERED TO HAVE A TRIP POINT OUTSIDE THE LIMITS OF LCO 4.4.1, TABLE 4.4-3. THESE ARE REPORTABLE PER TECH SPECS AC 7.5.2(B)1 AND AC 7.5.2(B)2. SIMILAR REPORTS ARE RO'S 77-47, 78-27, 79-32, 79-56, 80-07, 80-16, 80-20, 80-26, 80-34, 80-41, AND 80-51. ITT BARTON MODEL 289 PRESSURE DIFFERENTIAL SWITCHES FAILED TO ACTUATE AT TRIP POINT DUE TO DIRT ACCUMULATION IN ELECTRICAL SWITCHES. THE ITT BARTON PRESSURE DIFFERENTIAL INDICATING SWITCHES WERE REPLACED WITH ITT BARTON MODEL 752 PRESSURE TRANSMITTERS AND BISTABLE TRIP MODULES (MODEL PT-3D, MANUFACTURED BY GENERAL ATOMIC CO.) VIA CHANGE NOTICE 1110.

[136] FT. ST. VRAIN DOCKET 50-267 LER 80-074 REV 3
 UPDATE ON LEAKY SPRINKLER SYSTEM VALVE.
 EVENT DATE: 121080 REPORT DATE: 010981 NSSS: GA TYPE: HTGR

(NSIC 194516) THE FIXED WATER SPRAY SYSTEM FOR THE AUX BOILER ROOM WAS TAKEN OUT OF SERVICE FOR REPAIR OF A PILOT VALVE, WHICH WAS CAUSING A NUISANCE ALARM IN THE CONTROL ROOM. THIS RESULTED IN OPERATION IN A DEGRADED MODE PERMITTED BY LCO 4.10.5 AND IS REPORTABLE PER TECH SPEC AC 7.5.2(B)2. THE NUISANCE ALARM WAS CAUSED BY LEAKAGE PAST THE PILOT VALVE SEAT, DUE TO NORMAL CORROSION AND SETTLING OF SEDIMENT FROM THE FIRE WATER. THE CORROSION WAS REMOVED FROM THE VALVE AND THE VALVE AND SYSTEM WERE RETURNED TO SERVICE. VALVE IS AN AUTOMATIC SPRINKLER CORP. MODEL #153. RETARD CHAMBER IS A MODEL A-2.

[137] FT. ST. VRAIN DOCKET 50-267 LER 84-005 REV 2
 UPDATE ON CORROSION OF WIRES IN PRESTRESSED CONCRETE REACTOR VESSEL (PCRV) TENDONS.
 EVENT DATE: 032784 REPORT DATE: 103084 NSSS: GA TYPE: HTGR

(NSIC 194517) CORROSION OF SELECT WIRES NEAR THE ANCHOR WASHER ENDS WITHIN THE PRESTRESSING TENDONS OCCURRED AS A RESULT OF MOISTURE AND OXYGEN IN THE VICINITY OF THE ANCHOR ASSEMBLY. IN ADDITION, THE CORROSION INHIBITING AGENT WAS APPARENTLY EITHER NEVER APPLIED ADEQUATELY TO SOME WIRES OR REMOVED AT SOME STAGE DURING THE FABRICATION, INSTALLATION, OR OPERATION PHASE SO THAT CONDITIONS FAVORABLE TO LOCAL CORROSION ATTACK WERE PRESENT AT THIS LOCATION. THE RESULTS FROM CORROSION ANALYSIS INDICATE THAT MOISTURE IS A COMMON ELEMENT IN THE CORROSION ATTACK. THE SCOPE OF THE TENDON SURVEILLANCE PROGRAM IS CURRENTLY BEING INCREASED TO MONITOR THE ADEQUACY OF THE NEW CORROSION PROTECTION METHODS TO BE PROVIDED FOR THE PCRV PRESTRESSING COMPONENTS, AND ASSURE THAT THE REQUIRED PRESTRESSING FORCES ARE SUSTAINED THROUGHOUT THE OPERATIONAL LIFE OF THE PLANT. A MEETING HAS BEEN REQUESTED WITH THE NRC TO DISCUSS THE BASIS FOR THIS PROGRAM.

[138] FT. ST. VRAIN DOCKET 50-267 LER 84-008 REV 1
 UPDATE ON CONTROL ROD INSERTION FAILURES.
 EVENT DATE: 062384 REPORT DATE: 103084 NSSS: GA TYPE: HTGR

(NSIC 194459) MOISTURE IN CRD MOTOR AREA. THE PLANT PROTECTIVE SYSTEM INITIATED AN AUTOMATIC SCRAM UPON EXCEEDING THE FLOATING HIGH PRESSURE TRIP POINT IN THE PRESTRESSED CONCRETE REACTOR VESSEL. THE REACTOR WENT SUBCRITICAL IMMEDIATELY FOLLOWING THE AUTOMATIC SCRAM ACTION, BUT IT WAS NOTED THAT 6 OF THE 37 CONTROL ROD PAIRS HAD FAILED TO AUTOMATICALLY INSERT. THE SIX ROD PAIRS WERE DRIVEN INTO THE CORE WITHIN 20 MINS FOLLOWING THE EVENT. THE CAUSE OF THE 6 CONTROL ROD AUTOMATIC INSERTION FAILURES IS BELIEVED TO BE DUE TO THE MIGRATION OF MOISTURE FROM THE PCRV INTO THE CRD MOTOR AREA.

[139] FT. ST. VRAIN DOCKET 50-267 LER 84-008 REV 2
 UPDATE ON FAILURE OF 6 CONTROL ROD PAIRS TO INSERT.
 EVENT DATE: 062384 REPORT DATE: 031285 NSSS: GA TYPE: HTGR

(NSIC 194053) CAUSE - UNDER INVESTIGATION. THE PLANT PROTECTIVE SYSTEM (PPS) INITIATED AN AUTOMATIC SCRAM UPON EXCEEDING THE FLOATING HIGH PRESSURE TRIP POINT IN THE PRESTRESSED CONCRETE REACTOR VESSEL (PCRV). PRIOR TO THE HIGH PRESSURE TRIP, AN ORDERLY SHUTDOWN FROM 40% POWER WAS IN PROGRESS DUE TO HIGH PRIMARY COOLANT MOISTURE LEVELS FOLLOWING AN AUTOMATIC TRIP ACTION ON "A" HELIUM CIRCULATOR. THE NORMAL DEPRESSURIZATION FLOWPATH BECAME BLOCKED CAUSING THE EVENTUAL HIGH PRESSURE TRIP. THE AUTOMATIC ACTUATION OF THE PPS SCRAM CIRCUITRY IS BEING REPORTED UNDER SECTION 50.73(A)(2)(IV). THE REACTOR WENT SUBCRITICAL IMMEDIATELY FOLLOWING THE AUTOMATIC SCRAM ACTION, BUT IT WAS NOTED THAT 6 OF THE 37 CONTROL ROD PAIRS HAD FAILED TO AUTOMATICALLY INSERT. THE SIX ROD PAIRS WERE DRIVEN INTO THE CORE WITHIN 20 MINUTES FOLLOWING THE EVENT. THE REACTOR REMAINED SUBCRITICAL THROUGHOUT THE EVENT. THE CONDITIONS OF THIS EVENT ARE UNDER INVESTIGATION TO DETERMINE THE POTENTIAL IMPACT ON THE AUTOMATIC SAFE SHUTDOWN FUNCTION OF THE CONTROL ROD SYSTEM. THEREFORE, THIS EVENT IS ALSO BEING REPORTED UNDER SECTION 50.73(A)(2)(V) FOR ITS POTENTIAL IMPACT IN PREVENTING AN AUTOMATIC SAFE SHUTDOWN.

[140] FT. ST. VRAIN DOCKET 50-267 LER 84-011
 DRIFT IN SIX ULTRASONIC PIPE RUPTURE DETECTORS.
 EVENT DATE: 101284 REPORT DATE: 111184 NSSS: GA TYPE: HTGR

(NSIC 194460) INSTRUMENT DRIFT. DURING THE PERFORMANCE OF A SCHEDULED SURVEILLANCE TEST, 5 OF 12 ULTRASONIC DETECTORS FOR STEAM PIPE RUPTURE UNDER THE PRESTRESSED CONCRETE REACTOR VESSEL, AND 1 OF 12 ULTRASONIC DETECTORS FOR STEAM PIPE RUPTURE OUTSIDE THE PCRV WERE FOUND OUT OF TOLERANCE LIMITS. RELATED LERS: 81-012, 82-040, AND 82-051. THE MICROPHONES FOUND OUT OF TOLERANCE WERE ADJUSTED TO ACCEPTABLE VALUES, AND THE SURVEILLANCE WAS SUCCESSFULLY COMPLETED.

[141] FT. ST. VRAIN DOCKET 50-267 LER 84-011 REV 1
 UPDATE ON DRIFT IN SIX ULTRASONIC DETECTORS.
 EVENT DATE: 101284 REPORT DATE: 020885 NSSS: GA TYPE: HTGR

(NSIC 194518) DURING A SCHEDULED SURVEILLANCE TEST, 5 OF 12 ULTRASONIC DETECTORS FOR STEAM PIPE RUPTURE UNDER THE PRESTRESSED CONCRETE REACTOR VESSEL (PCRV), AND 1 OF 12 ULTRASONIC DETECTORS FOR STEAM PIPE RUPTURE OUTSIDE THE PCRV WERE FOUND OUT OF TOLERANCE LIMITS. IT WAS DETERMINED THAT A CONDITION EXISTED WHICH COULD HAVE PREVENTED THE FULFILLMENT OF A SAFETY FUNCTION NEEDED TO MITIGATE THE CONSEQUENCES OF AN ACCIDENT AND IS REPORTABLE PER 10 CFR 50.72(B)(2)(III) AND 10 CFR 50.73(A)(2)(V). THE ULTRASONIC DETECTORS ARE DESIGNED TO IDENTIFY THE SPECIFIC SECONDARY COOLANT LOOP WITHIN THE REACTOR BLDG CONTAINING A STEAM LEAK BY DETECTING AND TRIPPING AT TWICE NORMAL BACKGROUND NOISE LEVEL. ACTUATION OF THE ULTRASONIC DETECTORS IN COMBINATION WITH HIGH REACTOR BLDG PRESSURE OR TEMPERATURE INITIATES A LOOP SHUTDOWN. INSTRUMENT DRIFT IS A GENERIC PROBLEM FOR THESE DETECTORS, AND THE PROBLEM IS PRESENTLY UNDER INVESTIGATION THROUGH ENGINEERING ANALYSIS. RELATED LERS 81-012, 82-040, AND 82-051.

[142] FT. ST. VRAIN DOCKET 50-267 LER 84-012
 RESERVE SHUTDOWN MATERIAL RELEASED FROM HOPPER.
 EVENT DATE: 110584 REPORT DATE: 120484 NSSS: GA TYPE: HTGR

(NSIC 194462) UNKNOWN. WITH THE REACTOR SHUTDOWN FOR CONTROL ROD DRIVE INSPECTION AND MAINTENANCE, THE RESERVE SHUTDOWN HOPPER OF CONTROL ROD DRIVE AND ORIFICE ASSEMBLY (CRDOA) #21 WAS FUNCTIONALLY TESTED IN THE HOT SERVICE FACILITY PER SR 5.1.2C-X, "RESERVE SHUTDOWN ASSEMBLY FUNCTIONAL TEST". DURING PERFORMANCE

OF THE TEST, IT WAS DISCOVERED THAT ABOUT 40 POUNDS OF RESERVE SHUTDOWN MATERIAL (40 WEIGHT PERCENT BORON) HAD BEEN DISCHARGED FROM THE HOPPER ASSEMBLY. THE RESERVE SHUTDOWN HOPPER IS DESIGNED TO RELEASE APPROX 80 LBS. OF MATERIAL CONTAINING NEUTRON ABSORBING BORON CARBIDE INTO THE CORE UPON RUPTURE OF THE HOPPER RUPTURE DISC. THE FAILURE OF THE CRDOA #21 HOPPER ASSEMBLY TO DISCHARGE AN ACCEPTABLE AMOUNT OF RESERVE SHUTDOWN MATERIAL DURING PERFORMANCE OF SR 5.1.2C-X IS BEING REPORTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.73(A)(2)(V). AN INVESTIGATION IS PRESENTLY UNDERWAY TO DETERMINE WHY SOME OF THE RESERVE SHUTDOWN MATERIAL WAS RETAINED INSIDE THE CRDOA #21 HOPPER ASSEMBLY.

[143] FT. ST. VRAIN DOCKET 50-267 LER 84-013
TWO HOT SERVICE FACILITY RADIATION MONITORS FAIL.
EVENT DATE: 111384 REPORT DATE: 121384 NSSS: GA TYPE: HTGR

(NSIC 194461) POWER SUPPLY AND ALARM FAILURES. BOTH HOT SERVICE FACILITY (HSF) AREA RADIATION MONITORS WERE INOPERABLE FOR A PERIOD OF TIME LONGER THAN THAT ALLOWED BY TECH SPEC LCO 4.4.3. EACH INSTRUMENT CONSISTS OF A DETECTOR AND A LOCAL ALARM DEVICE WITH READOUT IN THE CONTROL ROOM. RIS-93250-3 WAS INOPERABLE DUE TO LOSS OF ITS POWER SUPPLY. THIS MONITOR WAS UNABLE TO DETECT RADIATION AND UNABLE TO ANNUNCIATE ABOVE-NORMAL RADIATION LEVELS. THE SECOND DETECTOR TO BECOME INOPERABLE, RIS-93251-3, WAS STILL ABLE TO DETECT NORMAL AND ABOVE NORMAL RADIATION LEVELS, AND THE CONTROL ROOM READOUT AND ALARM FUNCTIONS REMAINED OPERABLE. HOWEVER, THE LOCAL ALARM WAS INOPERABLE. RIS-93250-3 AND RIS-93251-3 WERE BOTH REPAIRED AND RETURNED TO SERVICE.

[144] FT. ST. VRAIN DOCKET 50-267 LER 85-001
WELDING MACHINE CAUSES SCRAM.
EVENT DATE: 012685 REPORT DATE: 022585 NSSS: GA TYPE: HTGR

(NSIC 194520) THE SCRAM OCCURRED AS A RESULT OF A WELDING MACHINE BEING STARTED USING THE HIGH FREQUENCY START NORMALLY USED IN GAS TUNGSTEN ARC WELDING. THE WELDING MACHINE WAS IN CLOSE PROXIMITY TO THE NEUTRON FLUX DETECTORS. AN ELECTROMAGNETIC FIELD WAS CREATED WHICH AFFECTED THE FLUX DETECTOR WIRES NEARBY, RESULTING IN A READING OF GREATER THAN 5 DECADES PER MIN. THE WELDING MACHINE WAS TURNED OFF, AND THE ERRATIC INDICATION STOPPED. ALL WELDING MACHINES USED IN THE PLANT HAVE HAD THE HIGH FREQUENCY START DISARMED. PROCEDURE REVISIONS WILL BE IMPLEMENTED TO ENSURE THAT THE HIGH FREQUENCY START WILL BE DISARMED PRIOR TO USE IN THE REACTOR BLDG DURING REACTOR STARTUP OR POWER OPERATION.

[145] GINNA DOCKET 50-244 LER 85-004
LOSS OF INSTRUMENT BUS RESULTS IN ACTUATION OF ENGINEERED SAFETY FEATURE.
EVENT DATE: 032685 REPORT DATE: 042685 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194742) ON MARCH 26, 1985 AT 1021 HOURS WHILE THE REACTOR WAS IN COLD SHUTDOWN, A SAFETY INJECTION (SI) ACTUATION SIGNAL WAS GENERATED WHEN A HIGH CONTAINMENT VESSEL (C.V.) PRESSURE BISTABLE WAS TRIPPED AS A RESULT OF A MOMENTARY LOSS OF INSTRUMENT BUS 1C. WHILE WORK ON PROTECTION CHANNEL #3 WAS IN PROGRESS, PERSONNEL WERE CLOSING VITAL BUS TIE 14 TO 16 IN PREPARATION FOR ELECTRICAL WORK ON BUS 14 UNDERVOLTAGE RELAYS. SINCE ONE PROTECTION CHANNEL WAS IN THE TRIP MODE, MOMENTARY LOSS OF POWER TRIPPED THE SECOND PROTECTION CHANNEL THUS COMPLETING THE 2/3 LOGIC FOR HIGH CONTAINMENT VESSEL PRESSURE SIGNAL. ON THE SAME DAY AT 1125 HOURS, WITH THE REACTOR IN COLD SHUTDOWN, A SECOND SAFETY INJECTION ACTUATION SIGNAL WAS GENERATED FROM PRESSURIZER PRESSURE SIGNAL GREATER THAN 2000 PSIG AND LOW STEAM LINE PRESSURE LESS THAN 514 PSIG. CALIBRATION OF DELTA T SP1 (OVER TEMPERATURE SETPOINT) IN PROTECTION CHANNEL #3 (PRESSURIZER PRESSURE CHANNEL DEFEATED) WAS IN PROGRESS WHILE (A DIESEL GENERATOR SUPPLYING BUS 14 AND 18 WAS BEING REMOVED FROM SERVICE AND NORMAL SUPPLY BEING RESTORED.

DURING THIS TRANSFER MOMENTARY LOSS OF POWER TRIPPED ANOTHER S.I. UNBLOCK RELAY WHICH COMPLETED A 2/3 LOGIC UNBLOCK OF S.I. PLUS LOW STEAM LINE PRESSURE < 514 PSIG, CAUSING S.I.

[146] GINNA DOCKET 50-244 LER 85-005
 TESTING ERROR RESULTS IN ACTUATION OF THE REACTOR PROTECTION SYSTEM.
 EVENT DATE: 040585 REPORT DATE: 050385 NSSS: WE TYPE: PWR
 VENDOR: ROSEMOUNT ENGINEERING COMPANY
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 194743) ON APRIL 5, 1985, WHILE THE REACTOR PROTECTION CHANNEL 3 OVERTEMPERATURE DELTA T TRIP BISTABLE AND OVERPOWER DELTA T TRIP BISTABLE WERE IN THE TRIPPED MODE, IN ACCORDANCE WITH THE APPLICABLE STEPS OF A CALIBRATION PROCEDURE, THE LEADS OF A RESISTANCE TEMPERATURE DETECTOR IN REACTOR PROTECTION CHANNEL 4 WERE OPENED. THIS RESULTED IN OVERPOWER DELTA T AND OVERTEMPERATURE DELTA T REACTOR TRIP SIGNALS BEING GENERATED. THE CAUSE OF THE EVENT HAS BEEN ATTRIBUTED TO UTILITY PERSONNEL PERFORMING RESISTANCE TEMPERATURE DETECTOR FAILURE RESPONSE TESTING WITHOUT PROCEDURAL GUIDANCE. THIS EVENT OCCURRED WHILE THE REACTOR WAS IN THE HOT SHUTDOWN MODE WITH ALL CONTROL RODS FULLY INSERTED AND THE PRIMARY BORON CONCENTRATION GREATER THAN 2000 PPM. THE REACTOR TRIP BREAKERS OPENED ON ACTUATION OF THE REACTOR TRIP SIGNAL.

[147] GINNA DOCKET 50-244 LER 85-006
 INADVERTENT REACTOR TRIP DURING FEEDWATER FLOW BISTABLE CALIBRATION.
 EVENT DATE: 040685 REPORT DATE: 050685 NSSS: WE TYPE: PWR

(NSIC 194468) ON 4-6-85, WHILE PERFORMING A PLANT STARTUP FROM A REFUELING OUTAGE WITH REACTOR POWER AT APPROX 5%, A REACTOR TRIP OCCURRED WITH A SUBSEQUENT TURBINE TRIP. THE REACTOR TRIP WAS THE RESULT OF THE 'B' SG LEVEL, WHICH WAS BEING MANUALLY CONTROLLED, REDUCING BELOW 30% NARROW RANGE LEVEL WHILE A FEEDWATER FLOW LESS THAN STEAM FLOW BISTABLE WAS IN THE TRIPPED POSITION, PER THE APPLICABLE STEPS OF A CALIBRATION PROCEDURE. THE SG LEVEL WAS BEING MANUALLY CONTROLLED BETWEEN 30% AND 39% WHILE THE CALIBRATION WAS BEING COMPLETED. ALL SYSTEMS OPERATED AS DESIGNED AND THE REACTOR WAS STABILIZED AT HOT SHUTDOWN CONDITIONS.

[148] GINNA DOCKET 50-244 LER 85-007
 MAIN TURBINE FAILS TO TRIP FOLLOWING REACTOR TRIP.
 EVENT DATE: 040685 REPORT DATE: 050685 NSSS: WE TYPE: PWR
 VENDOR: PARKER HANNIFIN CORP.
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 194469) ON 4-6-85, WHILE OPERATING AT 12% REACTOR POWER WITH THE TURBINE LATCHED AND BEING BROUGHT UP TO SYNCHRONOUS SPEED, A REACTOR TRIP OCCURRED. THE TURBINE FAILED TO TRIP AUTOMATICALLY AND ALSO FAILED TO TRIP FROM ACTUATION OF THE MANUAL TURBINE TRIP PUSHBUTTON ON THE MAIN CONTROL BOARD. THE TURBINE WAS SUBSEQUENTLY MANUALLY TRIPPED LOCALLY LESS THAN 1 MIN FOLLOWING THE REACTOR TRIP. THE REACTOR TRIP WAS THE RESULT OF THE 'B' SG LEVEL, WHICH WAS BEING MANUALLY CONTROLLED, REDUCING BELOW 17% NARROW RANGE LEVEL. THE FAILURE OF THE TURBINE TO TRIP WAS DUE TO MECHANICAL BINDING OF THE 20ET TRIP SOLENOID AND TO THE ADJUSTMENT OF A MECHANICAL STOP FOR THE TRIPPER BAR ACTUATED BY THE 20AST TRIP SOLENOID. THE TRIP SOLENOID FAILURE MECHANISMS HAVE BEEN REPAIRED AND THE SOLENOIDS HAVE BEEN SUCCESSFULLY TESTED.

[149] GINNA DOCKET 50-244 LER 85-008
 AUTOMATIC ACTUATION OF REACTOR PROTECTION SYSTEM ON LOW STEAM GENERATOR LEVEL.
 EVENT DATE: 040785 REPORT DATE: 050785 NSSS: WE TYPE: PWR

(NSIC 194470) ON 4-7-85, WHILE CONTROLLING SG LEVELS IN MANUAL AND TRANSFERRING CONTROL FROM THE BYPASS VALVES TO THE MAIN FEEDWATER REGULATING VALVES, THE REACTOR TRIPPED ON LOW SG LEVEL. THE CAUSE OF THE REACTOR TRIP HAS BEEN ATTRIBUTED TO OPERATIONS PERSONNEL BEING UNABLE TO MAINTAIN SG LEVELS ABOVE THE TRIP SETPOINTS WHILE TRANSFERRING LEVEL CONTROL. SIMILAR EVENT: 244/85-007.

[150] GINNA DOCKET 50-244 LER 85-009
 CONDENSER BYPASS VALVE OPENS CAUSING FEEDWATER PUMP AND MAIN TURBINE TRIPS.
 EVENT DATE: 040885 REPORT DATE: 050885 NSSS: WE TYPE: PWR
 VENDOR: BUSSMANN MFG (DIV OF MCGRAW-EDISON)
 NATIONAL ACME COMPANY
 STRUTHERS DUNN, INC.
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 194718) ON APRIL 8, 1985, A LOAD REDUCTION WAS IN PROGRESS IN PREPARATION FOR A TURBINE OVERSPEED TRIP TEST. DURING A SECONDARY SYSTEM PRESSURE TRANSIENT, THE CONDENSATE BYPASS VALVE AUTOMATICALLY OPENED WHICH EVENTUALLY RESULTED IN A MAIN FEEDWATER PUMP TRIP CAUSING THE TURBINE TO TRIP. DUE TO THE PLANT COOLDOWN THE "A" STEAM GENERATOR LEVEL REDUCED BELOW THE 17% LOW LEVEL TRIP SETPOINT AND A REACTOR TRIP OCCURRED. THE CAUSE OF THE EVENT HAS BEEN ATTRIBUTED TO THE CONDENSATE BYPASS VALVE SWITCH BEING IN THE AUTOMATIC POSITION, RATHER THAN THE CLOSED POSITION. NO PROCEDURAL CONTROLS WERE PRESENT FOR THE SWITCH POSITION PRIOR TO 30% REACTOR POWER. A PROCEDURE CHANGE HAS BEEN INITIATED TO IMPROVE CONTROL OF THE BYPASS VALVE POSITION AT LOW POWER.

[151] GINNA DOCKET 50-244 LER 85-010
 SOURCE RANGE CHANNEL RELAY FAILS CAUSING AUTOMATIC ACTUATION OF REACTOR PROTECTION SYSTEM.
 EVENT DATE: 040885 REPORT DATE: 050885 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194719) ON APRIL 8, 1985, DURING AN OPERATIONAL TEST OF THE NUCLEAR INSTRUMENTATION SYSTEM INTERMEDIATE RANGE CHANNEL N-35, A VARIABLE TEST SIGNAL WAS APPLIED IN ACCORDANCE WITH THE APPLICABLE STEPS OF PROCEDURE PT-6.2 (N.I.S. INTERMEDIATE RANGE CHANNELS.) UPON REACHING THE REACTOR TRIP SETPOINT THE "B" REACTOR TRIP BREAKER OPENED WITH NO ANNUNCIATION OF A REACTOR TRIP "FIRST OUT." A COMPUTER PRINTOUT WAS USED TO VERIFY THE SOURCE OF THE REACTOR TRIP. THE CAUSE OF THE EVENT HAS BEEN ATTRIBUTED TO A FAULTY RELAY COIL IN THE "B" TRAIN LOGIC FOR NIS SOURCE RANGE CHANNEL N-31, WHICH IS PHYSICALLY LOCATED ADJACENT TO AN INTERMEDIATE RANGE RELAY WHICH WAS ACTUATED DURING THE TESTING. THE FAULTY COIL ALLOWED INTERMITTENT OPENING OF A RELAY CONTACT IF THE RELAY WAS VIBRATED. THE RELAY FAILURE WAS IN THE SAFE DIRECTION AND AT NO TIME WAS A SAFETY FUNCTION INOPERABLE.

[152] GINNA DOCKET 50-244 LER 85-011
 CONDENSER LEAK RESULTS IN TURBINE TRIP/SCRAM.
 EVENT DATE: 041185 REPORT DATE: 051085 NSSS: WE TYPE: PWR
 VENDOR: NATIONAL ACME COMPANY
 STRUTHERS DUNN, INC.
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 194720) ON APRIL 11, 1985 AN INVESTIGATION WAS BEING CONDUCTED TO DETERMINE THE SOURCE OF A CIRCULATING WATER LEAK IN THE MAIN TURBINE CONDENSER. WITH CONDENSER VACUUM DECREASING A MANUAL TURBINE TRIP WAS ATTEMPTED. THE FIRST OF

TWO ACTUATIONS OF THE MANUAL TURBINE TRIP PUSHBUTTON FAILED TO RESULT IN A TURBINE TRIP. THIS HAS BEEN ATTRIBUTED TO THE ADJUSTMENT OF A MECHANICAL STOP ON THE AUTO STOP TRIPPER BAR. DURING THE SUBSEQUENT POWER REDUCTION A REACTOR TRIP OCCURRED AS THE RESULT OF THE COMBINATION OF THE TURBINE BEING TRIPPED, LOW CONDENSER VACUUM, AND REACTOR POWER BEING ABOVE THE P-7 PERMISSIVE. ONLY THE "B" REACTOR TRIP BREAKER OPENED ON THE REACTOR TRIP SIGNAL. THIS WAS DETERMINED TO BE DUE TO SEPARATE VACUUM PRESSURE SWITCHES FOR EACH REACTOR TRIP TRAIN. AN INVESTIGATION IS BEING UNDERTAKEN TO REVIEW THE SINGLE PRESSURE SWITCH PER REACTOR TRIP TRAIN DESIGN.

[153] GINNA DOCKET 50-244 LER 85-012
 POTENTIAL FOR INOPERABLE CONTAINMENT CHARCOAL FILTERS DURING A LOCA.
 EVENT DATE: 050685 REPORT DATE: 060485 NSSS: WE TYPE: PWR
 VENDOR: GILBERT ASSOCIATES, INC.

(NSIC 194827) THE TWO CONTAINMENT CHARCOAL FILTERS AND THE ASSOCIATED FAN COOLERS WERE DISCOVERED, AS A RESULT OF AN ENGINEERING EVALUATION, TO BE INOPERABLE UNDER LARGE BREAK LOCA CONDITIONS. THERE WERE NO ADVERSE CONDITIONS THAT RESULTED DURING NORMAL OPERATION OR FOR OTHER ACCIDENT CONDITIONS. PORTIONS OF THE FILTER DISCHARGE DUCTS WERE LOCATED IN THE BASEMENT OF CONTAINMENT AND MAY BE FLOODED AFTER THE RWST HAS BEEN EMPTIED TO CONTAINMENT. ACCESS PORTS AND DAMPERS WERE OPENED AT APPROPRIATE LOCATIONS TO REESTABLISH THE REQUIRED AIR FLOWS FOR FILTRATION, MIXING AND COOLING AND THE FILTERS WERE RETURNED TO OPERABILITY.

[154] GRAND GULF 1 DOCKET 50-416 LER 85-014
 MAIN STEAM LINE FLOW CHANNEL INOPERABLE LONGER THAN TECH SPEC LIMIT.
 EVENT DATE: 040185 REPORT DATE: 050185 NSSS: GE TYPE: BWR

(NSIC 194187) ON 4-1-85, DURING THE PERFORMANCE OF AN 18 MONTH CALIBRATION, A CHANNEL 'A' MAIN STEAM LINE HIGH FLOW ISOLATION ACTUATION INSTRUMENT WAS REMOVED FROM SERVICE LONGER THAN THE 2 HR TIME ALLOWED BY TECH SPECS. THE TRIP SYSTEM WAS NOT PLACED IN THE TRIP CONDITION WHEN THE LIMIT WAS NOT MET. THE CHANNEL WAS OUT OF SERVICE FOR APPROX 3.5 HRS. THE CAUSE OF THE EVENT WAS A COMMUNICATION ERROR BETWEEN THE TECHNICIAN AND THE SHIFT SUPERVISOR.

[155] GRAND GULF 1 DOCKET 50-416 LER 85-013
 REACTOR SCRAM ON HIGH WATER LEVEL.
 EVENT DATE: 040385 REPORT DATE: 050185 NSSS: GE TYPE: BWR
 VENDOR: CUTLER-HAMMER

(NSIC 194688) ON 4/3/85, THE REACTOR SCRAMMED ON HIGH WATER LEVEL DURING STARTUP TESTING WHEN A FAILED LEVEL CHANNEL SELECTOR SWITCH CAUSED AN INCORRECT LEVEL SIGNAL TO BE APPLIED TO THE FEEDWATER SYSTEM MASTER LEVEL CONTROLLER. THE SIGNAL INDICATED LOW REACTOR WATER LEVEL WHICH CREATED A DEMAND FOR MORE FEEDWATER FLOW. THE INCREASE IN LEVEL DUE TO INCREASED FEEDWATER FLOW WAS NOT NOTICED IN TIME TO PREVENT A HIGH LEVEL SCRAM SIGNAL. THE SWITCH WAS REPLACED AND PRECAUTIONARY STEPS WERE ADDED TO THE OPERATING INSTRUCTIONS TO PRECLUDE A RECURRENCE OF THIS TYPE OF EVENT.

[156] GRAND GULF 1 DOCKET 50-416 LER 85-016
 REACTOR SCRAM DUE TO MAIN STEAM LINE ISOLATION.
 EVENT DATE: 040785 REPORT DATE: 050785 NSSS: GE TYPE: BWR
 VENDOR: ROSEMOUNT, INC.

(NSIC 194188) ON 4-7-85, THE REACTOR SCRAMMED DUE TO A FULL MAIN STEAM LINE ISOLATION. A SURVEILLANCE CALIBRATION WHICH PRODUCES A MAIN STEAM LINE (MSL) ISOLATION SIGNAL WAS BEING CONDUCTED ON DIV 1 MAIN STEAM LINE FLOW. A FAULTY

PRESSURE TRANSMITTER IN DIV 2 PRODUCED AN ERRONEOUS MSL ISOLATION SIGNAL. THE TWO SIGNALS TOGETHER RESULT IN A FULL MSL ISOLATION SIGNAL WHICH PRODUCED THE ISOLATION AND SUBSEQUENT SCRAM. BOTH MSL LOW PRESSURE TRANSMITTERS ON DIV 2 WERE EXAMINED, AND TRANSMITTER N076D WAS FOUND TO HAVE WATER ON THE TERMINATION SIDE. THE N076D TRANSMITTER TERMINALS WERE CORRODED CAUSING A POOR CONNECTION. THE TRANSMITTER FAILS LOW WHICH EXPLAINS THE FALSE 'MSL LOW PRESSURE' SIGNAL. THE CAUSE OF THE WATER ACCUMULATION WAS NOT DETERMINED.

[157] GRAND GULF 1 DOCKET 50-416 LER 85-019
FOUR RWCU ISOLATIONS ON HIGH DIFFERENTIAL FLOW SIGNALS.
EVENT DATE: 051785 REPORT DATE: 061785 NSSS: GE TYPE: BWR

(NSIC 194783) ON MAY 17, MAY 18, MAY 29, AND JUNE 4 AT 2145, 0510, 1405, AND 1925 RESPECTIVELY, THE REACTOR WATER CLEANUP SYSTEM (RWCU) ISOLATED DUE TO HIGH DIFFERENTIAL FLOW SIGNALS. THE PLANT WAS IN HOT SHUTDOWN ON MAY 17, MAY 18, AND JUNE 4, AND WAS OPERATING AT APPROXIMATELY 90 PERCENT POWER ON MAY 29. THE CAUSE OF THE ISOLATIONS ON MAY 17 AND 18 WAS NOT DETERMINED. AN INSPECTION SUBSEQUENT TO THE EVENT REVEALED NO PROBLEMS. THE ISOLATION ON MAY 29 CAN BE ATTRIBUTED TO TWO FILTER/DEMINERALIZER POST STRAINER FLUSH VALVES WHICH WERE FOUND ERRONEOUSLY OPEN CAUSING A DEVIATION OF THE NORMAL FLOW PATH AND, AS A RESULT, A DIFFERENTIAL FLOW. THE REASON THE VALVES WERE OPEN WAS NOT DETERMINED. THE OPERATOR WHO LAST MANIPULATED THE VALVES RESIGNED FOR OTHER REASONS BEFORE ADMINISTRATIVE ACTION WAS CONSIDERED. ON JUNE 4, DURING A PLANT SHUTDOWN, REACTOR PRESSURE DROPPED TO 75 PSIG. ONE RWCU FILTER AND PUMP IS NORMALLY REMOVED FROM SERVICE AT 100 PSIG. THE REACTOR PRESSURE DROPPED TO 75 PSIG PRIOR TO REMOVAL OF ONE FILTER AND PUMP RESULTING IN A DIFFERENTIAL FLOW ISOLATION DUE TO A LOSS OF SUCTION PRESSURE TO BOTH RWCU PUMPS.

[158] HATCH 1 DOCKET 50-321 LER 81-052 REV 1
UPDATE ON DEFECTIVE INVERTER TEMPERATURE SWITCHES.
EVENT DATE: 062181 REPORT DATE: 123184 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: HATCH 2 (BWR)
VENDOR: EXIDE INDUSTRIAL DIV

(NSIC 194555) 'B' LPCI INVERTER R44-S003 TRIPPED ON 4 SEPARATE OCCASIONS ON HIGH TEMP RESULTING IN LOSS OF POWER TO 'B' RECIRCULATION SUCTION AND DISCHARGE VALVES AND LPCI INJECTION VALVE (MAKING RHR B LOOP INOP). UNIT 2 'B' LPCI INVERTER 2R44-S003 TRIPPED WHILE SEPARATELY BACKSEATING RECIRCULATION SUCTION AND DISCHARGE VALVES 2B31-F023B AND F031B, RESPECTIVELY. THE RECIRCULATION VALVES AND LPCI INJECTION VALVE HAD NO POWER MAKING RHR B LOOP INOPERABLE. TRIPPING OF R44-S003 AND 2R44-S003 WAS ATTRIBUTED TO DEFECTIVE THERMAL TEMPERATURE SWITCH(ES) IN THE INVERTER LEG(S). BY 7-13-81 ALL DEFECTIVE THERMAL TEMPERATURE SWITCHES WERE REPLACED IN THE INVERTER LEGS OF R44-S003 AND 2R44-S003.

[159] HATCH 1 DOCKET 50-321 LER 83-003
INCORRECT TECHNICAL SPECIFICATION.
EVENT DATE: 010583 REPORT DATE: 012083 NSSS: GE TYPE: BWR

(NSIC 194152) ON 1-5-83, THE NRC NOTIFIED GEORGIA POWER COMPANY OF AN INCORRECT PAGE (3.5-9) IN UNIT 1 TECH SPECS. THIS PAGE UNDER TECH SPEC 3.5.F.1 STATES 6 OF 7 INSTEAD OF 7 OF THE AUTOMATIC DEPRESSURIZATION VALVES SHALL BE OPERABLE. RECORDS SHOW WRONG REVISION TO PAGE 3.5-9 WAS ISSUED ON 8-1-80. A REVIEW OF ALL AFFECTED DEVIATIONS HAS ENSURED NO VIOLATION OF THE CORRECT TECH SPECS PAGE. THE CAUSE OF THIS EVENT WAS ATTRIBUTED TO PERSONNEL ERROR. PERSONNEL REPLACED ILLEGIBLE PAGES WITH LEGIBLE PAGES, INSERTING WRONG REVISION FOR PAGE 3.5-9. RESPONSIBLE PERSONNEL WERE COUNSELED. THE CORRECT REVISION FOR TECH SPECS PAGE 3.5-9 WAS ISSUED BY DOCUMENT CONTROL DEPARTMENT ON 1-5-83.

[160] HATCH 1 DOCKET 50-321 LER 83-092 REV 1
 UPDATE ON DEGRADED FIRE BARRIERS IN 10 SUBSYSTEMS.
 EVENT DATE: 100483 REPORT DATE: 102084 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: HATCH 2 (BWR)

(NSIC 194156) DURING PERFORMANCE OF 'FIRE BARRIER PENETRATION SEAL AND FIRE DAMPER SURVEILLANCE PROCEDURE (HNP-1-3366 UNIT 1 AND HNP-2-3366 UNIT 2) TEN PLANT SUBSYSTEMS HAD DEGRADED FIRE BARRIERS. THUS, THE PLANT WAS UNABLE TO MEET REQUIREMENTS OF UNIT 1 TECH SPEC 3.13.6 AND UNIT 2 TECH SPECS 3.7.7. FIRE WATCHES WERE ESTABLISHED FOR THE AFFECTED AREAS. THIS REPETITIVE EVENT WAS LAST REPORTED ON LER 50-321/1982-075. THE CAUSE OF THESE EVENTS HAS BEEN DETERMINED TO HAVE BEEN DUE TO IMPROPER INSTALLATION. THE CORRECTIVE ACTION IS TO REPAIR, REPLACE, OR INSTALL ADEQUATE FIRE BARRIERS IN ALL AFFECTED FIRE BARRIERS.

[161] HATCH 1 DOCKET 50-321 LER 83-109 REV 1
 UPDATE ON MAINTENANCE ERROR CAUSING DEGRADED FIRE BARRIER.
 EVENT DATE: 111483 REPORT DATE: 102584 NSSS: GE TYPE: BWR
 VENDOR: NELSON ELECTRIC

(NSIC 194158) ON 11-14-83, PLANT PERSONNEL DETERMINED THAT SILICONE FOAM HAD BEEN APPLIED AS A SUBSTITUTE FOR NELSON BLOCKS IN NELSON FRAMES 1R43-1Z2B1 AND 1R43-1Z2B2, THUS DEGRADING THE FIRE PROTECTION CAPABILITY OF BOTH PENETRATIONS. THIS EVENT IS CONTRARY TO THE REQUIREMENTS OF TECH SPECS SECTION 3.13.6. A FIRE WATCH WAS ESTABLISHED PER TECH SPECS SECTION 3.13.6, ACTION A. THE CAUSE OF THIS EVENT IS CONTRACTOR PERSONNEL FAILING TO FOLLOW PROCEDURE. THE SILICONE FOAM WAS REMOVED FROM THE PENETRATIONS. THEY WERE THEN RETURNED TO THEIR DESIGN CONFIGURATION AND SATISFACTORILY VISUALLY INSPECTED PER THE 'INSTALLATION AND REPAIR OF FIRE BREAKS AND PENETRATIONS: FIRE BARRIERS AND SEALS' PROCEDURE (HNP-6908) AND RETURNED TO SERVICE ON 12-06-83.

[162] HATCH 1 DOCKET 50-321 LER 83-105 REV 1
 UPDATE ON SETPOINT DRIFT OF 8 SAFETY/RELIEF VALVES.
 EVENT DATE: 111583 REPORT DATE: 100584 NSSS: GE TYPE: BWR
 VENDOR: TARGET ROCK CORP.

(NSIC 194157) ON 11-15-83, PLANT PERSONNEL WERE NOTIFIED THAT DURING A SAFETY/RELIEF VALVE (SRV) BENCH TEST AT WYLE LAB, 8 OF 11 SRV'S (1B21-F013 A, B, D, F, H, J, K & L) DID NOT LIFT WITHIN THE SPECIFIED SETPOINT PLUS OR MINUS 1% AS REQUIRED BY TECH SPECS SECTION 2.2.A.1.B. PLANT OPERATION WAS NOT AFFECTED. THIS IS A REPETITIVE EVENT AS LAST REPORTED ON LER 50-321/82-099 IN RESPECT TO VALVES 1B21-F013 F AND H. THE VALVES FAILED DUE TO A STUCK PILOT DISC, AND/OR LACK OF PROPER CLEARANCE OF THE PILOT ROD IN THE LABYRINTH SEAL AREA. THE VALVES WERE DISASSEMBLED AND CLEANED. THE LABYRINTH SEAL AREA WAS INSPECTED AND ALL DISCREPANCIES WERE CORRECTED. THE VALVES WERE REASSEMBLED AND FUNCTIONALLY TESTED SATISFACTORILY.

[163] HATCH 1 DOCKET 50-321 LER 85-020
 PROCEDURAL ERROR OF HATCH 2 WITH RESPECT TO TECH SPECS.
 EVENT DATE: 041585 REPORT DATE: 051485 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: HATCH 2 (BWR)

(NSIC 194576) ON 4-15-85 WITH UNIT 1 AT 2436 MWT (100% POWER) AND UNIT 2 SHUTDOWN FOR REFUELING, PLANT PERSONNEL DETERMINED THAT A SPECIAL PURPOSE PROCEDURE WHICH HAD BEEN WRITTEN TO DIRECT THE IMPLEMENTATION OF A DCR ON UNIT 2'S STANDBY GAS TREATMENT SYSTEM (SBGT) WOULD HAVE ALLOWED UNIT 1 TO OPERATE FOR A SHORT PERIOD OF TIME CONTRARY TO THE PROVISIONS OF TECH SPECS SECTION 3.7.B.1. THE ERROR IN THE PROCEDURE WAS DETECTED PRIOR TO ITS BEING USED IN THE FIELD. THE PROCEDURE WAS REVISED TO RESOLVE THE ERROR.

[164] HATCH 1 DOCKET 50-321 LER 85-011
 STANDBY GAS TREATMENT INITIATION DUE TO INCORRECT RESTART OF BATTERY CHARGER.
 EVENT DATE: 042485 REPORT DATE: 052185 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: HATCH 2 (BWR)

(NSIC 194575) ON 4-24-85 AT 0500 CST, UNIT 1 WAS IN STEADY-STATE OPERATION 2423 MWT (APPROX 100% POWER) AND UNIT 2 WAS IN REFUEL WITH NO FUEL IN THE VESSEL WHEN THE 'A' TRAIN OF THE SBTG SYSTEMS FOR EACH UNIT STARTED. THIS ESF ACTUATION WAS NOT PART OF A PRE-PLANNED SEQUENCE, THUS, THIS EVENT IS REPORTABLE PER THE REQUIREMENTS OF 10CFR 50.73(A)(2)(IV). EACH 'A' TRAIN OF SBTG WAS RETURNED TO NORMAL STATUS IMMEDIATELY. THE BATTERY CHARGER WAS CORRECTLY PLACED IN SERVICE LATER THE SAME DAY. THIS ACTUATION WAS DUE TO INADEQUATE SPECIAL INSTRUCTIONS WHICH FAILED TO GIVE DETAILED INSTRUCTIONS FOR RETURNING A BATTERY CHARGER TO SERVICE. THE ATTEMPT TO PLACE THE CHARGER IN SERVICE RESULTED IN A LOW VOLTAGE DIP ON THE CHARGER'S AC POWER SUPPLY DUE TO THE HIGH CURRENT DRAWN WHEN THE '2A' BATTERY CHARGER TRIED TO START AND ASSUME ITS OUTPUT LOAD AT THE SAME TIME. THIS LOW VOLTAGE DIP IN THE SUPPLY POWER MOMENTARILY DE-ENERGIZED THE 'A' TRAIN SBTG RELAY FOR EACH UNIT (THIS AC SUPPLY POWER IS COMMON TO THE NORMALLY ENERGIZED RELAY WHICH DE-ENERGIZES TO START THE 'A' TRAIN OF SBTG FOR EACH UNIT, AND ACTIVATES THE HIGH RADIATION REFUELING FLOOR ALARM IN THE CONTROL ROOM). THESE SPECIAL INSTRUCTIONS WERE FOR ONE TIME USE; HENCE, CORRECTIVE ACTION TO PREVENT RECURRENCE IS NOT REQUIRED.

[165] HATCH 1 DOCKET 50-321 LER 85-017
 POSSIBLE SEISMIC OVERLOADING OF CABLE TRAY SUPPORT DURING AN EARTHQUAKE.
 EVENT DATE: 051585 REPORT DATE: 052885 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: HATCH 2 (BWR)

(NSIC 194725) ON 05/15/85, GEORGIA POWER COMPANY (GPC) WAS INFORMED BY ITS ARCHITECT/ENGINEERS THAT ONE OF THE CABLE TRAY SUPPORTS (I.E., SUPPORT NO. 33 LOCATED IN THE CABLE SPREADING ROOM) IN PLANT HATCH WAS A POTENTIALLY SIGNIFICANT SAFETY HAZARD. ON 05/23/85, AFTER EVALUATING THE ARCHITECT/ENGINEERS REPORT, THIS EVENT WAS DETERMINED TO BE REPORTABLE PER THE REQUIREMENTS OF 10CFR21. DURING THE RECENT SEISMIC RE-EVALUATIONS IT WAS FOUND THAT DURING AN OPERATING BASIS EARTHQUAKE (OBE) OR SAFE SHUTDOWN EARTHQUAKE (SSE) THE BASE CONNECTION FOR CABLE TRAY SUPPORT NO. 33 COULD EXPERIENCE LOADING IN EXCESS OF THAT GIVEN IN THE PLANT OPERABILITY CRITERIA. THE ARCHITECT/ENGINEER WAS UNABLE TO EXACTLY DETERMINE WHETHER OR NOT THE SEISMIC LOADING WOULD EXCEED THE STRUCTURAL CAPACITY OF THIS SUPPORT. HOWEVER, IT WAS DETERMINED THAT THE DESIGN DURING AN ANALYZED EARTHQUAKE WOULD BE MARGINAL. THE CAUSE OF THIS EVENT WAS A DESIGN ERROR BY THE ARCHITECT/ENGINEER. CABLE TRAY SUPPORT NO. 33 WAS REDESIGNED AND THE MODIFICATIONS WERE MADE SUCH THAT SUPPORT NO. 33 MET THE CRITERIA ON THE NEW DESIGN ON 04/30/85. THUS, CABLE TRAY SUPPORT NO. 33 MET ALL OPERABILITY REQUIREMENTS AND FSAR CRITERIA, PRIOR TO THE ARCHITECT/ENGINEER NOTIFICATION OF THIS DEFICIENCY. CABLE TRAY SUPPORT NO. 33 WAS SUCCESSFULLY FUNCTIONALLY TESTED ON 05/20/85. NUMEROUS SAFETY RELATED CABLES ARE SUPPORTED IN THIS TRAY.

[166] HATCH 1 DOCKET 50-321 LER 85-016
 RCIC FAILS TO DELIVER RATED FLOW.
 EVENT DATE: 051985 REPORT DATE: 060785 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 194613) AT APPROX 1220 CDT ON 5-19-85 WITH THE PLANT OPERATING AT APPROX 2134 MWT (88% POWER), AND DURING PERFORMANCE OF THE MONTHLY 'RCIC PUMP OPERABILITY' PROCEDURE (HNP-1-3405), PLANT PERSONNEL DETERMINED THAT THE RCIC PUMP (1E51-C001) DELIVERED ONLY 900 PSIG AT 400 GPM, WHEN REACTOR PRESSURE WAS 960 PSIG. THIS EVENT IS CONTRARY TO THE REQUIREMENTS OF TECH SPECS SECTION 4.5.E.1.C. AN IMMEDIATE INVESTIGATION SHOWED THAT THE RCIC SYSTEM'S AUTOMATIC CONTROL AMPLIFIER CONTROL CIRCUIT BOARD (1E51-K616) HAD FAILED WHICH RESULTED IN

REDUCED TURBINE SPEED. SUBSEQUENT TO THE INVESTIGATION, THE CIRCUIT BOARD WAS REPLACED. THE RCIC SYSTEM WAS THEN SATISFACTORILY FUNCTIONALLY TESTED AND RETURNED TO SERVICE PER THE 'RCIC PUMP OPERABILITY' PROCEDURE (HNP-1-3405) AT 1345 CDT ON 5-19-85. THIS 30 DAY LER IS REQUIRED BY 10CFR 50.73(A)(2)(I)(B), BECAUSE THIS EVENT SHOWS THAT THE PLANT WAS OPERATED IN A CONDITION PROHIBITED BY TECH SPECS SECTION 3.5.E.1.A.

[167] HATCH 2 DOCKET 50-366 LER 85-002
 REACTOR PROTECTION SYSTEM LOGIC ACTUATION DUE TO SPURIOUS NOISE.
 EVENT DATE: 042985 REPORT DATE: 052985 NSSS: GE TYPE: BWR

(NSIC 194498) ON 4-29-85 AT 0450 CDT AND AT 2045 CDT WHILE PLANT PERSONNEL WERE INSERTING FUEL IN THE VESSEL, A SPURIOUS RPS LOGIC ACTUATION OCCURRED (NO SCRAM OCCURRED SINCE ALL OF THE CONTROL RODS WERE ALREADY INSERTED). IN BOTH CASES, THE RPS TRIPS WERE RESET IMMEDIATELY. BOTH EVENTS WERE DUE TO SPURIOUS ELECTRICAL NOISE IN AN INTERMEDIATE RANGE MONITOR (IRM) CHANNEL (IN THE FIRST EVENT THE 'E' IRM CHANNEL WAS RESPONSIBLE AND IN THE SECOND EVENT THE 'D' IRM CHANNEL WAS RESPONSIBLE). DURING FUEL MOVEMENT, THE RPS SHORTING LINKS ARE REMOVED. IN THIS CONFIGURATION, ONE IRM SPURIOUS TRIP WILL RESULT IN A FULL RPS LOGIC ACTUATION. THUS, MAKING UNPLANNED SPURIOUS RPS LOGIC ACTUATIONS MORE PREVALENT DURING CORE ALTERATIONS. SIMILAR EVENTS (I.E., RPS ACTUATION DUE TO SPURIOUS ELECTRICAL NOISE IN THE NEUTRON MONITORING SYSTEM) HAVE OCCURRED AS REPORTED VIA LERS 50-321/84-23 AND 50-366/85-015. THERE ARE NO FURTHER ACTIONS PLANNED FOR THIS EVENT.

[168] HATCH 2 DOCKET 50-366 LER 85-019
 TESTING ERROR CAUSES REACTOR WATER CLEANUP ISOLATION.
 EVENT DATE: 042985 REPORT DATE: 052785 NSSS: GE TYPE: BWR

(NSIC 194633) AT 1330 CDT ON 4-29-85 WITH THE UNIT IN COLD SHUTDOWN FOR REFUELING, PLANT PERSONNEL WERE PERFORMING THE 18 MONTH 'RWCU SYSTEM ROOM AMBIENT AND DELTA T INSTRUMENT FT & C' PROCEDURE. DURING THIS TEST, OPERATIONS PERSONNEL NOTED THAT THE RWCU PRIMARY CONTAINMENT INBOARD ISOLATION VALVE 2G31-F001 ISOLATED. THE ISOLATION SIGNAL WAS RESET, AND THE VALVE RE-OPENED AT APPROX 1335 CDT. AFTER AN INVESTIGATION, PLANT PERSONNEL DETERMINED THAT THE RWCU VALVE ISOLATION WAS DUE TO AN INCORRECTLY LABELED RESISTANCE TEMPERATURE DETECTOR (RTD). THE RTD IDENTIFIED AS 2G31-N062H SHOULD HAVE BEEN LABELED 2G31-N062E. CONSEQUENTLY, WHEN PLANT PERSONNEL JUMPED THE TRIP FUNCTION (TO PREVENT THE ISOLATION FROM OCCURRING WHILE THE TEST WAS BEING PERFORMED) FOR 2G31-N062H, AND THEN ACTUALLY HEATED 2G31-N062E, 2G31-F001 ISOLATED ON A HIGH RWCU PUMP ROOM TEMPERATURE SIGNAL. THE MISLABELING OF THE RTD WAS THE RESULT OF PERSONNEL ERROR BY A PERSON OR PERSONS UNKNOWN. IT IS POSTULATED THAT THE INCORRECT LABELING ERROR OCCURRED DURING INITIAL RTD INSTALLATION ON 8-26-84. INCORRECT LABELING OF THE RTD DID NOT AFFECT ITS OPERABILITY.

[169] HATCH 2 DOCKET 50-366 LER 85-017
 MOLDED CASE BREAKER SETPOINTS TOO HIGH.
 EVENT DATE: 043085 REPORT DATE: 053085 NSSS: GE TYPE: BWR

(NSIC 194632) ON 4-30-85 AND 5-1-85 DURING PERFORMANCE OF THE 'MOLDED CASE BREAKERS PROTECTING THE PRIMARY CONTAINMENT PENETRATION CONDUCTORS SURVEILLANCE' PROCEDURE (HNP-2-3850), PLANT PERSONNEL NOTED THAT MOLDED CASE CIRCUIT BREAKERS (MCCB) HAD TRIP SETPOINTS AND/OR BREAKER LOCATIONS THAT WERE CONTRARY TO THE SPECIFIED SETPOINTS AND/OR SPECIFIED LOCATIONS OF TECH SPECS TABLE 3.8.2.6-1. THE AS-FOUND SETPOINTS OF THE BREAKERS WERE STILL SUFFICIENTLY LOW SO THAT THE CONDUCTORS WOULD STILL HAVE ADEQUATE MARGINS OF PROTECTION. THE CAUSES WERE INADEQUATE INSTRUCTIONS FOR PERFORMING MAINTENANCE ON THE BREAKERS (I.E., ADJUSTING THE TRIP SETPOINT WHEN THE BREAKER WAS RETURNED TO SERVICE), AND

IMPLEMENTING A DESIGN CHANGE REQUEST (DCR). AN AMENDMENT TO THE TECH SPECS CORRECTED THE BREAKER SETPOINTS. A REQUEST WAS INITIATED TO CHANGE THE TECH SPECS SPECIFIED LOCATION OF THE BREAKERS FOR 2E51-F007 AND 2E41-F002. THE BREAKER SETTINGS WERE CORRECTED IN THE FIELD.

[170] HATCH 2 DOCKET 50-366 LER 85-014
 INADEQUATE TEST PROCEDURE RESULTS IN ADS VALVES OPENING.
 EVENT DATE: 051085 REPORT DATE: 060785 NSSS: GE TYPE: BWR

(NSIC 194631) ON 5-10-85 AT 0443 CDT, WITH THE REACTOR IN COLD SHUTDOWN FOR A REFUELING OUTAGE, AND DURING PERFORMANCE OF THE 'ADS LSFT' PROCEDURE PLANT PERSONNEL NOTED THAT THE 7 SAFETY RELIEF VALVES (SRV'S) WHICH SERVE AN AUTOMATIC DEPRESSURIZATION SYSTEM (ADS) FUNCTION (2B21-F013 A, C, E, H, K, L, AND M) OPENED. WHEN THE ADS VALVES OPENED, REACTOR WATER LEVEL DECREASED FROM 195 INCHES (REFERENCE INSTRUMENT ZERO) TO APPROX 153 INCHES (REFERENCE INSTRUMENT ZERO). WITH REACTOR WATER LEVEL AT 195" THE MAIN STEAM OUTLET NOZZLES WERE COVERED. THUS, WHEN THE ADS VALVES OPENED, REACTOR WATER DRAINED VIA THE MAIN STEAMLINE TO THE TORUS. THIS EVENT WAS THE RESULT OF HNP-2-3252-E BEING INADEQUATE. HNP-2-3252-E DID NOT FULLY ADDRESS THE NEED TO PERFORM CERTAIN STEPS OF THE PROCEDURE IN A TIMELY MANNER. ALL THE STEPS SHOULD HAVE BEEN PERFORMED IN LESS THAN 2 MINS, OTHERWISE THE ADS LOGIC TIMERS WOULD TIME OUT AND OPEN THE ADS S.V'S. HNP-2-3252-E WAS REVISED TO INCLUDE OPENING THE LINKS FOR THE ADS SRV'S WHICH WILL PRECLUDE THEIR OPENING ON AN ADS INITIATION SIGNAL DURING PERFORMANCE OF THE PROCEDURE. THERE HAVE BEEN PAST EVENTS WHERE ESF ACTUATIONS OCCURRED DUE TO INADEQUATE PROCEDURE REVS (REFER TO LERS 50-366/84-009, AND 85-023).

[171] HATCH 2 DOCKET 50-366 LER 85-023
 TESTING ERROR RESULTS IN LOW PRESSURE COOLANT INJECTION ACTUATION.
 EVENT DATE: 051585 REPORT DATE: 060785 NSSS: GE TYPE: BWR

(NSIC 194634) ON 5-15-85 AT 0640 CDT WITH THE REACTOR MODE SWITCH IN THE SHUTDOWN POSITION AND THE UNIT SHUTDOWN, I&C PERSONNEL IN THE PROCESS OF PERFORMING THE 'CHANNEL LOGIC RESPONSE TIME' PROCEDURE CAUSED A LPCI SYSTEM ACTUATION TO OCCUR. THE PROCEDURE MISTAKENLY CALLED FOR A JUMPER TO BE PLACED BETWEEN AA3 AND AA4 IN PANEL 2H11-P617, WHEN IN FACT IT SHOULD HAVE CALLED FOR THE JUMPER TO BE PLACED BETWEEN AA3 AND AA4 IN PANEL 2H11-P627. AT THE TIME OF THE EVENT, RHR PUMP 'C' WAS RUNNING IN THE SHUTDOWN COOLING MODE. THE IMPROPERLY INSTALLED JUMPER INITIATED A LOOP 'A' LOCA SIGNAL WHICH CAUSED RHR PUMPS 'B' AND 'D' TO START IN THE LPCI MODE AND INJECT WATER FROM THE TORUS INTO THE REACTOR PRESSURE VESSEL (RPV). OPERATIONS PERSONNEL IMMEDIATELY SECURED ALL RHR PUMPS AND THE I&C PERSONNEL INVOLVED TERMINATED THEIR TEST. AFTER REVIEWING AND CORRECTING THE UNCOMPLETED PORTION OF THE PROCEDURE, PLANT PERSONNEL SUCCESSFULLY COMPLETED IT.

[172] INDIAN POINT 2 DOCKET 50-247 LER 85-004
 FEEDWATER REG VALVE FAILURE CAUSE LOW SG LEVEL.
 EVENT DATE: 030685 REPORT DATE: 040485 NSSS: WE TYPE: PWR
 VENDOR: POTTER & BRUMFIELD

(NSIC 194167) ON 3-6-85 WHILE THE REACTOR WAS AT 100% POWER AND DURING A PERIODIC SURVEILLANCE TEST TO DETERMINE THE OPERABILITY OF THE STEAM LINE PRESSURE BISTABLES, A REACTOR TRIP OCCURRED. THE RPS WAS ACTUATED BY A FEEDWATER FLOW/STEAM FLOW MISMATCH SIGNAL IN COINCIDENCE WITH A LOW SG LEVEL SIGNAL. THE TRIP OCCURRED DURING THE PROCESS OF SWITCHING SG LEVEL CONTROL CHANNELS, AND IS ATTRIBUTED TO FAULTY RELAYS WHICH CAUSED A FEEDWATER REGULATING VALVE TO FUNCTION IMPROPERLY. THERE WERE NO SAFETY CONSEQUENCES, AS THE RPS FUNCTIONED IN ACCORDANCE WITH ITS DESIGN AND TRIPPED THE REACTOR WHEN THE MISMATCH OCCURRED.

[173] INDIAN POINT 2 DOCKET 50-247 LER 85-005
 FAILURE OF MAIN FEEDWATER REGULATING VALVE AND TRIP OF MAIN FEEDWATER PUMPS.
 EVENT DATE: 032685 REPORT DATE: 042385 NSSS: WE TYPE: PWR
 VENDOR: BAILEY METER COMPANY
 COPES-VULCAN, INC.
 INGERSOL-RAND CO.

(NSIC 194828) ON MARCH 26, 1985 DURING A PREPLANNED POWER DESCENT NECFSSALY TO REPAIR THE FEEDWATER REGULATING VALVE FOR STEAM GENERATOR #23. MAIN BOILER FEEDWATER PUMPS #21 AND 22 TRIPPED. THE OPERATOR MANUALLY TRIPPED THE REACTOR AND STABILIZED CONDITIONS AT HOT SHUTDOWN. THE POWER OUTPUT WAS 227 MWE AT THE TIME OF THE OCCURRENCE. VISUAL INSPECTION OF THE REGULATING VALVE REVEALED A VALVE POSITIONER MISALIGNMENT. ALSO, THE VALVE SHAFT HAD BECOME LOOSE AT THE VALVE OPERATOR AND WAS BEING DRIVEN CLOSED BY ITS OWN WEIGHT AND VIBRATION. THE VALVE SHAFT WAS BACK-THREADED SEVERAL TURNS INTO THE VALVE OPERATOR (COPES-VULCAN D-100-16013) AND A LOCKING DEVICE TIGHTENED, WHICH ELIMINATED THE PROBLEM. ALTHOUGH THE CAUSE OF THE EVENT COULD NOT BE IDENTIFIED, IT APPEARS THAT A PRESSURE TRANSIENT IN THE FEEDWATER SYSTEM MAY HAVE CAUSED THE FEEDWATER PUMPS TO TRIP DUE TO ACTUATION OF THE HIGH PRESSURE SWITCH ON THE DISCHARGE PRESSURE SIDE OF THE PUMPS. THE EVENT WAS REVIEWED AND IT WAS DETERMINED THAT ALTHOUGH IT REPRESENTED AN UNPLANNED SHUTDOWN OF THE REACTOR, THERE WERE NO SAFETY IMPLICATIONS ASSOCIATED WITH THE LOSS OF BOTH MAIN BOILER FEEDWATER PUMPS. THE REGULATING VALVE WAS REPAIRED AND THE PLANT RETURNED TO FULL POWER OPERATION.

[174] INDIAN POINT 3 DOCKET 50-286 LER 85-004
 FAILURE OF INTERMEDIATE RANGE DETECTOR GIVES 3 SCRAMS.
 EVENT DATE: 032085 REPORT DATE: 041585 NSSS: WE TYPE: PWR
 VENDOR: BUSSMANN MFG (DIV OF MCGRAW-EDISON)
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 194571) ON 3-20-85, DURING PLANT STARTUP, CONTROL POWER FUSES FOR NUCLEAR INSTRUMENTATION INTERMEDIATE RANGE CHANNEL 36 (I.R. 36) FAILED RESULTING IN 3 REACTOR TRIPS. THE REACTOR WAS SUBCRITICAL AT THE TIME OF EACH TRIP. IT APPEARS THAT INTERMITTENT CURRENT LEAKAGE ACROSS A TEST SWITCH CAUSED THE FUSES TO FAIL. IT IS STILL UNDER INVESTIGATION. ALL EQUIPMENT ASSOCIATED WITH THE REACTOR TRIPS OPERATED CORRECTLY.

[175] KEWAUNEE DOCKET 50-305 LER 85-008
 INADVERTENT START OF BOTH DIESEL GENERATORS.
 EVENT DATE: 022585 REPORT DATE: 032785 NSSS: WE TYPE: PWR

(NSIC 194670) AT 1647 ON FEBRUARY 25, 1985, WITH THE PLANT IN A REFUELING SHUTDOWN CONDITION, ALARM 47001-34, "CONDENSER LOW VACUUM TURBINE TRIP", MOMENTARILY CLEARED AND THEN ALARMED AGAIN. FOLLOWING THIS, BOTH DIESEL GENERATORS STARTED. AFTER INVESTIGATING THE CAUSE, THE DIESEL GENERATORS WERE SECURED. INVESTIGATION REVEALED THAT THESE TWO EVENTS WERE CAUSED BY MAINTENANCE TO THE TURBINE TRIP MECHANISM LOCATED ON THE TURBINE PEDESTAL. DURING THIS MAINTENANCE THE TURBINE MANUAL TRIP/RESET LEVER WAS MOMENTARILY PLACED IN THE LATCH POSITION ALLOWING TURBINE AUTO STOP OIL PRESSURE TO INCREASE TO THE POINT WHERE THE TURBINE TRIP PRESSURE SWITCHES WERE RESET. THIS CLEARED THE CONDENSER LOW VACUUM TURBINE TRIP ALARM. THE LEVER WAS THEN PLACED IN THE TRIP POSITION ALLOWING THE AUTO STOP OIL PRESSURE TO DECREASE. AS THE PRESSURE FELL BELOW 45 PSIG, THE CONDENSER LOW VACUUM TURBINE TRIP SIGNAL AND DIESEL GENERATOR START SIGNALS WERE INITIATED. TO PREVENT REOCCURRENCE, THE DIESEL GENERATOR START SIGNAL FROM A TURBINE TRIP WILL BE REMOVED FROM SERVICE AS PART OF THE SHUTDOWN EVOLUTION DURING EXTENDED OUTAGES AND RETURNED TO SERVICE PRIOR TO UNIT START-UP. THIS EVENT HAD MINIMAL IMPACT ON PLANT ACTIVITIES.

[176] KEWAUNEE DOCKET 50-305 LER 85-012
 INADVERTENT REACTOR TRIP DURING INTERMEDIATE RANGE DETECTOR CALIBRATION.
 EVENT DATE: 041085 REPORT DATE: 051085 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194477) AT 1522 ON 4-10-85, WITH THE PLANT IN THE HOT SHUTDOWN OPERATING MODE PREPARING TO START UP FOLLOWING A REFUELING OUTAGE, A REACTOR TRIP OCCURRED DURING PERFORMANCE OF THE SURVEILLANCE PROCEDURE TO CALIBRATE THE INTERMEDIATE RANGE NUCLEAR INSTRUMENTATION CHANNELS. THE TRIP WAS CAUSED BY THE P-6 DELAY CHATTERING, WHICH WAS INTRODUCED THROUGH THE GROUNDING OF THE TEST EQUIPMENT. THE CHATTERING BISTABLE CAUSED THE CONTROL POWER FUSES FOR INTERMEDIATE RANGE CHANNEL N35 DETECTOR TO BLOW. THIS COMPLETED THE ONE OUT OF TWO ACTUATION LOGIC FOR AN INTERMEDIATE RANGE HI FLUX REACTOR TRIP. IMMEDIATE ACTIONS WERE TAKEN TO STOP THE IN PROGRESS DILUTION AND VERIFY THE REACTOR TRIP. CONSIDERATION IS BEING GIVEN TO PURCHASING A NEW PORTABLE PICOAMMETER TO PREVENT A RECURRENCE OF THIS EVENT. THE REACTOR WAS IN THE SHUTDOWN CONDITION WITH THE CONTROL BANKS INSERTED PRIOR TO THE EVENT AND THE RPS PERFORMED AS DESIGNED.

[177] KEWAUNEE DOCKET 50-305 LER 85-013
 INFLUENCE OF HEAT TRACING ON HYDROGEN MONITOR OPERABILITY.
 EVENT DATE: 050585 REPORT DATE: 061285 NSSS: WE TYPE: PWR

(NSIC 194831) WHILE PERFORMING SP 56C-093, "CONTAINMENT HYDROGEN MONITOR OPERATIONAL TEST," THE HEAT TRACING CIRCUIT ON THE SUCTION LINE TO THE 1A CONTAINMENT HYDROGEN ANALYZER WAS DISCOVERED INOPERABLE. INVESTIGATION REVEALED THAT THIS CONDITION HAD EXISTED SINCE APRIL 4, 1985. ON APRIL 4, 1985, THE SHIFT SUPERVISOR ISSUED A WORK REQUEST TO REPAIR THE INOPERABLE HEAT TRACING CIRCUIT. THE SHIFT SUPERVISOR WAS AWARE OF THE RECENTLY ISSUED TECH SPEC (3/3/85) REGARDING HYDROGEN MONITOR OPERABILITY HOWEVER, THE LOSS OF ONE TRAIN OF REDUNDANT HEAT TRACING, ALTHOUGH DEGRADING THE SYSTEM, DID NOT CLEARLY RENDER THE HYDROGEN MONITOR INOPERABLE. CORRECTIVE ACTIONS WERE NOT COMPLETED DUE TO THE UNAVAILABILITY OF SPARE PARTS, AND ON MAY 5 THE FAILED HEAT TRACING CIRCUIT WAS DISCOVERED AGAIN. AT THIS TIME MANAGEMENT EVALUATIONS CONSERVATIVELY CONCLUDED THAT THE 14-DAY LCO ON HYDROGEN MONITOR OPERABILITY HAD BEEN EXCEEDED AND PREPARATIONS FOR AN ORDERLY SHUTDOWN COMMENCED. REPAIRS WERE COMPLETED IN THREE HOURS AND A POWER REDUCTION WAS NOT REQUIRED. FURTHER EVALUATION CONCLUDED THAT PLANT OPERATION WAS WITHIN TECH SPECS AS THE REDUNDANT TRAIN'S, HEAT TRACED, SUCTION LINE COULD HAVE BEEN VALVED INTO THE 1A H2 MONITOR. CORRECTIVE ACTIONS WILL INCLUDE ROUTING THIS LER TO ALL SRC'S FOR REVIEW AND PROVIDING TRAINING TO OPERATIONS PERSONNEL.

[178] LA SALLE 1 DOCKET 50-373 LER 85-033
 NOBLE GAS SAMPLE SBTG SYSTEM MISSED.
 EVENT DATE: 040285 REPORT DATE: 042585 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)

(NSIC 193819) ON 4-1-85, UNIT 1 STANDBY GAS TREATMENT SYSTEM WAS RUN FROM 1855 HRS TO 1405 HRS ON 4-2-85. BY THE END OF THE RUN A NOBLE GAS GRAB SAMPLE HAD NOT BEEN OBTAINED IN VIOLATION OF TECH SPEC 4.11.2.1.2. RAD CHEM WAS NOTIFIED PRIOR TO THE STARTUP OF THE STANDBY GAS TREATMENT SYSTEM BUT WAS NOT NOTIFIED PRIOR TO THE SYSTEM SHUTDOWN AS REQUIRED BY LOP-VG-02, STEP F.1.C. THE RAD CHEM TECHNICIAN RECORDED THE INITIAL CALL IN THE LOG BOOK AND IT WAS NOT IDENTIFIED UNTIL 1600 HRS ON 4-2, APPROX 2 HRS AFTER THE SYSTEM WAS SHUT DOWN. THE SYSTEM OPERATED FOR 19 HRS WITHOUT A GRAB SAMPLE TAKEN. THE WIDE RANGE GAS MONITOR OPERATED DURING THE EVENT AND PROVIDED A CONTINUOUS RECORD OF THE NOBLE GAS RELEASE. THE MISSED SAMPLE AFFECTS ONLY THE OFF SITE DOSE CALCULATION WHICH USES IDENTIFICATION OF SPECIFIC ISOTOPES FOR CALCULATION PURPOSES FOR NOBLE GAS RELEASE. THERE WAS NO INCREASE IN ACTIVITY DURING THE EVENT. PREVIOUS LERS: 373/84-048, 83-002, 82-041, 82-007.

[179] LA SALLE 1 DOCKET 50-373 LER 85-038
 CR VENTILATION ISOLATED WHEN AMMONIA DETECTOR TAPE BROKE.
 EVENT DATE: 041285 REPORT DATE: 050885 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 194132) AT 1030 HRS ON 4-12-85, THE CONTROL ROOM RECEIVED A 'HIGH CHLORINE/AMMONIA CONCENTRATION' ALARM FOR THE 'A' TRAIN OF THE CONTROL ROOM/AUX ELECTRICAL EQUIPMENT ROOM HVAC SYSTEM. ALL RESULTING AUTOMATIC ESF DAMPER ACTUATIONS OCCURRED SATISFACTORILY. AT THE TIME OF THIS EVENT THE 'B' TRAIN WAS IN OPERATION AND THE 'A' TRAIN WAS IDLE. UNIT 1 WAS IN OPERATIONAL CONDITION 3 AT 0% POWER AND UNIT 2 WAS IN OPERATIONAL CONDITION 4 AT 0% POWER. THE INSTRUMENT MAINTENANCE PERSONNEL WHO WERE DISPATCHED TO INVESTIGATE THE ALARM DISCOVERED THAT THE CHEMCASSETTE OF AN AMMONIA DETECTOR FOR THE 'A' TRAIN (OXY-VC125A/B) HAD A BROKEN TAPE, CAUSING THE ALARM AND DAMPER ACTUATIONS. THE BROKEN TAPE WAS REPAIRED AND THE INSTRUMENT WAS RETURNED TO SERVICE. THE 'A' TRAIN OF THE SYSTEM WAS RETURNED TO ITS PREVIOUS LINE-UP. SINCE THE ESF DAMPER ACTUATIONS PLACED THE SYSTEM IN A CONSERVATIVE CONFIGURATION AND SINCE 'A' TRAIN WAS NOT IN SERVICE, NO ADVERSE EFFECTS RESULTED FROM THIS EVENT.

[180] LA SALLE 1 DOCKET 50-373 LER 85-040
 CONTROL ROOM HVAC AMMONIA DETECTOR FAILS.
 EVENT DATE: 042385 REPORT DATE: 052185 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 194636) ON 4-23-85 AND ON 5-5-85, THE CONTROL ROOM RECEIVED ALARMS FOR 'HIGH CHLORINE/AMMONIA CONCENTRATION' FOR THE 'A' TRAIN OF THE CONTROL ROOM/AUX ELECTRICAL EQUIPMENT ROOM HVAC SYSTEM. IN EACH CASE THE ALARM WAS CAUSED BY A JAMMED CHEMCASSETTE TAPE IN THE 'B' AMMONIA DETECTOR OF THE 'A' TRAIN, AND RESULTED IN ESF DAMPER ACTUATIONS TO ISOLATE THE 'A' TRAIN FROM OUTSIDE AIR AND INITIATE RECIRCULATING AIRFLOW THROUGH CHARCOAL FILTERS. INSTRUMENT MAINTENANCE PERSONNEL CLEARED THE JAMS AND RESTORED NORMAL DETECTOR OPERATION FOLLOWING EACH EVENT. FOLLOW-UP TROUBLESHOOTING IDENTIFIED MALFUNCTIONING CAPSTANS AS A PROBABLE CAUSE FOR THE RECENT TAPE-JAMMING EVENTS. THE CAPSTANS WERE INSPECTED AND CLEANED, RESULTING IN PROPER DETECTION OPERATION. SIMILAR EVENT: 373-84-066.

[181] LA SALLE 1 DOCKET 50-373 LER 85-041
 SPURIOUS AUTO-START OF EMERGENCY MAKE-UP FAN.
 EVENT DATE: 050585 REPORT DATE: 053085 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)

(NSIC 194499) THE FAN (OVC03CA) FOR THE 'A' EMERGENCY MAKE-UP TRAIN OF CONTROL ROOM AUX ELECTRICAL EQUIPMENT ROOM HVAC (VC/VE) STARTED FOR NO APPARENT REASON. INVESTIGATION BY STATION PERSONNEL COULD FIND NOTHING WRONG WITH THE FAN OR ITS CONTROL CIRCUITRY. NO SURVEILLANCE OR MAINTENANCE ACTIVITIES WHICH COULD HAVE AFFECTED THE FAN WERE IN PROGRESS. THE TRIP WAS RESET AND THE FAN SECURED. THIS FAN SUBSEQUENTLY TESTED SATISFACTORILY DURING ROUTINE SURVEILLANCE TESTING.

[182] LA SALLE 1 DOCKET 50-373 LER 85-043
 CHLORINE DETECTOR SPURIOUSLY ACTUATES.
 EVENT DATE: 050885 REPORT DATE: 060685 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
 VENDOR: WALLACE & TIEMAN, INC.

(NSIC 194637) AT 1938 HRS ON 5-8-85, THE CONTROL ROOM RECEIVED AN ALARM FOR 'HIGH CHLORINE/AMMONIA CONCENTRATION' FOR THE 'B' TRAIN OF THE CONTROL ROOM AUX ELECTRICAL EQUIPMENT ROOM HVAC SYSTEM. THE ALARM RESULTED IN A SIGNAL FOR ESF

DAMPER OPERATIONS TO ISOLATE THE 'B' TRAIN FROM OUTSIDE AIR AND TO INITIATE RECIRCULATING AIR FLOW THROUGH CHARCOAL FILTERS. THE 'B' TRAIN WAS NOT IN USE, SO ALL ESF DAMPERS WERE ALREADY IN THEIR ACTUATED STATE. THE CAUSE FOR THIS EVENT WAS A FALSE ACTUATION OF 1 OR BOTH OF THE CHLORINE DETECTORS OF THE 'B' TRAIN. INVESTIGATION REVEALED 2 POSSIBLE CAUSES: SETTling IN OF NEW PARTS ON THE 'B' DETECTOR, OR A LOW ELECTROLYTE DRIP RATE ON THE 'A' DETECTOR. BOTH DETECTORS WERE RESET WITHIN 5 MINS AFTER ACTUATION, RESULTING IN PROPER DETECTION OPERATION WITH NO FURTHER PROBLEMS. UNIT 1 WAS AT 96% POWER AND UNIT 2 WAS IN COLD SHUTDOWN AT THE TIME OF THE EVENT.

[183] LA SALLE 1 DOCKET 50-373 LER 85-044
CONTROL ROOM CHLORINE DETECTOR ACTUATES.
EVENT DATE: 050985 REPORT DATE: 060785 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
VENDOR: WALLACE & TIEMAN, INC.

(NSIC 194638) AT 2159 HRS ON 5-9-85 BOTH CHLORINE DETECTORS FOR THE 'B' TRAIN OF THE CONTROL ROOM/AUX ELECTRICAL EQUIPMENT ROOM HVAC SYSTEM ALARMED SIMULTANEOUSLY RESULTING IN ESF DAMPER OPERATIONS. NO DEFINITE CAUSE FOR THE ACTUATIONS COULD BE FOUND, BUT IT IS BELIEVED THAT THESE DETECTORS ARE SUSCEPTIBLE TO RADIO-FREQUENCY INTERFERENCE. BOTH DETECTORS WERE RESET AND OPERATED PROPERLY. THE POTENTIAL FOR RADIO-FREQUENCY INTERFERENCE WILL BE INVESTIGATED UNDER ACTION ITEM RECORD 373-200-85-00072. NO CONSEQUENCES RESULTED FROM THIS EVENT. SIMILAR EVENTS: 373/85-042; 373/84-083 AND 373/85-007.

[184] LA SALLE 2 DOCKET 50-374 LER 85-019
INSTALLATION ERROR AND BLOWN FUSES CAUSE CONTAINMENT ISOLATION.
EVENT DATE: 041285 REPORT DATE: 050985 NSSS: GE TYPE: BWR
VENDOR: STATIC-O-RING

(NSIC 194184) AT 1639 ON 4-12-85, A UNIT 2 GROUP I ISOLATION OCCURRED ON TRIP SYSTEM A WHEN O.O.S. #2-481-85 WAS CLEARED TO PLACE MAIN CONDENSER LOW VACUUM PRESSURE SWITCHES 2B21-N056A AND 2B21-N056C BACK IN SERVICE FOR TESTING. SINCE AN ISOLATION SIGNAL WAS ALREADY PRESENT ON TRIP SYSTEM B DUE TO MAIN STEAM LINE HI FLOW SWITCHES 2E31-N008B, 2E31-N009B, 2E31-N010B, AND 2E31-N011B BEING IMPROPERLY WIRED UP AND RETURNED TO SERVICE TO PERMIT POST INSTALLATION TESTING, THE PCIS GROUP I RECEIVED A FULL ISOLATION SIGNAL. THREE BLOWN FUSES WERE REPLACED IN THE MAIN CONDENSER LOW VACUUM LOGIC TRIN AND THE TRIP ON THE A CHANNEL WAS CLEARED ON 4-13-85. A WIRING CORRECTION WAS MADE FOR MAIN STEAM LINE HI FLOW SWITCHES 2E31-N008B, 2E31-N009, 2E31-N010B, AND 2E31-N011B AND THE TRIP ON THE 'B' CHANNEL WAS CLEARED ON 4-15-85. AT THE TIME OF THIS OCCURRENCE LASALLE UNIT 2 WAS IN OPERATING CONDITION 4, COLD SHUTDOWN.

[185] LA SALLE 2 DOCKET 50-374 LER 85-016
DEFECTIVE PROCEDURE CAUSED MISSED VALVE SURVEILLANCE.
EVENT DATE: 041885 REPORT DATE: 043085 NSSS: GE TYPE: BWR
VENDOR: ROCKWELL MANUFACTURING COMPANY

(NSIC 194183) ON 4-18-84, IT WAS DISCOVERED THAT VALVE 2E51-F091, RCIC STEAM SUPPLY TO RHR STEAM CONDENSING MODE WARMUP BYPASS, WAS LISTED IN THE BODY OF OPERATING SURVEILLANCE PROCEDURE, LOS-RI-Q2, BUT DID NOT HAVE A PLACE FOR RECORDING STROKE TIME AND INITIALS ON THE DATA SHEET. THE 6-6-84, REVISION OF THE PROCEDURE INCLUDED A CHANGE OVER FROM THE OLD DATA SHEET FORMAT TO A FORMAT USED BY THE WANG WORD PROCESSING SYSTEM. SEPARATE DATA SHEETS ARE PROVIDED FOR EACH UNIT WITH THE ONLY DIFFERENCE BEING THE ADDITION OF THIS VALVE ON THE UNIT 2 DATA SHEET. IT WAS MISTAKENLY LEFT OFF THE UNIT 2 DATA SHEET AND PROOFREADING DID NOT CATCH THE ERROR. THE SURVEILLANCE WAS RUN TWICE BETWEEN THE TIME OF THE REVISION AND THE TIME OF DISCOVERY OF THE ERROR (8-28-84 AND 12-15-84). NO DATA

WAS TAKEN ON THE VALVE ON 8-28-84 BUT WAS INCLUDED IN THE COMMENT SECTION ON 12-15-84. A PROCEDURE REVISION IS IN PROGRESS TO CORRECT THE OMISSION.

[186] LA SALLE 2 DOCKET 50-374 LER 85-020
SERVICE WATER SAMPLE MISSED.
EVENT DATE: 042485 REPORT DATE: 051785 NSSS: GE TYPE: BWR

(NSIC 194639) THE UNIT 2 SERVICE WATER WAS NOT SAMPLED FOR APPROX 12 HRS AFTER ITS MONITOR WAS DECLARED INOPERABLE AT 1830 HRS, 4-23-85. THE RAD CHEM FOREMAN HAD MISTAKENLY TOLD THE RADIATION CHEMISTRY TECHNICIAN TO SAMPLE THE UNIT 2 'A' RHR SERVICE WATER, WHICH THE RCT DID. THIS WAS CONTRARY TO TECH SPEC 3.3.7.10 WHICH REQUIRES ONCE/8 HR SAMPLING. WHEN THE ERROR WAS DISCOVERED DURING THE SUBSEQUENT SHIFT TURNOVER AT 0600 HRS, 4-24-85, AN RCT WAS DISPATCHED TO THE CORRECT SAMPLE POINT. THIS SAMPLE AND THOSE TAKEN EVERY 8 HRS UNTIL 0600 HRS, 4-26-85 WAS ANALYZED AND NONE SHOWED ANY CONTAMINATION. THE MONITOR WAS DECLARED OPERABLE AT 0810 HRS, 4-26-85. AT THE TIME OF THIS EVENT, UNIT 2 WAS IN MODE 4 AT 0% POWER. THE RESPONSIBLE RAD CHEM FOREMAN WAS COUNSELED BY THE RAD CHEM SUPERVISOR AS TO THE FOREMAN'S RESPONSIBILITIES WHEN COMMUNICATING A VERBAL MESSAGE. A RAD CHEM DEPARTMENT MEMO PROVIDING ADDITIONAL GUIDANCE FOR EFFECTIVE VERBAL COMMUNICATION WILL BE ISSUED.

[187] LA SALLE 2 DOCKET 50-374 LER 85-021
RCIC TEMPERATURE LEAK DETECTOR MISWIRED.
EVENT DATE: 050385 REPORT DATE: 052985 NSSS: GE TYPE: BWR
VENDOR: GORDON, CLAUD S. CO.

(NSIC 194640) ON 3-25-85 WITH UNIT 2 IN COLD SHUTDOWN WHILE PERFORMING AN INSTRUMENT SURVEILLANCE, IT WAS DETERMINED THAT THE DIV II HIGH AREA TEMPERATURE TRIP UNIT FOR RCIC LEAK DETECTION SYSTEM DID NOT RESPOND TO TEMPERATURE CHANGES AT THE SENSOR. FURTHER INVESTIGATION ON 5-3-85 SHOWED THAT LABELS FOR 2 CABLES WERE SWAPPED WHILE ENROUTE TO THE CONTROL ROOM TRIP UNITS. AS A RESULT, AMBIENT TEMPERATURE SENSOR, 2E31-N004B, WAS WIRED TO DELTA TEMPERATURE TRIP UNIT, 2E31-N603B, WHILE INLET DELTA TEMPERATURE SENSOR 2E31-N005B WAS WIRED TO AMBIENT TEMPERATURE TRIP UNIT, 2E31-N602B. THE AS INSTALLED LOCATION OF 2E31-N005B, BEING ADJACENT TO THE INLET AIR DUCT RATHER THAN IN THE AIR STREAM DID NOT RESULT IN A LOSS OF THE AMBIENT TEMPERATURE SENSING LOOPS. BOTH DIV I AND II AMBIENT TRIP UNITS WERE OPERATIONAL AT ALL TIMES. A SPECIAL TEST OF THE REMAINING AVAILABLE LD SENSORS SHOWED PROPER TEMPERATURE RESPONSE. SENSORS IN THE MAIN STEAM TUNNEL WILL BE TESTED PER MODIFICATION M-1-2-84-177. A MECHANISM WILL BE DEVELOPED TO INSURE THAT ALL LD LOCAL TEMPERATURE SENSORS ARE HEAT CHECKED ON A PERIODIC BASIS FOR CORRECT WIRING.

[188] LA SALLE 2 DOCKET 50-374 LER 85-022
REACTOR SCRAM DUE TO SPIKE ON IRM.
EVENT DATE: 051085 REPORT DATE: 060585 NSSS: GE TYPE: BWR

(NSIC 194846) ON MAY 10, 1985, UNIT 2 WAS IN COLD SHUTDOWN WITH A HALF SCRAM PRESENT DUE TO WORK BEING PERFORMED ON THE "B" MAIN STEAM LINE PROCESS RADIATION MONITOR. AT 0424 HOURS, IRM C SPIKED HIGH, INITIATING A FULL SCRAM SIGNAL. CAUSE WAS DUE TO EQUIPMENT FAILURE. WORK IS STILL IN PROGRESS TO DETERMINE THE EXACT CAUSE OF THE SPIKES ON IRM C. MAINTENANCE DEPARTMENT BELIEVES THE PROBLEM IS IN THE CABLING AND/OR CONNECTORS OF IRM C.

[189] LACROSSE DOCKET 50-409 LER 83-009 REV 1
UPDATE ON 480V BREAKER FAILS THREE TIMES.
EVENT DATE: 113083 REPORT DATE: 122084 NSSS: AC TYPE: BWR
VENDOR: ALLIS CHALMERS

(NSIC 194561) FOLLOWING PREVENTIVE MAINTENANCE, THE 480V BUS 1A MAIN FEED BREAKER, 452 M1A, WAS REINSTALLED. THE 480V TIE BREAKER WAS CLOSED AND THE 480V BUS 1B MAIN FEED BREAKER, 452 M1B, WAS OPENED, IN PREPARATION FOR PREVENTIVE MAINTENANCE. 452 M1A THEN TRIPPED. BOTH EMERGENCY DG'S STARTED AND SUPPLIED ESSENTIAL BUSES FOR APPROX 15 MINS. THE PLANT WAS SHUTDOWN FOR REFUELING AT THE TIME. 452 M1A SUBSEQUENTLY TRIPPED ON 2 ADDITIONAL OCCASIONS. EXTENSIVE TROUBLESHOOTING WAS CONDUCTED ON BREAKER 452 M1A. THE DETERMINED PROBLEM WAS WITH THE BREAKER STATIC TRIP DEVICE MAGNETIC ACTUATOR. THE MAGNETIC ACTUATOR WAS REPLACED WITH A SPARE. A NEWER MODEL MAGNETIC ACTUATOR WAS INSTALLED ON 452 M1A AND SIMILAR LA1600 BREAKERS. PERIODIC VOLTAGE-DROPOUT CHECKS WILL BE PERFORMED ON ALLIS-CHALMERS LA600 BREAKERS IN USE PER MANUFACTURER'S RECOMMENDATION.

[190] LACROSSE DOCKET 50-409 LER 85-009
INADVERTENT SCRAM DURING SHUTDOWN DUE TO SEAL INJECTION SYSTEM LEAK.
EVENT DATE: 042185 REPORT DATE: 051385 NSSS: AC TYPE: BWR
VENDOR: CRAWFORD-FITTING CO.

(NSIC 193987) AN APPROX 5 GPM LEAK DEVELOPED IN THE SEAL INJECT SUPPLY LINE TO THE CONTROL ROD DRIVE MECHANISMS WHEN A HIGH PRESSURE HOSE BETWEEN A FLOW ORIFICE AND ITS TRANSMITTER RUPTURED. AN UNUSUAL EVENT WAS CONSERVATIVELY DECLARED AND A REACTOR SHUTDOWN COMMENCED FROM APPROX 0.5% POWER. DURING THE SHUTDOWN, THE REACTOR SCRAMMED DUE TO NUCLEAR INSTRUMENTATION CH. 6 WHEN THE OPERATOR DOWNSCALED ITS RANGE SWITCH TOO QUICKLY. CH. 6 IS A WIDE RANGE CHANNEL WITH ITS TRIP POINT SET AT APPROX 77% OF THE SELECTED SCALE. THE UNUSUAL EVENT WAS TERMINATED WHEN THE HOSE CONNECTION WAS PLUGGED. THE DESIGN OF THE LINE BETWEEN THE ORIFICE AND TRANSMITTER WILL BE EVALUATED.

[191] LACROSSE DOCKET 50-409 LER 85-011
LOW REACTOR WATER LEVEL DUE TO FEEDWATER CONTROL FAILURES.
EVENT DATE: 042785 REPORT DATE: 052085 NSSS: AC TYPE: BWR
VENDOR: FOXBORO CO., THE

(NSIC 194596) ON 4-27-85, WATER LEVEL CONTROL EXHIBITED ERRATIC BEHAVIOR. IT WAS DECIDED TO SWITCH TO THE OTHER REACTOR FEEDWATER PUMP (RFP). DURING NORMAL OPERATION, 1 OF 2 RFP'S IS RUNNING. PUMP FLOW IS CONTROLLED BY VARYING THE AMOUNT OF COUPLING BETWEEN A CONSTANT SPEED MOTOR (MO) AND THE PUMP. AT 0714, THE 1A RFP HYDRAULIC COUPLING PUMP AND THE 1A RFP WERE STARTED. THE 1A AND 1B RFP'S WERE PARALLELED IN AUTOMATIC CONTROL. THE OPERATORS PUT 1B RFP TO MANUAL AND STARTED BACKING IT DOWN, BUT THE 1A RFP DID NOT PICK UP THE LOAD AS IT SHOULD HAVE. THE OPERATORS STARTED INCREASING THE SPEED ON THE 1B RFP, BUT THE REACTOR SCRAMMED ON LOW WATER LEVEL, BEFORE THE 1B RFP RESPONDED. THE NOMINAL LOW WATER LEVEL SCRAM SETPOINT (JC) IS 12 INCHES BELOW NORMAL OPERATING LEVEL. ALL EMERGENCY SYSTEMS FUNCTIONED PROPERLY. THE REACTOR FEEDWATER FLOW CONTROLLER RESET TIME WAS REDUCED. THE DEAD BAND WIDTH AND GAIN WERE ADJUSTED ON THE 1B RFP COUPLING CONTROLLER AMPLIFIER (AMP). THE 1A RFP AMPLIFIER WAS CHECKED OUT AND APPEARED TO OPERATE SATISFACTORILY, BUT WAS REPLACED WITH A SPARE AS A PRECAUTION.

[192] LACROSSE DOCKET 50-409 LER 85-012
REACTOR PARTIAL SCRAM DUE TO LOWER CONTROL ROD DRIVE MECHANISM LOW OIL LEVEL.
EVENT DATE: 051785 REPORT DATE: 060785 NSSS: AC TYPE: BWR
VENDOR: ROYAL INDUSTRIES, INC.

(NSIC 194645) A REACTOR PARTIAL SCRAM OCCURRED DUE TO A LOW GAS OR OIL SIGNAL FROM A CONTROL ROD DRIVE MECHANISM (CRDM). DURING A PARTIAL SCRAM, THE CENTER 13 CONTROL RODS ARE AUTOMATICALLY INSERTED, RENDERING THE REACTOR SUBCRITICAL. THE LOW GAS PRESSURE ALARM AND SCRAM SETPOINTS WERE DETERMINED TO BE TOO HIGH ON CRDM'S IN POSITIONS 8 AND 21. THE SETPOINTS WERE NEAR NORMAL OPERATING PRESSURE. IT IS BELIEVED THAT THE ACCUMULATOR PRESSURE ON CRDM NO. 8 OR 21 DECREASED OVER

TIME UNTIL THE LOW PRESSURE SETPOINT WAS REACHED, RESULTING IN THE PARTIAL SCRAM. THE SWITCHES MAY HAVE BEEN DISTURBED WHEN THE MECHANISMS WERE REINSTALLED DURING THE RECENT REFUELING OUTAGE. THE SETPOINTS WERE ADJUSTED. AN INTERNAL OIL LEAK ON THE CRDM IN POSITION 12 WAS FOUND TO BE DUE TO A SMALL METAL CHIP IMBEDDED IN 1 OF THE 2 SCRAM SOLENOIDS' VALVE SEAT, WHICH ALLOWED OIL FLOW PAST THE SEAT. THIS CONDITION COULD HAVE CAUSED A CRDM LOW OIL LEVEL PARTIAL SCRAM, BUT IS CONSIDERED A LESS LIKELY SCRAM CAUSE, SINCE A CRD CHARGING PUMP HAD BEEN RUNNING PERIODICALLY TO MAINTAIN SYSTEM PRESSURE. THE SPARE MECHANISM WAS INSTALLED IN POSITION 12.

[193] LIMERICK 1 DOCKET 50-352 LER 85-053
FAILURE TO PERFORM HOURLY FIRE WATCH.
EVENT DATE: 041585 REPORT DATE: 061185 NSSS: GE TYPE: BWR

(NSIC 194704) ON APRIL 15, 1985 WITH THE UNIT IN COLD SHUTDOWN, THE REQUIRED HOURLY FIRE WATCH WAS NOT PERFORMED WITHIN THE ALLOTTED TIMES FOR SWITCHGEAR ROOM 428 (CONTROL ENCLOSURE ELEVATION 239). THIS AREA WAS PATROLLED AT 9:19 A.M. AND WAS NOT INSPECTED AGAIN UNTIL 10:58 A.M., 99 MINUTES AFTER THE FIRST INSPECTION. DURING THIS TIME AN UNPLANNED SECURITY COMPUTER OUTAGE PREVENTED ACCESS TO THE SWITCHGEAR ROOM. THIS AREA WAS BEING PATROLLED DUE TO AN INOPERABLE CONDUIT SEAL AND TECH SPEC 3.7.7 WHICH REQUIRES AN HOURLY FIREWATCH. THIS EVENT WAS DISCOVERED ON MAY 10, 1985 WHILE CLOSING A MAINTENANCE REQUEST FORM AND REVIEWING FIREWATCH DOCUMENTATION.

[194] LIMERICK 1 DOCKET 50-352 LER 85-047
THREE INSTRUMENTATION CHECK VALVE BYPASS VALVES OPEN.
EVENT DATE: 042085 REPORT DATE: 052185 NSSS: GE TYPE: BWR

(NSIC 194626) WITH CORRECTIVE MAINTENANCE BEING PERFORMED ON EXCESS FLOW CHECK VALVE (XV-51-103D) IN LPCI DIFFERENTIAL PRESSURE TRANSMITTER INSTRUMENT PIPING, IT WAS DETERMINED THAT THE EXCESS FLOW CHECK VALVE WAS EFFECTIVELY INOPERABLE IN THAT ITS ONE-EIGHTH-INCH MANUAL BYPASS VALVE WAS OPEN. ADDITIONAL INSPECTION IDENTIFIED OPEN BYPASS VALVES ON EXCESS FLOW CHECK VALVES (XV-43-103B) IN THE RECIRCULATION PUMP SEAL PURGE INSTRUMENT PIPING AND (SV-42-1F065B) IN THE REACTOR PRESSURE VESSEL INSTRUMENT PIPING. THE EXCESS FLOW CHECK VALVES ACT TO ISOLATE THEIR INSTRUMENT LINES IN THE EVENT OF INSTRUMENT LINE BREAKS. TECH SPEC 3.0.4, REQUIRING THE MEETING OF APPLICABLE ACTION STATEMENTS UPON PLANT ENTRY INTO AN OPERATIONAL CONDITION, WAS NOT SATISFIED SINCE ACTION STATEMENT 3.6.3.B REGARDING EXCESS FLOW CHECK VALVE OPERABILITY WAS NOT SATISFIED UPON ENTRY INTO THE STARTUP MODE ON 4-1-85.

[195] LIMERICK 1 DOCKET 50-352 LER 85-046
MAINTENANCE ERROR CAUSES REACTOR SCRAM.
EVENT DATE: 042385 REPORT DATE: 052385 NSSS: GE TYPE: BWR

(NSIC 194625) ON 4-23-85, WITH UNIT 1 IN COLD SHUTDOWN WITH ALL CONTROL RODS IN, A REACTOR FULL SCRAM SIGNAL OCCURRED. CAUSE OF THE EVENT WAS FAILURE TO PROPERLY REMOVE A REACTOR LEVEL INSTRUMENT FROM SERVICE. A DIFFERENTIAL PRESSURE DEVELOPED IN THE INSTRUMENT'S SENSING CHAMBERS AS THE RESULT OF A CLOSED EQUALIZER VALVE AND A LEAKING INSTRUMENT FITTING. THE DIFFERENTIAL PRESSURE DEVELOPED APPROX 3 HRS AFTER THE INSTRUMENT WAS VALVED OUT OF SERVICE AND WAS SUFFICIENT TO GENERATE A CHANNEL B2 SCRAM SIGNAL. THIS SIGNAL WAS GENERATED AT THE SAME TIME THAT A SURVEILLANCE TEST WAS BEING PERFORMED ON THE CHANNEL A2 SCRAM LOGIC. GENERATION OF AN A2 AND A B2 SCRAM SIGNAL COMPLETED THE LOGIC REQUIRED FOR A FULL SCRAM.

[196] LIMERICK 1 DOCKET 50-352 LER 85-048
 BLOWN FUSE CAUSES ESF ISOLATIONS.
 EVENT DATE: 043085 REPORT DATE: 052285 NSSS: GE TYPE: BWR
 VENDOR: BUSSMANN MFG (DIV OF MCGRAW-EDISON)

(NSIC 194627) ON 4-30-85 WITH UNIT 1 IN THE COLD SHUTDOWN CONDITION, A BLOWN FUSE (5 SMP) IN THE NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM INBOARD LOGIC RESULTED IN ISOLATION OF THE REACTOR WATER CLEANUP SYSTEM, PRIMARY CONTAINMENT INSTRUMENT GAS SYSTEM, REACTOR ENCLOSURE VENTILATION SYSTEM, AND RHR SHUTDOWN COOLING SYSTEM. THE FUSE WAS REPLACED AND ALL AFFECTED SYSTEMS WERE RETURNED TO NORMAL OPERATION. NO CAUSE COULD BE FOUND. SIMILAR EVENT: 352-85-008.

[197] LIMERICK 1 DOCKET 50-352 LER 85-049
 TESTING ERROR CAUSES MSIV ISOLATION.
 EVENT DATE: 050185 REPORT DATE: 052185 NSSS: GE TYPE: BWR

(NSIC 194628) ON 5-1-85, WITH THE UNIT IN COLD SHUTDOWN, A SIGNAL ISOLATED THE 'A', 'B', AND 'D' MAIN STEAM ISOLATION VALVES AND THE INBOARD MAIN STEAM LINE DRAIN VALVE. THIS SIGNAL WAS GENERATED BY THE PRIMARY CONTAINMENT INTEGRITY SYSTEM, AN ESF. ALL OF THE MSIV'S WERE CLOSED AT THE TIME. THEREFORE, THIS ISOLATION SIGNAL DID NOT AFFECT THE POSITION OF THESE VALVES; HOWEVER, THE MAIN STEAM LINE INBOARD DRAIN VALVE DID CLOSE FROM THIS SIGNAL AS DESIGNED. THE ISOLATION SIGNAL OCCURRED WHEN I&C TECHNICIANS PERFORMING A TURBINE CONTROL VALVE FAST CLOSURE TEST INADVERTENTLY BLEW A FUSE IN THE TURBINE MAIN STOP VALVE (MSV) CONTROL LOGIC. THE MSV'S WERE IN THE CLOSED POSITION, PRIOR TO THE FUSE BLOWING; HOWEVER, 3 OF THE MSV'S OPENED WHEN THE CIRCUIT WAS INTERRUPTED. THE OPENING OF THESE VALVES IN CONJUNCTION WITH LOW CONDENSER VACUUM COMPLETED THE MSIV AND DRAIN VALVE ISOLATION LOGIC. THE FUSE WAS REPLACED AND THE ISOLATION WAS RESET.

[198] LIMERICK 1 DOCKET 50-352 LER 85-050
 MAIN CONTROL ROOM CHLORINE DETECTOR FAILS.
 EVENT DATE: 050685 REPORT DATE: 060585 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 194629) ON 5-6-85 AT 7:48 PM, WITH THE UNIT IN COLD SHUTDOWN, AN ESF ACTUATION OCCURRED. FAILURE OF THE 'D' CONTROL ROOM CHLORINE DETECTOR CAUSED THE NORMAL VENTILATION SYSTEM TO ISOLATE AND THE 'B' TRAIN OF THE CONTROL ROOM EMERGENCY FRESH AIR SYSTEM (AN ESF SYSTEM) TO START. THE SAMPLE TAPE IN THE DETECTOR INSTRUMENT HAD BROKEN, CAUSING THE ANALYZER TO INDICATE FULL SCALE. THE TAPE WAS REPAIRED, THE ANALYZER WAS TESTED AND RETURNED TO SERVICE, AND THE ISOLATION WAS RESET. PREVIOUS OCCURRENCES HAVE BEEN REPORTED AS LER'S 84-008, 84-010, 84-028, 84-033, 84-046, 85-029, 85-030, 85-031, AND 85-042. VARIOUS MODIFICATIONS TO THE DETECTOR INSTRUMENT HAVE BEEN IMPLEMENTED. SEVERAL MORE ARE UNDER INVESTIGATION. THERE WERE NO ADVERSE EFFECTS AS A RESULT OF THIS EVENT.

[199] LIMERICK 1 DOCKET 50-352 LER 85-052
 INADVERTENT MOTOR START OF THE D-13 DIESEL GENERATOR.
 EVENT DATE: 050685 REPORT DATE: 060785 NSSS: GE TYPE: BWR

(NSIC 194730) ON MAY 6, 1985 AT APPROXIMATELY 8:45 A.M. WITH UNIT 1 IN COLD SHUTDOWN, AN INADVERTENT MOTOR START OF THE D-13 EMERGENCY DIESEL GENERATOR OCCURRED DURING AN INVESTIGATION OF FALSE PROTECTIVE RELAY TARGET ACTUATIONS. TO DETERMINE THE AMOUNT OF VIBRATION NECESSARY TO ACTUATE A RELAY TARGET, THE D-13 DIESEL OUTPUT BREAKER COMPARTMENT DOOR WAS STRUCK. WHEN THE DOOR WAS STRUCK, CONTACTS ON THE D-13 SWITCHGEAR INTERPOSING RELAY WHICH BYPASS THE DIESEL GENERATOR OUTPUT BREAKER CLOSING LOGIC, CLOSED, ENERGIZING THE D-13 OUTPUT BREAKER CLOSING COIL. CLOSING OF THE OUTPUT BREAKER APPLIED 4KV LINE VOLTAGE TO THE GENERATOR STATOR PRODUCING ENOUGH TORQUE TO ROTATE THE DIESEL ENGINE. THE

DIESEL ENGINE STARTING SEQUENCE WAS COMPLETED AND THE ENGINE REACHED RATED SPEED. THE D-13 DIESEL GENERATOR WAS DECLARED INOPERABLE IN ORDER TO INSPECT FOR POTENTIAL INSULATION DAMAGE. FOLLOWING TESTING OF THE GENERATOR INSULATION SYSTEM AND COMPLETION OF A LOAD TEST, THE DIESEL GENERATOR WAS DECLARED OPERABLE. THERE HAVE BEEN NO PREVIOUS SIMILAR OCCURRENCES.

[200] LIMERICK 1 DOCKET 50-352 LER 85-054
 'B' DIESEL GENERATOR SPRINKLER INOPERABILITY.
 EVENT DATE: 051785 REPORT DATE: 061485 NSSS: GE TYPE: BWR

(NSIC 194712) ON MAY 17, 1985, DURING THE PERFORMANCE OF SURVEILLANCE TEST ST-2-022-613-1 WHICH TESTS DIESEL GENERATOR SMOKE, HEAT, AND INFRARED FLAME DETECTORS, THE ACTUATION RELAY IN THE 'B' DIESEL GENERATOR FIRE SUPPRESSION RELEASE CONTROL PANEL (RCP) 10C976 DID NOT ACTIVATE THE DELUGE VALVE ALONG WITH THE AUDIO/VISUAL ALARMS WHEN ITS HEAT DETECTORS WERE ACTUATED. INVESTIGATION REVEALED THAT THE CONTACTS OF THE PANEL'S ACTUATION RELAY HAD BEEN TAPED WITH ELECTRICAL TAPE, RENDERING THE ACTUATION RELAY INOPERABLE. CONSEQUENTLY, THIS CAUSED THE 'B' DIESEL GENERATOR SPRINKLER SYSTEM AND NOTIFICATION SYSTEM TO BE INOPERABLE AND RESULTED IN THE FAILURE TO COMPLY WITH TECH SPECS 3.7.6.2 AND 3.3.7.9 SINCE NO FIRE WATCH HAD BEEN ESTABLISHED. THIS PANEL IS BELIEVED TO HAVE BEEN OPERABLE PRIOR TO MARCH, 1985. SMOKE AND FLAME DETECTION WITHIN THE 'B' DIESEL GENERATOR AREA WAS OPERABLE DURING THE TIME PERIOD THE SPRINKLER SYSTEM WAS BELIEVED TO BE INOPERABLE. ADDITIONALLY, HAD A FIRE OCCURRED DURING THAT PERIOD, THE CAPABILITY STILL EXISTED FOR MANUAL INITIATION OF THE SPRINKLER SYSTEM. THIS EVENT IS THE RESULT OF AN ERROR BY UNIDENTIFIED PERSONNEL. THE TAPE WAS REMOVED FROM THE CONTACTS AND ST-2-022-613-1 WAS SATISFACTORILY COMPLETED.

[201] MAINE YANKEE DOCKET 50-309 LER 85-003
 REACTOR SCRAM DURING INSTRUMENT REPLACEMENT.
 EVENT DATE: 043085 REPORT DATE: 053085 NSSS: CE TYPE: PWR
 VENDOR: SIGMA INSTRUMENTS, INC.

(NSIC 194671) ON APRIL 30, 1985, WHILE OPERATING AT 96% POWER AN AUTOMATIC REACTOR TRIP ON LOSS OF LOAD OCCURRED DUE TO MAIN TURBINE TRIP. THE MAIN TURBINE TRIP RESULTED FROM AN INSTRUMENT AND CONTROLS TECHNICIAN'S INCORRECT VERIFICATION OF CONTACT POSITIONS IN PROTECTIVE CIRCUITRY FOR THE TURBINE DRIVEN MAIN FEED PUMP. HE MISTAKENLY COMPLETED THE PUMP'S LOW SUCTION PRESSURE TRIP PATH WITH A TEST METER. THE MAIN TURBINE TRIPS AUTOMATICALLY ON A TURBINE DRIVEN MAIN FEED PUMP TRIP. PLANT SAFETY SYSTEMS RESPONDED NORMALLY FOLLOWING THE TRIP. PROPER TESTING TECHNIQUES HAVE BEEN REVIEWED AND THEIR IMPORTANCE STRESSED TO INSTRUMENT AND CONTROLS PERSONNEL TO PREVENT SIMILAR EVENTS.

[202] MAINE YANKEE DOCKET 50-309 LER 85-005
 LACK OF ADMINISTRATIVE CONTROLS ON CONTAINMENT INTEGRITY VALVES.
 EVENT DATE: 052285 REPORT DATE: 060785 NSSS: CE TYPE: PWR

(NSIC 194757) ON MAY 8, 1985 SEVERAL VENTS AND DRAINS ON PRIMARY COMPONENT COOLING (PCC) PIPING, FOR THE REACTOR CONTAINMENT AIR RECIRCULATION AND PENETRATION COOLERS, WERE DETERMINED TO BE LACKING THE ADMINISTRATIVE CONTROLS NECESSARY FOR CONTAINMENT INTEGRITY (CI) BARRIERS. THE VENTS AND DRAINS WERE FOUND CLOSED AND THE ASSOCIATED REDUNDANT CONTAINMENT INTEGRITY VALVES WERE OPERABLE, ENSURING CONTAINMENT INTEGRITY. THE VENTS AND DRAINS WERE NOT IDENTIFIED ON ENGINEERING DRAWINGS NOR IN PROCEDURES AS CONTAINMENT INTEGRITY VALVES, THEREFORE, THEY WERE NOT MAINTAINED UNDER APPROPRIATE ADMINISTRATIVE CONTROLS, AS REQUIRED BY THE MAINE YANKEE FINAL SAFETY ANALYSIS REPORT. PRIMARY COMPONENT COOLING SYSTEM OPERABILITY WAS NOT AFFECTED BY THIS EVENT. TEMPORARY ADMINISTRATIVE CONTROLS WERE ESTABLISHED BY VERBAL INSTRUCTION TO PERSONNEL

ENTERING THE CONTAINMENT, UNTIL PROCEDURES AND ENGINEERING DRAWINGS COULD BE REVISED. TO PREVENT RECURRENCE, ENGINEERING PERSONNEL WILL PERFORM A WALKDOWN OF ALL SYSTEMS PENETRATING THE CONTAINMENT, DURING THE UPCOMING REFUELING, TO VERIFY THERE ARE NO OTHER VENTS OR DRAINS THAT ARE CONTAINMENT INTEGRITY BARRIERS.

[203] MCGUIRE 1 DOCKET 50-369 LER 85-008
FAILURE TO COMPLY WITH WIRING SEPARATION CRITERIA/ESF ACTUATION.
EVENT DATE: 020685 REPORT DATE: 050985 NSSS: WE TYPE: PWR

(NSIC 194699) ON FEBRUARY 6, 1985, IT WAS DISCOVERED THAT THE UNIT 1 REACTOR TRIP SWITCHGEAR WIRING DID NOT SATISFY SEPARATION CRITERIA REQUIRED FOR SAFETY-RELATED CIRCUITS. A SINGLE WIRE OF TRAIN "A" WAS ROUTED WITH TRAIN "B" WIRING DURING THE INSTALLATION OF A MODIFICATION IN MARCH, 1984. WHILE THIS ERROR WAS BEING CORRECTED, AN ELECTRICIAN ACCIDENTALLY ACTUATED A LIMIT SWITCH INSIDE THE REACTOR TRIP BREAKER CABINET ("A"), AND INITIATED A FEEDWATER ISOLATION SIGNAL. THE CAUSE OF THE WIRING ERROR HAS BEEN ATTRIBUTED TO AN ADMINISTRATIVE/PROCEDURAL DEFICIENCY, WHILE THE FEEDWATER ISOLATION (ESF) SIGNAL WAS CAUSED BY PERSONNEL ERROR. CORRECTIVE ACTIONS WILL ADDRESS PROCEDURAL ENHANCEMENTS TO BETTER CONTROL WIRING CHANGES.

[204] MCGUIRE 1 DOCKET 50-369 LER 85-010
PERSONNEL AIRLOCK INTEGRITY NOT ASSURED.
EVENT DATE: 032085 REPORT DATE: 041985 NSSS: WE TYPE: PWR

(NSIC 194684) ON MARCH 20, 1985, DURING PERFORMANCE OF THE LOWER CONTAINMENT PERSONNEL LOCK LEAK RATE TEST, IT WAS DISCOVERED THAT THE KEYSWITCH FOR THE DOOR ON THE REACTOR SIDE OF THE CONTAINMENT PERSONNEL AIRLOCK WAS IN THE "BYPASS" POSITION. THIS CREATED THE POSSIBILITY THAT BOTH AIRLOCK DOORS COULD BE OPEN AT THE SAME TIME, THEREBY VIOLATING CONTAINMENT INTEGRITY. BOTH DOORS WERE VERIFIED TO BE CLOSED AND SEALED, AND CONTAINMENT INTEGRITY WAS NOT COMPROMISED. THE CAUSE OF THE EVENT IS ATTRIBUTED TO PROCEDURAL DEFICIENCY, BECAUSE THE APPROPRIATE PROCEDURES DID NOT REQUIRE A SIGN-OFF STEP TO VERIFY THAT THE INTERLOCK KEY SWITCHES ARE IN THE "ACTIVE" POSITION WHEN RETURNING THE AIRLOCK TO SERVICE. CORRECTIVE ACTIONS WILL ADDRESS PROCEDURE CHANGES TO ENSURE THAT INTERLOCK KEY SWITCHES ARE RETURNED TO THEIR "ACTIVE" POSITION PRIOR TO ENTERING MODE 4.

[205] MCGUIRE 1 DOCKET 50-369 LER 85-017
DIESEL GENERATOR 1A STARTED DUE TO A TRANSMISSION SYSTEM DISTURBANCE.
EVENT DATE: 051585 REPORT DATE: 061485 NSSS: WE TYPE: PWR

(NSIC 194635) ON 5-15-85, DG 1A EXPERIENCED AN INVALID AUTOMATIC START DUE TO A UNIT BLACKOUT SIGNAL GENERATED BY A MOMENTARY POWER TRANSMISSIONS SYSTEM ELECTRICAL DISTURBANCE DURING A SEVERE STORM. (DG 1B WAS INOPERABLE AT THE TIME DUE TO MAINTENANCE REPAIRS). THE UNIT WAS IN MODE 6 WITH ALL FUEL REMOVED FROM THE REACTOR CORE AT THE TIME OF THE OCCURRENCE. THIS INCIDENT IS ATTRIBUTED TO AN UNUSUAL SERVICE CONDITION, DUE TO THE POWER DISTRIBUTION SYSTEM DISTURBANCE CAUSED BY THE SEVERE WEATHER, AND A DESIGN DEFICIENCY BECAUSE THE START CIRCUITRY OF THE DG'S CAUSE THEM TO START ON AN INSTANTANEOUS UNDERVOLTAGE CONDITION.

[206] MCGUIRE 2 DOCKET 50-370 LER 85-007
SPURIOUS OVERCURRENT RELAY ACTUATION CAUSES LOSS OF ESSENTIAL SWITCHGEAR.
EVENT DATE: 032785 REPORT DATE: 042985 NSSS: WE TYPE: PWR
VENDOR: BROWN BOVERI

(NSIC 194845) ON MARCH 27, 1985, AN OVERCURRENT RELAY AT MCGUIRE UNIT 2 ACTUATED ON A SPURIOUS (NON-EXISTENT) CONDITION, CAUSING A BREAKER TO OPEN AND A RESULTANT

INTERRUPTION OF POWER TO AN ESSENTIAL SWITCHGEAR. UNIT 2 WAS IN MODE 6 AT THE TIME. THE CAUSE OF THE EVENT IS A COMPONENT MALFUNCTION, BECAUSE THE OVERCURRENT RELAY CAUSED THE BREAKER TO OPEN WITHOUT AN ACTUAL OVERCURRENT CONDITION. CORRECTIVE ACTIONS CONSISTED OF REPLACEMENT OF THE RELAY, AND ITS RETURN TO THE MANUFACTURER FOR INSPECTION.

[207] MCGUIRE 2 DOCKET 50-370 LER 85-012
 MANUAL REACTOR TRIP DUE TO LOSS OF MAIN FEEDWATER PUMP 2A.
 EVENT DATE: 050885 REPORT DATE: 060785 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194776) ON 5/8/85 AT 0647, MAIN FEEDWATER (MF) PUMP 2A TRIPPED ON HIGH DISCHARGE PRESSURE DURING AN ATTEMPT TO SWAP THE PUMP'S STEAM SUPPLY FROM AUXILIARY STEAM TO MAIN STEAM. AUXILIARY FEEDWATER AUTOSTARTED ON A "LOSS OF BOTH MAIN FEEDWATER PUMPS" SIGNAL. THE REACTOR WAS MANUALLY TRIPPED, ACCORDING TO PROCEDURE. THE UNIT WAS IN MODE 1 AT 10% POWER AT THE TIME OF THE TRIP. THE MAIN TURBINE HAD NOT BEEN PLACED ON-LINE. THE CAUSE WAS DUE TO FAILURES OF THE FLYBALL GOVERNOR MECHANISM IN THE MF TURBINES SPEED CONTROL SYSTEM.

[208] MILLSTONE 1 DOCKET 50-245 LER 84-005 REV 1
 UPDATE ON SIX LEAKING CONTAINMENT ISOLATION VALVES.
 EVENT DATE: 041484 REPORT DATE: 090484 NSSS: GE TYPE: BWR
 VENDOR: CERTIFIED RADIATION INSTRUMENT CO.
 CHAPMAN DIV OF CRANE CO.
 CRANE COMPANY
 VELAN VALVE CORP.

(NSIC 194564) DURING THE 1984 REFUEL OUTAGE ALL TESTABLE PRIMARY CONTAINMENT ISOLATION VALVES, CABLE PENETRATIONS AND MANWAYS WERE LOCAL LEAK RATE TESTED. OF THE TOTAL NUMBER OF VALVES, PENETRATIONS AND MANWAYS TESTED, 6 PRIMARY CONTAINMENT ISOLATION VALVES WERE FOUND TO HAVE LEAKAGE IN EXCESS OF TECH SPECS. TECH SPEC 4.7.A.3.E REQUIRES THAT NO ONE PENETRATION OR ISOLATION VALVE, EXCEPT THE MSIV EXCEED A LEAK RATE OF 19.95 SCFH AT 43 PSIG. NO ONE MSIV MAY EXCEED A LEAK RATE OF 11.5 SCFH AT 25 PSIG. THE 6 PRIMARY CONTAINMENT ISOLATION VALVES WERE INSPECTED AND FOUND TO HAVE VARIOUS MECHANICAL DEFICIENCIES THAT RESULTED IN EXCESS LEAKAGE RATES. THE DEFICIENCIES WERE CORRECTED AND THE PRIMARY CONTAINMENT ISOLATION VALVES SATISFACTORILY RETESTED. SYSTEMS INVOLVED INCLUDE - MSIV'S, LPCI, REACTOR WATER CLEANUP AND STANDBY LIQUID CONTROL.

[209] MILLSTONE 1 DOCKET 50-245 LER 84-009 REV 1
 UPDATE ON TEN HYDRAULIC SNUBBER FAILURES.
 EVENT DATE: 042584 REPORT DATE: 091184 NSSS: GE TYPE: BWR
 VENDOR: BERGEN-PATTERSON PIPE SUPPORT CORPORATION
 ITT GRINNELL

(NSIC 194565) DURING THE 1984 REFUEL OUTAGE, 10% OF THE TOTAL NUMBER OF HYDRAULIC SNUBBERS IN USE AT THE PLANT WERE FUNCTIONALLY TESTED. FOR EVERY FAILURE IDENTIFIED IN THIS REPRESENTATIVE SAMPLE, AN ADDITIONAL 10% WERE FUNCTIONALLY TESTED. THIS TESTING CONTINUED UNTIL NO ADDITIONAL INOPERABLE SNUBBERS WERE DISCOVERED. ADDITIONALLY, ALL SNUBBERS THAT FAILED THE PREVIOUS FUNCTIONAL TEST DURING THE 1982 REFUEL OUTAGE WERE AGAIN TESTED. OF THE TOTAL NUMBER OF SNUBBERS TESTED DURING THE 1984 REFUEL OUTAGE, 10 FAILED TO MEET THEIR SPECIFIC DESIGN ACCEPTANCE CRITERIA. ALL SNUBBERS, HYDRAULIC AND MECHANICAL, WERE VISUALLY INSPECTED AND FOUND ACCEPTABLE. THE 10 SNUBBERS WERE FURTHER EXAMINED AND FOUND TO HAVE VARIOUS MECHANICAL AND ADJUSTMENT DEFICIENCIES. THE DEFICIENCIES WERE CORRECTED AND THE 10 SNUBBERS RETESTED FOR FUNCTIONAL ACCEPTABILITY.

[211] MILLSTONE 2 DOCKET 50-336 LER 85-007
INADVERTENT ACTUATION OF CONTAINMENT PURGE VALVES.
EVENT DATE: 041385 REPORT DATE: 051385 NSSS: CE TYPE: PWR

[212] MILLSTONE 2 DOCKET 50-336 LER 85-008
PRESSURIZER PIPING DESIGN INADEQUATE FOR SEISMIC LOADS.
EVENT DATE: 052485 REPORT DATE: 062185 NSSS: CE TYPE: PWR

(INSC 194837) DURING THE CURRENT MILLSTONE UNIT 2 REFUELING A ROUTINE SNUBBER INSPECTION WAS PERFORMED. AS A RESULT OF THIS INSPECTION A LOCKED UP SNUBBER WAS FOUND ON THE PRESSURIZER VENT PIPING. A DESIGN REVIEW WAS PERFORMED TO DETERMINE THE IMPACT OF THE LOCKED UP SNUBBER ON THE PIPING SYSTEM. THE NORMAL LOAD CALCULATION WAS FOUND TO BE ACCEPTABLE, HOWEVER AN ERROR WAS DISCOVERED IN THE SEISMIC LOAD CALCULATION. THE SEISMIC LOAD SHOWED A SIGNIFICANT INCREASE IN THE PIPING STRESSES OVER THE ORIGINAL CALCULATION. THIS INCREASE WAS UNEXPECTED. INVESTIGATIONS INTO THIS UNEXPECTED RESULT SHOWED THAT THE DATA FOR ADLPIPE VERSION 1B PROGRAM WAS NOT INPUTTED PROPERLY INTO THE PROGRAM. THIS ERROR RESULTED IN THE USE OF INCORRECT DATA BY THE PROGRAM WHICH CAUSED THE LOSS OF THE SEISMIC QUALIFICATION FOR THIS PIPING. THE INPUT FOR THIS PIPING HAS BEEN CORRECTED AND THE PROGRAM HAS BEEN RERUN. THE NEW PROGRAM OUTPUT HAS BEEN USED TO ADD TWO PIPING SUPPORTS ON THIS LINE. THESE SUPPORTS ARE COMPLETE AND SEISMIC QUALIFICATION HAS BEEN REESTABLISHED. A REVIEW OF ALL WORK AT NORTHEAST UTILITIES PERFORMED USING ADLPIPE VERSION 1B HAS BEEN COMPLETED. NO SIMILAR PROBLEMS HAVE BEEN FOUND WITH OTHER PIPE SYSTEMS. ADLPIPE VERSION 1D IS NOW IN USE AT NORTHEAST UTILITIES. VERSION 1D WILL NOT ALLOW A SIMILAR PROBLEM TO OCCUR

IF INPUT TO VERSION 1D IS IMPROPERLY SUPPLIED A FATAL ERROR WILL OCCUR AND THE PROGRAM WILL NOT RUN.

[213] NINE MILE POINT 1 DOCKET 50-220 LER 84-012 REV 1
UPDATE ON INADVERTENT START OF DIESEL GENERATOR.
EVENT DATE: 060184 REPORT DATE: 031885 NSSS: GE TYPE: BWR

(NSIC 194159) ON 6-1-84, DURING A REFUELING OUTAGE, WORK WAS TO BE DONE ON BREAKER R1012, WHICH SUPPLIES 4160V POWERBOARD 102. THIS MADE IT NECESSARY TO BACKFEED POWERBOARD 102 THROUGH 600V POWERBOARD 16. BREAKER R1012 WAS OPENED IN PREPARATION FOR THIS MAINTENANCE. IMMEDIATELY THEREAFTER, NEW PROTECTIVE RELAYS SENSED UNDERVOLTAGE ON 4160V POWERBOARD 102. AS A RESULT, TIE BREAKER R1042 TRIPPED, AND DG 102 STARTED AT APPROX 1000 HRS. IMMEDIATE CORRECTIVE ACTION TAKEN INCLUDED RETURNING TO THE NORMAL 115K VOLT SUPPLY ON POWERBOARD 102. OPERATING PROCEDURES ARE BEING REVIEWED TO DETERMINE IF ANY PROCEDURAL CHANGES ARE REQUIRED WHICH WILL PREVENT THIS TYPE OF EVENT FROM OCCURRING IN THE FUTURE.

[214] NINE MILE POINT 1 DOCKET 50-220 LER 85-005
TURBINE CONTROL SYSTEM FAILURE CAUSES SCRAM.
EVENT DATE: 041685 REPORT DATE: 051685 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.
MOOG INC.

(NSIC 194166) DURING NORMAL OPERATION ON 4-16-85 A DISTURBANCE IN THE TURBINE CONTROL SYSTEM RESULTED IN THE PARTIAL CLOSING OF THE TURBINE CONTROL VALVES. THIS THROTTLING ACTION CAUSED REACTOR PRESSURE AND NEUTRON FLUX TO RISE WHICH RESULTED IN AN AUTOMATIC REACTOR SCRAM DUE TO AN AVERAGE POWER RANGE MONITOR HIGH FLUX LEVEL. FOUR SECS AFTER THE REACTOR SCRAM HPCI WAS INITIATED DUE TO REACTOR LOW WATER LEVEL. HOWEVER, ONLY THE NO. 12 SYSTEM ACTUATED DUE TO THE FAILURE OF POWER BOARD 11 TO TRANSFER AUTOMATICALLY TO RESERVE POWER. POWER BOARD 11 WAS MANUALLY TRANSFERRED TO RESERVE POWER BY OPERATIONS IN ORDER TO RESTORE ITS LOADS. WORK REQUESTS WERE ISSUED TO TROUBLESHOOT THE ELECTRONIC PRESSURE REGULATOR AND TO INVESTIGATE THE CAUSE OF THE FAILURE OF POWER BOARD 11 TO TRANSFER TO RESERVE POWER AUTOMATICALLY AND TO MAKE NEEDED REPAIRS. THE ELECTRONIC PRESSURE REGULATOR WAS CALIBRATION CHECKED AND THE MOOG VALVE WAS STROKE CHECKED. NO OBVIOUS OR MEASURABLE DEVIATIONS FROM PROPER OPERATION WERE NOTED. THE FILTER IN THE MOOG VALVE ASSEMBLY WAS REPLACED. THE MECHANICAL PRESSURE REGULATOR STROKE REQUIRED LUBRICATION OF THE BUSHINGS AS THE STROKE WAS BINDING AND STICKY. THE FAILURE OF POWER BOARD 11 TO TRANSFER WAS TRACED TO DIRTY AUX AC BREAKER CONTACTS. THESE CONTACTS WERE CLEANED, THE RELAY WAS CHECKED AND THEN RESTORED TO SERVICE.

[215] NINE MILE POINT 1 DOCKET 50-220 LER 85-007
MAINTENANCE ERROR CAUSES INITIATION OF REACTOR BUILDING EMERGENCY VENTILATION.
EVENT DATE: 042485 REPORT DATE: 052485 NSSS: GE TYPE: BWR
VENDOR: AMPHENOL

(NSIC 194566) DURING NORMAL OPERATION ON 4-24-85 THE AUTOMATIC INITIATION OF THE REACTOR BLDG EMERGENCY VENTILATION SYSTEM OCCURRED. THE INITIATION WAS THE RESULT OF A TECHNICIAN SHORTING A WIRE IN THE CABLE CONNECTOR TO THE SENSOR FOR THE EMERGENCY CONDENSER VENTILATION MONITOR NO. 121. THE DAMAGE CAUSED BY THE SHORTING OF A WIRE IN THE SENSOR CONVERTOR CABLE CONNECTOR FOR THE NO. 121 EMERGENCY CONDENSER VENTILATION RADIATION MONITOR WAS REPAIRED. AN EXTERNAL 24V FUSE AND INTERNAL 24 V POWER SUPPLY FUSE BLEW. THE EXTERNAL FUSE WAS REPLACED AND DUE TO TIME CONSTRAINTS THE ENTIRE POWER SUPPLY WAS REPLACED. THE FAULTY CABLE CONNECTOR WAS RE-REPAIRED PER THE INITIAL WORK REQUEST. THE CHANNEL 11 RADIATION MONITORING CHANNEL SUPPLIED BY THE SHORTED 24V POWER SUPPLY WAS THEN SATISFACTORILY RETURNED TO SERVICE.

[216] NORTH ANNA 1 DOCKET 50-338 LER 85-002
 POST ACCIDENT HYDROGEN REMOVAL SYSTEM CHECK VALVES NOT TESTED.
 EVENT DATE: 012885 REPORT DATE: 022785 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: NORTH ANNA 2 (PWR)
 VENDOR: NUPRO COMPANY
 VELAN VALVE CORP.

(NSIC 194729) ON JANUARY 28, 1985, ENGINEERING PERSONNEL DISCOVERED THAT EIGHT CHECK VALVES IN THE POST ACCIDENT HYDROGEN REMOVAL SYSTEM THAT IS COMMON TO BOTH UNITS, HAD NOT BEEN TESTED AS REQUIRED BY THE STATION VALVE INSERVICE TESTING PROGRAM. FOUR OF THESE CHECK VALVES, HYDROGEN ANALYZER DISCHARGE CHECK VALVES, WERE IN A SYSTEM THAT IS REQUIRED BY TECH SPEC 3.6.4.1. THESE FOUR HYDROGEN ANALYZER CHECK VALVES WERE TESTED WITH SATISFACTORY RESULTS ON FEBRUARY 12, 1985. OF THE REMAINING FOUR CHECK VALVES, ONE WAS FOUND STUCK IN THE OPEN POSITION WHEN TESTED ON FEBRUARY 15, 1985. AS A RESULT OF THIS INCIDENT, A REVIEW OF THE STATION VALVE INSERVICE TESTING PROGRAM WAS INITIATED AND SIX ADDITIONAL UNIT 1 VALVES THAT HAD NOT BEEN TESTED IN ACCORDANCE WITH THE STATION VALVE INSERVICE TESTING PROGRAM WERE IDENTIFIED. SUBSEQUENT TESTING DETERMINED THAT ONE VALVE IN THE RECIRCULATION SPRAY SYSTEM WAS INOPERABLE. MAINTENANCE WAS PERFORMED ON THIS VALVE AND IT WAS RETURNED TO OPERABLE STATUS. THE FAILURE TO TEST VALVES IN ACCORDANCE WITH THE STATION VALVE INSERVICE TESTING PROGRAM HAS BEEN CLASSIFIED AS A LOSS OF ADMINISTRATIVE CONTROL IN THAT THE PROVISIONS OF TECH SPEC 6.8.1 HAVE NOT BEEN FOLLOWED. TECH SPEC 6.8.1 REQUIRES THE LICENSEE TO ESTABLISH, IMPLEMENT, AND MAINTAIN WRITTEN PROCEDURES FOR SURVEILLANCE AND TEST ACTIVITIES OF SAFETY-RELATED EQUIPMENT. THIS EVENT IS REPORTABLE PURSUANT TO 10CFR50.73(A)(2)(I)(B).

[217] NORTH ANNA 1 DOCKET 50-338 LER 85-003
 FLOODING POTENTIAL NOT PREVIOUSLY EVALUATED.
 EVENT DATE: 031985 REPORT DATE: 041885 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: NORTH ANNA 2 (PWR)

(NSIC 194678) A RECENT REVIEW OF THE NORTH ANNA MAIN DAM AND OTHER HYDRO STRUCTURES REVEALED THAT PREVIOUS STUDIES HAD FAILED TO IDENTIFY THE UNIT 3 AND 4 CONSTRUCTION AREA AS A POTENTIAL FLOOD PATH TO THE UNIT 1 AND 2 TURBINE BUILDING. PARTIAL FLOODING OF THE TURBINE BUILDING IS ADDRESSED BY THE UPSAR. CURRENT PROCEDURES PROVIDE GUIDANCE FOR ACTION TO BE TAKEN IN RESPONSE TO RISING LAKE LEVEL. LONG TERM CORRECTIVE ACTIONS ARE CURRENTLY BEING DEVELOPED.

[218] NORTH ANNA 1 DOCKET 50-338 LER 85-004
 SERVICE WATER PIPING DEPTH NOT ADEQUATE FOR TORNADO MISSILE PROTECTION.
 EVENT DATE: 032885 REPORT DATE: 042585 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: NORTH ANNA 2 (PWR)

(NSIC 194679) ON MARCH 28, 1985, WITH BOTH UNITS AT 100 PERCENT POWER, A REVIEW OF SURVEY RESULTS DISCLOSED A DEFICIENCY INVOLVING THE SERVICE WATER SYSTEM SUPPLY AND RETURN PIPING BETWEEN THE SERVICE WATER PUMPHOUSE AND THE SAFEGUARDS AREA. FOR A LENGTH OF APPROXIMATELY FIFTY LINEAR FEET, THE DEPTH OF COMPACTED BACKFILL OVER THE PIPING WAS LESS THAN THE SIX FEET REQUIRED FOR TORNADO MISSILE PROTECTION. THE MINIMUM DEPTH OF BACKFILL OVER THE PIPING WAS TWO AND ONE HALF FEET. CORRECTIVE ACTIONS WERE IMMEDIATELY DEVELOPED AND INITIATED IN ORDER TO RE-ESTABLISH A BACKFILL COVERAGE OVER THE AFFECTED PIPING EQUIVALENT TO THE ORIGINAL DESIGN. THIS WAS COMPLETED BY MARCH 29, 1985. THIS EVENT IS REPORTABLE PURSUANT TO 10 CFR 50.73 (A)(2)(VI).

[219] NORTH ANNA 1 DOCKET 50-338 LER 85-005
 SURVEILLANCE NOT PERFORMED ON SEISMIC MONITORING INSTRUMENTATION.
 EVENT DATE: 050385 REPORT DATE: 052385 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: NORTH ANNA 2 (PWR)
 VENDOR: ENGDAHL ENTERPRISES

(NSIC 194492) ON 5-3-85 THE SEMI-ANNUAL FUNCTIONAL TEST ON THE SEISMIC TRIAXIAL RESPONSE-SPECTRUM RECORDER WAS REQUIRED BUT WAS NOT PERFORMED. THE CONTAINMENT MAT TRIAXIAL RESPONSE RECORDER IS AN INACCESSIBLE DEVICE WITH A REMOTE ANNUNCIATOR IN THE MAIN CONTROL ROOM. PRESENT SURVEILLANCE REQUIREMENTS AND ANSI/ANS STANDARD 2.2, 1978 REQUIRE SEMI-ANNUAL FUNCTIONAL TESTING. BECAUSE THIS DEVICE IS INACCESSIBLE DURING POWER OPERATION, TESTING EVERY 6 MONTHS WOULD REQUIRE THE EXTENSIVE USE OF PROTECTIVE CLOTHING, SELF CONTAINED BREATHING APPARATUS AND LIMITED ACCESS (ALARA CONCEPT). TESTING UNDER THESE CONDITIONS COULD DAMAGE THIS SENSITIVE EQUIPMENT.

[220] NORTH ANNA 1 DOCKET 50-338 LER 85-006
 LOSS OF BOTH FIRE SUPPRESSION WATER SYSTEM HIGH PRESSURE PUMPS.
 EVENT DATE: 052885 REPORT DATE: 060685 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: NORTH ANNA 2 (PWR)
 VENDOR: CUMMINS ENGINE CO., INC.

(NSIC 194769) ON MAY 28, 1985 AT 0255 HOURS, THE DIESEL-DRIVEN FIRE PUMP, LOCATED AT THE SERVICE WATER RESERVOIR, BECAME INOPERABLE WHEN AN ENGINE COOLANT HOSE RUPTURED DURING THE PERFORMANCE OF THE WEEKLY SURVEILLANCE TEST. THE MOTOR-DRIVEN FIRE PUMP, LOCATED AT THE CIRCULATING WATER INTAKE STRUCTURE SCREENWELL, WAS OUT OF SERVICE AT THE TIME OF THE EVENT. AS A RESULT, BOTH HIGH PRESSURE FIRE PUMPS WERE INOPERABLE. BACKUP WATER SOURCES WERE AVAILABLE VIA THE WAREHOUSE NO. 5 DIESEL AND ELECTRIC FIRE PUMPS WHILE THE FIRE SUPPRESSION WATER SYSTEM WAS INOPERABLE. THE MOTOR-DRIVEN FIRE PUMP WAS RETURNED TO SERVICE AT 1235 HOURS ON MAY 28, 1985 AND THE DIESEL-DRIVEN FIRE PUMP WAS REPAIRED AND RETURNED TO SERVICE AT 1429 HOURS ON MAY 28, 1985. THIS EVENT IS REPORTABLE AS A SPECIAL REPORT PURSUANT TO UNIT 1 TECH SPECS 3.7.14.1 AND 6.9.2.1 AND UNIT 2 TECH SPEC 3.7.14.1 AND 6.9.2.1.

[221] NORTH ANNA 2 DOCKET 50-339 LER 85-004
 FORCED SHUTDOWN CAUSED BY INOPERABLE EMERGENCY DIESEL GENERATOR.
 EVENT DATE: 031885 REPORT DATE: 041185 NSSS: WE TYPE: PWR
 VENDOR: FAIRBANKS MORSE

(NSIC 194587) ON 3-15-85 AT 1221, DURING SURVEILLANCE TESTING, THE '2J' EMERGENCY DG TRIPPED ON HIGH CRANKCASE PRESSURE AND WAS SUBSEQUENTLY REMOVED FROM SERVICE. UNIT 2 WAS OPERATING AT 100% STEADY STATE POWER WHEN THIS EVENT OCCURRED. THE OPERABILITY OF THE REMAINING AC SOURCES WAS VERIFIED PER SURVEILLANCE TESTING WITHIN 1 HR AND EVERY 8 HRS THEREAFTER AS DELINEATED BY THE ACTION STATEMENT OF TECH SPEC 3.8.1.1. SINCE THE '2J' DIESEL REQUIRED EXTENSIVE INSPECTION AND MAINTENANCE, IT COULD NOT BE DECLARED OPERABLE WITHIN THE 72 HRS ALLOWED BY THE ACTION STATEMENT. A UNIT RAMPDOWN FROM 100% POWER COMMENCED AT 1145 ON 3-18-85. AT 1147, THE NRC WAS NOTIFIED OF THE UNIT SHUTDOWN INITIATION IN ACCORDANCE WITH 10 CFR 50.72 (B)(1)(A). THE UNIT WAS PLACED IN MODE 3 AT 1718 ON 3-18-85. THE REPAIRS OF THE '2J' DIESEL WERE COMPLETED; THE '2J' DIESEL WAS TESTED SATISFACTORILY AND DECLARED OPERABLE AT 1540 ON 3-19-85.

[222] NORTH ANNA 2 DOCKET 50-339 LER 85-006
 REACTOR TRIP DUE TO DE-ENERGIZATION OF VITAL BUS.
 EVENT DATE: 042685 REPORT DATE: 050985 NSSS: WE TYPE: PWR
 VENDOR: NAMCO CONTROLS

(NSIC 194588) AT 0915 ON 4-26-85 UNIT 2 TRIPPED FROM 100% POWER WHEN THE 120V AC VITAL BUS 2-I WAS INADVERTENTLY DE-ENERGIZED. THE 120V AC VITAL BUS 2-I SUPPLIES POWER TO THE RELAY WHICH SENSES THE BREAKER POSITION OF REACTOR COOLANT PUMP 'A'. WHEN THE 2-I 120V AC VITAL BUS WAS DE-ENERGIZED, THIS RELAY WAS DE-ENERGIZED WHICH CAUSED THE RPS TO SENSE THAT THE 'A' REACTOR COOLANT PUMP BREAKER WAS OPEN. A REACTOR TRIP SIGNAL WAS GENERATED AS A RESULT OF THE RPS SENSING THE 'A' REACTOR COOLANT PUMP BREAKER OPEN COINCIDENT WITH REACTOR POWER GREATER THAN 30%. REACTOR COOLANT PUMP 'A' DID NOT ACTUALLY TRIP DURING THIS EVENT. POWER WAS RESTORED TO THE 120V AC VITAL BUS 2-I WITHIN SECS BY OPERATOR ACTION. ALL PLANT PARAMETERS RESPONDED AS EXPECTED. THE UNIT WAS RETURNED TO CRITICALITY ON 4-27-85 AND REACHED 100% POWER 4-30-85.

[223] OCONEE 1 DOCKET 50-269 LER 85-004
GASEOUS WASTE DISPOSAL TANK RELEASED WITHOUT A REDUNDANT SAMPLE ANALYSIS.
EVENT DATE: 032885 REPORT DATE: 042985 NSSS: BW TYPE: PWR

(NSIC 194663) ON MARCH 28, 1985 AT 2202 HOURS, THE GASEOUS WASTE DISPOSAL (GWD) TANK WAS RELEASED WITHOUT A REDUNDANT SAMPLE ANALYSIS. SINCE ONE OF THE TWO RADIATION MONITORS WAS OUT OF SERVICE, REDUNDANT SAMPLING WAS REQUIRED AND FAILURE TO DO SO WAS A VIOLATION OF FOOTNOTE (A) TO TECH SPEC TABLE 3.5.5-2. THE REASON THE REDUNDANT SAMPLE WAS NOT TAKEN BEFORE THE GWD TANK WAS RELEASED WAS PERSONNEL ERROR. THE PERSONNEL INVOLVED HAD FORGOTTEN THAT THE MONITOR WAS OUT OF SERVICE, THEREFORE, DID NOT REALIZE A REDUNDANT SAMPLE ANALYSIS WAS REQUIRED. AS SOON AS THE MISTAKE WAS DISCOVERED, THE HPT ANALYZED A REDUNDANT SAMPLE ON THE REMAINING GAS IN THE GWD TANK. THE RESULTS OF THE SECOND SAMPLE AGREED WITH THE RESULTS OF THE FIRST SAMPLE (WITHIN TECH SPEC 3.10 LIMITS).

[224] OCONEE 2 DOCKET 50-270 LER 85-001
INADVERTENT ACTUATION OF ENGINEERED SAFEGUARDS SYSTEM.
EVENT DATE: 030985 REPORT DATE: 040985 NSSS: BW TYPE: PWR

(NSIC 194664) ON MARCH 9, 1985 AT 1536 HOURS, AN INADVERTENT ACTUATION INVOLVING PART OF THE OCONEE UNIT 2 ENGINEERED SAFEGUARDS (ES) SYSTEM OCCURRED WHILE THE UNIT WAS SHUT DOWN FOR REFUELING. THE ACTUATION RESULTED FROM PERSONNEL ERROR IN THE TRIPPING OF TWO ANALOG CHANNELS DURING THE ROUTINE CALIBRATION OF REACTOR COOLANT PRESSURE TRANSMITTERS. THE CALIBRATION PROCEDURE INDICATED THAT ONLY ONE ANALOG CHANNEL AT A TIME SHOULD BE TRIPPED, BUT COMMUNICATION PROBLEMS CONTRIBUTED TO ONE CHANNEL BEING TRIPPED BEFORE ANOTHER COULD BE RESET. FOLLOWING THE ACTUATION, THE AFFECTED ES DIGITAL CHANNELS WERE PLACED IN THE MANUAL CONTROL MODE IN ORDER TO SHUT DOWN ALL UNNECESSARY ELECTRICAL LOADS AND EQUIPMENT. THE CAUSE OF THE ACTUATION WAS SUBSEQUENTLY IDENTIFIED AND ALL AFFECTED ES CHANNELS AND COMPONENTS WERE RETURNED TO THEIR PROPER STATUS FOR A REFUELING SHUTDOWN.

[225] OYSTER CREEK DOCKET 50-219 LER 83-001 REV 1
UPDATE ON RADWASTE TANK OVERFLOW AND LEAK TO ENVIRONMENT.
EVENT DATE: 012383 REPORT DATE: 052985 NSSS: GE TYPE: BWR
VENDOR: FISKER CONTROLS CO.

(NSIC 194557) CHEMICAL WASTE STORAGE TANK (CWST) 'B' OVERFLOWED INTO A SURROUNDING CONCRETE VAULT. RADIOACTIVE WATER SEEPED THROUGH VAULT EXTERIOR WALL CAUSING AN UNMONITORED RELEASE OUTSIDE THE NEW RADWASTE BLDG. THIS EVENT IS REPORTABLE AS DEFINED IN THE TECH SPECS, PARAGRAPH 6.9.2.B.4. A MAXIMUM OF 8 GALS OF WATER WAS RELEASED AND CONTAINED IN THE IMMEDIATE AREA. THE SAFETY SIGNIFICANCE IS CONSIDERED TO BE MINIMAL. THE PRIMARY CAUSE OF THE OCCURRENCE IS ATTRIBUTED TO 2 FACTORS. FIRST, FOREIGN MATERIAL WAS FOUND IN THE AIR PRESSURE REGULATOR FOR THE BUBBLER SYSTEM LEVEL INDICATION FOR CWST 'B'. THIS MATERIAL CAUSED PARTIAL PLUGGING OF THE REGULATOR WHICH CONTRIBUTED TO THE FALSE LEVEL

INDICATION. SECOND, ON 2-2-83, THE THREADS ON THE BUBBLER SYSTEM CLEAN-OUT CAP WERE FOUND TO BE LEAKING AIR. THIS RESULTED IN THE TANK LEVEL INDICATION REMAINING AT 26% FOR 8 HRS WHILE THE TANK LEVEL ACTUALLY ROSE TO 56%. A SECONDARY CAUSE OF THE OCCURRENCE IS ATTRIBUTED TO THE CWST VAULT FLOOR DRAINS SYSTEM BEING PLUGGED WITH DEBRIS. IF THE FLOOR DRAIN HAD NOT BEEN PLUGGED, THE RUN TIME ON THE SUMP PUMP FOR THE VAULT'S FLOOR DRAIN SYSTEM WOULD HAVE GIVEN INDICATION THAT WATER WAS OVERFLOWING INTO THE VAULT. IN ADDITION, THE OPERATORS DID NOT IDENTIFY THE FALSE LEVEL INDICATION UNTIL AFTER THE TANK OVERFLOWED AND CONTAMINATED WATER HAD SEEPED THROUGH THE VERY MINOR CRACKS IN THE VAULT'S THREE FT THICK CONCRETE WALL.

[226] OYSTER CREEK DOCKET 50-219 LER 83-009 REV 1
 UPDATE ON LEAKAGE FROM 10 ISOLATION VALVES AND THE DRYWELL HEAD GASKET.
 EVENT DATE: 022283 REPORT DATE: 110284 NSSS: GE TYPE: BWR
 VENDOR: ATWOOD & MORRILL CO., INC.

(NSIC 194558) LOCAL LEAK RATE TESTING REVEALED THAT 10 CONTAINMENT ISOLATION VALVES AND 1 GASKET FAILED TO MEET THEIR ACCEPTANCE CRITERIA. THE FAILURE OF DRYWELL VENT ISOLATION VALVES V-27-3 AND 4 AND DRYWELL HEAD GASKET TO MEET REQUIRED ACCEPTANCE CRITERIA COULD HAVE RESULTED IN EXCEEDING 10CFR100 LIMITS DURING DESIGN BASIS ACCIDENT CONDITIONS. ALL OTHER CONTAINMENT ISOLATION VALVES FAILING LEAK TESTING WERE IN SERIES WITH REDUNDANT VALVES WHICH PASSED. REPORTABLE PER TECH SPECS PARAGRAPH 6.9.2.A.2. DRYWELL PURGE VALVE V-27-1 STEM WAS OUT OF ALIGNMENT. OTHER VALVES HAD DETERIORATION OF INTERNALS. ALL VALVES WERE EITHER REPAIRED OR REPLACED. ALTHOUGH APPEARING TO BE IN GOOD CONDITION, THE DRYWELL HEAD GASKET WAS REPLACED. ALL PENETRATIONS PASSED THEIR SUBSEQUENT LOCAL LEAK RATE TESTS.

[227] OYSTER CREEK DOCKET 50-219 LER 84-017 REV 1
 UPDATE ON MODIFICATION WORK CAUSING FIFTEEN ISOLATION VALVES TO OPEN.
 EVENT DATE: 062784 REPORT DATE: 122484 NSSS: GE TYPE: BWR

(NSIC 194562) A MODIFICATION WAS IN PROGRESS WHICH INVOLVED PLANT COMPUTER SYSTEM TIE-INS. DURING THE PERFORMANCE OF A PROCEDURE WHICH INVOLVED THE TIE-IN OF COMPUTER WIRING TO EXISTING PLANT CIRCUITRY, A NEUTRAL ELECTRICAL LEAD WAS REQUIRED TO BE LIFTED. THIS ACTION CAUSED 15 PRIMARY CONTAINMENT ISOLATION VALVES, INCLUDING ALL 4 MSIV'S, TO REPOSITION. THE PLANT ALSO EXPERIENCED A HALF SCRAM AT APPROX THE SAME TIME THAT THESE VALVES CYCLED. THE PREVIOUSLY LIFTED NEUTRAL ELECTRICAL LEAD AND A FUSE PREVIOUSLY REMOVED WERE RE-INSTALLED. THE PRIMARY CONTAINMENT ISOLATION VALVES WHICH REPOSITIONED WERE THEN PLACED IN THEIR PROPER POSITIONS BY OPERATOR ACTION. AN INTERMEDIATE RANGE MONITOR BELIEVED TO HAVE CAUSED THE HALF-SCRAM WAS RANGED UP-SCALE, AND THE NEUTRAL ELECTRICAL LEAD WAS ONCE AGAIN LIFTED. THE RESULTS WERE THE SAME AS BEFORE, EXCEPT THAT NO HALF-SCRAM OCCURRED. PLANT CONDITIONS WERE RESTORED TO NORMAL. NO VIOLATION OF THE TECH SPECS OCCURRED SINCE PRIMARY CONTAINMENT INTEGRITY WAS NOT REQUIRED AT THE TIME OF THE INCIDENT. THE VALVES REPOSITIONED DUE TO AN ABNORMAL CURRENT FLOWPATH WHICH WAS ESTABLISHED THROUGH THEIR SOLENOIDS WHEN THE NEUTRAL LEAD WAS LIFTED. THIS ABNORMAL FLOW PATH HAS BEEN VERIFIED THROUGH PERFORMANCE OF ADDITIONAL TESTING ON THE CONTAINMENT ISOLATION VALVE CONTROL CIRCUITRY.

[228] PALISADES DOCKET 50-255 LER 85-001
 SAFETY INJECTION SYSTEM FUNCTIONS BLOCKED.
 EVENT DATE: 021285 REPORT DATE: 031985 NSSS: CE TYPE: PWR
 VENDOR: EAGLE SIGNAL

(NSIC 194662) ON FEBRUARY 18, 1985 WITH THE PLANT AT 98% POWER, A RELAY FAILURE WAS IDENTIFIED IN A SAFETY INJECTION SYSTEM (SIS) TEST CIRCUIT. THE FAILED RELAY BLOCKED AN AUTOMATIC SIS INITIATION OF A PRESSURIZER HEATER TRIP AND A

CONCENTRATED BORIC ACID SUPPLY VALVE ACTUATION SIGNAL. THE BLOCKING FUNCTION WAS INSERTED DURING AN SIS SURVEILLANCE TEST AND FAILED TO CLEAR ON COMPLETION OF THE TEST. NO SPECIFIC CAUSE FOR THE RELAY FAILURE WAS DETERMINED. A SIMILAR BLOCKING CIRCUIT IN THE OPPOSITE CHANNEL WAS FOUND TO NOT HAVE ANNUNCIATION CAPABILITIES FOR THIS TYPE OF FAILURE. A PRECAUTION WAS ADDED TO THE SIS SURVEILLANCE PROCEDURE TO IDENTIFY THE ACTUATIONS THAT ARE INOPERABLE WITH THE BLOCKING RELAY ANNUNCIATOR LIT. A REVIEW OF OTHER TEST PROCEDURES WILL BE PERFORMED. THE MALFUNCTIONING RELAY WILL BE REPLACED. ANNUNCIATION OF THE BLOCKING RELAY STATUS WILL BE PROVIDED FOR THE OPPOSITE CHANNEL.

[229] PALISADES DOCKET 50-255 LER 85-003
INABILITY TO PERFORM REACTOR INTERNALS VIBRATION MONITORING.
EVENT DATE: 021885 REPORT DATE: 050785 NSSS: CE TYPE: PWR
VENDOR: HEWLETT-PARKARD CO.

(NSIC 194747) TECH SPEC SURVEILLANCE REQUIREMENT 4.13(C) REQUIRES REACTOR INTERNALS VIBRATION MONITORING TO BE PERFORMED, AS A MINIMUM, ONCE PER 7 DAYS FOR PHASE I MEASUREMENTS AND ONCE PER 31 DAYS FOR PHASE II MEASUREMENTS. AS A RESULT OF HARDWARE FAILURES IN DATA PROCESSING EQUIPMENT, VIBRATION MONITORING WAS NOT PERFORMED FOR A WEEKLY TEST IN LATE NOVEMBER, 1984 AND HAS NOT BEEN OBTAINED, AS REQUIRED, SINCE FEBRUARY 11, 1985. THE EQUIPMENT WAS NECESSARY TO RECORD THE VIBRATION DATA HAS BEEN PROCURED. A VENDOR WAS LOCATED WITH THE CAPABILITY TO REDUCE THE RECORDED DATA. A TECH SPEC CHANGE REQUEST WAS SUBMITTED TO ELIMINATE THE REACTOR INTERNALS VIBRATION MONITORING REQUIREMENTS. THE DIRECTOR, NUCLEAR REACTOR REGULATION, WAS NOTIFIED OF THE CURRENT DIFFICULTIES WITH VIBRATION MONITORING AND THE INABILITY TO SATISFY THE SURVEILLANCE REQUIREMENTS.

[230] PALISADES DOCKET 50-255 LER 85-005
STARTUP TRANSFORMER BREAKER FAILS TO CLOSE.
EVENT DATE: 041485 REPORT DATE: 051385 NSSS: CE TYPE: PWR
VENDOR: ALLIS CHALMERS

(NSIC 194607) ON 4-14-85 AT 0637 DURING A POWER REDUCTION FOR TURBINE CONTROL PROBLEMS, A TRANSFER OF SAFEGUARDS BUS 1C FAILED TO OCCUR. THE MANUAL ACTUATION OF THE START-UP TRANSFORMER BREAKER CAUSED THE STATION POWER SUPPLY BREAKER TO OPEN BUT FAILED TO CLOSE THE STARTUP BREAKER. THE LOSS OF POWER TO BUS 1C INITIATED AN AUTOMATIC EMERGENCY DG START AND LOAD ON BUS 1C. SUBSEQUENT INVESTIGATION HAS NOT DETERMINED THE CAUSE OF THE FAILURE. NO EQUIPMENT DEFECTS OR PROCEDURAL VIOLATIONS HAVE BEEN IDENTIFIED. INVESTIGATION OF THE FAILURE IS CONTINUING. PROPER HAND SWITCH OPERATION WILL BE DISCUSSED WITH OPERATORS. CURRENTLY, BUS 1C IS BEING SUPPLIED BY THE STARTUP TRANSFORMER. REFERENCE SIMILAR LER 84-015 AND 85-001.

[231] PALO VERDE 1 DOCKET 50-528 LER 85-010
AUTOMATIC ACTUATION OF FUEL BUILDING AND CONTROL ROOM ESP VENTILATION SYSTEMS.
EVENT DATE: 022285 REPORT DATE: 032585 NSSS: CE TYPE: PWR

(NSIC 194698) AUTOMATIC ACTUATION OF THE BALANCE OF PLANT ENGINEERED SAFETY FEATURES ACTUATION SYSTEM (BOP ESPAS) OCCURRED WHEN PLACING THE TRAIN "A" SEQUENCER IN MANUAL MODE FROM AUTO MODE. DURING THE TRANSFER FROM AUTO TO MANUAL, TRAIN "A" FUEL BUILDING ESSENTIAL VENTILATION ACTUATION SIGNAL (FBEVAS) AND CONTROL ROOM ESSENTIAL FILTRATION ACTUATION SIGNAL (CREFAS) AS WELL AS THE CROSS-TRIP TO TRAIN "B" FBEVAS AND CREFAS WERE INITIATED. RESETTNG BOTH TRAIN "A" AND "B" CABINETS RETURNED THE SYSTEM TO NORMAL.

[232] PALO VERDE 1 DOCKET 50-528 LER 85-013
 INADVERTENT START OF TRAIN "B" DIESEL GENERATOR.
 EVENT DATE: 022385 REPORT DATE: 032585 NSSS: CE TYPE: PWR

(NSIC 194803) AN INADVERTENT START OF THE TRAIN "B" DIESEL GENERATOR OCCURRED DURING ROUTINE SURVEILLANCE TESTING. THE SURVEILLANCE PROCEDURE, WHICH FUNCTIONALLY TESTS THE TRAIN "B" ENGINEERED SAFETY FEATURES ACTUATION SYSTEM (ESPAS) SUBGROUP RELAYS ON AN INDIVIDUAL BASIS, INITIALLY CONTAINED AN ERROR IN THE METHOD FOR TESTING CERTAIN SUBGROUP RELAY CONTACTS. A PROCEDURE CHANGE NOTICE (PCN) WAS SUBSEQUENTLY GENERATED, BUT THIS TOO WAS ERRONEOUS IN THAT THE DIESEL GENERATOR "B" "CONTROL MODE" SELECT SWITCH, WHEN IN THE OFF POSITION, PREVENTS AN AUTO-START OF THE DIESEL UPON DE-ENERGIZING THE ASSOCIATED SUBGROUP RELAY. THIS WAS PLACED BACK IN THE REMOVE POSITION. UPON DE-ENERGIZING THE TRAIN "B" AUXILIARY FEEDWATER ACTUATION SYSTEM SUBGROUP RELAY (K113), THE TRAIN "B" DIESEL GENERATOR AND ITS SUPPORT EQUIPMENT INADVERTENTLY STARTED BUT DID OPERATE CORRECTLY PER DESIGN. ALL ACTUATED EQUIPMENT SUBSEQUENTLY WAS RESTORED TO NORMAL AND THE PROCEDURAL INADEQUACY CORRECTED, AFTER WHICH THE TEST WAS SATISFACTORILY COMPLETED.

[233] PALO VERDE 1 DOCKET 50-528 LER 85-018
 DIESEL GENERATOR HAS SLOW STARTING TIME.
 EVENT DATE: 030585 REPORT DATE: 040485 NSSS: CE TYPE: PWR
 VENDOR: CRAWFORD FITTING CO.

(NSIC 194805) THIS SPECIAL REPORT IS REQUIRED BY PALO VERDE UNIT 1 TECH SPEC 4.8.1.1.3. ON 3/5/85, UNIT 1 DIESEL GENERATOR "A" FAILED TO ATTAIN THE REQUIRED VOLTAGE, FREQUENCY, AND SPEED WITHIN 10 SECONDS (ACTUAL TIME: 10.51 SEC.) PER TECH SPEC 4.8.1.1.2.A.4 DURING THE PERFORMANCE OF 41ST-IDG05. THIS START FAILURE WAS THE FIRST FAILURE (ON A PER NUCLEAR UNIT BASIS) IN FOUR (4) VALID TESTS, PLACING UNIT 1 UNDER THE REQUIREMENTS OF TECH SPEC TABLE 4.8-1 AND THE CRITERIA OF REGULATORY GUIDE 1.108.C.2.D.(1). ON 3/8/85, UNIT 1 DIESEL GENERATOR "B" FAILED TO ATTAIN THE REQUIRED VOLTAGE, FREQUENCY, AND SPEED WITHIN 10 SECONDS (ACTUAL TIME: 11.6 SEC., 12.55 SEC., AND 12.06 SEC., RESPECTIVELY) PER SURVEILLANCE TEST 41ST-IDG06 ACCEPTANCE CRITERIA. THIS START FAILURE, HAD IT BEEN VALID, WOULD HAVE BEEN THE SECOND FAILURE (ON A PER NUCLEAR UNIT BASIS) IN FIVE (5) VALID TESTS, PLACING UNIT 1 IN A SHORTENED TEST INTERVAL SCHEDULE PER TECH SPEC TABLE 4.8-1 AND R.G. 1.108.C.2.D.(2). A DETAILED REVIEW OF THIS EVENT INDICATES THAT IT WAS NOT A VALID TEST PER R.G. 1.108 AND THEREFORE A SHORTENED TEST INTERVAL WAS NOT REQUIRED.

[234] PALO VERDE 1 DOCKET 50-528 LER 85-009
 INADVERTENT REACTOR TRIP.
 EVENT DATE: 032185 REPORT DATE: 041985 NSSS: CE TYPE: PWR

(NSIC 194697) ON MARCH 21, 1985 AT 1320 AN INADVERTENT REACTOR TRIP OCCURRED DURING THE PERFORMANCE OF SURVEILLANCE TEST 36ST-9SB02, PLANT PROTECTION SYSTEM (PPS) FUNCTIONAL TEST. THE CAUSE OF THE INADVERTENT TRIP WAS PERSONNEL ERROR ASSOCIATED WITH A PROCEDURAL DEFICIENCY. THE PPS FUNCTIONED AS DESIGNED AND OPENED THE REACTOR TRIP BREAKERS. NO CONTROL ELEMENT ASSEMBLIES (CEAS) WERE WITHDRAWN OR BEING WITHDRAWN AT THE TIME OF THE TRIP. A PROCEDURE CHANGE NOTICE (PCN) HAS BEEN WRITTEN AND IMPLEMENTED IN 36ST-9SB02 PROCEDURE TO CORRECT THE DEFICIENCY.

[235] PALO VERDE 1 DOCKET 50-528 LER 85-024
 FAILURE TO VERIFY FIRE DOOR POSITION.
 EVENT DATE: 041285 REPORT DATE: 051385 NSSS: CE TYPE: PWR

(NSIC 194798) DURING THE PERFORMANCE OF THE SURVEILLANCE PROCEDURE (14ST-12427,

APPENDIX A) FOR LOCKED FIRE DOORS IT WAS DISCOVERED THAT THERE WERE FIRE DOORS ON THE LIST THAT WERE UNLOCKED AND REQUIRED TO BE INSPECTED EVERY 24 HOURS INSTEAD OF EVERY 7 DAYS. WHEN OPERATIONS NOTICED THE DEFICIENCY, A PROCEDURE CHANGE NOTICE WAS GENERATED TO CORRECT THE PROBLEM BEFORE THE NEXT UNLOCKED FIRE DOOR SURVEILLANCE WAS DUE. THE PROCEDURES HAVE BEEN REVISED TO INCLUDE THE CORRECT DOORS IN THE CORRECT PROCEDURES. THE PERFORMANCE GROUP HAS BEEN INSTRUCTED TO VERIFY THAT THE DOORS INSPECTED IN THE LOCKED PROCEDURE ARE IN FACT LOCKED DOORS, NOT UNLOCKED DOORS.

[236] PALO VERDE 1 DOCKET 50-528 LER 85-022
AUTOMATIC ACTUATION OF BALANCE OF PLANT ENGINEERED SAFETY FEATURE SYSTEM.
EVENT DATE: 041385 REPORT DATE: 051385 NSSS: CE TYPE: PWR

(NSIC 194713) AUTOMATIC ACTUATION OF THE FUEL BUILDING ESSENTIAL VENTILATION SYSTEM (FBEVS) OCCURRED DUE TO A SPURIOUS HIGH RADIATION ALARM ON THE FUEL POOL AREA RADIATION MONITORING UNIT (RU-31). ALL ATTENDANT EQUIPMENT ACTUATED SATISFACTORILY. THIS ACTUATION IS CONSIDERED RANDOM AND IS THE FIRST HIGH RADIATION ACTUATION ON AN AREA MONITOR. SIMILAR ACTUATIONS HAVE OCCURRED ON PROCESS RADIATION MONITORS AND HAVE BEEN REPORTED.

[237] PALO VERDE 1 DOCKET 50-528 LER 85-028
TESTING ERROR RESULTS IN INADVERTENT ACTUATION OF ENGINEERED SAFETY FEATURES.
EVENT DATE: 041785 REPORT DATE: 051785 NSSS: CE TYPE: PWR

(NSIC 194738) WHILE PERFORMING A SURVEILLANCE TEST OF LOCAL OPERABILITY OF THE TRAIN 'B' CLASS ELECTRICAL SYSTEM, THE "B" AND "D" BATTERY CHARGERS SUPPLIED BY THIS SYSTEM WERE NOT PROPERLY VERIFIED AS BEING RETURNED TO SERVICE IN ACCORDANCE WITH TWO CONSECUTIVE STEPS OF THE PROCEDURE. WHEN THE OPERATOR PERFORMING THE TEST PROCEEDED WITH THE NEXT STEP, WHICH OPENS AND RECLOSSES THE "B" AND "D" BATTERY BREAKERS, THE ENGINEERED SAFETY FEATURES ACTUATION SYSTEM (ESFAS) 2 OUT OF 4 COINCIDENCE LOGIC WAS ACTUATED DUE TO BEING DE-ENERGIZED. A PROCEDURE CHANGE NOTICE (PCN) WAS ISSUED AND APPROVED TO PROVIDE ADDITIONAL CLARIFICATION TO THE OPERATORS TO PROVIDE POSITIVE DETERMINATION THAT THE BATTERY CHARGERS HAVE BEEN PROPERLY RETURNED TO SERVICE. WITH THE PCN IN PLACE, THE PROCEDURE WAS RERUN WITHOUT INCIDENT.

[238] PALO VERDE 1 DOCKET 50-528 LER 85-031
SPURIOUS ACTUATION OF CONTROL ROOM VENT RADIATION MONITOR.
EVENT DATE: 041785 REPORT DATE: 051585 NSSS: CE TYPE: PWR

(NSIC 194514) AUTOMATIC ACTUATION OF THE CONTROL ROOM ESSENTIAL FILTRATION ACTUATION SIGNAL OCCURRED DUE TO A SPURIOUS HIGH RADIATION ALARM ON THE RADIATION MONITORING UNIT (RU-29). ALL ATTENDANT EQUIPMENT ACTUATED SATISFACTORILY. THE ROOT CAUSE AND FINAL CORRECTIVE ACTION REGARDING THIS EVENT ARE STILL UNDER INVESTIGATION AND WILL BE ADDRESSED IN A SUPPLEMENT TO THIS REPORT. SIMILAR EVENT: 528/85-011.

[239] PALO VERDE 1 DOCKET 50-528 LER 85-021
LACK OF FIRE PROTECTION DURING MAINTENANCE ACTIVITIES.
EVENT DATE: 042585 REPORT DATE: 052585 NSSS: CE TYPE: PWR

(NSIC 194598) ON 4-25-85, MAINTENANCE WAS PERFORMED IN CONTAINMENT WHILE THE FIRE PROTECTION HEADER WAS ISOLATED. THIS IS IN VIOLATION OF TECH SPEC 3.7.11.4. THE MAINTENANCE WORK HAD BEEN COMPLETED WHEN IT WAS DISCOVERED THAT THE REQUIRED FIRE PROTECTION HEADER WAS ISOLATED DURING THE TIME THE MAINTENANCE WAS BEING PERFORMED. THE MAINTENANCE INVOLVED WELDING, BUT THE JOB WAS MINOR IN NATURE AND THE PERSONNEL INVOLVED DIDN'T REALIZE THAT THE FIRE PROTECTION HEADER TO THE

CONTAINMENT FIRE HOSE STATIONS WAS REQUIRED TO BE IN SERVICE. CORRECTIVE ACTION INCLUDES: 1) A TECH SPEC REV IS BEING PREPARED FOR SUBMITTAL TO CLARIFY THE REQUIREMENTS OF TECH SPEC 3.7.11.4. 2) THE SHIFT SUPERVISORS HAVE BEEN DIRECTED TO CONSULT WITH THE FIRE PROTECTION GROUP WHEN EVALUATING HOT WORK AUTHORIZATION PERMITS FOR PROPOSED MAINTENANCE IN CONTAINMENT WHILE IN MODES 1, 2, 3, AND 4 TO ENSURE THAT REQUIRED FIRE PROTECTION MEASURES HAVE BEEN IMPLEMENTED.

[240] PALO VERDE 1 DOCKET 50-528 LER 85-030
DECLARED INOPERABILITY OF BOTH EMERGENCY CORE COOLING SYSTEM TRAINS.
EVENT DATE: 042585 REPORT DATE: 052585 NSSS: CE TYPE: PWR

(NSIC 194652) ON 4-25-85 BOTH EMERGENCY CORE COOLING SYSTEM TRAINS WERE DECLARED INOPERABLE DUE TO THE INDETERMINATE OPERABILITY OF CONTAINMENT RECIRCULATION SUMP ISOLATION CHECK VALVES, 1PSIAV0206 OF TRAIN 'A' AND 1PSIBV0205 OF TRAIN 'B'. THESE 2 VALVES HAD BEEN DISASSEMBLED AND THE SEATS REPAIRED (LAPPED) DUE TO SUSPECTED LEAKAGE. THE VALVES WERE NOT, HOWEVER, RETESTED IN COMPLIANCE WITH SECTION XI OF THE ASME CODE PRIOR TO INITIAL ENTRY INTO MODE 4. TO PREVENT RECURRENCE OF THIS EVENT, A LIST OF APPLICABLE VALVES COVERED BY SECTION XI OF THE ASME CODE HAS BEEN PREPARED BY OPERATIONS ENGINEERING. THIS LIST WILL BE ISSUED TO ALL WORKING GROUPS ASSOCIATED WITH THIS CLASS OF VALVES.

[241] PALO VERDE 1 DOCKET 50-528 LER 85-037
INVALIDATION OF GRAB SAMPLE DUE TO MOISTURE.
EVENT DATE: 042985 REPORT DATE: 061085 NSSS: CE TYPE: PWR

(NSIC 194800) ON 4/29/85, PALO VERDE UNIT 1 WAS IN MODE 4 AND HAD NOT REACHED INITIAL CRITICALITY. THE CONDENSER VACUUM GLAND SEAL EXHAUST MONITOR (IJ) HAD BEEN DECLARED INOPERABLE ON 4/23/85, AT 1030, DUE TO LOW FLOW ALARMS. GRAB SAMPLING WAS INITIATED TO COMPLY WITH TECH SPEC ACTION STATEMENTS. DUE TO EXCESS MOISTURE RESULTING FROM CONDENSATION IN SAMPLE LINES, THE PARTICULATE FILTER WAS DESTROYED AND THE IODINE CHARCOAL FILTER CARTRIDGE WAS SATURATED WITH WATER, WHICH INVALIDATED THE SAMPLE DATA. THEREFORE, TECH SPEC LIMITING CONDITION FOR OPERATION 3.3.3.9 ACTION STATEMENT 40 WAS VIOLATED. A MOISTURE TRAP AND A NEW SAMPLE MEDIA WERE INSTALLED IN THE SAMPLE CART ON 4/30/85 AT 1400. THE MOISTURE TRAP WILL PREVENT MOISTURE FROM ENTERING THE SAMPLE CART AND INVALIDATING THE SAMPLE AGAIN. A SUPPLEMENT REPORT WILL BE ISSUED WITHIN 30 DAYS TO COMPLETE THIS EVALUATION.

[242] PILGRIM 1 DOCKET 50-293 LER 83-065 REV 1
UPDATE ON NUMEROUS ISOLATION VALVE LEAKS.
EVENT DATE: 121383 REPORT DATE: 052485 NSSS: GE TYPE: BWR
VENDOR: ANCHOR VALVE CO.
ATWOOD & MORRILL CO., INC.

(NSIC 194560) DURING REFUELING OUTAGE VI 'APPENDIX J LEAK RATE TESTING', 21 PRIMARY CONTAINMENT VALVES WERE FOUND TO HAVE SEAT LEAKAGE IN EXCESS OF THAT PERMITTED BY TECH SPEC, SECTION 4.7.A.2.F. FOUR ADDITIONAL VALVES WERE REMOVED PRIOR TO PERFORMANCE OF THE 'AS FOUND LEAK RATES'. THE CAUSE OF THESE EXCESSIVE LEAKAGE RATES WERE EVALUATED AND THE CORRECTIVE ACTION IS SPECIFIED. ALL VALVES HAVE BEEN REPAIRED AND TESTED SATISFACTORILY.

[243] PILGRIM 1 DOCKET 50-293 LER 85-011
ABSOLUTE PRESSURE TRANSMITTERS INCORRECTLY USED FOR CONTAINMENT POST-ACCIDENT MONITORING.
EVENT DATE: 042485 REPORT DATE: 052485 NSSS: GE TYPE: BWR
VENDOR: ROSEMOUNT ENGINEERING COMPANY

(NSIC 194572) ON 4-24-85, WHILE PERFORMING A CALIBRATION CHECK OF PT 1001-601A & B, QUESTIONS WERE RAISED ON THE USE OF ABSOLUTE PRESSURE TRANSMITTERS, AS OPPOSED TO GAUGE PRESSURE TRANSMITTERS, TO MEASURE CONTAINMENT NARROW RANGE PRESSURE FOR THE PURPOSE OF POST-ACCIDENT MONITORING. FURTHER INVESTIGATION AND ANALYSIS IDENTIFIED THAT 2 ABSOLUTE PRESSURE TRANSMITTERS ARE INSTALLED, AS OPPOSED TO THE REQUIRED (REF.: REG GUIDE 1.97, REV 3) GAUGE PRESSURE TRANSMITTERS. THE CAUSE OF THE ABSOLUTE, AS OPPOSED TO GAUGE PRESSURE TRANSMITTERS BEING INSTALLED, WAS A RESULT OF A DESIGN CHANGE BEING DEVELOPED AND INSTALLED IN ACCORDANCE WITH REG GUIDE 1.97, REV 1, AND THE PROPOSED REV 2, BOTH OF WHICH DISCUSSED LOW-RANGE CONTAINMENT PRESSURE MONITORING IN TERMS OF ABSOLUTE PRESSURE. SUBSEQUENTLY, REV 3 WAS ISSUED WHICH DISCUSSED THE LOW-RANGE MONITORING OF CONTAINMENT PRESSURE IN TERMS OF GAUGE RATHER THAN ABSOLUTE. THIS CHANGE WAS NOT IMPLEMENTED DUE TO AN ENGINEERING OVERSIGHT, EVEN THOUGH BOSTON EDISON COMMITTED TO MEETING REG GUIDE 1.97, REV 3. THE INTERIM CORRECTIVE ACTION WAS TO RECALIBRATE THE TRANSMITTERS PER TEMPORARY MODIFICATION 85-27. PLANNED LONG-TERM CORRECTIVE ACTION IS TO REPLACE THE TRANSMITTERS (REF.: PDC 84-17). A REVIEW OF REG GUIDE 1.97, REV 3, WAS PERFORMED WITH NO INDICATION OF ANY FURTHER DEVIATIONS. THIS IS CONSIDERED TO BE AN ISOLATED EVENT.

[244] POINT BEACH 1 DOCKET 50-266 LER 85-001
INADVERTENT SAFETY INJECTION ACTUATION ON LOW STEAM LINE PRESSURE.
EVENT DATE: 040585 REPORT DATE: 050385 NSSS: WE TYPE: PWR

(NSIC 194472) ON 4-5-85, DURING A SCHEDULED REFUELING PLANT SHUTDOWN, LOW STEAM PRESSURE CAUSED AN ACTUATION OF SAFETY INJECTION. THE REACTOR WAS SUBCRITICAL AND IN HOT SHUTDOWN WHEN THE ACTUATION OCCURRED. NO FLOW INTO THE RCS OCCURRED DUE TO RCS PRESSURE ABOVE THE SHUTOFF HEAD OF THE SAFETY INJECTION PUMPS. ALL SYSTEMS PERFORMED AS EXPECTED DURING THE SAFETY INJECTION ACTUATION. THE PRIMARY CAUSE OF THIS ACTUATION WAS INADEQUATE PRECAUTIONS IN PROCEDURE OP-3C, 'HOT SHUTDOWN TO COLD SHUTDOWN,' WHICH IS USED FOR THIS EVOLUTION.

[245] PRAIRIE ISLAND 1 DOCKET 50-282 LER 85-007
INADVERTENT START OF ONE COMPONENT COOLING PUMP.
EVENT DATE: 031985 REPORT DATE: 041885 NSSS: WE TYPE: PWR

(NSIC 194665) ON MARCH 19, BOTH UNITS WERE AT 100% POWER. AT APPROXIMATELY 1600 THE DC TRANSFER SWITCH (HS) FOR SAFEGUARDS 4.16KV BUS 16 WAS TRANSFERRED TO ITS NORMAL SOURCE. DURING THIS TRANSFER THE NO. 12 COMPONENT COOLING (CC) PUMP DISCHARGE HEADER LOW PRESSURE ANNUNCIATOR (ANN) WAS RECEIVED AND NO. 12 COMPONENT COOLING PUMP (P) WAS OBSERVED TO START. NO. 12 COMPONENT COOLING PUMP WAS THEN STOPPED AND RETURNED TO STANDBY SERVICE. A REVIEW OF THE SCHEMATIC DRAWING FOR NO. 12 COMPONENT COOLING PUMP SHOWS THAT THE AUTOMATIC START ON LOSS OF PRESSURE USES A PRESSURE SWITCH (63) WHICH ACTUATES A DC AUXILIARY RELAY (RLY). THE POWER SUPPLY FOR THIS AUXILIARY RELAY IS THE SAME DC CIRCUIT WHICH SUPPLIES CONTROL POWER FOR BUS 16. THEREFORE, WHEN DC POWER IS REMOVED, DURING THE TRANSFER, THIS AUXILIARY RELAY DEENERGIZES GIVING A LOSS OF PRESSURE SIGNAL TO THE BREAKER (BKR) FOR NO. 12 COMPONENT COOLING PUMP. WHEN DC POWER IS RESTORED, DURING THE SECOND HALF OF THE TRANSFER SWITCH TRAVEL, A RELAY RACE IS INITIATED BETWEEN THIS AUXILIARY RELAY AND THE BREAKER CLOSING COIL (CL). DURING THIS EVENT THE BREAKER CLOSING COIL ACTUATED BEFORE THE AUXILIARY RELAY ENERGIZED. THIS DESIGN FOR THE LOW PRESSURE START SIGNAL IS DESIRABLE TO PROVIDE FAIL-SAFE ACTUATION OF THE COMPONENT COOLING PUMP ON LOSS OF CONTROL POWER. THE PROCEDURE WILL BE CHANGED TO ACKNOWLEDGE THAT THE COMPONENT COOLING PUMP ON THE AFFECTED SAFEGUARDS BUS MAY START FROM A FALSE LOW PRESSURE SIGNAL.

[246] PRAIRIE ISLAND 1 DOCKET 50-282 LER 85-009
 BROKEN AIR LINE CAUSES FEEDWATER REG VALVE TO CLOSE.
 EVENT DATE: 050885 REPORT DATE: 060785 NSSS: WE TYPE: PWR

(NSIC 194751) ON MAY 8, 1985 AT ABOUT 1323, A 2-INCH COPPER INSTRUMENT AIR LINE SEPARATED AT A SOLDERED ELBOW JOINT (PSF). AS A RESULT, THE UNIT 1 SIDE OF THE INSTRUMENT AIR SYSTEM (LD) DEPRESSURIZED ENOUGH TO CAUSE THE FEEDWATER REGULATING VALVE (FCV) TO NO. 12 STEAM GENERATOR TO CLOSE. AT 1326, UNIT 1 TRIPPED ON LOW STEAM GENERATOR LEVEL PLUS FEEDWATER FLOW/STEAM FLOW MISMATCH. CABLE TRAY (TY) WRAPPING FOR APPENDIX R COMPLIANCE WAS IN PROGRESS IN THE VICINITY OF THE BREAK, AND THE AIR LINE WAS MOVED SOMEWHAT TO ACCOMPLISH THE WRAP. THIS APPARENTLY PLACED ENOUGH STRESS ON THE ELBOW TO CAUSE IT TO SEPARATE. THE UNIT WAS MAINTAINED IN HOT SHUTDOWN WHILE REPAIRS WERE MADE. A WALKDOWN INSPECTION OF THE INSTRUMENT AIR SYSTEM WAS PERFORMED IN AREAS OF THE PLANT WHERE CABLE TRAY WRAPPING HAD TAKEN PLACE OR WAS IN PROGRESS. NO ADDITIONAL PROBLEM AREAS WERE IDENTIFIED. THE UNIT WAS RETURNED TO SERVICE AT 1847 ON MAY 9.

[247] PRAIRIE ISLAND 1 DOCKET 50-282 LER 85-010
 REACTOR TRIP ON LOW STEAM GENERATOR LEVEL.
 EVENT DATE: 050985 REPORT DATE: 061085 NSSS: WE TYPE: PWR

(NSIC 194752) ON MAY 9, 1985 DURING UNIT 1 STARTUP, THE REACTOR TRIPPED ON LOW STEAM GENERATOR LEVEL. DURING FEEDWATER SUPPLY TRANSFER FROM THE AUXILIARY FEEDWATER SUPPLY (BA) TO THE MAIN FEEDWATER (SJ) THE MAIN FEEDWATER PUMP (P) WAS STARTED AND THE PUMP DISCHARGE VALVE (SHV) OPEN SIGNAL GIVEN. THE VALVE'S MOTOR OPERATOR BEGAN TO TURN, AND THE "NOT CLOSED" LIMIT SWITCH ACTUATED. DUAL VALVE POSITION LIGHTS INDICATED TO THE OPERATOR THAT THE VALVE HAD BEGUN TO OPEN. THE MOTOR OPERATOR HAD, IN FACT, TRIPPED ON HIGH TORQUE WITH THE VALVE STILL FULLY CLOSED. WHEN THE MAIN FEEDWATER BYPASS VALVES (FCV) WERE OPENED, STEAM WAS BEING RELEASED FROM THE STEAM GENERATORS (SG). THE RESULTING SWELL, INCREASE, IN STEAM GENERATOR LEVEL WAS INTERPRETED AS AN INDICATION THAT MAIN FEEDWATER WAS BEING SUPPLIED, SO AUXILIARY FEEDWATER WAS TERMINATED. THE REACTOR TRIPPED AT 1421 HOURS ON LOW STEAM GENERATOR LEVEL. THE MAIN FEEDWATER PUMP DISCHARGE VALVE WAS OPENED AND RESTART WAS COMPLETED SUCCESSFULLY. THIS REPORT WILL BE CIRCULATED FOR TRAINING AMONG OPERATIONS PERSONNEL.

[248] PRAIRIE ISLAND 2 DOCKET 50-306 LER 85-002
 CONTROL SWITCH FOR ONE DIESEL COOLING WATER PUMP FOUND IN MANUAL.
 EVENT DATE: 021885 REPORT DATE: 060785 NSSS: WE TYPE: PWR

(NSIC 194756) DURING POWER OPERATION OF UNIT 2, THE CONTROL SWITCH FOR NO. 12 DIESEL COOLING WATER PUMP WAS MISTAKENLY PUT IN MANUAL. AFTER ABOUT 6 HOURS THE ERROR WAS DISCOVERED AND THE SWITCH WAS RETURNED TO AUTO. THE PRAIRIE ISLAND TECH SPECS PERMIT ONE DIESEL-DRIVEN COOLING WATER PUMP TO BE INOPERABLE FOR UP TO SEVEN DAYS. THE TECH SPECS ALSO REQUIRE, HOWEVER, THAT THE OPERABILITY OF THE REDUNDANT DIESEL-DRIVEN PUMP AND ITS ASSOCIATED DIESEL GENERATOR BE DEMONSTRATED IMMEDIATELY AND AT LEAST DAILY THEREAFTER. THE REDUNDANT DIESEL-DRIVEN COOLING WATER PUMP AND ASSOCIATED DIESEL GENERATOR WERE NOT TESTED IMMEDIATELY IN THIS CASE. THIS REPORT IS BEING PROVIDED AT THE REQUEST OF THE NRC RESIDENT INSPECTOR FOR PRAIRIE ISLAND.

[249] QUAD CITIES 1 DOCKET 50-254 LER 85-003
 GROUP II ISOLATION AND STANDBY GAS TREATMENT SYSTEM TRAIN FAILS TO START.
 EVENT DATE: 051785 REPORT DATE: 061485 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: QUAD CITIES 2 (BWR)

(NSIC 194723) ON MAY 17, 1985, AT 1059 HOURS, WHILE UNIT 1 WAS IN THE RUN MODE AT 45% POWER AND UNIT 2 WAS IN COLD SHUTDOWN FOR ITS END OF CYCLE SEVEN REFUELING

AND MAINTENANCE OUTAGE, UNIT 2 RECEIVED AN UNEXPECTED GROUP II ISOLATION SIGNAL. THIS SIGNAL OCCURRED WHEN THE TEST FOR MODIFICATION M-4-2-83-49 TRIPPED GROUP II CHANNEL B. GROUP II CHANNEL A WAS PREVIOUSLY TRIPPED DUE TO THE REMOVAL OF THE 2A DRYWELL RADIATION MONITOR FOR MAINTENANCE. UPON RECEIPT OF THE GROUP II ISOLATION SIGNAL, THE 'B' STANDBY GAS TREATMENT SYSTEM (SBGTS)(BH) AUTO-STARTED. THE 'A' SBGTS, WHICH WAS SELECTED AS PRIMARY, FAILED TO START. WHEN THE 'B' SBGTS STARTED IT WAS IMMEDIATELY NOTICED THAT THE HEATER DID NOT ENERGIZE. AN OPERATOR WAS SENT TO INVESTIGATE AND HE DISCOVERED THAT THE BREAKER FOR THE HEATER WAS TRIPPED. THE BREAKER WAS RESET AND THE NORMAL DIFFERENTIAL TEMPERATURE ACROSS THE HEATER WAS ESTABLISHED. REPEATED ATTEMPTS WERE PERFORMED TO DUPLICATE THE 'A' SBGTS FAILURE TO START, BUT IN EVERY CASE THE 'A' SBGTS PROPERLY SERVED ITS FUNCTION. AFTER FURTHER INVESTIGATION, IT IS POSTULATED THAT THE CAUSE OF THE 'A' SBGTS FAILURE TO START WAS A DEGRADATION OF THE AUTO-START RELAY 595-133. THE SIMILAR RELAY ON 'B' SBGTS CAUSED AN IDENTICAL FAILURE OF 'B' SBGTS TO START ON JUNE 5, 1985. THE RELAY FAILURE WAS INTERMITTENT IN NATURE. THE BREAKER TRIP WAS CAUSED BY A FAULTY BREAKER WHICH WAS REPLACED AFTER IT TOTALLY FAILED ON 6/12/85.

[250] ROBINSON 2 DOCKET 50-261 LER 85-008
LOSS OF MOTOR CONTROL CENTER DUE TO DECONTAMINATION ACTIVITIES.
EVENT DATE: 020385 REPORT DATE: 030485 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194816) ON FEBRUARY 3, 1985, WITH THE REACTOR IN COLD SHUTDOWN, A DECONTAMINATION TEAM WORKING IN THE NEW FUEL BUILDING AIR HANDLING ROOM INADVERTENTLY SPRAYED WATER INTO THE SPENT FUEL BUILDING UPPER LEVEL EXHAUST RADIATION MONITOR (R-21) CABINET. THIS CAUSED A SHORT CIRCUIT IN THE TERMINAL BOARD. THE SHORT CIRCUIT CAUSED INSTANTANEOUS HIGH CURRENT LEVELS TO BE DRAWN THROUGH THE R-21 MOTOR CONTROLLER AND CAUSED ITS DESTRUCTION. THE DESTRUCTION OF THE R-21 MOTOR CONTROLLER CAUSED A SHORT CIRCUIT ON THE LINE SIDE OF THE R-21 MOTOR FEEDER BREAKER LOCATED IN THE SAME CUBICLE IN MCC-5. THESE EVENTS CAUSED ELECTRICAL CURRENT TO RISE TO AN EXCESSIVE LEVEL CAUSING AN OVERCURRENT TRIP OF THE MCC-5 FEEDER BREAKER. THE MCC-5 FEEDER BREAKER IS POWERED FROM EMERGENCY BUS E1 WHICH IS POWERED BY "A" EMERGENCY DIESEL GENERATOR. LOSS OF MCC-5 RESULTED IN THE LOSS OF ITS ASSOCIATED EMERGENCY EQUIPMENT. EVALUATION OF THIS EVENT DETERMINED THAT THE R-21 MOTOR FEEDER BREAKER INSTANTANEOUS OVERCURRENT TRIP DEVICE WAS OVERSIZED AND UNABLE TO ADEQUATELY PROTECT THE R-21 MOTOR CONTROLLER. THE OVERCURRENT CONDITION CAUSED A SUPPLY SIDE BREAKER (MCC-5 FEEDER BREAKER) TO TRIP ON OVERCURRENT.

[251] ROBINSON 2 DOCKET 50-261 LER 85-011
STEAM LINE DELTA-P TRIP CAUSED BY GROUND ON INSTRUMENT BUS.
EVENT DATE: 031885 REPORT DATE: 041685 NSSS: WE TYPE: PWR

(NSIC 194570) ON 3-18-85, THE UNIT WAS OPERATING AT 100% POWER. AT 1409 HRS, THE PLANT RECEIVED A REACTOR TRIP AND SAFETY INJECTION FROM THE 'A' STEAM LINE DIFFERENTIAL PRESSURE DELTA-9 SIGNAL. TECHNICIANS WERE PERFORMING THE STEAM LINE DELTA-P MAINTENANCE SURVEILLANCE TEST, MST-014. THE BISTABLE FOR CHANNEL 3 'A' STEAM LINE DELTA-P WAS PLACED IN THE TRIP POSITION AS REQUIRED BY MST-014. CONCURRENTLY, A BODY TO BONNET LEAK ON A SG BLOWDOWN VALVE SPRAYED WATER INTO AN ADJACENT LIMIT SWITCH CAUSING AN ELECTRICAL GROUND WHICH TRIPPED AN INSTRUMENT BUS, IB-9. THIS PLACED ANOTHER CHANNEL OF THE 'A' STEAM LINE DELTA-P INTO THE TRIPPED POSITION SATISFYING THE 2 OUT OF 3 CHANNELS IN TRIP LOGIC NECESSARY TO INITIATE THE 'A' STEAM LINE DELTA-P SAFETY INJECTION/REACTOR TRIP SIGNAL. THE LEAKING VALVE WHICH CAUSED THE TRIP WAS REPAIRED, AND THE UNIT WAS RETURNED ON LINE AT 1419 HRS ON 3-19-85.

[252] ROBINSON 2 DOCKET 50-261 LER 85-013
 REACTOR TRIP ON S/G LOW LEVEL SIGNAL GENERATED DURING MAINTENANCE.
 EVENT DATE: 052185 REPORT DATE: 061285 NSSS: WE TYPE: PWR

(NSIC 154829) ON MAY 21, 1985, THE PLANT WAS OPERATING AT 100% REACTOR POWER. AT APPROXIMATELY 1308 HOURS, THE REACTOR TRIPPED ON 2 OF 3 LO-LO LEVEL SIGNALS FROM "A" STEAM GENERATOR (S/G). ONE OF THE THREE "A" S/G LEVEL TRANSMITTERS WAS TO BE TAKEN OUT OF SERVICE FOR MAINTENANCE ON A LEAKING CONDENSING POT VENT VALVE. IT WAS INTENDED TO TRIP THE BISTABLE AND ISOLATE THE TRANSMITTER. HOWEVER, THE TRIP OCCURRED WHEN THE S/G LEVEL TRANSMITTER ISOLATED IN THE FIELD WAS DIFFERENT FROM AND REDUNDANT TO THE LEVEL TRANSMITTER WHOSE BISTABLE WAS TRIPPED. THIS ERROR RESULTED IN THE REACTOR TRIP. SIGNIFICANT CORRECTIVE ACTIONS INCLUDED COUNSELING THOSE INVOLVED.

[253] SALEM 1 DOCKET 50-272 LER 84-028
 REACTOR TRIP FROM 77% WHILE REDUCING HIGH FLUX TRIP SETPOINTS.
 EVENT DATE: 122384 REPORT DATE: 012285 NSSS: WE TYPE: PWR

(NSIC 194654) AT 2158 HOURS, DECEMBER 23, 1984, AN AUTOMATIC REACTOR TRIP WAS INITIATED BY AN OVERTEMPERATURE DELTA-T SIGNAL. THIS SIGNAL RESULTED FROM TECHNICIAN ERROR WHILE REDUCING THE POWER RANGE HIGH FLUX TRIP SETPOINTS, AND WAS NOT THE RESULT OF ACTUAL PLANT CONDITIONS. THE REACTOR PROTECTION SYSTEM FUNCTIONED AS DESIGNED. THE HIGH FLUX TRIP SETPOINTS WERE BEING REDUCED IN ACCORDANCE WITH TECH SPEC REQUIREMENTS, DUE TO CHANNEL 1N44 BEING INOPERABLE, AND DUE TO A DELAY ENCOUNTERED IN COMPLETING A QPTR CALCULATION IN THE REQUIRED TIME. FOLLOWING THE REDUCTION OF CHANNEL 1N41 HIGH FLUX SETPOINT, THE "NUCLEAR INSTRUMENT SYSTEM CHANNEL TEST" ALARM WOULD NOT CLEAR, AS SPECIFIED IN THE 1N41 PROCEDURE. REALIZING THAT THE CAUSE WAS CHANNEL 1N44 OPERATIONS SELECTOR SWITCH BEING IN THE TEST POSITION, THE TECHNICIAN DEVIATED FROM THE 1N41 PROCEDURE AND RETURNED THE SWITCH TO THE NORMAL POSITION. THIS RESULTED IN AN AUTOMATIC REDUCTION IN THE OVERTEMPERATURE DELTA-T SETPOINT AND THE REACTOR TRIP. IT HAS BEEN DETERMINED NOT TO BE A GENERIC PROBLEM INVOLVING ALL TECHNICIANS, AND CORRECTIVE ACTIONS ARE BEING RESTRICTED TO THE INDIVIDUAL RESPONSIBLE FOR THE OCCURRENCE. DUE TO THE AUTOMATIC ACTUATION OF THE REACTOR PROTECTION SYSTEM, THE EVENT IS REPORTABLE IN ACCORDANCE WITH 10CFR 50.73(A)(2)(IV).

[254] SALEM 2 DOCKET 50-311 LER 85-002
 2A DIESEL GENERATOR - VALID TEST FAILURES.
 EVENT DATE: 030885 REPORT DATE: 040585 NSSS: WE TYPE: PWR
 VENDOR: ALCO ENGINE DIVISION, WHITE IND.

(NSIC 194672) ON MARCH 8, 1985, WITH THE UNIT IN MODE 5 FOLLOWING A REFUELING OUTAGE, 2A DIESEL GENERATOR FAILED TO AUTOMATICALLY START AND ACCELERATE DURING SURVEILLANCE TESTING. THE DIESEL FAILED A RETEST ON MARCH 9, 1985, FOLLOWING THE INSPECTION, LUBRICATION AND MANUAL OPERATION OF THE FUEL RACKS. ON MARCH 14, 1985, FOLLOWING THE INDIVIDUAL ALIGNMENT OF EACH FUEL INJECTOR TO THE FUEL RACKS, ANOTHER TEST WAS INITIATED; HOWEVER, THE DIESEL FAILED THE SURVEILLANCE TEST FOR THE THIRD TIME. THE OVERSPEED TRIP DEVICE WAS DISASSEMBLED, INSPECTED AND DISCOVERED TO BE RESTRICTING THE OPERATION OF THE FUEL RACKS. ALTHOUGH THIS CONDITION DID NOT PREVENT THE FUEL RACKS FROM BEING EASILY POSITIONED MANUALLY DURING MANUAL STARTS, ENOUGH FRICTION EXISTED TO PREVENT THE FUEL RACKS FROM REACHING THE "FULL FUEL" POSITION DURING AUTOMATIC STARTING. THE OVERSPEED TRIP DEVICE WAS REPAIRED, AND ON MARCH 16, 1985, 2A DIESEL GENERATOR WAS SATISFACTORILY TESTED AND RESTORED TO AN OPERABLE STATUS. INSPECTION OF THE REDUNDANT DIESEL GENERATORS REVEALED THAT THE PROBLEM WAS ISOLATED TO 2A DIESEL GENERATOR. THIS REPORT IS BEING SUBMITTED FOR INFORMATIONAL PURPOSES ONLY, IN ACCORDANCE WITH SURVEILLANCE REQUIREMENT 4.8.1.1.4, WHICH REQUIRES ALL DIESEL GENERATOR FAILURES TO BE REPORTED TO THE COMMISSION.

[255] SALEM 2 DOCKET 50-311 LER 85-004
 REACTOR TRIP FROM 25% DURING STARTUP OPERATIONS.
 EVENT DATE: 041385 REPORT DATE: 051085 NSSS: WE TYPE: PWR

(NSIC 194758) ON APRIL 13, 1985, DURING UNIT STARTUP OPERATIONS, A REACTOR TRIP OCCURRED. THE TRIP OCCURRED AFTER THE GENERATOR WAS SYNCHRONIZED TO THE GRID, AND WAS THE RESULT OF NO. 24 STEAM GENERATOR STEAM FLOW/FEED FLOW MISMATCH, COINCIDENT WITH A LOW STEAM GENERATOR WATER LEVEL SIGNAL. ALL ESTABLISHED PROCEDURES WERE FOLLOWED; HOWEVER, POOR JUDGMENT WAS EXERCISED BY SYNCHRONIZING THE UNIT WHILE NO. 24 STEAM GENERATOR STEAM FLOW CHANNEL 1 BISTABLES WERE IN A TRIPPED CONDITION. THE BISTABLES HAD BEEN PLACED IN A TRIPPED CONDITION WHILE PERFORMING TRANSMITTER VOLTAGE CHECKS, WHICH ESSENTIALLY REDUCED THE ANTICIPATORY TRIP FOR LOSS OF FEEDWATER TO A LOW STEAM GENERATOR WATER LEVEL TRIP ALONE. DURING STARTUP AND LOW POWER OPERATION, OSCILLATIONS IN LEVEL ARE LIKELY AS THE UNIT LOAD IS INCREASED. NO. 24 STEAM GENERATOR WATER LEVEL CONTROL SYSTEM (JB) WAS IN AUTOMATIC AT THE TIME, AND THE LEVEL SWINGS WHICH RESULTED WHEN THE UNIT WAS SYNCHRONIZED AND LOAD WAS INCREASED RESULTED IN A REACTOR TRIP WHEN NO. 24 STEAM GENERATOR WATER LEVEL DECREASED TO TWENTY-FIVE PERCENT. AUTOMATIC ACTUATION OF THE REACTOR PROTECTION SYSTEM IS REPORTABLE IN ACCORDANCE WITH THE CODE OF FEDERAL REGULATIONS, 10 CFR 50.73 (A)(2)(IV).

[256] SALEM 2 DOCKET 50-311 LER 85-005
 REACTOR TRIP FROM 17.5% POWER DURING STARTUP OPERATIONS.
 EVENT DATE: 041785 REPORT DATE: 051785 NSSS: WE TYPE: PWR

(NSIC 194802) ON APRIL 17, 1985, DURING UNIT STARTUP OPERATIONS, A "WATER HAMMER" NOISE WAS HEARD IN THE REHEAT STEAM LINE ASSOCIATED WITH NO. 21 STEAM GENERATOR FEED PUMP. AN EQUIPMENT OPERATOR OPENED A STEAM TRAP DRAIN VALVE. A SOLID STREAM OF WATER ISSUED FROM THE TRAP. WHILE IN THE PROCESS OF DRAINING WATER FROM THE REHEAT STEAM LINE, NO. 21 STEAM GENERATOR FEED PUMP SPEED AND DISCHARGE PRESSURE DECREASED SHARPLY. THIS WAS FOLLOWED BY DECREASING STEAM GENERATOR WATER LEVELS. THE AUXILIARY FEEDWATER PUMPS WERE STARTED, AND A UNIT LOAD REDUCTION WAS INITIATED. THE WATER LEVEL IN NO. 24 STEAM GENERATOR REACHED LOW-LOW LEVEL SETPOINT (8%), WHICH RESULTED IN A REACTOR/TURBINE TRIP. THE CAUSE OF THE REACTOR TRIP WAS THE INABILITY OF THE STEAM TRAPS TO ADEQUATELY REMOVE THE CONDENSATE WHICH HAD COLLECTED IN NO. 21 STEAM GENERATOR FEED PUMP REHEAT STEAM SUPPLY LINE. THE ROOT CAUSE WAS ATTRIBUTED TO CRUD AND CORROSION PRODUCTS (NORMALLY FOUND IN STEAM DRAIN PIPING), WHICH COLLECTED IN THE REHEAT STEAM DRAIN LINE PIPING FOLLOWING THE EXTENDED SHUTDOWN FOR REFUELING. BECAUSE OF THE AUTOMATIC ACTUATION OF THE REACTOR PROTECTION SYSTEM, THIS EVENT IS REPORTABLE IN ACCORDANCE WITH 10CFR 50.73(A)(2)(IV).

[257] SALEM 2 DOCKET 50-311 LER 85-006
 TURBINE TRIP ON LOW LUBE OIL PRESSURE.
 EVENT DATE: 042385 REPORT DATE: 052385 NSSS: WE TYPE: PWR

(NSIC 194759) ON APRIL 23, 1985, DURING ROUTINE POWER OPERATIONS, A REACTOR TRIP WAS INITIATED BY A TURBINE TRIP, WHEN A PARTIALLY FILLED MAIN TURBINE LUBE OIL COOLER WAS PLACED IN SERVICE. TESTING VERIFIED THAT THE COOLER VENT LINE REMAINS FULL OF OIL, EVEN WHEN THE COOLER IS PARTIALLY DRAINED. WHEN THE OUT-OF-SERVICE COOLER WAS PRESSURIZED, THE RESIDUAL OIL FLOW OBSERVED IN THE LUBE OIL COOLER VENT LINE "BULL'S-EYE" PROVIDED FALSE INDICATION THAT THE COOLER WAS FULL. THE COOLER WAS THEN PLACED IN SERVICE, AND A MOMENTARY DROP IN TURBINE LUBE OIL PRESSURE RESULTED IN THE TURBINE/REACTOR TRIP. THE ROOT CAUSE OF THE EVENT WAS DETERMINED TO BE THE LACK OF SUFFICIENT PROCEDURAL GUIDANCE TO ENSURE THAT OPERATORS CLEARLY DISTINGUISH THE DIFFERENCE BETWEEN RESIDUAL VENT LINE OIL AND A SOLID STREAM OF OIL, WHICH VERIFIES THAT THE COOLER IS COMPLETELY FULL. TO PRECLUDE RECURRENCE, THE MAIN TURBINE LUBRICATING OIL SYSTEM OPERATING PROCEDURE WAS REVISED TO INCLUDE A SECTION SPECIFICALLY ADDRESSING THE ROTATION OF THE

IN-SERVICE OIL COOLER. THE TURBINE TRIP AND THE REACTOR TRIP OCCURRED AS REQUIRED TO PREVENT TURBINE BEARING DAMAGE, AND TO MINIMIZE THE PRIMARY PLANT TRANSIENT. AUTOMATIC ACTUATION OF THE REACTOR PROTECTION SYSTEM IS REPORTABLE IN ACCORDANCE WITH 10 CFR 50.73(A)(2)(IV).

[258] SALEM 2 DOCKET 50-311 LER 85-008
MAIN GENERATOR "LOSS OF FIELD" RELAY FAILURE.
EVENT DATE: 050285 REPORT DATE: 053185 NSSS: WE TYPE: PWR

(NSIC 194760) ON MAY 2, 1985, DURING ROUTINE POWER OPERATION, A REACTOR TRIP WAS INITIATED BY A TURBINE TRIP. THE INITIATING EVENT WAS THE OPERATION OF THE MAIN GENERATOR "LOSS OF FIELD" RELAY. THIS, IN TURN, ACTUATED THE GENERATOR "MULTI-TRIP" RELAY, RESULTING IN A GENERATOR, TURBINE, AND REACTOR TRIP. INVESTIGATION REVEALED THAT THE "LOSS OF FIELD" RELAY (RELAY #10 - TYPE CEH-11A) WAS INSTALLED INCORRECTLY. THE RELAY WAS WIRED ACCORDING TO THE ELECTRICAL SCHEMATIC; HOWEVER, THE ELECTRICAL SCHEMATIC WAS NOT CORRECT. THE ELECTRICAL SCHEMATIC HAD BEEN REVISED DUE TO THE RECENT GENERATOR CHANGEOUT. THE CEH-11A RELAY WAS NOT INCLUDED IN THE REVISION; HOWEVER, IT WAS RE-DRAWN BECAUSE OF THE CLOSE PROXIMITY OF THE REVISED CIRCUITS. THE RELAY WAS INADVERTENTLY RE-DRAWN (AND SUBSEQUENTLY PHYSICALLY CONNECTED) TO THE WRONG PHASE OF THE BUS. THE ROOT CAUSE WAS DETERMINED TO BE A PROCEDURAL INADEQUACY, IN THAT ONLY THOSE PORTIONS OF THE ELECTRICAL SCHEMATIC WHICH HAD BEEN REVISED WERE REVIEWED, AND THE REVIEW PROCESS DID NOT INCLUDE A REVIEW OF THOSE PORTIONS OF THE SCHEMATIC WHICH WERE RE-DRAWN WHILE IMPLEMENTING THE REVISION. THE RELAY WIRING AND DRAWINGS WERE SUBSEQUENTLY CORRECTED, AND ALL GENERATOR PROTECTIVE CIRCUITS WERE DESIGN VERIFIED. FUTURE DRAWING REVISIONS WILL ALSO INCLUDE A REVIEW OF THOSE PORTIONS OF THE CIRCUITS WHICH WERE RE-DRAWN.

[259] SAN ONOPRE 1 DOCKET 50-206 LER 85-004
LOSS OF MAIN FEEDWATER PUMP OCCURS.
EVENT DATE: 021185 REPORT DATE: 031385 NSSS: WE TYPE: PWR
VENDOR: BYRON JACKSON PUMPS, INC.

(NSIC 194164) ON 2-10-85, AT 2230, UNIT 1 COMMENCED STARTUP FROM SUCCESSFUL MODE 3 SAFETY INJECTION SYSTEM (SIS) SURVEILLANCE TESTING. AT 0152, ON 2-11-85 A HIGH BEARING TEMPERATURE ALARM WAS RECEIVED ON THE THRUST BEARING OF THE EAST MAIN FEEDWATER PUMP (EMFP). THE EMFP IS USED AS BOTH A FEEDWATER AND AS A SAFETY INJECTION PUMP. LOCAL INSPECTION FOUND THE THRUST BEARING HOT AND THE DEFLECTOR RING SHATTERED. AS A RESULT, AT 0210, THE PUMP WAS DECLARED INCOPERABLE, AND BECAUSE BOTH EAST AND WEST PUMPS ARE REQUIRED IN MODE 2, SHUTDOWN WAS INITIATED AS REQUIRED BY TECH SPEC 3.0.3. SUBSEQUENT INVESTIGATION HAS CONCLUDED AFTER EXAMINATION OF THE EMFP, THAT THE THRUST BEARING FAILED DUE TO CONTAMINATION OF THE PUMP OIL WITH WATER FROM THE PUMP SEAL WATER SYSTEM. AS CORRECTIVE ACTION, THE ROTATING ELEMENT AND THE FAILED BEARING WERE REPLACED BY SPARES AND THE LUBE OIL SYSTEM WAS RESTORED. PROCEDURES ON PUMP OPERATION HAVE BEEN REVISED TO PRECLUDE OIL CONTAMINATION.

[260] SAN ONOPRE 1 DOCKET 50-206 LER 85-009
PLANT VENT NOBLE GAS ACTIVITY MONITOR HAS INCORRECT SETPOINT.
EVENT DATE: 030185 REPORT DATE: 052885 NSSS: WE TYPE: PWR

(NSIC 194739) TECH SPEC 3.5.9 REQUIRES THAT THE PLANT VENT NOBLE GAS ACTIVITY MONITOR R-1219 (EIS COMPONENT CODE R1) BE SET TO A VALUE DERIVED FROM THE OFFSITE DOSE CALCULATION MANUAL (ODCM). ON 3/1/85, WITH UNIT 1 AT 67% POWER, THE MONITOR SETPOINT WAS NOT RESET DURING A PLANNED RELEASE. IT WAS INADVERTENTLY LEFT AT THE PREVIOUS VALUE, WHICH WAS 19% ABOVE THE ODCM VALUE. THE PATHWAY WAS MONITORED AND THE ACTUAL ACTIVITY REMAINED LESS THAN 1.4% OF 10 CFR 20 LIMITS. THE CORRECT SETPOINT WAS SPECIFIED ON THE PERMIT, HOWEVER, THE OPERATORS HAD

BECOME ACCUSTOMED TO THE PREVIOUS SETPOINT AND FAILED TO RECOGNIZE THAT A SETPOINT CHANGE WAS REQUIRED. THE ERROR WAS REVEALED DURING A ROUTINE REVIEW OF RELEASE PERMITS CONDUCTED ON 5/3/85. CORRECTIVE ACTION WILL BE TAKEN TO REORGANIZE THE PERMIT FORMAT TO CLEARLY DIRECT THE OPERATOR TO VERIFY THE SETPOINT IS CORRECT AND TO INCORPORATE IN THE PROCEDURES ADDITIONAL GUIDANCE ON COMPLETING THE PERMIT AND EVALUATING THE SETPOINT. THIS EVENT WAS ALSO DISCUSSED IN SHIFT BRIEFINGS TO STRESS THE NEED FOR ATTENTION TO DETAIL.

[261] SAN ONOFRE 1 DOCKET 50-206 LER 85-010
FAILURE TO MAKE CONTINUOUS 4-HOUR ESTIMATES OF STACK FLOW.
EVENT DATE: 050885 REPORT DATE: 060785 NSSS: WE TYPE: PWR

(NSIC 194824) TECH SPEC LIMITING CONDITION FOR OPERATION 3.5.9, ACTION STATEMENT 24, STATES THAT WHEN THE FAN FLOW INDICATION OF STACK WIDE RANGE GASEOUS MONITOR R-1254 IS INOPERABLE, EFFLUENT RELEASES THROUGH THE STACK MAY CONTINUE PROVIDED THE FLOW RATE IS ESTIMATED AT LEAST ONCE PER 4 HOURS. CONTRARY TO THIS, ON MAY 8, 1985, INVESTIGATION OF A SEPARATE EVENT REVEALED THAT WE HAD NOT MET THIS ACTION STATEMENT ON SEVERAL OCCASIONS IN THE PAST. PRIOR TO THE MAY 8 INVESTIGATION, INTERPRETATION OF LCO 3.5.9, ACTION STATEMENT 24, WAS THAT FLOW ESTIMATES WERE REQUIRED ONLY DURING BATCH RELEASES. THEREFORE, THE PROCEDURE ADDRESSING THE CONDITION OF R-1254 BEING OUT-OF-SERVICE DID NOT STATE THAT FLOW ESTIMATES WERE REQUIRED WHENEVER THERE IS FLOW THROUGH THE STACK, REGARDLESS OF WHETHER OR NOT A BATCH RELEASE IS IN PROGRESS. CORRECTIVE ACTION TAKEN WAS TO REVISE PROCEDURES TO SPECIFICALLY REQUIRE STACK FLOW RATE ESTIMATES TO BE MADE WHENEVER THE R-1254 FLOW INDICATOR IS OUT-OF-SERVICE. NO UNMONITORED RELEASES WERE MADE THROUGH THE STACK AND ALL REQUIRED FLOW ESTIMATES WERE MADE DURING BATCH RELEASES. THERE WERE ALWAYS GROSS ACTIVITY, NOBLE GAS, PARTICULATE, AND IODINE MONITORS OPERABLE, AND, IF IT HAD BEEN NECESSARY, FLOW RATES COULD HAVE BEEN ESTIMATED DURING TIMES THE R-1254 FLOW INDICATOR WAS OUT OF SERVICE BY OBSERVING THE NUMBER OF VENT STACK FANS THAT WERE OPERATING.

[262] SAN ONOFRE 2 DOCKET 50-361 LER 85-012
PRECAUTIONARY EVACUATION OF FIRE WATCH DUE TO AMMONIA RELEASE.
EVENT DATE: 031985 REPORT DATE: 041585 NSSS: CE TYPE: PWR

(NSIC 194815) ON MARCH 19, 1985, AT 0700, WITH UNIT 2 IN MODE 4, A CONTINUOUS FIRE WATCH POSTED IN THE UNIT 2 ELECTRICAL CABLE TUNNEL WAS EVACUATED AS A PRECAUTIONARY MEASURE DUE TO THE SMELL OF AMMONIA GAS. THE FIRE WATCH WAS REQUIRED PURSUANT TO TECH SPEC 3.7.8.2 FOR AN INOPERABLE FIRE SUPPRESSION SYSTEM. AN INVESTIGATION WAS PERFORMED TO DETERMINE THE SOURCE OF THE AMMONIA GAS. THE STEAM TRAP DRAINS IN THE MAIN STEAM ISOLATION VALVE (MSIV) AND AUXILIARY FEED BUILDING AREAS WERE ALIGNED TO THE ATMOSPHERE AND RELIEVING STEAM AND AMMONIA WHICH WAS BEING DRAWN INTO THE CABLE TUNNEL BY THE EXHAUST FAN. THE AMMONIA HAD BEEN ADDED TO THE STEAM GENERATORS DURING A RECENT OUTAGE TO CONTROL PH. THE FIRE WATCH WAS REESTABLISHED AT 1030 ON MARCH 19, 1985, AFTER VENTILATING THE CABLE TUNNEL WITH PORTABLE EXHAUST FANS. IN ADDITION, OPERATIONS ALIGNED THE STEAM TRAPS TO THE CONDENSER AND ISOLATED THE SOURCE OF THE AMMONIA AT APPROXIMATELY 1100. THE AMMONIA GAS WAS NOT OF HIGH ENOUGH CONCENTRATION TO PRECLUDE ESSENTIAL PERSONNEL FROM PERFORMING DUTIES NECESSARY FOR SAFE OPERATION OF THE PLANT.

[263] SAN ONOFRE 2 DOCKET 50-361 LER 85-025
IMPROPERLY INSTALLED SAMPLE PUMP FOR CONDENSER VACUUM RAD MONITOR.
EVENT DATE: 033085 REPORT DATE: 051585 NSSS: CE TYPE: PWR

(NSIC 194495) ON 3-30-85 AT 0930 AND AGAIN ON 3-31-85 AT 0930 WITH UNIT 2 IN MODE 4 AN AUX SAMPLE PUMP, USED TO TAKE NOBLE GAS, PARTICULATE AND IODINE SAMPLES FROM THE CONDENSER EVACUATION SYSTEM WHEN THE NORMAL MONITORING EQUIPMENT IS OUT OF

SERVICE, WAS IMPROPERLY INSTALLED, RENDERING BOTH THE MONITOR AND THE AUX SAMPLING EQUIPMENT INOPERABLE. AS A RESULT, TECH SPFC LCO 3.3.3.9, ACTION STATEMENT 40, WAS NOT MET. IN EACH INSTANCE, THE IMPROPER INSTALLATION EXISTED APPROX 12 HRS BEFORE IT WAS DISCOVERED AND CORRECTED. THE CAUSE OF THIS EVENT WAS PERSONNEL ERROR. THE RESPONSIBLE TECHNICIAN HAD PERFORMED THE SAMPLE PUMP INSTALLATION SEVERAL TIMES PRIOR TO THIS EVENT, BUT THIS TIME HE ATTEMPTED TO INSTALL THE PUMP FROM MEMORY, WILTHOUT TAKING THE APPLICABLE PROCEDURE WITH HIM. HE ALSO FAILED TO COMPLETE A PROCEDURALLY REQUIRED FORM THAT WOULD HAVE INITIATED THE INDEPENDENT SECOND VERIFICATION. CORRECTIVE ACTION TAKEN WAS TO DISCUSS THIS EVENT WITH APPROPRIATE PERSONNEL, EMPHASIZING THE IMPORTANCE OF USING PROCEDURES, AND TO TAKE DISCIPLINARY ACTION AGAINST THE RESPONSIBLE TECHNICIAN. THERE WAS NO SAFETY SIGNIFICANCE TO THIS EVENT BECAUSE NO DETECTABLE PRIMARY-TO-SECONDARY LEAKS EXISTED. IN THE EVENT OF A SG TUBE LEAK, ACTIVITY IN THE SECONDARY SIDE WOULD HAVE BEEN DETECTED BY THE SG BLOWDOWN MONITOR.

[264] SAN ONOFRE 2 DOCKET 50-361 LER 85-024
REACTOR TRIP DUE TO LOOP COLD LEG TEMPERATURE DIFFERENCE.
EVENT DATE: 041685 REPORT DATE: 051585 NSSS: CE TYPE: PWR

(NSIC 194772) ON 4/16/85, AT 0833, WITH UNIT 2 IN MODE 2 AND OPERATING WITH ONE MAIN STEAM ISOLATION VALVE (MSIV) OPEN AND ONE SHUT, THE REACTOR TRIPPED IN RESPONSE TO LOW DEPARTURE FROM NUCLEATE BOILING RATIO (DNBR) TRIP SIGNALS FROM CORE PROTECTION CALCULATORS (CPC'S) A AND B. THE LOW DNBR SIGNALS WERE GENERATED DUE TO A TEMPERATURE DIFFERENCE BETWEEN REACTOR COOLANT SYSTEM (RCS) LOOP COLD LEG TEMPERATURES. ALL CONTROL AND SAFETY SYSTEMS WERE VERIFIED TO HAVE FUNCTIONED PROPERLY. THE REACTOR TRIP RESULTED FROM PENALTY FACTORS APPLIED BY THE CPC'S WHICH ARE BASED ON PLANT OPERATION AT 20 PERCENT OR ABOVE. AS CORRECTIVE ACTION, CPC OPERATION USING PENALTY FACTORS BASED ON ACTUAL UNIT POWER WILL BE REVISED TO FACILITATE PLANT CONTROL WHEN OPERATING WITH ONE MSIV OPEN AND ONE SHUT.

[265] SAN ONOFRE 2 DOCKET 50-361 LER 85-026
UNANALYZED CHEMISTRY SAMPLES.
EVENT DATE: 04'685 REPORT DATE: 051685 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(INSIC 194731) ON 4/16/85, A REVIEW OF EFFLUENT SAMPLES REVEALED TWO INSTANCES IN WHICH SAMPLES HAD NOT BEEN PROPERLY COUNTED. UNIT 2 STEAM GENERATOR BLOWDOWN WAS INITIATED ON 3/29/85 WITH THE EFFLUENT MONITOR OUT OF SERVICE. ONE OF THE TECH SPEC REQUIRED DAILY SAMPLES WAS ANALYZED APPROXIMATELY 19 HOURS LATE. ON 3/29/85, A CHARCOAL IODINE COMPOSITE SAMPLE FROM THE UNIT 3 AIR EJECTOR GASEOUS MONITOR WAS INADVERTENTLY DISCARDED. THE TECH SPEC REQUIRES THE SAMPLE BE ANALYZED WEEKLY. THE 47 HR., 45 MIN. OF LOST DATA WILL BE ESTIMATED. THERE WAS NO SAFETY SIGNIFICANCE TO THESE EVENTS BECAUSE THE FLOW PATHS WERE CONTINUOUSLY MONITORED BY OTHER INSTRUMENTS, AND ANALYSIS OF OTHER AVAILABLE DATA CONFIRMED THE ACTIVITY LEVELS WERE WITHIN THE EXPECTED RANGE. THESE INSTANCES RESULTED FROM OVERSIGHT BY CHEMISTRY TECHNICIANS. THESE EVENTS WERE DISCUSSED WITH ALL OF THE CHEMISTRY TECHNICIANS TO EMPHASIZE THE NEED TO ANALYZE SAMPLES PROMPTLY AS REQUIRED, AND BOTH INDIVIDUALS RECEIVED APPROPRIATE DISCIPLINARY ACTION. THE ADMINISTRATIVE CONTROLS HAVE BEEN STRENGTHENED TO REDUCE THE OPPORTUNITY FOR SIMILAR ERRORS. THE MONITOR STATUS BOARD IN THE CHEMISTRY LABORATORY HAS BEEN MODIFIED TO CLEARLY INDICATE WHEN SAMPLES ARE REQUIRED. ADDITIONALLY, A SUPERVISOR WILL VERIFY THE PROPER SAMPLE RECORDS HAVE BEEN COMPLETED PRIOR TO THE DISPOSAL OF COMPOSITE SAMPLE CARTRIDGES.

[266] SAN ONOPRE 2 DOCKET 50-361 LER 85-028
 REACTOR TRIP CAUSES MAIN STEAM ISOLATION VALVE TO FAIL SHUT.
 EVENT DATE: 041995 REPORT DATE: 052085 NSSS: CE TYPE: PWR
 VENDOR: WKM VALVE DIVISION

(NSIC 194682) ON APRIL 19, 1985, WITH UNIT 2 IN MODE 1 AT 50% POWER, A PRESSURE REGULATOR (EIIIS COMPONENT CODE RG) FAILED IN THE NITROGEN SUPPLY TO MAIN STEAM ISOLATION VALVE (MSIV) (EIIIS COMPONENT CODE ISV) 2HV-8205. THE MSIV SHUT, ISOLATING MAIN STEAM FROM ONE STEAM GENERATOR (EIIIS COMPONENT CODE SG). THE RESULT WAS AN IMBALANCE IN THE PLANT OPERATIONS CAUSING AN INCREASE IN LOOP TEMPERATURE DIFFERENCE IN THE REACTOR COOLANT SYSTEM (RCS) (EIIIS COMPONENT CODE AB). THE CORE PROTECTION CALCULATORS (CPCS) (EIIIS COMPONENT CODE CPU) GENERATED TRIP SIGNALS BASED UPON EXTRAPOLATED RCS LOOP TEMPERATURE DIFFERENCE OF 18 DEGREES BETWEEN COLD LEGS. AS A RESULT, AT 1224, A REACTOR TRIP WAS GENERATED BY THE CPCS. THE ACTUAL MEASURED AVERAGE COLD LEG TEMPERATURE DIFFERENCE WAS 4.83 DEGREES. ALL ESSENTIAL CONTROL AND SAFETY SYSTEMS FUNCTIONED PROPERLY DURING AND AFTER THE TRIP. THE FAILED NITROGEN PRESSURE REGULATOR WAS REPLACED AND THE MSIV TESTED AND RESTORED TO OPERABILITY. AS ADDITIONAL CORRECTIVE ACTION, PROCEDURE S023-0-38, "ROUTINE OPERATIONS AND INSPECTIONS", WAS CHANGED TO REQUIRE MONITORING OF MSIV NITROGEN SYSTEM PRESSURE AND NITROGEN BOTTLE PRESSURE ONCE PER SHIFT TO REDUCE THE PROBABILITY OF AN UNDETECTED FAILURE OF THE MSIV NITROGEN SYSTEM.

[267] SAN ONOPRE 2 DOCKET 50-361 LER 85-029
 SPURIOUS TOXIC GAS ISOLATION SYSTEM (TGIS) ACTUATIONS.
 EVENT DATE: 050485 REPORT DATE: 052985 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOPRE 3 (PWR)

(NSIC 194496) ON 5-4-85 AT 1550, WITH UNIT 2 IN MODE 1 AND UNIT 3 IN MODE 1 AT 100% POWER, A SPURIOUS TGIS TRAIN 'A' ACTUATION OCCURRED. SUBSEQUENT TO THIS DATE, AN ADDITIONAL SPURIOUS ACTUATION OCCURRED ON 5/11. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) ACTUATED AS REQUIRED. EACH ACTUATION WAS VERIFIED TO BE SPURIOUS BY CONFIRMING THAT THE METER INDICATIONS ON THE TGIS PANEL WERE LESS THAN THEIR RESPECTIVE SETPOINTS, AND TGIS WAS RESET. PREVIOUS OCCURRENCES OF THIS EVENT WERE MOST RECENTLY DISCUSSED IN LER 85-010 (DOCKET NO. 50-361). SPURIOUS TGIS ACTUATIONS HAVE BEEN A RECURRING EVENT, AND HAVE BEEN THE RESULT OF ONE OR MORE OF THE FOLLOWING CONDITIONS: OVERLY CONSERVATIVE ALARM SETPOINTS; ELECTRICAL NOISE; RAPID TEMPERATURE AND PRESSURE CHANGES; RADIO TRANSMISSIONS; VIBRATION; AND DUST AND DIRT ACCUMULATION. CORRECTIVE ACTIONS HAVE SIGNIFICANTLY REDUCED THE NUMBER OF SPURIOUS ACTUATIONS. A TECH SPEC AMENDMENT HAS IMPLEMENTED MORE APPROPRIATE SETPOINTS WHICH SHOULD FURTHER REDUCE THE NUMBER OF SPURIOUS ACTUATIONS. A TGIS TASK FORCE HAS RECOMMENDED ADDITIONAL CORRECTIVE ACTIONS, WHICH ARE DISCUSSED IN DETAIL IN LER 85-010. IMPLEMENTATION OF THESE CORRECTIVE ACTIONS IS CURRENTLY IN PROGRESS.

[268] SAN ONOPRE 2 DOCKET 50-361 LER 85-030
 DELINQUENT SURVEILLANCE FOR LOCKED FIRE DOORS.
 EVENT DATE: 050685 REPORT DATE: 060385 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOPRE 3 (PWR)

(NSIC 194773) TECH SPEC 4.7.9.1.5 REQUIRES VERIFICATION OF THE POSITION OF EACH LOCKED CLOSED FIRE DOOR EVERY SEVEN DAYS. ON 5/15/85, DURING A DOCUMENTATION REVIEW BY THE EMERGENCY SERVICE ORGANIZATION OF FIRE DOOR SURVEILLANCES, IT WAS DETERMINED THAT THE 7-DAY SURVEILLANCE SCHEDULED FOR 5/4/85 WAS NOT PERFORMED AND THE 25% EXTENSION ALLOWED IN TECH SPEC 4.0.2 WAS EXCEEDED ON 5/6/85. A REVIEW OF THE PREVIOUS SURVEILLANCE ON 4/25/85 AND THE SUBSEQUENT SURVEILLANCE ON 5/11/85 DID NOT IDENTIFY ANY DEFICIENCIES IN THE POSITION OF THE LOCKED FIRE DOORS. IN ADDITION, THE ADMINISTRATIVE CONTROLS FOR THE ACCESS OF LOCKED FIRE DOORS REQUIRE, PRIOR TO ACCESS, THAT AUTHORIZATION FROM EMERGENCY PREPAREDNESS BE

RECEIVED IN WRITING AND A FIRE WATCH ESTABLISHED. THERE IS NO EVIDENCE THAT THESE CONTROLS WERE VIOLATED; BECAUSE OF THIS IT HAS BEEN CONCLUDED THAT THERE WAS NO SIGNIFICANCE TO THIS EVENT. THE CAUSE OF THIS EVENT WAS OVERSIGHT. THE INSPECTOR FAILED TO REVIEW THE DAILY WORK SCHEDULE TO DETERMINE IF HE HAD BEEN ASSIGNED SURVEILLANCES. AS CORRECTIVE ACTION THE INSPECTOR WAS DISCIPLINED AND ALL OTHER INSPECTORS WERE MADE AWARE OF THIS EVENT. IN ADDITION, THE ADMINISTRATIVE CONTROLS FOR VERIFYING SURVEILLANCE COMPLETION WERE STRENGTHENED TO ENSURE COMPLIANCE WITH THE SURVEILLANCE SCHEDULES.

[269] SAN ONOFRE 2 DOCKET 50-361 LER 85-027
CONTAINMENT PURGE ISOLATION SYSTEM SPURIOUS ACTUATION.
EVENT DATE: 050785 REPORT DATE: 052985 NSSS: CE TYPE: PWR

(NSIC 194681) ON MAY 7, 1985, AT 2216, WITH UNIT 2 AT 100% POWER, THE TRAIN "A" CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) (EIS SYSTEM CODE VA) SPURIOUSLY ACTUATED APARENTLY DUE TO AN ELECTRICAL NOISE SPIKE ON CONTAINMENT AREA RADIATION MONITOR 2RT-7856 (EIS COMPONENT CODE RIT). CONTAINMENT RADIATION LEVELS WERE VERIFIED TO BE BELOW THE CPIS ACTUATION SETPOINT AND CPIS WAS RESET AT 2235. THE CPIS ACTUATION CORRESPONDED WITH THE STARTING OF HIGH PRESSURE SAFETY INJECTION (EIS SYSTEM CODE BQ) PUMP (EIS COMPONENT CODE P) 2P-018 WHICH MAY HAVE CAUSED AN ELECTRICAL NOISE SPIKE ON 2RT-7856. THE CAUSE OF THE ACTUATION AND THE SUSPECTED PRESENCE OF ELECTRICAL NOISE IS UNDER INVESTIGATION AS REPREVIOUSLY REPORTED IN LERS 84-004, 84-049, 84-061, 84-071, 84-076, 85-009, 85-023 (DOCKET NO. 361) AND 84-010 (DOCKET NO. 50-362). OUR PRELIMINARY INVESTIGATION HAS BEEN COMPLETED, AND WE ARE CURRENTLY PERFORMING A DETAILED STUDY OF THE PLANT GROUND SYSTEM, WHICH BEGAN IN MARCH 1985. COMPLETION OF THE GROUND SYSTEM STUDY IS SCHEDULED FOR NOVEMBER 1, 1985, AND UPON DETERMINATION OF CORRECTIVE ACTION, WE WILL SUBMIT A REVISION TO LER 84-002. THERE ARE NO CREDIBLE CIRCUMSTANCES UNDER WHICH THIS EVENT WOULD HAVE BEEN MORE SEVERE.

[270] SAN ONOFRE 2 DOCKET 50-361 LER 85-031
ELECTRICAL PROBLEMS RESULT IN DROPPED CONTROL ELEMENT ASSEMBLIES.
EVENT DATE: 051885 REPORT DATE: 061285 NSSS: CE TYPE: PWR

(NSIC 194839) ON 5/18/85, AT 0427 THE REACTOR TRIPPED IN RESPONSE TO LOW DEPARTURE FROM NUCLEATE BOILING RATIO (DNBR) TRIP SIGNALS. THE LOW DNBR SIGNALS WERE GENERATED AS A RESULT OF CONTROL ELEMENT ASSEMBLY (CEA) (EIS COMPONENT CODE ROD) SUBGROUP 6 DROPPING INTO THE CORE. ALL SAFETY SYSTEMS WERE VERIFIED TO HAVE FUNCTIONED PROPERLY. A MISSING LUG NUT, ON A LEAD FROM A CARD CAGE (EIS COMPONENT CODE IMOD) TO A GROUND BUS (EIS COMPONENT CODE GBU) COMMON TO CEA SUBGROUPS 5 AND 6, CAUSED ABNORMAL ENERGIZATION OF THE SUBGROUP 6 POWER COILS AND THE RESULTING HIGH CURRENT CAUSED THE SUBGROUP 6 SUPPLY BREAKER (EIS COMPONENT CODE BKR) TO TRIP AND THE SUBGROUP 6 CEA'S DROPPED INTO THE CORE. THE LEAD WAS RE-TERMINATED ON THE CARD CAGE. ALL UNIT 2 AND 3 CEA CONTROL PANELS WERE CHECKED FOR SIMILAR LOOSE CONNECTIONS; HOWEVER, NONE WERE FOUND. EVEN THOUGH THE CAUSE OF THE LOOSE CONNECTION COULD NOT BE DETERMINED, IT IS POSSIBLE THAT THE LUG NUT WAS NOT INITIALLY INSTALLED OR WAS REMOVED BUT NOT RESTORED DURING EARLIER MAINTENANCE. THE CEA CONTROL CIRCUITRY WAS SATISFACTORILY TESTED PRIOR TO RETURNING THE UNIT TO SERVICE. NO FURTHER ACTION IS PLANNED.

[271] SAN ONOFRE 2 DOCKET 50-361 LER 85-034
HYDROCARBON ANALYZER FLAME-OUT CAUSES TOXIC GAS ISOLATION SYSTEM ACTUATION.
EVENT DATE: 052885 REPORT DATE: 062585 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 194775) ON 5/28/85, AT 0302, WITH UNITS 2 AND 3 BOTH AT 100% POWER, TOXIC GAS ISOLATION SYSTEM (TGIS) TRAIN 'B' (EIS SYSTEM CODE VI) ACTUATED ON AN INSTRUMENT FAILURE SIGNAL. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM

(CREACUS) (EIIIS SYSTEM CODE VI) ACTUATED AS REQUIRED. THE CAUSE OF THE TGIS ACTUATION WAS A HYDROCARBON ANALYZER (EIIIS COMPONENT CODE 45) FLAME-OUT. AT 0325, THE FLAME WAS RE-ESTABLISHED AND TGIS WAS RESET. THE CAUSE OF THE FLAME-OUT CONDITION WAS AN ERROR IN EXCHANGING HYDROGEN BOTTLES. APPROXIMATELY 1 HOUR BEFORE THE TGIS ACTUATION, THE STANDBY HYDROGEN BOTTLE WAS PLACED IN SERVICE AS THE INSERVICE BOTTLE REQUIRED REPLACEMENT. INVESTIGATION AFTER THE ACTUATION FOUND THE STANDBY BOTTLE'S SHUTOFF VALVE (EIIIS COMPONENT CODE SHV) TO BE CLOSED. OPERATING INSTRUCTION S023-3-2.29, "TOXIC GAS ANALYZER OPERATION," WILL BE REVISED TO INCLUDE A REQUIREMENT TO VERIFY THAT THE SHUTOFF VALVE TO THE STANDBY HYDROGEN BOTTLE IS OPEN WHEN PLACING THE STANDBY BOTTLE IN SERVICE. IN ADDITION, A DESIGN CHANGE SINCE THE EVENT REMOVED THE HYDROCARBON ANALYZER CHANNEL FAILURE SIGNAL FROM THE TGIS ACTUATION LOGIC, SUCH THAT A FLAME-OUT ONLY RESULTS IN A CONTROL ROOM ANNUNCIATOR ALARM.

[272] SAN ONOPRE 3 DOCKET 50-362 LER 85-001
PRESSURIZER SPRAY VALVE LEAKS.
EVENT DATE: 012785 REPORT DATE: 022685 NSSS: CE TYPE: PWR
VENDOR: HAMMEL DAHL

(NSIC 194181) ON 1-27-85 AT 1320 A RCS WATER INVENTORY BALANCE INDICATED A 2.97 GPM LEAKAGE RATE, OF WHICH 1.73 GPM WAS DETERMINED TO BE UNIDENTIFIED LEAKAGE, EXCEEDING THE 1.0 GPM LIMIT OF LCO 3.4.5.2. AT 1330, THE RCS WAS ISOLATED. AT 1350, IT WAS DETERMINED THE LEAK RATE HAD NOT BEEN REDUCED, AND AT 1412 A REACTOR SHUTDOWN WAS COMMENCED AND AN UNUSUAL EVENT WAS DECLARED. AT 2248, AND AGAIN AT 0140 ON 1-28-85, CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) TRAIN 'A' ACTIVATED FROM CONTAINMENT AIRBORNE IODINE RESULTING FROM THE LEAK. THE MINI-PURGE IN PROGRESS AT 2248 WAS ISOLATED. NO PURGE WAS IN PROGRESS AT 0140. SUBSEQUENT INVESTIGATION DETERMINED THE UNIDENTIFIED LEAKAGE WAS DUE TO FAILURE OF THE STEM PACKING ON PRESSURIZER SPRAY VALVE 3PV-0100B. THE PRESSURIZER SPRAY VALVE STEM PACKING IS CURRENTLY UNDER REPAIR. TO PREVENT RECURRENCE, THE PRESSURIZER SPRAY VALVE PACKING AND PRESSURIZER SPRAY VALVE SYSTEM WILL BE MODIFIED DURING THE FIRST REFUELING OUTAGE. THIS SUBMITTAL ALSO PROVIDES THE REPORT PURSUANT TO LCO 3.4.7, ACTION STATEMENT 'D', FOR RCS SPECIFIC ACTIVITY EXCEEDING 1.0 MICROCURIES/GRAM DOSE EQUIVALENT I-131, WHICH WAS CAUSED BY IODINE SPIKING FOLLOWING THE SHUTDOWN. SIMILAR OCCURRENCES WERE PREVIOUSLY REPORTED IN LERS 83-111, 84-005, 84-013, 84-015, 84-023, 84-037, 84-038, AND 84-039.

[273] SAN ONOPRE 3 DOCKET 50-362 LER 85-007
ENTRY INTO MODE 3 WITH SAFETY INJECTION TANK DISCHARGE VALVES DE-ENERGIZED.
EVENT DATE: 031785 REPORT DATE: 041685 NSSS: CE TYPE: PWR

(NSIC 194810) ON 3/17/85, UNIT 3 WAS IN MODE 4 AND BEING PREPARED FOR POWER OPERATION FOLLOWING AN OUTAGE. REACTOR COOLANT SYSTEM (RCS) PRESSURE WAS 2250 PSIG, AND THE TEMPERATURE WAS LESS THAN THE MODE 3 ENTRY POINT OF 350F. THE SAFETY INJECTION TANK (SIT) DISCHARGE CHECK VALVES WERE BEING PRESSURE TESTED WITH THE DISCHARGE VALVES DE-ENERGIZED IN THE CLOSED POSITION. IN ORDER TO PERFORM THE TEST, AND PREPARE FOR ENTRY TO MODE 3, RCS TEMPERATURE WAS INCREASED TO 340F. DURING A PERIOD OF APPROXIMATELY 10 MINUTES AT 0311, RCS TEMPERATURE WAS INCREASED TO 351F, RESULTING IN NONCOMPLIANCE WITH THE REQUIREMENT TO HAVE THE VALVES DE-ENERGIZED OPEN IN MODE 3. THE AUXILIARY CONTROL OPERATOR (ACO) BECAME INVOLVED IN THE SHIFTLY SURVEILLANCES AND ALLOWED THE RCS TEMPERATURE TO DRIFT UPWARDS. AT APPROXIMATELY 0320, PROMPT CORRECTIVE ACTION WAS INITIATED TO RESTORE THE TEMPERATURE TO LESS THAN 350F. THE ACO HAD RECOGNIZED THE INCREASING TEMPERATURE TREND DEVELOPING EARLIER AND TOOK ACTION TO REDUCE THE TEMPERATURE BUT FAILED TO VERIFY THAT HIS CORRECTIVE ACTION HAD BEEN SATISFACTORY. DURING SHIFT BRIEFINGS TO REVIEW THIS INCIDENT, EMPHASIS WILL BE PLACED ON THE NECESSITY TO CAREFULLY MONITOR AND CONTROL RCS TEMPERATURE WHEN THE RCS TEMPERATURE IS BEING MAINTAINED NEAR A MODE CHANGE POINT.

[274] SAN ONOFRE 3 DOCKET 50-362 LER 85-010
 REACTOR TRIP DUE TO REACTOR PROTECTION SYSTEM COMPONENT FAILURES.
 EVENT DATE: 032985 REPORT DATE: 042985 NSSS: CE TYPE: PWR
 VENDOR: ELECTRO-MECHANICS

(NSIC 194840) ON 3/29/85, AT 2108, THE REACTOR TRIPPED DUE TO APPARENT LOW FLOW THROUGH STEAM GENERATOR (S/G) E-088. THE TRIP OCCURRED, EVEN THOUGH CONTROL ROOM INDICATIONS SHOWED ONLY THAT A CHANNEL 'C' LOW FLOW TRIP HAD ACTUATED, WHICH WOULD NOT COMPLETE THE TWO-OUT-OF-FOUR REACTOR TRIP LOGIC. WITH SOME EXCEPTIONS, CONTROL AND SAFETY SYSTEMS WERE VERIFIED TO HAVE FUNCTIONED PROPERLY AND MAJOR PLANT PARAMETER RESPONSES WERE SATISFACTORY. THE REACTOR TRIP WAS DETERMINED TO BE THE RESULT OF TWO FAILURES IN THE REACTOR PROTECTION SYSTEM CIRCUITRY. A FAILURE OF A RELAY FROM THE CHANNEL 'A' S/G LOW FLOW BISTABLE CAUSED A CHANNEL 'A' TRIP PRIOR TO THE CHANNEL 'C' TRIP. THIS WAS UNKNOWN TO THE CONTROL ROOM, SINCE IT WAS DOWNSTREAM OF THE S/G LOW FLOW BISTABLE AND ALARM/INDICATION SIGNAL. REACTOR TRIP LOGIC WAS COMPLETED WHEN CHANNEL 'C' TRIPPED DUE TO FAILURE OF A SETPOINT CARD. BOTH OF THESE COMPONENTS WERE REPLACED. THIS SUBMITTAL ALSO PROVIDES THE REPORT PURSUANT TO LIMITING CONDITION FOR OPERATION 3.4.7, ACTION STATEMENT 'D', FOR RCS SPECIFIC ACTIVITY EXCEEDING 1.0 MICROCURIE/GRAM DOSE EQUIVALENT I-131, WHICH WAS CAUSED BY IODINE SPIKING FOLLOWING THE SHUTDOWN.

[275] SAN ONOFRE 3 DOCKET 50-362 LER 85-012
 REACTOR TRIP ON LOSS OF LOAD SIGNAL.
 EVENT DATE: 040485 REPORT DATE: 050685 NSSS: CE TYPE: PWR

(NSIC 194841) ON 4/4/85, AT 0452, WITH UNIT 3 AT STEADY STATE FULL LOAD OPERATION, THE REACTOR TRIPPED ON LOSS OF LOAD CHANNELS 1 AND 4. CONTROL AND SAFETY SYSTEMS FUNCTIONED PROPERLY, WITH BOTH EMERGENCY FEEDWATER SYSTEM TRAINS ACTUATING ON LOW STEAM GENERATOR LEVEL DUE TO SHRINK. INVESTIGATION WAS UNABLE TO REVEAL ANY CAUSE FOR THE 'LOSS OF LOAD' REACTOR TRIP SIGNALS. THIS SUBMITTAL ALSO PROVIDES THE REPORT PURSUANT TO LIMITING CONDITION FOR OPERATION 3.4.7, ACTION STATEMENT 'D', FOR RCS SPECIFIC ACTIVITY EXCEEDING 1.0 MICROCURIE/GRAM DOSE EQUIVALENT I-131, WHICH WAS CAUSED BY IODINE SPIKING FOLLOWING THE SHUTDOWN. A REQUIRED 4-HOUR RCS SAMPLE TAKEN AT 1705 WAS NOT PROPERLY ANALYZED DUE TO AN INSTRUMENT MALFUNCTION. THE 1705 SAMPLE WAS DISCARDED BEFORE THE ANALYSIS WAS DETERMINED TO BE INVALID. AS A RESULT, THE 4-HOUR LIMIT REQUIRED BY LCO 3.4.7, ACTION STATEMENT 'D', WAS NOT MET. ANOTHER SAMPLE WAS IMMEDIATELY OBTAINED AND ANALYZED. CHEMISTRY TECHNICIANS HAVE BEEN REINSTRUCTED TO RETAIN SAMPLES UNTIL ANALYSES HAVE BEEN VERIFIED AS VALID. IN ADDITION, A PRECAUTION TO RETAIN THE SAMPLE UNTIL CONFIRMATION OF A VALID ANALYSIS WILL BE INCLUDED IN APPROPRIATE CHEMISTRY PROCEDURES.

[276] SAN ONOFRE 3 DOCKET 50-362 LER 85-013
 LEAK IN GENERATOR HYDROGEN SEAL OIL CAUSES FIRE.
 EVENT DATE: 040885 REPORT DATE: 050885 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOFRE 2 (PWR)

(NSIC 194630) ON 4-8-85 AT 2100, UNIT 3 AUTOMATICALLY SHUT DOWN FROM 100% POWER AS A RESULT OF A TURBINE TRIP CAUSED BY A FAILED PIPE FITTING IN THE GENERATOR HYDROGEN SEAL OIL SYSTEM. HYDROGEN GAS FLOWING OUT OF THE GENERATOR SEAL IGNITED, ACTUATING THE AUTOMATIC FIRE SUPPRESSION SYSTEM AND CAUSING MINIMAL DAMAGE. ALL SAFETY SYSTEMS FUNCTIONED PROPERLY. THE FITTING SHEARED ON A COMMON LINE AT THE PRESSURE CONTROL VALVE WHICH MAINTAINS THE SEAL OIL SUPPLY PRESSURE. THE TURBINE TRIPPED ON LOW SEAL OIL PRESSURE, AND ACTUATION OF THE RPS IMMEDIATELY FOLLOWED. AFTER AN INSPECTION OF THE FITTINGS AND SEAL TEST WAS COMPLETED, THE UNIT RETURNED TO SERVICE AT 0940 ON 4-10-85. INITIAL LAB ANALYSIS INDICATES VIBRATION MAY HAVE CAUSED THE FITTING TO FAIL AT THE THREADED CONNECTION. SEVERAL LONG-TERM CORRECTIVE ACTIONS ARE UNDER STUDY: RESTRICTING THE SEAL OIL FLOW THROUGH THE LINE OR PROVIDING SEPARATE LINES; THE DIAMETER OF

THE LINE MAY BE INCREASED; OR ADDITIONAL SUPPORTS MAY BE EMPLOYED TO STRENGTHEN THE LINE. ELECTRICAL EQUIPMENT IN THE VICINITY OF THE SEAL WILL BE EVALUATED TO DETERMINE IF IMPROVEMENTS CAN BE MADE TO REDUCE POTENTIAL IGNITION SOURCES. THIS SUBMITTAL ALSO PROVIDES THE REPORT PURSUANT TO TECH SPEC 3.4.7 FOR RCS SPECIFIC ACTIVITY EXCEEDING 1.0 MICROCURIE/GRAM DOSE EQUIVALENT I-131, DUE TO IODINE SPIKING FOLLOWING THE SHUTDOWN.

[277] SAN ONOPRE 3 DOCKET 50-362 LER 85-016
 AZIMUTHAL POWER TILT ALARM SETPOINTS MISSED.
 EVENT DATE: 041785 REPORT DATE: 051485 NSSS: CE TYPE: PWR

(NSIC 194497) ON 4-12-85 WITH UNIT 3 IN MODE 1 IT WAS RECOGNIZED THAT CONTRARY TO TECH SPEC 4.2.3, THE CONTINUOUS SURVEILLANCE OF AZIMUTHAL POWER TILT (APT) BEING PERFORMED, WAS NOT ADEQUATE TO DETERMINE THAT THE ACTUAL APT WAS WITHIN THE APT ALLOWANCE USED BY CORE PROTECTION CALCULATORS (CPC). THE CORE OPERATING LIMIT SUPERVISORY SYSTEM (COLSS) WAS PROMPTLY ADJUSTED TO CORRECT THIS CONDITION. THIS LAPSE IN CONTINUOUS SURVEILLANCE HAD EXISTED FOR A 6 DAY PERIOD. DURING THE PERIOD WHEN THIS CONDITION EXISTED, THE ACTUAL APT EXCEEDED THE CPC APT ALLOWANCE FOR A PERIOD OF 1 HR. THIS OCCURRED ON 4-10-85, WHEN REACTOR POWER WAS BETWEEN 20% AND 30%. HOWEVER, THE TECH SPEC LCO 3.2.3 WAS NOT EXCEEDED SINCE IT ALLOWS SUCH A CONDITION TO EXIST FOR 2 HRS. THE CAUSE OF THIS EVENT WAS INADEQUATE PROCEDURAL GUIDANCE TO ENSURE CONTINUOUS SURVEILLANCE OF APT. PROCEDURES HAVE BEEN CHANGED TO PROVIDE THE NECESSARY ADMINISTRATIVE CONTROLS TO ENSURE CONTINUOUS MONITORING OF APT AND OPERATIONS PERSONNEL HAVE BEEN BRIEFED AS TO THE REQUIREMENTS THEREIN.

[278] SAN ONOPRE 3 DOCKET 50-362 LER 85-017
 INOPERABLE SNUBBERS IN MAIN STEAM TO AUXILIARY FEEDWATER PUMP TURBINE.
 EVENT DATE: 041785 REPORT DATE: 051685 NSSS: CE TYPE: PWR
 VENDOR: PACIFIC SCIENTIFIC COMPANY

(NSIC 194842) ON APRIL 16, 1985, WITH UNIT 3 IN MODE 1 AT 100% POWER, A ROUTINE POST-MAINTENANCE SURVEILLANCE IDENTIFIED A FAILED PACIFIC SCIENTIFIC MECHANICAL SNUBBER. THE SNUBBER WAS ON THE MAIN STEAM LINE TO THE AUXILIARY FEEDWATER PUMP TURBINE (AFWPT). THE FAILED SNUBBER WAS REPLACED. ON APRIL 17, AN ENGINEERING EVALUATION DETERMINED THAT THE SNUBBER HAD BEEN DAMAGED BY HYDRAULIC TRANSIENT. A TOTAL OF TWENTY-NINE ADDITIONAL SNUBBERS, WHICH MAY HAVE SEEN THIS TRANSIENT, WERE MANUALLY STROKED. SEVEN SHOWED TRANSIENT DAMAGE AND TWO WERE ENVIRONMENTALLY DEGRADED. AN ENGINEERING EVALUATION OF THE EFFECTS OF THESE SNUBBER FAILURES ON THEIR PIPING SYSTEMS AND SUPPORTS CONCLUDED THERE WAS NO SYSTEM DAMAGE, OTHER THAN TO THE SNUBBERS, AND THE SYSTEM REMAINS CAPABLE OF PERFORMING ITS FUNCTION UNDER THE FSAR DESIGN BASIS. AS CORRECTIVE ACTIONS, ALL DEFICIENT SNUBBERS HAVE BEEN REPLACED, AND THE EXISTING STEAM TRAPS WILL BE REPLACED WITH ORIFICES TO REDUCE THE POSSIBILITY OF CONDENSATION INDUCED HYDRAULIC TRANSIENTS.

[279] SAN ONOPRE 3 DOCKET 50-362 LER 85-019
 SPURIOUS SIGNALS CAUSE ACTUATION OF FUEL HANDLING ISOLATION SYSTEM.
 EVENT DATE: 051785 REPORT DATE: 061485 NSSS: CE TYPE: PWR

(NSIC 194843) ON 05/17/85, AT 1803 AND 1817, WITH UNIT 3 AT 100% POWER, AN ACTUATION OF THE FUEL HANDLING ISOLATION SYSTEM (FHIS) (EIIIS SYSTEM CODE VG) TRAIN 'A' OCCURRED WHEN AIRBORNE MONITOR (EIIIS COMPONENT CODE DET) 3RE-7822 SPURIOUSLY ALARMED. ADDITIONAL SPURIOUS ACTUATIONS OF THE UNIT 3 FHIS OCCURRED ON 05/19/85, 05/26/85, AND 06/07/85. IN EACH CASE, ALL FHIS COMPONENTS FUNCTIONED PROPERLY. THE ACTUATIONS WERE VERIFIED TO BE SPURIOUS BY CONFIRMING THE MONITOR READINGS WERE BELOW THE ALARM SETPOINT. FOLLOWING EACH SPURIOUS ACTUATION, FHIS WAS PROMPTLY RESET. THE CAUSE OF THE SPURIOUS ACTUATIONS IS BELIEVED TO BE RADIATION

MONITOR SENSITIVITY TO RANDOM ELECTRICAL NOISE. NO RADIATION MONITORING SYSTEM MAINTENANCE OR REPAIRS WERE IN PROGRESS WHICH COULD HAVE GENERATED THE SPURIOUS SIGNALS. THERE IS NO FUEL IN THE UNIT 3 FUEL HANDLING BUILDING. ACTUAL AIRBORNE ACTIVITY REMAINED AT BACKGROUND LEVELS. AN ENGINEERING EVALUATION IS BEING PERFORMED TO IDENTIFY AND CORRECT POTENTIAL DESIGN DEFICIENCIES CONTRIBUTING TO NOISE PROBLEMS IN RADIATION MONITORING INSTRUMENTATION. SIMILAR EVENTS WERE REPORTED IN LER 84-074 (DOCKET NUMBER 50-361). THE RESULTS OF THE EVALUATION AND PLANNED CORRECTIVE ACTIONS WILL BE REPORTED IN A REVISION TO THIS LER.

[280] SEQUOYAH 1 DOCKET 50-327 LER 85-006
FEEDWATER CHANNEL SENSING LINES FREEZE.
EVENT DATE: 012085 REPORT DATE: 021585 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 194726) ON JANUARY 20, 1985, UNIT 1 ENTERED LCO 3.3.1.1 DUE TO LOSS OF ONE FEEDWATER CHANNEL AT 2303 CST CAUSED BY A FROZEN SENSE LINE. AT 0447 CST ON JANUARY 21, 1985, A SECOND CHANNEL BECAME INOPERABLE FOR THE SAME REASON, AND THE UNIT ENTERED LCO 3.0.3. WITHIN TWENTY MINUTES, ONE CHANNEL WAS RETURNED TO SERVICE, AND THE UNIT EXITED LCO 3.0.3. CHATTANOOGA AND SURROUNDING AREAS, INCLUDING SEQUOYAH NUCLEAR PLANT, EXPERIENCED RECORD-SETTING LOW TEMPERATURES ON JANUARY 20 AND 21, 1985, WITH TEMPERATURES PLUNGING TO -15 DEGREES F AND WIND CHILL FACTORS OF UP TO -45 DEGREES F. THE FEEDWATER SENSE LINES ARE PARTIALLY ROUTED IN THE OUTSIDE ENVIRONMENT AND ARE INSULATED AND HEAT TRACED; HOWEVER, THE DESIGN TEMPERATURE RATING FOR THE FREEZE PROTECTION SYSTEM IS -10 DEGREES F, WHICH IS NORMALLY MORE THAN ADEQUATE FOR TEMPERATURE VARIATIONS AT THE PLANT SITE. DURING THESE ABNORMAL WEATHER CONDITIONS, OTHER INSTRUMENT LINES ALSO EXPERIENCED SOME SLIGHT FREEZING CAUSING THE PLANT TO ENTER AND EXIT SIMILAR LCOS. THESE WERE: 1-PI-1-20A, UNIT 1 STEAM LINE PRESSURE CHANNEL; UNIT TWO STEAM LINE PRESSURE CHANNEL 2-PI-1-2A; UNIT 2 FEEDWATER FLOW CHANNELS 2-FI-3-90A AND -103A.

[281] SEQUOYAH 1 DOCKET 50-327 LER 85-011
FAILURE TO PERFORM FIRE WATCHES DUE TO ACCESS PROBLEMS.
EVENT DATE: 020685 REPORT DATE: 030785 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 194833) ON SEVEN SEPARATE OCCASIONS, AN HOURLY FIRE WATCH WAS NOT PERFORMED WITHIN ONE HOUR. ALL FIRE WATCHES WERE COMPLETED WITHIN THREE HOURS AFTER THE LAST WATCH. ALL OF THE MISSED FIRE WATCHES WERE CAUSED BY EQUIPMENT FAILURES. THIS CONDITION IS REPORTABLE PER 10 CFR 50.73 (A)(2)(I) AND THE SPECIAL REPORT REQUIREMENTS OF TECH SPEC 3.7.12. THE FIRST EVENT (2200 CST ON FEBRUARY 6): THE HOURLY FIRE WATCH WAS NOT PERFORMED FOR THE ESSENTIAL RAW COOLING WATER (ERCW) PUMPING STATION. THE KEYCARD CONTROLS FOR AN OUTSIDE ACCESS DOOR (PS-4) WERE NOT FUNCTIONING AND WOULD NOT ALLOW PERSONNEL TO ENTER THE BUILDING. THE SECOND EVENT (0400 CST ON FEBRUARY 8): THE HOURLY FIRE WATCH WAS NOT PERFORMED FOR THE ERCW PUMPING STATION. THE KEYCARD CONTROLS FOR AN OUTSIDE ACCESS DOOR (PS-6) WERE FROZEN AND WOULD NOT ALLOW PERSONNEL TO ENTER THE BUILDING. THE THIRD EVENT (0215 CST ON FEBRUARY 12): THE HOURLY FIRE WATCH WAS NOT PERFORMED FOR THE ERCW PUMPING STATION. THE INCLEMENT WEATHER (ICE AND SNOW STORM) CAUSED AN OUTSIDE DOOR (PS-5) TO BE FROZEN SHUT. THE FOURTH, FIFTH, SIXTH, AND SEVENTH EVENTS ARE DESCRIBED IN THE LER. THE DOOR TO THE TSC HAS BEEN MODIFIED WITH A SECURITY KEYCARD READER IN PREPARATION FOR CHANGES TO SEQUOYAH'S PHYSICAL SECURITY PLAN. PREVIOUS OCCURRENCES - 327/84075, 327/85003, AND 327/85008.

[282] SEQUOYAH 1 DOCKET 50-327 LER 85-013
MULTIPLE FAILURES TO COMPLY WITH 1 HR FIRE WATCH DUE TO INOPERABLE DOORS.
EVENT DATE: 032185 REPORT DATE: 041885 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 194581) ON 7 OCCASIONS, AN HOURLY FIRE WATCH WAS NOT PERFORMED WITHIN 1 HR DUE TO INOPERABLE DOORS. THE FIRE WATCHES WERE REESTABLISHED AS SOON AS THE DOORS WERE REPAIRED. THIS CONDITION IS REPORTABLE PER 10 CFR 50.73(A)(2)(I) AND THE SPECIAL REPORT REQUIREMENTS OF TECH SPEC 3.7.12. THE FIRST 2 EVENTS OCCURRED AT 1300 CST ON 3-21-85. THE HOURLY FIRE WATCH COULD NOT BE PERFORMED FOR THE UNIT 1 VENTILATION AND PURGE ROOM OR THE UNIT 1 AUX BLDG SUPPLY AIR FAN ROOM. THIS WAS DUE TO INOPERABILITY OF DOOR A-123. THE DOOR LATCH WAS REPAIRED. THE THIRD EVENT OCCURRED AT 1800 CST ON 3-24-85. THE HOURLY FIRE WATCH COULD NOT BE PERFORMED FOR THE UNIT 1 125V BATTERY ROOM II DUE TO INOPERABILITY OF DOOR A-181. THE LOCKSET WAS REMOVED. THE FOURTH EVENT OCCURRED AT 0816 CST ON 3-27-85. THE HOURLY FIRE WATCH COULD NOT BE PERFORMED FOR RHR PUMP ROOM 1-B. THIS WAS DUE TO INOPERABILITY OF DOOR A-5. A NEW LOCK WAS INSTALLED. THE FIFTH AND SIXTH EVENTS OCCURRED AT 0610 CST AND 1330 CST ON 3-28-85. THE HOURLY FIRE WATCH COULD NOT BE PERFORMED AT THE UNIT 1 ADDITIONAL EQUIPMENT BLDG. THE INOPERABLE LOCK ON DOOR A-183 CAUSED IT TO BE JAMMED SHUT. THE SEVENTH EVENT OCCURRED AT 0507 CST ON 3-30-85. THE HOURLY FIRE WATCH COULD NOT BE PERFORMED AT THE UNIT 1 AUX BLDG SUPPLY AIR FAN ROOM. THIS WAS DUE TO INOPERABILITY OF DOOR A-122. THE LOCK WAS REPAIRED. PREVIOUS LERS: 327/85-012, 85-011, 85-008, 85-003, AND 84-075.

[283] SEQUOYAH 1 DOCKET 50-327 LER 85-017
TWO AUXILIARY BUILDING VENTILATION ISOLATIONS DUE TO SPURIOUS RADIATION MONITOR TRIPS.
EVENT DATE: 042285 REPORT DATE: 052085 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 194489) WITH UNIT 1 IN COLD SHUTDOWN (MODE 5) AND UNIT 2 AT FULL POWER, AN INADVERTENT AUX BLDG ISOLATION (ABI) OCCURRED AT 0725 CST ON 4-22-85. A SECOND ISOLATION OCCURRED ON 5-6-85, AT 0650 CST WITH UNIT 1 IN MODE 5 AND UNIT 2 IN HOT SHUTDOWN (MODE 4) AT 205 F. THE CAUSE WAS FOUND TO BE ELECTRO-MAGNETIC FREQUENCY FEEDBACK FROM WELDING ACTIVITIES CAUSING RADIATION MONITOR RM-90-101 TO INDICATE A HIGH RADIATION SIGNAL. THE ABI IN BOTH EVENTS WAS RESET. FOR THE FIRST EVENT, WELDING WAS BEING PERFORMED ON THE UNIT 1 MOISTURE SEPARATOR REHEATERS IN THE TURBINE BLDG ADJACENT TO THE CONDENSER VACUUM EXHAUST RADIATION MONITOR RM-90-119. THE INVESTIGATION REVEALED THAT RM-90-119 HAD EXPERIENCED A SHORT-TERM HIGH RADIATION INDICATION SIMULTANEOUS TO THE ONE ON AB VENT MONITOR RM-90-101 WHICH HAD CAUSED THE ABI. BECAUSE THE CONTROL CIRCUIT POWER SUPPLIES FOR BOTH MONITORS ARE FED FROM THE SAME SOURCE, IT WAS CONCLUDED AFTER SOME TESTING THAT HELI-ARC WELDING NEAR THE CONDENSER EXHAUST MONITORS CAUSED ELECTRO-MAGNETIC INTERFERENCE (EMI) IN THE CONTROL CIRCUIT FOR THESE MONITORS. THIS EMI RESULTED IN A MOMENTARY HIGH RADIATION INDICATION ON BOTH MONITORS; HOWEVER, ONLY THE RM-90-101 PARTICULATE CHANNEL WAS SUFFICIENTLY HIGH TO EXCEED ITS SET POINT TO CAUSE THE ABI. INVESTIGATION INTO THE SECOND EVENT HAS NOT PRODUCED A CLEAR REASON FOR THE MOMENTARY HIGH RADIATION SIGNAL ON RM-90-101. THE PROBLEM WAS DUE TO EMI.

[284] SEQUOYAH 1 DOCKET 50-327 LER 85-020
LOSS OF RHR SUCTION.
EVENT DATE: 051485 REPORT DATE: 061185 NSSS: WE TYPE: PWR

(NSIC 194616) ON 5-14-85 WITH UNIT 1 IN MODE 5 AT 144 F, BOTH TRAINS OF RHR WERE INADVERTENTLY ISOLATED BY CLOSURE OF THE TRAIN B SUCTION VALVE. THE SUCTION WAS REESTABLISHED WITHIN 16 MINS AND THERE WAS NO INDICATED CHANGE IN RCS TEMPERATURE. THE ISOLATION OCCURRED WHILE WORK WAS BEING PERFORMED ON THE REACTOR VESSEL LEVEL INSTRUMENTATION SYSTEM (RVLIS) TO REFILL SENSE LINES. RCS WIDE RANGE PRESSURE TRANSMITTER 1-PT-68-66, WHICH IS USED FOR RHR OVERPRESSURE PROTECTION, RECEIVES ITS PROCESS SIGNAL FROM THE RVLIS SENSE LINES AND WAS INCREASED TO APPROX 2000 PSI DURING TESTING (RHR ISOLATION IS AT 700 PSI INCREASING).

[285] SEQUOYAH 2 DOCKET 50-328 LER 85-002
 REACTOR TRIPS ON LOW SG LEVEL.
 EVENT DATE: 011285 REPORT DATE: 021185 NSSS: WE TYPE: PWR
 VENDOR: MASONEILAN INTERNATIONAL, INC.

(NSIC 194727) ON 01/12/85, UNIT 2 EXPERIENCED A REACTOR TRIP ON LO-LO STEAM GENERATOR LEVEL WHILE THE UNIT WAS AT 100% POWER. FOLLOWING THE AUTOMATIC TRIP, IT WAS NOTED BY THE REACTOR OPERATOR THAT TRAIN A REACTOR TRIP BREAKER HAD FAILED TO OPEN AUTOMATICALLY. THE BREAKER WAS OPENED MANUALLY FROM THE MAIN CONTROL BOARD. ALL OTHER REACTOR PROTECTION AND ENGINEERED SAFEGUARD FEATURES OPERATED AS EXPECTED. PRIOR TO THE TRIP AT APPROXIMATELY 0320 CST, A STEAM GENERATOR LEVEL DEVIATION ALARM WAS RECEIVED, AND THE OPERATOR NOTED THAT STEAM GENERATOR LEVEL IN LOOP 3 HAD INCREASED FROM 44% TO 49%. AS THE OPERATOR PROCEEDED TO STABILIZE THE STEAM GENERATOR LEVEL, HE OBSERVED AN INCREASE IN FLOW FROM THE NUMBER 3 HEATER DRAIN TANK (HDT) PUMPS TO THE CONDENSATE SYSTEM UPSTREAM OF THE NUMBER 3 HEATERS. AT 0327 CST, ALL THREE NUMBER 3 HDT PUMPS TRIPPED OFF. DUE TO THESE UNSTABLE FLOW CONDITIONS, THE "A" MAIN FEEDWATER PUMP TRIPPED ON LOW SEAL INJECTION WATER PRESSURE. THE MAIN FEEDWATER PUMP SEAL INJECTION WATER IS FED FROM TWO PUMPS TAKING SUCTION FROM THE CONDENSATE SYSTEM. UNSTABLE FLOW IN THE CONDENSATE SYSTEM CAUSED A MOMENTARY LOW SEAL INJECTION WATER PRESSURE. THE UNIT AUTOMATICALLY TRIPPED AT 0329 CST ON LO-LO LEVEL IN STEAM GENERATOR NUMBER 3. ONE HDT PUMP DISCHARGE VALVE, LCV-6-106A, HAD FAILED. THE CIRCUIT BREAKER FAILED DUE TO A FAULTY UNDERVOLTAGE CIRCUIT CARD.

[286] SEQUOYAH 2 DOCKET 50-328 LER 85-001
 REACTOR TRIPS WHEN MAINTENANCE PERSONNEL PULLS FUSES FOR WRONG CHANNEL.
 EVENT DATE: 011485 REPORT DATE: 021385 NSSS: WE TYPE: PWR

(NSIC 194676) ON JANUARY 14, 1985 WITH THE UNIT HOLDING AT 30% REACTOR POWER, INSTRUMENT MAINTENANCE PERSONNEL RECEIVED PERMISSION FROM THE UNIT OPERATOR TO PERFORM A CALIBRATION ON NUCLEAR INSTRUMENTATION SYSTEM POWER RANGE CHANNEL N-41. THIS WAS THE NORMAL CHANNEL CALIBRATION FOLLOWING THE RECENT REFUELING OUTAGE AND WAS BEING PERFORMED USING APPROVED PROCEDURE SI-80, "POWER RANGE NEUTRON FLUX CHANNEL CALIBRATION AND FUNCTIONAL TEST (QUARTERLY)." WHEN AN INSTRUMENT MECHANIC WENT TO PULL THE INSTRUMENT POWER FUSES FOR THE N-41 CHANNEL, HE MISTAKENLY PULLED THE INSTRUMENT POWER FUSES TO THE N-42 CHANNEL. IMMEDIATELY REALIZING HIS ERROR, THE MECHANIC REINSERTED THE N-42 FUSES AND PULLED THE CORRECT FUSES FOR N-41 CHANNEL. SINCE THE MECHANIC DID NOT RESET THE RATE SIGNAL FOR THE N-42 CHANNEL BEFORE THE FUSES FOR N-41 WERE PULLED, THE REACTOR TRIPPED ON POWER RANGE NEGATIVE RATE TRIP WHICH HAS A 2 OUT OF 4 LOGIC SCHEME. UPON THE REACTOR TRIP, WHICH OCCURRED AT 0704 CST ON JANUARY 14, 1985, THE UNIT OPERATOR VERIFIED THAT ALL REACTOR PROTECTION AND ENGINEERED SAFEGUARD SYSTEMS WORKED PROPERLY AND NO ABNORMAL CONDITIONS WERE NOTED. THE UNIT WAS STABILIZED IN MODE 3 WITH TAVG AT 547 DEGREES F.

[287] SEQUOYAH 2 DOCKET 50-328 LER 85-004
 TWO REACTOR TRIPS ON LOW SG LEVEL.
 EVENT DATE: 021585 REPORT DATE: 031385 NSSS: WE TYPE: PWR

(NSIC 194177) TWO REACTOR TRIPS OCCURRED ON 2-15-85, AND 2-17-85, RESPECTIVELY, DUE TO LO-LO SG WATER LEVEL. ALL REACTOR PROTECTION AND ENGINEERED SAFEGUARD SYSTEMS PERFORMED AS DESIGNED, AND NO ANOMALIES WERE NOTED. INVESTIGATION INTO THE EVENT OF 2-15 REVEALED THAT POWER WAS LOST TO PROTECTION SET I INSTRUMENTATION, CAUSING A REDUCTION IN FEEDWATER FLOW TO ALL SG'S. FEED PUMP SPEED CONTROL HAS INPUT TO A SUMMING DEVICE FOR TOTAL STEAM FLOW. THIS SIGNAL CAN BE MANUALLY SELECTED AT THE MAIN CONTROL BOARD TO BE FED FROM EITHER PROTECTION SET I OR II INSTRUMENTATION. THE NORMAL OPERATING POSITION IS PROTECTION SET I, IN WHICH CASE, UPON LOSS OF POWER TO PROTECTION SET I, THE STEAM FLOW SIGNAL WENT TO A ZERO INPUT TO THE FEEDWATER PUMP SPEED CONTROLLER

CAUSING THE FEEDWATER PUMP TO REDUCE SPEED. THIS REDUCED PUMP SPEED RESULTED IN A REDUCED FEED FLOW TO ALL SG'S WHEN ACTUAL STEAM FLOW WAS STILL AT FULL POWER RATING. ALSO, LOSS OF PROTECTION SET I CAUSED LOOPS 1 AND 3 FEEDWATER REGULATOR VALVES TO FAIL CLOSED. THE FINAL RESULT WAS A REACTOR TRIP ON LO-LO SG LEVEL IN LOOP 1. THE REASON FOR THE LOSS OF PROTECTION SET I POWER WAS A PERSONNEL ERROR MADE WHILE TRYING TO REMOVE VITAL INVERTER 2-I FROM SERVICE FOR MAINTENANCE. WHILE OPERATING AT 30% POWER, A SECOND REACTOR TRIP OCCURRED AT 0243 CST ON 2-17-85, DUE TO LO-LO SG LEVEL IN LOOP 2.

[288] SEQUOYAH 2 DOCKET 50-328 LER 85-006
 INOPERABLE CONTAINMENT SPRAY PUMP.
 EVENT DATE: 040685 REPORT DATE: 050685 NSSS: WE TYPE: PWR

(NSIC 194582) ON 4-6-85, THE AIR CONTROL VALVE FOR THE ESSENTIAL RAW COOLING WATER VALVE 2-FCV-67-186 WAS FOUND IN THE CLOSED POSITION. THIS WOULD HAVE PREVENTED THE SUPPLY OF COOLING WATER TO CONTAINMENT SPRAY (CS) PUMP ROOM COOLER 2B-B AND RESULTED IN INOPERABILITY OF THE CS PUMP. THE VALVE WAS IMMEDIATELY RETURNED TO ITS NORMAL POSITION. THIS EVENT IS REPORTABLE PER 10 CFR 50.73 A.2.I. IN EARLY 1984 MODIFICATIONS WERE MADE TO THE ERCW VALVE CONTROLLERS FOR ESP PUMP ROOM COOLERS, TO COMPLY WITH EQUIPMENT QUALIFICATIONS. AS A RESULT, THE EXISTING BACKING PLATES FOR THE SELECTOR SWITCHES FOR THE 3-WAY AIR VALVES PROVIDED INCORRECT INDICATION OF NORMAL AND CLOSED POSITIONS. ON 5-25-84, THE AIR VALVE FOR THE 2B-B SAFETY INJECTION SYSTEM (SIS) PUMP ROOM COOLER ERCW VALVE 2-FCV-67-182 WAS FOUND CLOSED. THE VALVE HAD BEEN PLACED IN THE INCORRECT POSITION FOLLOWING SURVEILLANCE INSTRUCTION (SI) 566. THE MISPOSITIONING OF THESE VALVES IS ATTRIBUTED TO THE IMPROPER BACK PLATE INDICATIONS. TO PREVENT RECURRENCE, THE BACK PLATES FOR THE AIR CONTROLLERS OF THE ERCW VALVES FOR THE CSS, SIS, RHRS, AND CENTRIFUGAL CHARGING PUMP ROOM COOLERS WILL BE MODIFIED TO PROVIDE CORRECT INDICATION FOR VALVE POSITION.

[289] SEQUOYAH 2 DOCKET 50-328 LER 85-008
 FAILURE TO COMPLETE HOURLY FIRE WATCH DUE TO INOPERABLE DOOR.
 EVENT DATE: 042385 REPORT DATE: 052285 NSSS: WE TYPE: PWR

(NSIC 194490) AT 1200 CST ON 4-23-85, THE HOURLY FIRE WATCH COULD NOT BE CONDUCTED FOR THE UNIT 2 AUX BLDG SUPPLY AIR FAN ROOM OR THE UNIT 2 AUX BLDG SUPPLY AIR INTAKE FILTER ROOM BECAUSE DOOR A-132 COULD NOT BE OPENED. IT HAS BEEN DETERMINED THAT THE FAILURE OF THE DOOR HANDLE, WHICH RESULTED IN INABILITY TO OPEN THE DOOR, WAS CAUSED BY EXCESSIVE PULLING TO OVERCOME DOOR WEIGHT AND PRESSURE DIFFERENCES BETWEEN THE ROOMS SEPARATED BY THE DOOR. PERIODIC SURVEILLANCE WILL BE PERFORMED AT LEAST ONCE EVERY 18 MONTHS AND DOOR HANDLE MOVING PARTS GREASED AND OILED AS REQUIRED. THIS EVENT IS REPORTABLE PER 10 CFR 50.73, PARAGRAPH A.2.I AND SPECIAL REPORT REQUIREMENTS OF TECH SPEC 3.7.12. PREVIOUS OCCURRENCES - SEVEN (SQRO-50-327/85-015, 85-013, 85-012, 85-011, 85-008, 85-003 AND 84-075).

[290] SEQUOYAH 2 DOCKET 50-328 LER 85-009
 REACTOR TRIP FROM LOSS OF MAIN GENERATOR STATOR COOLING WATER.
 EVENT DATE: 050385 REPORT DATE: 052485 NSSS: WE TYPE: PWR

(NSIC 194834) ON 5-3-85, AT 1209 CST, THE REACTOR TRIPPED DUE TO A MAIN TURBINE TRIP CAUSED BY A MAIN GENERATOR TRIP FROM A LOSS OF STATOR COOLING WATER. THE 2B STATOR COOLING WATER PUMP WAS BEING TESTED AFTER MAINTENANCE FOR HIGH VIBRATION. THE ASSISTANT SHIFT ENGINEER STARTED THE 2B PUMP AND PLACED THE 2A STATOR COOLING WATER PUMP IN RESERVE. PLANT TEST PERSONNEL, WHO WERE AT THE PUMP LOCATION TO MONITOR THE 2B PUMP VIBRATION, NOTED ELECTRICAL ARCING AND SMOKE ON THE 2A PUMP WHEN THE SWITCHING OCCURRED AND CALLED THE CONTROL ROOM (CR) TO REPORT THE FIRE. THE CR SOUNDED THE FIRE ALARM AND ANNOUNCED THE LOCATION OVER THE PLANT INTERCOM.

THE ASE HEARD THE FIRE ALARM BUT NOT THE LOCATION BECAUSE OF BACKGROUND NOISE. BECAUSE HE COULD NOT SEE THE PUMPS FROM HIS LOCATION, THE ASE ASSUMED THE FIRE WAS ON THE 2B PUMP. HE ATTEMPTED TO RESTART THE 2A PUMP AND STOPPED THE 2B PUMP; HOWEVER, THE 2A PUMP WAS INOPERABLE DUE TO AN ELECTRICAL FAULT, AND THE ACTION CAUSED A TOTAL LOSS OF STATOR COOLING WATER AND RESULTANT MAIN GENERATOR TO TRIP. THE ELECTRICAL ARC ON THE 2A PUMP DID NOT RESULT IN A FIRE, AND NO PLANT FIRE FIGHTING EQUIPMENT WAS REQUIRED. AFTER THE TRIP WAS CLEARED, REACTOR TRIP BREAKER B WOULD NOT CLOSE BECAUSE OF A FALSE TRAIN B IRM HIGH FLUX TRIP SIGNAL. MAINTENANCE FOUND A STRAY WIRE CONNECTOR LODGED BETWEEN THE LOGIC BOARD PEN FOR THE OPERATION ABOVE 10% POWER (P-10) BLOCK AND A SPARE INPUT PEN IN TRAIN B SSFS.

[291] SHOREHAM DOCKET 50-322 LER 85-002
BOMB THREAT (TELEPHONE).
EVENT DATE: 012385 REPORT DATE: 012485 NSSS: GE TYPE: BWR

(NSIC 194487) ON 1-23-85 AT 10:56 AM A TELEPHONE CALL WAS RECEIVED BY PLANT SECURITY FROM THE SUFFOLK COUNTY POLICE DEPARTMENT (SCPD) 6TH PRECINCT, WHO ADVISED THAT THEY WERE IN RECEIPT OF A TELEPHONE CALL FROM RADIO STATION WBAB, BABYLON, NY. WBAB RECEIVED A CALL STATING, "THERE IS A BOMB GOING TO GO OFF AT THE NUCLEAR POWER PLANT IN SHOREHAM AT 12:00 NOON". AT APPROX THE SAME TIME, THE SCPD RECEIVED A SIMILAR CALL FROM AN ANONYMOUS MALE OVER THE POLICE EMERGENCY 911 TELEPHONE SYSTEM. SECURITY CONTACTED THE CONTROL ROOM AT 11:10 AM WITH THE INFORMATION FROM SCPD. AT 11:18 AM AN UNUSUAL EVENT WAS DECLARED BY THE EMERGENCY DIRECTOR. AT 11:37 AM A CALL WAS RECEIVED THROUGH THE SHOREMAN SWITCHBOARD FROM AN ANONYMOUS MALE WHO STATED, "THE BOMB IS SET TO GO OFF AT 12:30, YOU BETTER DO SOMETHING". THE SCPD 6TH PRECINCT SECTOR CARS, EXPLOSIVE DETECTION CANINE TEAM AND EMERGENCY SERVICE UNIT RESPONDED. EMERGENCY PLAN UNUSUAL EVENT PROCEDURES WERE IMPLEMENTED AND A SECURITY ALERT DECLARED. THE SITE WAS NOT EVACUATED. SHOREHAM NUCLEAR SITE WAS SEARCHED AND NO EXPLOSIVE DEVICE WAS DISCOVERED. THE EMERGENCY WAS DECLARED TERMINATED AT 1:31 PM.

[292] SHOREHAM DOCKET 50-322 LER 85-018
ESF ACTUATION CAUSED BY FALSE HIGH FLUX SIGNAL ON IRM.
EVENT DATE: 050985 REPORT DATE: 053085 NSSS: GE TYPE: BWR

(NSIC 194488) ON 5-9-85 AT 1528 A RPS ACTUATION OCCURRED AS A RESULT OF A FALSE HIGH FLUX SIGNAL CAUSING AN UPSCALE SPIKE ON INTERMEDIATE RANGE MONITOR (IRM) CHANNEL 'D'. THE PLANT WAS IN OPERATIONAL CONDITION 4, RHR B WAS IN THE SHUTDOWN COOLING MODE AND THE MODE SWITCH WAS IN REFUEL TO SUPPORT CONTROL ROD DRIVE MECHANISM (CRDM) MAINTENANCE. A PLANNED HALF SCRAM ON THE 'A' CHANNEL OF RPS WAS IN DUE TO I&C TECHNICIANS PERFORMING A SURVEILLANCE TEST ON REACTOR HIGH PRESSURE INSTRUMENTS IN RPS CHANNEL 'A'. CONCURRENT TO THE I&C TESTING, MAINTENANCE PERSONNEL, WHILE REMOVING CRDM 42-07 FOR REPAIRS, MAY HAVE INADVERTENTLY BUMPED SOME INCORE INSTRUMENT CABLES, RESULTING IN THE UPSCALE SPIKE AND THE FULL SCRAM. THE MODE SWITCH WAS PLACED IN SHUTDOWN, VESSEL LEVEL WAS VERIFIED TO BE NORMAL (+35"), THE EMERGENCY SHUTDOWN PROCEDURE WAS PERFORMED, AND THE SCRAM WAS RESET. I&C TESTING WAS SECURED AND UNDERVESSEL CRDM WORK WAS COMPLETED. THE NRC WAS NOTIFIED OF THE EVENT PER 10CFR 50.72 AT 1558. TO PREVENT RECURRENCE, 2 PROCEDURES WILL BE PERFORMED TO VERIFY IRM CHANNEL 'D' CABLE INTEGRITY.

[293] SHOREHAM DOCKET 50-322 LER 85-019
TEMPORARY PROCEDURE CHANGE NOT APPROVED WITHIN REQUIRED TIME FRAME.
EVENT DATE: 051685 REPORT DATE: 061785 NSSS: GE TYPE: BWR

(NSIC 194614) ON 5-16-85 AT 1430 IT WAS DISCOVERED THAT A TEMPORARY PROCEDURE CHANGE NOTICE (TPCN) WAS NOT REVIEWED BY THE REVIEW OF OPERATIONS COMMITTEE (ROC) AND APPROVED BY THE PLANT MANAGER WITHIN 14 DAYS AS REQUIRED BY TECH SPEC 6.8.3.C. THE PLANT WAS IN OPERATIONAL CONDITION 4 AT THE TIME OF THE EVENT. THE

TPCN WAS ISSUED 4-19 FOR CLARIFICATION TO A STATEMENT ON STATION PROCEDURE 24.602.01 (IRM FUNCTIONAL TEST). IT WAS REVIEWED BY ROC ON 5-16 AND APPROVED BY THE PLANT MANAGER ON 5-17. IN ADDITION, THE PROCEDURE FOR WHICH THE TPCN WAS WRITTEN ON WAS PERFORMED 5-11 AND 5-18, WHICH WAS 22 AND 29 DAYS RESPECTIVELY AFTER THE TPCN ISSUANCE DATE, WITH THE MAY 18 TEST PERFORMED AFTER THE TPCN WAS SIGNED OFF BY THE PLANT MANAGER. TO PREVENT RECURRENCE OF THE EVENT, THE DIVISION RESPONSIBLE FOR THE ISSUANCE OF THE TPCN SHALL BE NOTIFIED BY THE PLANT ADMINISTRATIVE COORDINATOR PRIOR TO THE 14 DAY TIME LIMIT.

[294] SHOREHAM DOCKET 50-322 LER 85-020
ESF ACTUATION CAUSED BY FALSE RPV LOW WATER LEVEL SIGNALS.
EVENT DATE: 052185 REPORT DATE: 061785 NSSS: GE TYPE: BWR

(NSIC 194615) ON 5-21-85 AT 1459 AN I&C TECHNICIAN, WHILE PERFORMING TESTING UNDER MWR 85-2191, STARTED TO VALVE IN LEVEL TRANSMITTER 1B21*LT159B, AND CAUSED A PRESSURE TRANSIENT IN THE REACTOR PRESSURE VESSEL VARIABLE LEG. THE TRANSIENT CAUSED MOMENTARY FALSE LOW LEVEL (LEVEL 3, +12.5") SIGNALS RESULTING IN A FULL SCRAM AND A ONE HALF NS4 ISOLATION. THE PLANT WAS IN OPERATIONAL CONDITION 4 WITH THE MODE SWITCH IN REFUEL. INSTRUMENT 1B21*LT159B VARIABLE LEG IS COMMON TO REACTOR PRESSURE VESSEL LEVEL TRANSMITTERS 1B21*LT154(C AND D). RHR 'B' SHUTDOWN COOLING LOOP WAS AUTOMATICALLY ISOLATED CAUSING THE PUMP TO TRIP. VESSEL LEVEL WAS VERIFIED TO BE NORMAL (+44"), THE SCRAM WAS RESET AND THE EMERGENCY SHUTDOWN PROCEDURE WAS PERFORMED. PLANT MANAGEMENT WAS NOTIFIED AND ALL WORK WHICH COULD AFFECT THE LEVEL VARIABLE LEG WAS STOPPED. THE NRC WAS NOTIFIED OF THE EVENT PER 10CFR50.72 AT 1608. TO PREVENT RECURRENCE, ENGINEERING HAS BEEN REQUESTED TO EVALUATE THE POTENTIAL FOR A DESIGN PROBLEM IN THE CAPACITANCE OF THE VARIABLE AND REFERENCE LEGS.

[295] ST. LUCIE 1 DOCKET 50-335 LER 85-002
COMPONENT COOLING WATER CONTAINMENT ISOLATION VALVE BLOCKED OPEN.
EVENT DATE: 022885 REPORT DATE: 040185 NSSS: CE TYPE: PWR

(NSIC 194178) WHILE IN MODE 1, AT NORMAL FULL POWER, THE INBOARD VALVE OF A SERIES SET OF CONTAINMENT ISOLATION VALVES WAS FOUND INOPERABLE IN THE OPEN POSITION. THOSE CONTAINMENT ISOLATION VALVES SUPPLY COMPONENT COOLING WATER TO THE REACTOR COOLANT PUMPS. THE INBOARD VALVE WAS DISCOVERED TO BE INCORRECTLY CONNECTED TO AN EMERGENCY BACKUP NITROGEN SYSTEM. THIS CONDITION IS CONTRARY TO TECH SPEC 3.6.3.1. THE VALVE WAS OBSERVED TO MOVE FREELY AND WAS PLACED IN AN OPERABLE STATUS WITHIN AN HR. THE PIPING AND COMPONENTS SUPPLIED BY THESE SERIES ISOLATION VALVES ARE INTERNAL TO THE CONTAINMENT AND COMPRISE A CLOSED SYSTEM, SUBJECT ONLY TO POTENTIAL BYPASS LEAKAGE. MULTIPLE COMPONENT FAILURES, IN ADDITION TO 1 VALVE INOPERABLE IN THE OPEN POSITION, WOULD BE REQUIRED TO BREACH CONTAINMENT INTEGRITY. INVESTIGATION INDICATES THE BACKUP NITROGEN SYSTEM WAS CONNECTED BY PROCEDURE WHILE MAKING DC GROUND CHECKS ON 12-31-84. DUE TO A MECHANICAL CONNECTOR PROBLEM, THE VALVE WAS NOT IMMEDIATELY DISCONNECTED. AS A CORRECTIVE ACTION, ALL PROCEDURES ALLOWING EMERGENCY USE OF THIS BACKUP SYSTEM NOW REQUIRE THE CONNECTORS TO BE EITHER HAND HELD OR ENTERED IN THE JUMPERS AND DISCONNECTED LEADS LOG.

[296] ST. LUCIE 1 DOCKET 50-335 LER 85-003
REACTOR TRIP DURING LOGIC MATRIX TEST.
EVENT DATE: 030785 REPORT DATE: 040885 NSSS: CE TYPE: PWR

(NSIC 194677) DURING NORMAL FULL POWER OPERATION A REACTOR TRIP OCCURRED DURING PERFORMANCE OF A ROUTINE REACTOR PROTECTIVE SYSTEM (RPS) LOGIC MATRIX TEST. NORMAL PLANT RESPONSE TO A REACTOR TRIP WAS OBSERVED. THE LICENSED OPERATOR PERFORMING THE TEST INADVERTENTLY TURNED A TEST SWITCH TO AN INCORRECT POSITION THUS CAUSING THE REACTOR TO TRIP. A REPORT WILL BE ISSUED TO OPERATIONS AND

TRAINING PERSONNEL WHICH WILL INCLUDE A REVIEW OF THIS EVENT AND A DISCUSSION OF THE RPS TEST CIRCUITRY. A NOTE WILL BE ADDED TO THE PROCEDURE WHICH WILL SPECIFICALLY ADVISE METHODS OF SAFELY TERMINATING THE LOGIC MATRIX TEST AT INTERMEDIATE POINTS IN THE PROCEDURE.

[297] ST. LUCIE 1 DOCKET 50-335 LER 85-006
INADVERTENT ACTUATION OF CONTAINMENT SPRAY PUMP.
EVENT DATE: 052785 REPORT DATE: 062685 NSSS: CE TYPE: PWR

(NSIC 194836) ON MAY 27, 1985, AT APPROXIMATELY 0025 HOURS, AN INADVERTENT ACTUATION OF THE "1B" CONTAINMENT SPRAY PUMP OCCURRED. BECAUSE THE PUMP ACTUATION LASTED ONLY 0.9 SECONDS AND THE FLOW CONTROL VALVE WAS SHUT, NO SPRAY FLOW RESULTED. THE EVENT DID NOT AFFECT OPERATION OF THE UNIT. NO RADIATION WAS RELEASED. A ROUTINE SURVEILLANCE CYCLING OF THE CONTAINMENT SPRAY FLOW CONTROL VALVES WAS BEING CONDUCTED. THE TRAIN "A" FLOW CONTROL VALVE WAS COMPLETED AND PREPARATIONS WERE BEING MADE TO CYCLE THE TRAIN "B" FLOW CONTROL VALVE. PRIOR TO CYCLING THE FLOW CONTROL VALVE, THE ASSOCIATED CONTAINMENT SPRAY PUMP BREAKER CONTROL SWITCH MUST BE SWITCHED FROM AUTO TO STOP. IT WAS DURING THIS STEP THAT THE SWITCH WAS ROTATED IN THE WRONG DIRECTION (AUTO TO START), THUS CAUSING THE "1B" CONTAINMENT SPRAY PUMP TO START. THE LICENSED OPERATOR TOOK IMMEDIATE CORRECTIVE ACTION TO SECURE THE PUMP. THE NUCLEAR PLANT SUPERVISOR COUNSELED THE LICENSED OPERATOR ON THE IMPORTANCE OF ATTENTION TO DETAIL DURING PERFORMANCE OF EVEN MINOR ROUTINE SURVEILLANCES.

[298] ST. LUCIE 2 DOCKET 50-389 LER 85-001
REACTOR TRIP BY LOW STEAM GENERATOR LEVEL DURING STARTUP.
EVENT DATE: 040885 REPORT DATE: 050885 NSSS: CE TYPE: PWR

(NSIC 194594) WHILE IN MODE 1, AT 10% POWER, A REACTOR TRIP OCCURRED AS A RESULT OF LOW SG WATER LEVEL. ALL SYSTEMS FUNCTIONED NORMALLY, AND THE PLANT WAS QUICKLY STABILIZED IN HOT STANDBY. THE CAUSE OF THE EVENT IS ATTRIBUTED TO INEFFECTIVE COMMUNICATION BETWEEN THE CONTROL ROOM OPERATORS IN THE PROCESS OF POWER ASCENSION. LOW SG WATER LEVELS WERE THE RESULT OF INCREASING TURBINE STEAM DEMAND AND FEEDWATER FLOW INADEQUATE TO ACCOMMODATE THE INCREASE. AS CORRECTIVE ACTION, ST. LUCIE WILL PROMPTLY DISSEMINATE A COPY OF THE TEXT OF THIS REPORT TO THE OPERATIONS STAFF, AND MAKE THIS EVENT A PART OF ITS ANNUAL LICENSED OPERATOR TRAINING AND REQUALIFICATION.

[299] ST. LUCIE 2 DOCKET 50-389 LER 85-002
MAIN FEEDWATER REGULATORY VALVE FAILS OPEN CAUSING HIGH STEAM GENERATOR WATER LEVEL.
EVENT DATE: 040885 REPORT DATE: 050885 NSSS: CE TYPE: PWR

(NSIC 194848) WHILE IN MODE-1, AT 15 PERCENT POWER, A REACTOR TRIP OCCURRED WHEN THE 2A MAIN FEEDWATER BLOCK VALVE WAS OPENED WHICH PRECIPITATED AN EQUIPMENT PROTECTIVE TURBINE TRIP BY HIGH STEAM GENERATOR LEVEL. THE TURBINE TRIP SUBSEQUENTLY PRODUCED A REACTOR PROTECTION SYSTEM ACTUATION BY LOSS OF LOAD WHICH INITIATED THE REACTOR TRIP. THE MAIN FEEDWATER BLOCK VALVE WAS CLOSED TO REDUCE FLOW AND STEAM GENERATOR WATER LEVELS WERE NORMALIZED WITH AUXILIARY FEEDWATER WHILE THE PLANT WAS STABILIZED IN HOT STANDBY. THE CAUSE OF THE EVENT WAS A COMBINATION OF PERSONNEL ERRORS MADE BY MAINTENANCE AND OPERATIONS PERSONNEL. MAINTENANCE CONTRIBUTED TO THE EVENT BY IMPROPER RESTORATION OF THE AIR-OPERATED MAIN FEEDWATER REGULATING VALVE'S AIR SUPPLY FOLLOWING A STROKE TEST OF THE VALVE ACTUATOR. OPERATIONS CONTRIBUTED BY NOT VERIFYING PROPER OPERATION OF THE FEEDWATER REGULATING VALVE FOLLOWING THE STROKE TEST BY MAINTENANCE. A COPY OF THE TEXT OF THIS REPORT WILL BE PROMPTLY DISSEMINATED TO THE OPERATIONS AND INSTRUMENT AND CONTROL STAFFS. PERMANENT CORRECTIVE ACTION PLANS INCLUDE A CHANGE TO THE STARTUP PROCEDURE TO INCLUDE A VISUAL VERIFICATION OF PROPER REGULATING

VALVE OPERATION BEFORE USE. THIS EVENT WILL ALSO BECOME A SUBJECT OF THE ANNUAL LICENSED OPERATOR REQUALIFICATION PROGRAM.

[300] ST. LUCIE 2 DOCKET 50-389 LER 85-003
MANUAL REACTOR TRIP DUE TO SPURIOUS CONTROL INTERCEPT VALVE SIGNAL OCCURS.
EVENT DATE: 041785 REPORT DATE: 051785 NSSS: CE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194734) ON APRIL 17, 1985, AT 0755, THE ST. LUCIE, UNIT 2 REACTOR WAS AT 99.26 PERCENT POWER WITH THE TURBINE CONTROL SYSTEM (DEH) IN MANUAL FOR MAINTENANCE. AT APPROXIMATELY 0755 ALL FOUR TURBINE INTERCEPT VALVES CLOSED, APPARENTLY DUE TO A SPURIOUS CLOSE-INTERCEPT-VALVE (CIV) SIGNAL GENERATED WHEN A MAINTENANCE TECHNICIAN REENERGIZED THE DIGITAL PORTION OF THE DEH. THE CIV CAUSED THE MOISTURE SEPARATOR REHEATER (MSR) RELIEF VALVES TO OPEN. THE CONTROL ROOM OPERATORS DETERMINED THAT THE ENTIRE TURBINE STEAM FLOW WAS RELIEVING TO ATMOSPHERE (AFTER PASSING THROUGH THE HIGH PRESS TURBINE) AND PRUDENTLY INITIATED A MANUAL REACTOR TRIP TO PREVENT THE LOSS OF SECONDARY WATER INVENTORY THROUGH THE OPEN MSR RELIEF VALVES. THERE WERE NO SIGNIFICANT RELEASES OF RADIOACTIVITY. SUBSEQUENT INVESTIGATION REVEALED NO PHYSICAL CAUSE FOR THE SPURIOUS CIV SIGNAL. THE IMMEDIATE CORRECTIVE ACTIONS WERE TO STABILIZE THE PLANT IN HOT SHUTDOWN AND TROUBLESHOOT THE DEH SYSTEM.

[301] SUMMER 1 DOCKET 50-395 LER 85-007
DIESEL GENERATOR SEISMICITY.
EVENT DATE: 032185 REPORT DATE: 041985 NSSS: WE TYPE: PWR

(NSIC 194685) ON MARCH 21, 1985, AT APPROXIMATELY 1500 HOURS, THE NRC RESIDENT INSPECTOR IDENTIFIED SCAFFOLDING OVER THE GENERATOR UNITS FOR DIESEL GENERATORS "A" AND "B". THE SCAFFOLDING HAD BEEN INSTALLED ON MARCH 20 AND 21, 1985, FOR THE PURPOSE OF PREVENTATIVE MAINTENANCE (PM) ON THE OVERHEAD CRANES AND COULD HAVE HAD AN ADVERSE IMPACT ON THE OPERABILITY OF BOTH AC POWER SOURCES FOR A PERIOD OF APPROXIMATELY 8 HOURS AND 25 MINUTES (SCAFFOLDING WAS REMOVED BY 1555 HOURS ON MARCH 21, 1985). THE POTENTIAL INOPERABILITY IS BASED ON THE SCAFFOLD FALLING DURING A POSTULATED LOSS OF PREFERRED POWER CONCURRENT WITH A SEISMIC EVENT. THE CAUSE OF THE SCAFFOLD INSTALLATION ERROR IS ATTRIBUTED TO PERSONNEL ERROR. THE MECHANICAL MAINTENANCE PLANNER FAILED TO CONSIDER THE POTENTIAL ADVERSE IMPACT ON DIESEL GENERATOR OPERABILITY WHEN HE SCHEDULED THE PM. THE LICENSEE HAS INITIATED THE FOLLOWING CORRECTIVE ACTIONS TO PREVENT A RECURRENCE: 1. ALL PERSONNEL INVOLVED IN ERECTION/EVALUATION OF SCAFFOLDING HAVE BEEN DIRECTED TO CAREFULLY REVIEW EACH PROPOSED INSTALLATION. 2. MAINTENANCE PERSONNEL WILL REVIEW THE EVENT BY MAY 1, 1985. 3. PROCEDURAL CONTROLS WILL BE REVIEWED AND REVISED AS NECESSARY BY JULY 1, 1985.

[302] SUMMER 1 DOCKET 50-395 LER 85-004
THREE DIESEL GENERATOR TEST FAILURES.
EVENT DATE: 032285 REPORT DATE: 041985 NSSS: WE TYPE: PWR
VENDOR: COLT INDUSTRIES, INC.

(NSIC 194780) DURING AN ADMINISTRATIVE REVIEW OF REGULATORY GUIDE 1.108, REVISION 1 BY PLANT STAFF, IT WAS IDENTIFIED IN SECTION C.2.D THAT THE "LAST 100 VALID TESTS" IS TO BE DETERMINED ON A "PER NUCLEAR UNIT BASIS" AND NOT ON A "PER DIESEL GENERATOR UNIT" AS HAD BEEN THE PRACTICE OF THE LICENSEE. THE LICENSEE HAD PREVIOUSLY REPORTED TWO VALID TEST FAILURES (LER 82-061 AND LER 83-108), ONE FAILURE PER DIESEL GENERATOR, AND HAD CONTINUED TESTING THE UNITS ONCE PER 31 DAYS ON A STAGGERED TEST BASIS. THE LICENSEE INCREASED TESTING OF THE DIESEL GENERATORS AS REQUIRED BY REGULATORY GUIDE 1.108, AND ALL FAILURES, VALID AND INVALID, WERE REVIEWED TO VERIFY COMPLIANCE WITH REGULATORY REQUIREMENTS. THREE FAILURES WHICH HAD PREVIOUSLY BEEN REPORTED AS INVALID HAVE BEEN DETERMINED TO BE

VALID FAILURES, AND TESTING OF THE UNITS HAS BEEN INCREASED AS REQUIRED BY TECH SPECS AND REGULATORY GUIDE 1.108.

[303] SUMMER 1 DOCKET 50-395 LER 85-010
MISSED QUADRANT POWER TILT RATIO SURVEILLANCE.
EVENT DATE: 041085 REPORT DATE: 051085 NSSS: WE TYPE: PWR

(NSIC 194501) AT 0930 HRS ON 4-10-85 A FAILURE TO MEET THE REQUIREMENTS OF ACTION STATEMENT 2.C, TABLE 3.3-1, TECH SPEC 3.3.1, 'REACTOR TRIP SYSTEM INSTRUMENTATION,' WAS IDENTIFIED. ONE POWER RANGE EXCORE NUCLEAR INSTRUMENTATION CHANNEL HAD BEEN REMOVED FROM SERVICE SINCE 1330 HRS ON 4-9-85 FOR SURVEILLANCE TESTING. THE QUADRANT POWER TILT RATIO (QPTR) SURVEILLANCE REQUIRED BY THE ACTION STATEMENT WAS NOT PERFORMED. THE CAUSE OF THIS EVENT IS ATTRIBUTED TO PERSONNEL ERROR IN THAT THE PERSONS RESPONSIBLE FAILED TO RECOGNIZE THE REQUIREMENT OF THE ACTION STATEMENT. IMMEDIATE CORRECTIVE ACTION WAS TAKEN TO OBTAIN A FULL CORE FLUX MAP AND VERIFY THE QPTR TO BE WITHIN SPECIFICATION. THE LICENSEE HAS INITIATED THE FOLLOWING CORRECTIVE ACTION TO PREVENT RECURRENCE. SURVEILLANCE TEST PROCEDURES WHICH REQUIRE ENTRY INTO ACTION STATEMENT 2 OF TABLE 3.3-1 WILL BE REVISED TO INCLUDE A PRECAUTION TO ALERT OPERATIONS OF THE REQUIREMENT TO MONITOR QPTR AT LEAST ONCE PER 12 HRS PER SPEC 4.2.4.2. THE LICENSEE EXPECTS THIS ACTION TO BE COMPLETED BY 7-31-85.

[304] SUMMER 1 DOCKET 50-395 LER 85-012
ERROR IN LIQUID RADWASTE COMPUTER PROGRAM.
EVENT DATE: 041785 REPORT DATE: 051785 NSSS: WE TYPE: PWR

(NSIC 194502) ON 4-17-85, HEALTH PHYSICS PERSONNEL IDENTIFIED AN ERROR IN THE COMPUTER PROGRAM ASSOCIATED WITH LIQUID RADWASTE MONITORING. IN 8-84, A REWRITE OF THE COMPUTER PROGRAM ASSOCIATED WITH LIQUID RADWASTE WAS MADE, AND DUE TO A PERSONNEL ERROR AN INCORRECT CORRELATION FACTOR ($1.05 \text{ E}+9$ IN LIEU OF $3.12 \text{ E}+8$) WAS ENTERED. THIS ERROR CAUSED THE CALCULATED TRIP SETPOINTS TO BE NONCONSERVATIVE. CORRECTIVE ACTION WAS TAKEN TO ENTER THE CORRECT CORRELATION FACTOR INTO THE PROGRAM. IN ADDITION, AN INVESTIGATION WAS INITIATED TO VERIFY THAT NO TECH SPEC LIMITS FOR INSTANTANEOUS RELEASE RATE HAD BEEN EXCEEDED. THIS EVALUATION SHOULD BE COMPLETED BY 6-15-85. TO PRECLUDE RECURRENCE, THE LICENSEE'S NUCLEAR COMPUTER SERVICES GROUP HAS DEVELOPED A PROGRAM WHICH REQUIRES STRINGENT VERIFICATION AND VALIDATION OF NEW SOFTWARE. NEW EFFLUENT SOFTWARE HAS BEEN DEVELOPED AND IS PRESENTLY BEING VERIFIED AND VALIDATED UNDER THE NEW PROGRAM AND SHOULD BE IMPLEMENTED BY 7-1-85.

[305] SUMMER 1 DOCKET 50-395 LER 85-011
ROD CONTROL SYSTEM FAILURE.
EVENT DATE: 041885 REPORT DATE: 051785 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC COMPANY (ELEV. DIV)

(NSIC 194849) AT APPROXIMATELY 0147 HOURS ON APRIL 18, 1985, CONTROL RODS POWERED BY ROD CONTROL SYSTEM CABINET 2AC FAILED TO MOVE. THE AFFECTED RODS WERE DECLARED INOPERABLE, AND THE PLANT ENTERED ACTION STATEMENT (B) OF TECH SPEC 3.1.3.1, "MOVABLE CONTROL ASSEMBLIES." DURING SYSTEM TROUBLESHOOTING, AN INADVERTENT ROD DROP OCCURRED JUST PRIOR TO STARTING A CONTROLLED SHUTDOWN OF THE PLANT. THE ROD DROP CAUSED A REACTOR TRIP FROM 100% POWER AT 0629 HOURS ON POWER RANGE NEGATIVE RATE. THERE WERE NO ADVERSE CONSEQUENCES FROM THIS EVENT. THE REACTOR PROTECTION SYSTEM FUNCTIONED PER DESIGN. DUE TO A PREVIOUS STEAM GENERATOR TUBE LEAK, THE STEAM DUMPED FROM THE AFFECTED STEAM LINE TO ATMOSPHERE AND FROM THE TURBINE-DRIVEN EMERGENCY FEEDWATER PUMP EXHAUST RESULTED IN AN UNMONITORED RELEASE. THE RELEASE WAS CONSERVATIVELY CALCULATED TO BE A SMALL FRACTION OF THE ALLOWABLE RELEASE LIMITS. THE ROD CONTROL SYSTEM FAILURE WAS DETERMINED TO BE A DEFECTIVE SLAVE CYCLER COUNTER CARD. THE CARD WAS REPLACED

AND A PLANT RESTART MADE AFTER A FORCED OUTAGE OF 19.3 HOURS. TO PREVENT A POTENTIAL RECURRENCE, THE LICENSEE HAS ESTABLISHED A PREVENTIVE MAINTENANCE PROGRAM FOR THE ROD CONTROL SYSTEM CABINETS.

[306] SUMMER 1 DOCKET 50-395 LER 85-013
 REACTOR TRIP ON LO-LO SG LEVEL.
 EVENT DATE: 042985 REPORT DATE: 052985 NSSS: WE TYPE: PWR
 VENDOR: FISHER CONTROLS CO.
 GENERAL ELECTRIC CO.

(NSIC 194850) ON APRIL 29, 1985 AT 0130 HOURS, A REACTOR TRIP OCCURRED AT APPROXIMATELY 30% POWER DURING A PLANT SHUTDOWN. THE REACTOR TRIP WAS INITIATED BY A LO-LO STEAM GENERATOR WATER LEVEL IN THE "B" STEAM GENERATOR. THIS CONDITION RESULTED FROM TRANSIENTS IN DEAERATOR TANK LEVEL AND MAIN FEEDWATER PUMP DISCHARGE PRESSURE WHICH OCCURRED DURING THE DOWN POWER RAMP. THESE TRANSIENTS CAUSED A FEEDWATER ISOLATION ON A LOW FEEDWATER TEMPERATURE (225 F) AND A LOW FEEDWATER FLOW (16%) CONDITION. THE REACTOR PROTECTION SYSTEM RESPONDED AS DESIGNED. THERE WERE NO ADVERSE CONSEQUENCES DUE TO THIS EVENT. DUE TO A PREVIOUS STEAM GENERATOR TUBE LEAK, THE TRANSIENT PRIOR TO THE REACTOR TRIP RESULTED IN A UNMONITORED RELEASE TO THE ATMOSPHERE FROM THE MAIN STEAM SYSTEM. THE RELEASE WAS CONSERVATIVELY CALCULATED TO BE A SMALL FRACTION OF THE ALLOWABLE RELEASE LIMITS.

[307] SUMMER 1 DOCKET 50-395 LER 85-014
 CHALLENGE OF OVERPRESSURE PROTECTION SYSTEM.
 EVENT DATE: 050685 REPORT DATE: 060585 NSSS: WE TYPE: PWR

(NSIC 194851) ON MAY 5, 1985 AT APPROXIMATELY 2200 HOURS, A REACTOR COOLANT SYSTEM (RCS) PRESSURE TRANSIENT RESULTED IN A CHALLENGE OF A RESIDUAL HEAT REMOVAL (RHR) SUCTION RELIEF VALVE. THE PLANT WAS IN COLD SHUTDOWN (MODE 5) WITH RHR SYSTEM (TRAIN "A") IN OPERATION. DIESEL GENERATOR (D/G) SURVEILLANCE TESTING WAS IN PROGRESS AND HAD RESULTED IN A NON-VALID TEST FAILURE DURING AN ATTEMPT TO PARALLEL THE D/G TO THE ESF BUS (XSW-1DB). THE FAILURE TO PARALLEL THE D/G WAS A RESULT OF FAILURE OF THE SPEED CONTROL SWITCH ON THE MAIN CONTROL BOARD. DURING TROUBLESHOOTING ACTIVITIES ON THE D/G, A PERSONNEL ERROR RESULTED IN A LOSS OF ESF BUS (XSW-1DB). MAJOR EQUIPMENT AFFECTED INCLUDED THE LOSS OF THE "B" COMPONENT COOLING WATER (CCW) PUMP, "B" SERVICE WATER (SW) PUMP, AND "B" HVAC CHILLER AND CHILL WATER PUMP. THE LOSS OF CCW FLOW TO THE REACTOR COOLANT PUMP (RCP) REQUIRED THE SHUTDOWN OF THE OPERATING RCP. THE BREAKER WAS RECLOSED TO ESF BUS (XSW-1DB) AND THE BUS WAS RELOADED. UPON RESTART OF THE RCP WITH SOLID PLANT OPERATION, PRESSURE SPIKES OCCURRED WHICH RESULTED IN THE CHALLENGE TO THE TRAIN "A" RHR SUCTION RELIEF VALVE. FOLLOWING THE RELIEF VALVE ACTUATION, AN OPERATOR NOTED THAT PRESSURIZER RELIEF TANK (PRT) LEVEL CONTINUED TO INCREASE APPARENTLY DUE TO A FAILURE OF THE RELIEF VALVE TO RESEAT. APPROXIMATELY SIXTEEN HUNDRED (1600) GALLONS OF RCS INVENTORY WERE RELEASED TO THE PRT.

[308] SURRY 1 DOCKET 50-280 LER 85-008
 LOCKOUT OF AUTO START FUNCTION FOR CABLE VAULT AREA CARBON DIOXIDE SYSTEM.
 EVENT DATE: 031885 REPORT DATE: 041785 NSSS: WE TYPE: PWR

(NSIC 194169) ON 3-18-85 AT 1720 HRS WITH UNIT 1 AND 2 AT 100% POWER, AN OPERATOR DISCOVERED WHILE CLEARING TAGS ON VARIOUS FIRE ZONES, THAT THE TAG INTENDED FOR FIRE ZONE 8 (UNIT 2 CONTAINMENT PENETRATION AREA) HAD BEEN PLACED ON FIRE ZONE #5 (UNIT 1 CABLE VAULT AREA). AS A CONSEQUENCE, FIRE ZONE #5 CARBON DIOXIDE SYSTEM AUTO INITIATION HAD BEEN LOCKED OUT SINCE 0825 HRS THAT DAY WITH NO FIRE WATCH PRESENT AS REQUIRED BY TECH SPECS.

[309] SURREY 1 DOCKET 50-280 LER 85-005
LOCKOUT OF AUTO CO2 FIRE PROTECTION WITHOUT FIRE WATCH.
EVENT DATE: 040385 REPORT DATE: 050285 NSSS: WE TYPE: PWR

(NSIC 194716) ON APRIL 3, 1985, AT 1700 HOURS, WITH UNIT 1 AT 100% POWER AND UNIT 2 AT REFUELING SHUTDOWN, AN OPERATOR DISCOVERED, WHILE CLEARING TAGS ON VARIOUS FIRE ZONES, THAT THE AUTOMATIC INITIATION OF CO2 FOR FIRE ZONE #7 HAD BEEN LOCKED OUT AND NO FIRE WATCH WAS PRESENT AS REQUIRED BY TECH SPECS. OPERATIONS PERSONNEL WILL VERIFY THAT A FIRE WATCH HAS BEEN POSTED IN THE AREA(S) AFFECTED PRIOR TO REMOVING ANY FIRE PROTECTION SYSTEM FROM SERVICE.

[310] SURREY 1 DOCKET 50-280 LER 85-007
MFP TRIP RESULTING IN TURBINE TRIP/RX TRIP.
EVENT DATE: 042985 REPORT DATE: 052985 NSSS: WE TYPE: PWR
VENDOR: CONSOLIDATED ELECTRODYNAMICS CORP.

(NSIC 194749) ON APRIL 29, 1985 WITH UNIT 1 AT 17% POWER AND RAMPING DOWN TO INVESTIGATE THE CAUSE OF AN INCREASING PRIMARY LEAKRATE, A TURBINE TRIP/RX TRIP OCCURRED AS A RESULT OF THE 'A' MAIN FEED PUMP (MFP) TRIP. AT THE TIME OF THE TRIP, NO VALID TRIP CONDITIONS WERE INDICATED FOR THE FEED PUMP. AS A RESULT OF AN INVESTIGATION AND SPECIAL TEST FOLLOWING THE EVENT, IT WAS NOTED THAT IT WAS POSSIBLE FOR THE ACTUATOR ARM TO NOT PROPERLY DEPRESS THE LIMIT SWITCH ASSOCIATED WITH THE VALVE POSITION SIGNAL TO THE PUMP TRIP LOGIC. THEREFORE, IT IS BELIEVED THAT WHEN THE RECIRC. VALVE OPENED AT THE SPECIFIED LOW DISCHARGE FLOW SETPOINT, A VALVE OPEN SIGNAL WAS NOT SENT TO THE FEED PUMP TRIP LOGIC AND A PUMP TRIP RESULTED. THE TRIP CIRCUITRY WAS TESTED SATISFACTORILY AND THE VALVE POSITION ACTUATOR ARM WAS MODIFIED TO ENSURE PROPER LIMIT SWITCH MAKEUP.

[311] SURRY 1 DOCKET 50-280 LER 85-009
PRESSURE CONTROL VALVE MALFUNCTION CAUSES REACTOR COOLANT SYSTEM OVERPRESSURE
TRANSIENT.
EVENT DATE: 051285 REPORT DATE: 061085 NSSS: WE TYPE: PWR

(NSIC 194750) ON MAY 12, 1985, AT 0558, THE UNIT 1 REACTOR COOLANT SYSTEM WAS SOLID AND AT 150 DEGREES F AND 350 PSIG. POWER OPERATED RELIEF VALVE (PORV E11S NO. RV) PCV-1455C WAS OBSERVED TO CYCLE TWICE IN RESPONSE TO AN OVERPRESSURE CONDITION. PCV-1145, THE NORMAL LETDOWN PRESSURE CONTROL VALVE, FAILED TO PROPERLY CONTROL PRESSURE AT THE 350 PSIG SETPOINT DURING SOLID PLANT OPERATION. THIS CAUSED PCV-1455C TO LIFT AT APPROXIMATELY 410 PSIG. NORMAL PRESSURE CONTROL DEVICES WERE USED TO RETURN THE PRIMARY SYSTEM PRESSURE TO 350 PSIG. THE VALVE POSITIONER FOR PCV-1145 WAS ADJUSTED TO MAINTAIN LETDOWN PRESSURE. THIS EVENT IS REPORTABLE PURSUANT TO THE SPECIAL REPORTING REQUIREMENTS OF TECH SPEC 3.1.G.3 AND TECH SPEC 6.6.4.G.

[312] SURREY 2 DOCKET 50-281 LER 85-003
FAILURE OF RECIRCULATION SPRAY VALVES.
EVENT DATE: 042385 REPORT DATE: 052385 NSSS: WE TYPE: PWR
VENDOR: TUFLINE CORP.

(NSIC 194724) ON 4/28/85, WITH THE UNIT DEFUELED, TYPE C TESTING REVEALED THAT BOTH OUTSIDE RECIRCULATION SPRAY PUMP SUCTION VALVES, MOV-RS-255A, B (ELLS 20) WERE INOPERABLE. ON 5/10/85, THE OUTSIDE RECIRCULATION SPRAY PUMP DISCHARGE VALVE, MOV-RS-256B (ELLS 20) WAS FOUND TO BE INOPERABLE. THE CAUSE OF THE FAILURE IS UNKNOWN AT THIS TIME. THE ACTIONS REQUIRED TO PREVENT RECURRENCE OF THE EVENTS WILL BE DETERMINED BY THE RESULTS OF THE INVESTIGATION AND WILL BE COMPLETED PRIOR TO RETURNING THE UNIT TO SERVICE.

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[316] SUSQUEHANNA 1 DOCKET 50-387 LER 85-012
 FOUR FIRE DAMPERS NOT INCLUDED IN SURVEILLANCE PROCEDURES.
 EVENT DATE: 040485 REPORT DATE: 052485 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)
 VENDOR: RUSKIN MANUFACTURING COMPANY

(NSIC 194641) ON 4-4-85 IT WAS DETERMINED BY THE FIRE PROTECTION SYSTEM ENGINEER AND ONE OF THE STATION'S RESIDENT NRC INSPECTORS THAT 4 FIRE DAMPERS IN THE SGTS DUCTWORK WERE NOT INCLUDED IN THE APPROPRIATE 18 MONTH SURVEILLANCE PROCEDURES. THESE DAMPERS SHOULD HAVE BEEN INCLUDED IN THE SURVEILLANCE BECAUSE THEY CLOSE ON HIGH TEMPERATURE (ACTUATOR: FUSIBLE LINKS) TO ISOLATE SGTS DUCTWORK TO PREVENT SPREAD OF FIRE FROM 1 FIRE ZONE TO ANOTHER VIA THE DUCTWORK AS IT PASSES THROUGH THE REACTOR BLDG AND CONTROL STRUCTURE. THE DAMPERS WERE ADDED TO THE PROCEDURES. THE INSPECTION CONSISTS OF A VISUAL EXAMINATION OF EACH DAMPER AND ITS ASSOCIATED HARDWARE TO ENSURE THAT IT IS OPEN, UNOBSTRUCTED AND FREE FROM VISIBLE DAMAGE. ALTHOUGH THE PROPER NOTIFICATION OF THE NEED TO ESTABLISH AN HOURLY FIRE WATCH IN THE AFFECTED AREAS WAS GIVEN TO OPERATIONS PERSONNEL AND THE APPROPRIATE LCO'S WERE NOTED, IT COULD NOT BE VERIFIED THAT THE WATCHES WERE ACTUALLY IMPLEMENTED ON 4-4-85. THE FIRE WATCH LOG (CONTROLLED BY ADMINISTRATIVE PROCEDURE AD-QA-143) FOR THAT DATE DOES NOT REFLECT THE PLANT AREAS AFFECTED. SUBSEQUENTLY, 1 OF THE DAMPERS WAS INSPECTED AND A FIRE WATCH WAS ESTABLISHED AND WILL REMAIN IN EFFECT UNTIL THE REMAINING DAMPERS ARE INSPECTED. THE METHODS/PROCESSES USED TO ASSURE IDENTIFICATION AND SURVEILLANCE OF SAFETY-RELATED DAMPERS WILL BE REVIEWED AND REVISED AS NECESSARY TO MITIGATE RECURRING INCIDENTS.

[317] SUSQUEHANNA 1 DOCKET 50-387 LER 85-016
 FIVE EMERGENCY SERVICE WATER AND CONTROL STRUCTURE CHILLED WATER SURVEILLANCES COMPLETED LATE.
 EVENT DATE: 042585 REPORT DATE: 052485 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)

(NSIC 194642) ON 4-25-85 DURING A REVIEW OF SURVEILLANCE TESTING STATUS CN UNIT 1 IT WAS DISCOVERED THAT 5 SURVEILLANCE PROCEDURES COMMON TO BOTH UNITS HAD PASSED THEIR VIOLATION DATES. THESE SURVEILLANCES PERFORMED FLOW VERIFICATION, VALVE STROKING, AND VALVE LINE-UP OF THE EMERGENCY SERVICE WATER AND CONTROL STRUCTURE CHILLED WATER SYSTEMS. BOTH SYSTEMS WERE OPERATING DURING THE VIOLATION PERIOD WITH NO ABNORMAL INDICATIONS BEING OBSERVED. AFTER DISCOVERY, THE PERFORMANCE OF THESE PROCEDURES IMMEDIATELY COMMENCED AND ALL PROCEDURES WERE COMPLETED ON REQUIRED EQUIPMENT. DURING THE VIOLATION PERIOD UNIT 1 WAS SHUT DOWN FOR REFUELING AND UNIT 2 WAS OPERATING AT 100% POWER. THE CONTRIBUTING FACTORS IN THIS OCCURRENCE WERE: THE WEEKLY SCHEDULE PROVIDED LOW VISIBILITY TO COMMON SURVEILLANCES; THE OPERATING UNIT WAS NOT INFORMED OF THE STATUS OF COMMON SURVEILLANCES; AND THE MODIFICATION WORK BEING PERFORMED ON THE COMMON SYSTEMS MADE IT DIFFICULT TO COMPLETE THESE PROCEDURES. ACTIONS WHICH HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT RECURRENCE ARE: CHANGE LAYOUT OF WEEKLY SURVEILLANCE SCHEDULE TO GIVE 'COMMON' SURVEILLANCES 'HIGH-VISIBILITY'; COMMON SURVEILLANCES WHICH ARE NOT PERFORMED WILL APPEAR ON THE LIST OF OUTSTANDING SURVEILLANCES FOR BOTH UNITS THE NEXT WEEK; COMMON SURVEILLANCES WILL BE BROKEN INTO SMALLER SEGMENTS TO IMPROVE COMPUTER TRACKING AND SCHEDULING; ADD VIOLATION DATES.

[318] SUSQUEHANNA 1 DOCKET 50-387 LER 85-017
 RWCU ISOLATES ON SPURIOUS HIGH FLOW SIGNAL.
 EVENT DATE: 050585 REPORT DATE: 060385 NSSS: GE TYPE: BWR

(NSIC 194500) ON 5-5-85 WITH THE UNIT SHUT DOWN FOR ITS FIRST REFUELING OUTAGE, THE REACTOR WATER CLEANUP (RWCU) (EIS CODE: CF) SYSTEM CONTAINMENT OUTBOARD ISOLATION VALVE CLOSED ON A HIGH FLOW SIGNAL (UNANTICIPATED ESF ACTUATION). RWCU HAD BEEN IN OPERATION TO SUPPORT INDUCTION HEATING FOR STRESS IMPROVEMENT (IHSI)

TREATMENT OF A WELD AT THE PIPE TEE WHERE THE RWCU SUCTION LINE TAPS OFF FROM REACTOR RECIRCULATION (EIS CODE: AD) LOOP 'A'. RWCU SYSTEM OPERATED AS DESIGNED DURING THE TRANSIENT. SYSTEM FLOW AT THAT TIME WAS BELOW THE SETPOINT OF THE DIFFERENTIAL PRESSURE SWITCH WHICH PROVIDES HIGH FLOW ISOLATION. HOWEVER, THE SWITCH IS CALIBRATED FOR NORMAL SYSTEM TEMPERATURE WHILE IN OPERATIONAL CONDITION 1 (RUN). THE DIFFERENCE IN WATER DENSITY WHICH RESULTS IN A HIGHER DIFFERENTIAL PRESSURE WHEN THE SYSTEM IS RUNNING COLD VERSUS WHEN THE SYSTEM IS AT NORMAL OPERATING TEMPERATURE ACCOUNTS FOR THE SWITCH'S ACTUATION AT A LOWER FLOW RATE. SINCE THE IHSI TREATMENT OF THE WELD IS A ONCE-AND-DONE EVOLUTION, THERE IS NO ACTION REQUIRED TO PREVENT A SIMILAR EVENT.

[319] SUSQUEHANNA 1 DOCKET 50-387 LER 85-018
TWO SPURIOUS ACTUATIONS OF IRM'S.
EVENT DATE: 051385 REPORT DATE: 061185 NSSS: GE TYPE: BWR

(NSIC 194643) ON 5-13-85 THE UNIT EXPERIENCED AN UNANTICIPATED ACTUATION OF THE RPS WHEN INTERMEDIATE RANGE MONITOR (IRM) 'E' SPURIOUSLY TRIPPED UPSCALE. ON 5-14-85, IRM 'D' SPURIOUSLY TRIPPED UPSCALE RESULTING IN ANOTHER RPS ACTUATION. AS REQUIRED BY TECH SPEC 3.3.1 FOR REFUELING, THE 'SHORTING LINKS' HAD BEEN REMOVED FROM THE RPS CIRCUITRY, THUS PERMITTING AN UPSCALE SIGNAL FROM ANY IRM TO CAUSE A FULL RPS ACTUATION. (NORMAL IRM RPS INPUT CONFIGURATION REQUIRES A ONE-OUT-OF-TWO-TWICE TRIP LOGIC BE SATISFIED TO CAUSE A FULL RPS ACTUATION). NO FUEL WAS BEING LOADED AT THE TIMES IRM 'E' AND IRM 'D' TRIPPED. NO CONTROL ROD MOVEMENT OCCURRED ON 5-13 AS ALL RODS WERE ALREADY INSERTED. ON 5-14 CONTROL ROD 50-11 WAS FULLY WITHDRAWN FOR FRICTION TESTING WHEN THE IRM 'D' SPIKE OCCURRED. THE CONTROL ROD FULLY INSERTED DUE TO THE SCRAM SIGNAL. WEEKLY SURVEILLANCE FUNCTIONAL TESTING OF IRM'S 'E' AND 'D' PRIOR TO AND FOLLOWING THESE EVENTS WAS SATISFACTORY. NEITHER IRM HAS BEEN OBSERVED TO SPIKE SINCE THESE EVENTS OCCURRED. NO FURTHER ACTIONS ARE PLANNED BASED ON THESE SPURIOUS IRM SIGNALS.

[320] SUSQUEHANNA 1 DOCKET 50-387 LER 85-019
UNANTICIPATED RPS ACTUATION DUE TO IRM ACTUATION.
EVENT DATE: 051685 REPORT DATE: 060785 NSSS: GE TYPE: BWR

(NSIC 194644) ON 5-16-85 AT 1430 DURING THE PERFORMANCE OF SURVEILLANCE TESTING OF IRM 'C', A RPS ACTUATION OCCURRED. THE ACTUATION OCCURRED WHEN IRM 'C' WAS TAKEN OUT OF BYPASS BY THE OPERATOR (UTILITY, LICENSED) AT THE REQUEST OF AN I&C TECHNICIAN (UTILITY, NON-LICENSED) IN THE CONTROL ROOM. THE TECHNICIAN IN THE CONTROL ROOM MISINTERPRETED A PHONE MESSAGE FROM ANOTHER I&C TECHNICIAN AT THE IRM 'C' INSTRUMENT DRAWER IN THE RELAY ROOM AND REQUESTED THE OPERATOR TO REMOVE IRM 'C' FROM BYPASS. THE RELAY ROOM TECHNICIAN HAD NOT FULLY RESTORED IRM 'C' WHEN IT WAS REMOVED FROM BYPASS, CAUSING A SCRAM SIGNAL. AS REQUIRED BY TECH SPEC 3.3.1 FOR REFUELING, THE 'SHORTING LINKS' HAD BEEN REMOVED FROM THE RPS CIRCUITRY, THUS PERMITTING AN UPSCALE SIGNAL FROM ANY IRM TO CAUSE A FULL RPS ACTUATION. (NORMAL IRM RPS INPUT CONFIGURATION REQUIRES A ONE-OUT-OF-TWO-TWICE TRIP LOGIC BE SATISFIED TO CAUSE A FULL RPS ACTUATION.) NO CONTROL ROD MOVEMENT OCCURRED AS ALL RODS WERE FULLY INSERTED AT THE TIME OF THE EVENT. THE PERSONNEL INVOLVED WERE COUNSELED BY FIRST-LINE SUPERVISION EMPHASIZING VERBATIM COMPLIANCE TO PROCEDURES, PARTICULARLY THOSE REQUIRING OTHER THAN FACE-TO-FACE COMMUNICATION. ESPECIALLY UNDERScoreD WAS THE NECESSITY TO BE EXACT WHEN COMMUNICATING ON THE PHONE AND NOT TO TAKE ANY ACTION UNLESS SPECIFICALLY AND CLEARLY DIRECTED TO DO SO.

[321] SUSQUEHANNA 2 DOCKET 50-388 LER 85-014
RCIC INBOARD STEAM SUPPLY VALVE ISOLATES ON ERRONEOUS HI AREAS TEMPERATURE.
EVENT DATE: 041785 REPORT DATE: 050785 NSSS: GE TYPE: BWR
VENDOR: RILEY COMPANY, THE

(NSIC 194185) ON 4-17-85, AT 2344, THE RCIC SYSTEM INBOARD STEAM SUPPLY VALVE ISOLATED ON EQUIPMENT AREA HIGH TEMPERATURE. INVESTIGATION DETERMINED THAT TEMPERATURE INDICATING SWITCH E51-N600B WAS MALFUNCTIONING. THE DEFECTIVE SWITCH WAS REPLACED ON 4-18-85, AND THE ISOLATION SIGNAL CLEARED. THE UNIT CONTINUED 100% POWER OPERATION DURING THE EVENT.

[322] THREE MILE ISLAND 2 DOCKET 50-320 LER 85-004
 REACTOR BUILDING INTERNAL PRESSURE INDICATION REGISTERING VALUE IN EXCESS OF LIMITS.
 EVENT DATE: 030685 REPORT DATE: 040585 NSSS: EW TYPE: PWR

(NSIC 194801) ON MARCH 6, 1985, IT WAS DETERMINED THAT A SLIGHTLY POSITIVE INTERNAL PRESSURE VALUE HAD BEEN RECORDED ON THE REACTOR BUILDING (R.B.) INTERNAL PRESSURE INDICATION BS-PT-1412 BETWEEN 0910 AND 1625 HOURS ON THE PREVIOUS DAY, MARCH 5, 1985. ON MARCH 26, 1985, BS-PT-1412 AGAIN REGISTERED A SLIGHTLY POSITIVE VALUE BETWEEN THE HOURS OF 0918 AND 1029. DURING BOTH PERIODS, AN R.B. ENTRY WAS IN PROGRESS, THE R.B. PURGE EXHAUST SYSTEM WAS OPERATING AT MINIMUM FLOWRATE (I.E., APPROXIMATELY 10,000 CFM), AND BOTH EQUIPMENT HATCH PERSONNEL AIRLOCK DOORS WERE OPEN. THE CAUSE OF THIS EVENT HAS BEEN DETERMINED TO BE ERRONEOUS INTERNAL PRESSURE INDICATIONS DURING "DOUBLE DOOR" R.F. ENTRIES WITH THE R.B. PURGE EXHAUST SYSTEM OPERATING AT THE MINIMUM FLOWRATE. THE INDICATION OF R.B. INTERNAL PRESSURE OF GREATER THAN ZERO (0) PSIG FOR A PERIOD IN EXCESS OF ONE HOUR RESULTED IN VIOLATION OF THE TECH SPEC LIMITING CONDITION FOR OPERATION (L.C.O.) 3.6.1.4 ACTION STATEMENT. FAILURE TO COMPLY WITH THE ACTION STATEMENT RESULTS IN THIS EVENT BEING REPORTABLE TO THE NRC PURSUANT TO 10 CFR 50.73(A)(2)(I)(B).

[323] TROJAN DOCKET 50-344 LER 85-003
 INADVERTENT SAFETY INJECTION DUE TO CIRCUIT FAILURE.
 EVENT DATE: 031385 REPORT DATE: 041285 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194680) ON MARCH 13, 1985 THE PLANT WAS SHUT DOWN IN MODE 4. REACTOR COOLANT SYSTEM TEMPERATURE AND PRESSURE WERE 275 F AND 350 PSIG, RESPECTIVELY. WHILE PERFORMING PREVENTIVE MAINTENANCE ON ONE PRESSURIZER LOW PRESSURE BISTABLE IN ACCORDANCE WITH PERIODIC I&C TEST (PICT) 7-3, A MALFUNCTION IN ANOTHER PRESSURIZER LOW PRESSURE BISTABLE CIRCUIT ESTABLISHED THE 2-OUT-OF-3 LOGIC CRITERIA FOR LOW PRESSURE SAFETY INJECTION, WHICH OCCURRED AT 1345 PST. ACTION WAS TAKEN IN ACCORDANCE WITH EMERGENCY INSTRUCTION EI-0 AND EI-0.3, AND THE SAFETY INJECTION WAS TERMINATED AT 1347 PST. THE PLANT WAS RETURNED TO PRE-SI STATUS BY 1410 PST THE SAME DAY. THIS WAS THE THIRTEENTH ACTIVATION OF THE TROJAN ECCS TO DATE AND IN ADDITION TO MEETING THE REQUIREMENTS OF 10 CFR 50.73 (A)(2)(IV), IS BEING REPORTED IN ACCORDANCE WITH SECTION 6.9.2.D, ECCS ACTUATION, OF THE TROJAN TECH SPECS.

[324] TURKEY POINT 3 DOCKET 50-250 LER 85-001
 SURVEILLANCE FOR PLANT VENT AND SPENT FUEL PIT BUILDING MISSED.
 EVENT DATE: 011185 REPORT DATE: 021185 NSSS: WE TYPE: PWR

(NSIC 194604) ON 1-11-85 IT WAS DISCOVERED THAT A SAMPLING FREQUENCY FOR THE PLANT VENT AND UNIT 3 SPENT FUEL PIT BLDG HAD BEEN EXCEEDED. TECH SPEC TABLE 3.9-3, ITEM D STATES THAT TRITIUM GRAB SAMPLES SHALL BE TAKEN AT LEAST 4 PER MONTH AT INTERVALS OF NO GREATER THAN 9 DAYS WHENEVER SPENT FUEL IS IN THE SPENT FUEL POOL. THIS REQUIREMENT BECAME EFFECTIVE 1-1-85, THEREFORE, THE FIRST SAMPLE SHOULD HAVE BEEN TAKEN BY 1-9-85. THE TRITIUM GRAB SAMPLE WAS ONE OF MANY NEW SURVEILLANCES THAT BECAME EFFECTIVE AS OF 1-1-85. THIS PARTICULAR REQUIREMENT HAD NOT YET BEEN PLACED IN THE REQUIRED CHEMISTRY SAMPLING PROGRAM DUE TO PERSONNEL OVERSIGHT. IMMEDIATE CORRECTIVE ACTIONS WERE: 1) A TRITIUM GRAB

SAMPLE WAS TAKEN ON 1-11-85. ANALYSIS SHOWED THAT ACTIVITY LEVELS WERE WELL WITHIN REQUIRED LEVELS, 2) THE TRITIUM GRAB SAMPLE HAS BEEN PLACED IN THE CHEMISTRY SURVEILLANCE PROGRAM WITH A SAMPLING FREQUENCY OF ONCE EACH WEEK, AND 3) CHEMISTRY LAB PERSONNEL WERE COUNSELED ON THE IMPORTANCE OF PROCEDURAL AND TECH SPEC COMPLIANCE. IN ADDITION, PERSONNEL INVOLVED IN THIS INCIDENT WERE COUNSELED ON THE SIGNIFICANCE OF THEIR ACTIONS. SIMILAR OCCURRENCES: LER 250-84-016; 251-83-019; AND 250-82-009.

[325] TURKEY POINT 3 DOCKET 50-250 LER 85-002
 STEAM GENERATOR BLOWDOWN ISOLATION VALVE FAILS TO CLOSE.
 EVENT DATE: 011385 REPORT DATE: 021285 NSSS: WE TYPE: PWR

(NSIC 194605) ON 1-13-85, CONTAINMENT BOUNDARY VALVE (CV-3-6275C) WOULD NOT CLOSE WHEN GIVEN A CLOSE SIGNAL FROM THE CONTROL ROOM. CV-3-6275C IS THE 'C' SG BLOWDOWN ISOLATION VALVE OUTSIDE CONTAINMENT. DURING THE EVENT, FCV-3-6278C DOWNSTREAM OF CV-3-6275C REMAINED OPERABLE. FCV-3-6278C RECEIVES AN AUTOMATIC CLOSURE SIGNAL FROM A PROCESS RADIATION MONITOR (R-19) LOCATED IN THE SG BLOWDOWN SAMPLE LINE. NO HIGH RADIATION LEVELS WERE DETECTED BY R-19 DURING THE EVENT. AN I&C INVESTIGATION REVEALED PARTIALLY CLOGGED AIR FILTERS ON THE VALVE ACTUATOR SOLENOIDS THAT PREVENTED THE VALVE FROM FUNCTIONING PROPERLY. IMMEDIATE CORRECTIVE ACTIONS WERE: 1) THE UPSTREAM MANUAL ISOLATION VALVE (3-009) WAS CLOSED; 2) I&C CLEANED THE AIR FILTERS AND RELEASED THE VALVE TO OPERATIONS. THE VALVE WAS TESTED SATISFACTORILY AND THE SYSTEM RETURNED TO NORMAL CONFIGURATION; AND 3) ALL OTHER VALVES ON UNITS 3 AND 4 THAT HAVE THIS AIR FILTER ARRANGEMENT HAVE BEEN INSPECTED AND CLEANED. IN ADDITION, THESE AIR FILTERS HAVE BEEN PLACED IN A PREVENTATIVE MAINTENANCE PROGRAM THAT WILL INSPECT AND CLEAN THESE AIR FILTERS PERIODICALLY. AN UNUSUAL EVENT WAS DECLARED IN ACCORDANCE WITH THE TURKEY POINT EMERGENCY PLAN AND ALL REQUIRED NOTIFICATIONS WERE MADE. THE UNUSUAL EVENT WAS TERMINATED WHEN MANUAL ISOLATION VALVE 3-009 WAS CLOSED. SIMILAR LERS: 250-84-034, 84-031; 251-84-020, 84-009; AND 250-83-016.

[326] TURKEY POINT 3 DOCKET 50-250 LER 85-004
 REACTOR TRIPS DUE TO MG SETS DE-ENERGIZED.
 EVENT DATE: 012985 REPORT DATE: 022885 NSSS: WE TYPE: PWR

(NSIC 194658) ON JANUARY 29, 1985, AT 11:14 A.M., WHILE UNIT 3 WAS AT 100% POWER AND UNIT 4 WAS PROCEEDING FROM HOT SHUTDOWN TO COLD SHUTDOWN CONDITIONS UNDER ADMINISTRATIVE CONTROLS, THE NON-LICENSED OPERATIONS PERSONNEL WHO HAD BEEN INSTRUCTED TO REMOVE THE A AND B MG SETS OF UNIT 4 FROM SERVICE, INADVERTENTLY ENTERED THE UNIT 3 MOTOR CONTROL CENTER ROOM AND REMOVED A AND B MG SETS FOR UNIT 3 FROM SERVICE INSTEAD. SINCE THE MG SETS SUPPLY POWER TO THE CONTROL ROOM SYSTEM, ISOLATING THIS POWER SOURCE RESULTED IN THE DE-ENERGIZATION OF THE CONTROL ROD DRIVE MECHANISMS WHICH ALLOWED THE CONTROL RODS TO DROP TO FULL INSERTION, I.E., A REACTOR TRIP. FOLLOWING THE REACTOR TRIP, OFF-NORMAL OPERATING PROCEDURE 0208.1, SHUTDOWN RESULTING FROM REACTOR TRIP OR TURBINE TRIP, WAS INITIATED. A POST-TRIP REVIEW WAS PERFORMED AND ALL EQUIPMENT FUNCTIONED AS DESIGNED UPON ACTUATION OF THE REACTOR PROTECTION SYSTEM FEATURES. THE NRC WAS NOTIFIED OF A SIGNIFICANT EVENT PURSUANT TO 10CFR50.72(B)(2)(II) VIA THE ENS AT 12:50 P.M. SIMILAR OCCURRENCES: LER 250-84-003, 250-84-005, 250-84-014, 250-85-003, 251-84-008, AND 251-84-021. THE REACTOR TRIP WAS THE RESULT OF PERSONNEL OVERSIGHT WHEN THE UNIT 3 MG SETS WERE INADVERTENTLY REMOVED FROM SERVICE RATHER THAN THOSE FOR UNIT 4. THE LICENSED AND NON-LICENSED PERSONNEL INVOLVED WERE INDIVIDUALLY COUNSELED CONCERNING THIS EVENT.

[327] TURKEY POINT 3 DOCKET 50-250 LER 85-005
 DIESEL DRIVEN FIRE PUMP OUT OF SERVICE.
 EVENT DATE: 021385 REPORT DATE: 031485 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: TURKEY POINT 4 (PWR)

VENDOR: FAIRBANKS MORSE

(NSIC 194721) ON FEBRUARY 5, 1985, WHILE PERFORMING A WORK ORDER TO CLEAN THE 4 BATTERIES FOR THE DIESEL DRIVEN FIRE PROTECTION PUMP, IT WAS NOTICED THAT BATTERY ACID FLUID HAD BEEN FORCED OUT OF EACH OF FOUR BATTERIES. FURTHER INVESTIGATION REVEALED THAT WIRE LEADS TO THE DIODE BRIDGE RECTIFIER IN THE TERMINAL BOX FOR THE DIESEL CHARGING SYSTEM HAD "BLOWN OFF". THE DIESEL-DRIVEN PUMP WAS DECLARED OUT OF SERVICE AT 6:18 P.M., FOR REPAIRS. REPLACEMENT PARTS HAD TO BE ORDERED AND THE PUMP COULD NOT BE RETURNED TO NORMAL OPERATION UNTIL FEBRUARY 15, 1985. THE STANDBY CHARGING SYSTEM THAT MAINTAINS THE BATTERIES WHEN THE DIESEL ENGINE IS NOT OPERATING WAS OVERCHARGING. THE FOUR 12-VOLT BATTERIES ARE PHYSICALLY AND ELECTRICALLY ARRANGED IN TWO BY TWO SETS FOR 24-VOLT PRIMARY AND 24-VOLT BACK-UP CRANKING ENERGY. NORMALLY, THE STAND-BY CHARGING CURRENT IS A FRACTION OF AN AMP TO EACH SET. NEW BATTERIES AND DIODE BRIDGE RECTIFIER WERE RECEIVED AND INSTALLED AND THE DIESEL ALTERNATOR CHARGING PERFORMED ACCORDING TO THE MANUFACTURER'S DESIGN AND SPECIFICATIONS. A NEW CIRCUIT CARD WAS INSTALLED IN THE STANDBY CHARGER CONTROLS. CHARGING RATE ADJUSTMENTS WERE MADE IN ACCORDANCE WITH THE MANUFACTURER'S MANUAL. BOTH THE DIESEL CHARGING AND THE STANDBY CHARGING FUNCTIONS WERE RETURNED TO NORMAL SERVICE. THIS SPECIAL REPORT IS SUBMITTED IN ACCORDANCE WITH 10 CFR 50.73(G).

[328] TURKEY POINT 3 DOCKET 50-250 LER 85-008
TECHNICAL SPECIFICATIONS SURVEILLANCE NOT DONE ON GASEOUS EFFLUENT MONITORS.
EVENT DATE: 031285 REPORT DATE: 041185 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: TURKEY POINT 4 (PWR)

(NSIC 194659) ON MARCH 12, 1985, DURING A SHIFT RADIOCHEMISTRY SURVEILLANCE, THE CHECK SOURCE OPERABILITY VERIFICATION OF THE HIGH-RANGE CHANNELS OF TWO SYSTEM-LEVEL PARTICULATE, IODINE, AND NOBLE GAS (SPING) GASEOUS EFFLUENT MONITORS WAS INADVERTENTLY NOT PERFORMED. THE TWO HIGH-RANGE CHANNELS OF NOBLE GAS EFFLUENT MONITORS ASSOCIATED WITH THE PRIMARY PLANT SIDE, FOR WHICH NO OPERABILITY VERIFICATION WAS PERFORMED, WERE THE UNIT 3 SPENT FUEL PIT BUILDING EXHAUST AND THE PLANT VENT GAS EXHAUST MONITORS. THE SURVEILLANCE TECHNICAL SPECIFICATION 4.1, TABLE 4.1-1, REQUIRES THAT AN OPERABILITY VERIFICATION FOR THE HIGH-RANGE CHANNELS OF THESE SPING NOBLE GAS EFFLUENT MONITORS BE PERFORMED ONCE DURING EACH SHIFT. SIMILAR OCCURRENCES: LER 250-85-001. THE ROOT CAUSE OF THE MISSED SURVEILLANCE OF THE TWO PRIMARY PLANT SPING HIGH-RANGE NOBLE GASE EFFLUENT MONITORS WAS THE RESULT OF A MISCOMMUNICATION BETWEEN TWO ON-SHIFT CHEMISTRY TECHNICIANS OVER WHO WOULD PERFORM THESE SURVEILLANCES. THE FOLLOWING CORRECTIVE ACTIONS WERE TAKEN: 1. THE MISSED SURVEILLANCE WAS POINTED OUT TO THE TECHNICIANS INVOLVED AND THE SERIOUSNESS OF THE PROBLEM WAS MADE CLEAR TO THEM; 2. A TRAINING MEETING WAS HELD WITH THE CHEMISTRY LAB TECHNICIANS TO REITERATE THE SURVEILLANCE REQUIREMENTS FOR THE SPING SYSTEM; AND (3) A CHANGE WAS MADE TO ADD THE SURVEILLANCE STATUS FOR EACH COMPONENT OF THE SPING SYSTEM TO THE TURNOVER SHEET.

[329] TURKEY POINT 3 DOCKET 50-250 LER 85-009
DEGRADED SNUBBERS ON SG BLOWDOWN SYSTEM FOUND.
EVENT DATE: 040185 REPORT DATE: 050185 NSSS: WE TYPE: PWR
VENDOR: PACIFIC SCIENTIFIC COMPANY

(NSIC 194722) ON APRIL 1, 1985, WHILE UNIT 3 WAS PROCEEDING TO REFUELING SHUTDOWN CONDITIONS, IT WAS DETERMINED THAT AN EVALUATION REQUIRED BY TECH SPEC WAS NOT DONE WITHIN THE ALLOWABLE TIME LIMITS. ON DECEMBER 18, 1984, AND MARCH 16, 1985, A MECHANICAL SHOCK ARRESTOR (SNUBBER) ON THE STEAM GENERATOR (SG) BLOWDOWN SYSTEM WAS REPLACED. ON MARCH 20, 1985, A SUBSEQUENT EXAMINATION OF THE REPLACED SNUBBERS REVEALED THAT THE SNUBBERS WERE INOPERABLE AND THAT THIS CONDITION APPEARS TO HAVE EXISTED AT THE TIME OF REPLACEMENT BUT HAD NOT BEEN IDENTIFIED. IF A SNUBBER IS FOUND TO BE INOPERABLE, TECH SPEC REQUIRED THAT SNUBBER TO BE

REPAIRED OR REPLACED AND AN EVALUATION TO BE PERFORMED ON THE SUPPORTED COMPONENTS WITHIN 72 HOURS. THE SNUBBERS WERE REPLACED WITHIN THE 72 HOUR TIME LIMIT BUT NO EVALUATION WAS PERFORMED AT THAT TIME AND THE SG BLOWDOWN SYSTEM WAS NOT DECLARED INOPERABLE. THE CAUSE OF THE EVENT WAS THAT THE AS FOUND CONDITION OF THE SNUBBERS WAS NOT ADEQUATELY EVALUATED, AND THE SG BLOWDOWN SYSTEM WAS MAINTAINED OPERABLE. CORRECTIVE ACTION INCLUDE THE FOLLOWING: 1. UPON DETERMINATION THAT THE SNUBBERS WERE INOPERABLE, THE EVALUATION REQUIRED TECH SPEC WAS PERFORMED FOR BOTH OCCURRENCES. THE RESULTS SHOWED NO ADVERSE EFFECTS ON THE SG BLOWDOWN SYSTEM OCCURRED DUE TO THE CONDITION OF THE SNUBBERS. 2. NEW PLANT PROCEDURES HAVE BEEN WRITTEN TO ENHANCE PERFORMANCE. TESTING, VISUAL EXAMINATIONS, AND SURVEILLANCES.

[330] TURKEY POINT 3 DOCKET 50-250 LER 85-011
SNUBBERS NOT INSPECTED.
EVENT DATE: 040685 REPORT DATE: 050685 NSSS: WE TYPE: PWR

(NSIC 194471) ON 4-6-85, AND 4-8-85, WHILE UNIT 3 WAS IN REFUELING SHUTDOWN, 2 SAFETY-RELATED SNUBBERS WERE REMOVED BEFORE THE INSERVICE VISUAL INSPECTION OF THESE SNUBBERS COULD BE PERFORMED. THE SNUBBERS WERE LOCATED INSIDE CONTAINMENT ON THE RCS PRESSURIZER SPRAY AND RELIEF LINE. TECH SPEC 4.14.1 REQUIRES AN INSERVICE VISUAL INSPECTION OF ALL SAFETY-RELATED SNUBBERS THAT ARE LISTED IN TECH SPEC TABLE 3.13-1 ON A PERIODIC BASIS. THE CAUSE OF THE EVENT WAS INADEQUATE GUIDANCE TO PROPERLY IMPLEMENT THE REQUIREMENTS OF TECH SPEC 4.14.1. CORRECTIVE ACTIONS TAKEN INCLUDE THE FOLLOWING: 1) ADMINISTRATIVE PROCEDURE 0190.83, 'MECHANICAL SHOCK ARRESTOR SURVEILLANCE PROGRAM', AP 0190.85, 'FUNCTIONAL TESTING OF MECHANICAL SHOCK ARRESTORS', AND OPERATING PROCEDURE (OP) 0209.9, 'VISUAL EXAMINATION OF MECHANICAL SHOCK ARRESTORS', HAVE BEEN WRITTEN TO ENHANCE THE REMOVAL, TESTING AND SURVEILLANCE OF SNUBBERS AS REQUIRED BY TECH SPEC AND ASME SECTION XI. THE PROCEDURES INCLUDE A REQUIREMENT TO PERFORM A VISUAL EXAMINATION OF A SNUBBER BEFORE IT IS REMOVED. 2) APPROPRIATE ADMINISTRATIVE SITE PROCEDURES USED BY CONSTRUCTION PERSONNEL WILL BE REVIEWED AND REVISED TO ENHANCE THE REMOVAL, TESTING, AND VISUAL EXAMINATION OF SNUBBERS. 3) DISCUSSIONS WERE HELD WITH THE COGNIZANT INDIVIDUALS ON THE SIGNIFICANCE OF THEIR ACTIONS AND THE NEED TO INSPECT SNUBBERS PRIOR TO REMOVAL. 2 SNUBBERS WERE TESTED AND PASSED. SIMILAR LER 250-95-009.

[331] TURKEY POINT 3 DOCKET 50-250 LER 85-012
EMERGENCY DIESEL GENERATORS (EDG) START.
EVENT DATE: 042985 REPORT DATE: 052985 NSSS: WE TYPE: PWR

(NSIC 194744) ON APRIL 29, 1985, WHILE UNIT 3 WAS IN A REFUELING SHUTDOWN CONDITION WITH THE FULL CORE UNLOADED, THE GENERATOR-MAIN TRANSFORMER LOCKOUT RELAY TRIPPED RESULTING IN THE ACTUATION OF THE ESF EQUIPMENT IDENTIFIED BELOW. PRIOR TO THE EVENT, A NEW OIL CIRCUIT BREAKER (OCB) WAS BEING INSTALLED IN THE SWITCHYARD AND THE UNIT 3 START-UP AND "C" TRANSFORMERS AND THE 3B 4160V BUS WERE OUT OF SERVICE FOR THIS MODIFICATION. POWER TO THE 3A 4160V BUS WAS BEING MAINTAINED BY BACKFEEDING POWER THROUGH THE UNIT 3 MAIN AND AUXILIARY TRANSFORMERS. AT 2:54 P.M., THE UNIT 3 GENERATOR TRANSFORMER LOCKOUT RELAY TRIPPED, WHICH TRIPPED TWO SWITCHYARD BREAKERS ISOLATING POWER FROM THE UNIT 3 MAIN AND AUXILIARY TRANSFORMER AND THE 3A 4160V BUS. THE LOSS OF POWER TO THE 3A 4160V BUS INITIATED THE ESF SEQUENCER WHICH STRIPPED LOADS, STARTED THE "A" EDG, AND CONNECTED THE 3A 4160V BUS TO THE "A" EDG. AT THE TIME OF THE EVENT, THE REACTOR TRIP BREAKERS WERE ALREADY OPEN. SIMILAR OCCURRENCES: LERS 250-84-05, 250-84-06, 251-84-017, AND 250-85-013. THE ROOT CAUSE OF THE EVENT WAS TRACED TO THE INADVERTENT OPERATION OF A RELAY MOUNTED ON THE UNIT 3 GENERATOR RELAY PANEL DOOR LOCATED IN THE CABLE SPREADING ROOM. THIS OCCURRED AS CONSTRUCTION PERSONNEL WERE CLOSING THE PANEL'S SWING DOORS. THIS EVENT OCCURRED WHILE UNIT 3 WAS IN A REFUELING SHUTDOWN CONDITION WITH THE CORE OFF-LOADED, AND THE ESF EQUIPMENT FUNCTIONED AS DESIGNED UPON LOSS OF OFFSITE POWER.

[332] TURKEY POINT 3 DOCKET 50-250 LER 85-013
 EMERGENCY DIESEL GENERATOR AUTOMATIC START.
 EVENT DATE: 050285 REPORT DATE: 060385 NSSS: WE TYPE: PWR

(NSIC 194745) ON 5/2/85, WHILE UNIT 3 WAS IN A SCHEDULED REFUELING OUTAGE WITH THE CORE OFF-LOADED, THE "A" EMERGENCY DIESEL GENERATOR (EDG) AUTOMATICALLY STARTED. THE EVENT OCCURRED DURING EVOLUTION TO TAKE THE 3A 4160 VOLT BUS OUT OF SERVICE (OOS) USING OPERATING PROCEDURE 3-OP-005, "4160 VOLT BUSES A AND B", FOR INSPECTION AND PREVENTATIVE MAINTENANCE. THE STEP IN THE PROCEDURE THAT CALLS FOR DEENERGIZING THE ACTUATION LOGIC TO THE UNDERVOLTAGE RELAYS ASSOCIATED WITH THE 3A 4160 VOLT BUS WAS INCORRECT AND IT ACTUALLY DE-ENERGIZED THE 3B SEQUENCER. WHEN THE TIE BREAKER BETWEEN THE UNIT 3 START-UP TRANSFORMER AND THE 3A 4160 VOLT BUS WAS OPENED DURING THE NEXT STEP, THE 3A 4160 VOLT BUS SENSED AN UNDERVOLTAGE CONDITION AND THE "A" EDG AUTOMATICALLY STARTED AND BEGAN SEQUENCING ONTO THE 3A 4160 VOLT BUS. THE CAUSE OF THE EVENT WAS AN INCORRECT STEP IN 3-OP-005 USED TO DE-ENERGIZE THE 3A 4160 VOLT BUS. THE FOLLOWING CORRECTIVE ACTIONS WERE TAKEN AS A RESULT OF THIS EVENT: 1. FUSE FU2 ON THE 3A SEQUENCER WAS PULLED TO DE-ENERGIZE THE ACTUATION LOGIC TO UNDERVOLTAGE RELAYS ASSOCIATED WITH THE 3A 4160 VOLT BUS. 2. THE "A" EDG WAS STOPPED AND RETURNED TO THE NORMAL STANDBY CONDITION BY USING APPLICABLE SECTIONS OF O-OP-023, "EMERGENCY DIESEL GENERATOR". THE EVOLUTION TO TAKE THE 3A 4160 VOLT BUS OOS CONTINUED WITH NO FURTHER PROBLEMS. 3. OTSCS WERE WRITTEN FOR 3-OP-005 AND R-OP-005 TO CORRECT THE PROBLEM.

[333] TURKEY POINT 4 DOCKET 50-251 LER 85-002
 LOSS OF EMERGENCY DIESEL GENERATOR.
 EVENT DATE: 012985 REPORT DATE: 022885 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: TURKEY POINT 3 (PWR)
 VENDOR: FAIRBANKS CO, THE

(NSIC 194660) ON JANUARY 29, 1985, WHILE UNIT 3 WAS AT 100% POWER AND UNIT 4 WAS COOLING DOWN FROM HOT SHUTDOWN, A MALFUNCTION CAUSED EMERGENCY DIESEL GENERATOR A (EDG A) TO BE OUT OF SERVICE (OOS) SO VITAL BUSES 3A AND 4A DID NOT HAVE ACCESS TO ON-SITE EMERGENCY POWER. IN ADDITION, A PREVIOUS MALFUNCTION ON JANUARY 16, 1985, CAUSED VITAL BUS 4B TO NOT HAVE ACCESS TO EMERGENCY POWER FROM EDG B. THERE ARE A TOTAL OF FOUR VITAL BUSES FOR BOTH UNITS 3 AND 4 BUT ONLY VITAL BUS 3B HAD ON-SITE EMERGENCY POWER AVAILABLE. SIMILAR OCCURRENCES: LER 250-84-036. DURING A ROUTINE CHECK, IT WAS NOTED AND REPORTED THAT LAMP INDICATORS ON THE LOCAL EDG A CONTROL PANEL WERE DARK. A SHORT IN A DIESEL LOCAL PANEL LIGHT SOCKET CAUSED THE LOSS OF CONTROL POWER TO EDG A AND IT WAS DECLARED OUT OF SERVICE (OOS) TO BOTH UNITS. THE LOSS OF LOCAL CONTROL POWER WOULD PREVENT AUTOMATIC DIESEL START ON DEMAND BUT THE DIESEL COULD HAVE BEEN STARTED LOCALLY FROM THE CONTROL PANEL THROUGHOUT THE EVENT. ALSO, THE PREVIOUS AND INDEPENDENT MALFUNCTION OF BREAKER 4AB21 HAD PUT IT OOS TO UNIT 4. ON LOSS OF OFF-SITE POWER, BREAKER 4AB21 CONNECTS VITAL BUS 4B TO EMERGENCY POWER FROM EDG B.

[334] TURKEY POINT 4 DOCKET 50-251 LER 85-004
 REACTOR TRIPS FOLLOWING SWITCHYARD BREAKER GROUND FAULTS.
 EVENT DATE: 020785 REPORT DATE: 031185 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: TURKEY POINT 3 (PWR)

(NSIC 194168) ON 2-7-85 WITH BOTH UNITS 3 AND 4 OPERATING AT 100% POWER, A HIGH VOLTAGE FLASHOVER OCCURRED ON AN INSULATING SUPPORT OF A UNIT 3 240KV CIRCUIT SWITCHER. GROUND FAULT PROTECTIVE RELAYS TRIPPED TWO SWITCHYARD 240KV BREAKERS AND THE NORMAL POWER SUPPLY BREAKER TO THE UNIT 4 'C' BUS, RESULTING IN A LOSS OF POWER TO THE UNIT 3 'C' AND START-UP TRANSFORMERS. LOSS OF POWER TO THE 4 'C' BUS RESULTED IN A TRIP OF THE 4B SG FEED PUMP, INITIATING A UNIT 4 TURBINE GOVERNOR RUNBACK. THE REDUCED FEEDWATER FLOW TRANSIENT INITIATED A UNIT 4 REACTOR TRIP AS A RESULT OF THE RPS COINCIDENT LOGIC OF 'STEAM FLOW/GREATER THAN

FEEDWATER FLOW' COMBINED WITH 'LOW 'A' SG LEVEL'. ALL SWITCHYARD RELAYING DEVICES AND EQUIPMENT INITIATED BY THE RPS SIGNALS FUNCTIONED AS DESIGNED. The NRC AND THE STATE WARNING POINT WERE NOTIFIED OF AN UNUSUAL EVENT, I.E., THE LOSS OF POWER TO THE UNIT 3 START-UP TRANSFORMER. A SIGNIFICANT EVENT NOTIFICATION WAS MADE VIA ENS PURSUANT TO 10 CFR 50.72 AS THE RESULT OF THE REACTOR TRIP. SIMILAR OCCURRENCES: LERS 250-84-001, 84-005, 84-006, 84-007; 251-84-001, 84-007, 84-010, 85-003. THE ROOT CAUSE OF THE VOLTAGE FLASHOVER WAS THE BUILDUP OF DIRT AND SALT DEPOSITS ON A CIRCUIT SWITCHER INSULATING SUPPORTS. IMMEDIATE CORRECTIVE ACTIONS WERE TAKEN TO REMEDY BOTH THE LOSS OF THE UNIT 3 START-UP AND 'C' TRANSFORMERS AND THE REACTOR TRIP ON UNIT 4.

[335] TURKEY POINT 4 DOCKET 50-251 LER 85-006
 AUXILIARY FEEDWATER INITIATION OCCURS DUE TO LOSS OF FEEDWATER.
 EVENT DATE: 020785 REPORT DATE: 031185 NSSS: WE TYPE: PWR

(NSIC 194661) ON FEBRUARY 7, 1985, WHILE UNIT 4 WAS AT HOT SHUTDOWN, AUXILIARY FEEDWATER (AFW) SYSTEM AUTOMATICALLY ACTUATED. THE 4 "B" STEAM GENERATOR (S/G) FEEDWATER PUMP WAS STARTED TO SECURE THE STANDBY S/G FEEDWATER PUMP. WHILE STARTING THE 4 "B" S/G FEEDWATER PUMP, A LOCKOUT RELAY ACTUATED DE-ENERGIZING THE 4 "C" 4160 VOLT BUS AND TRIPPED THE 4 "B" S/G FEEDWATER PUMP. THE "A" S/G FEEDWATER PUMP WAS NOT RUNNING AT THIS TIME. THIS COMPLETED AFW SYSTEM INITIATION LOGIC AND THE AFW SYSTEM AUTOMATICALLY ACTUATED. ALL EQUIPMENT FUNCTIONED AS DESIGNED UPON INITIATION OF ENGINEERED SAFETY FEATURE ACTUATION SIGNAL. AN INVESTIGATION BY THE RELAY DEPARTMENT REVEALED THAT A RELAY ON THE 4 "C" 4160 VOLT BUS HAD AN INCORRECT SETTING. THE RELAY WIRING HAD BEEN SET UP FOR RELAY TESTING AND INADVERTENTLY HAD NOT BEEN RETURNED TO AN OPERATIONAL CONFIGURATION. CORRECTIVE ACTIONS INCLUDED: 1) THE AFW PUMPS WERE SECURED AND RESET. A STANDBY S/G FEEDWATER PUMP WAS STARTED TO MAINTAIN S/G LEVEL. 2) THE RELAY DEPARTMENT REWIRED THE AFFECTED RELAY AND CHECKED ALL OTHER RELAYS ON THE "A", "B", AND "C" 4160 VOLT BUSES ON BOTH UNIT 3 AND UNIT 4. THE OTHER RELAYS CHECKED OUT SATISFACTORILY. 3) DISCUSSIONS WERE HELD WITH RELAY DEPARTMENT PERSONNEL ON SIGNIFICANCE OF THIS EVENT. THE PERSONNEL HAVE BEEN INSTRUCTED TO TEST RELAYS ON TAPS ASSIGNED BY OFFICIAL RELAY SETTING SHEETS.

[336] TURKEY POINT 4 DOCKET 50-251 LER 85-008
 CONTAINMENT INTEGRITY LOST.
 EVENT DATE: 041185 REPORT DATE: 051385 NSSS: WE TYPE: PWR
 VENDOR: CRAWFORD FITTING CO.
 MASONEILAN INTERNATIONAL, INC.

(NSIC 194606) ON 4-11-85 WHILE UNIT 4 WAS AT 100% POWER, A SMALL LEAK WAS DISCOVERED AT A FITTING ON A TEST CONNECTION BETWEEN CONTAINMENT AND CONTAINMENT ISOLATION VALVE, CV-4-956A, LOCATED ON THE PRESSURIZER STEAM SAMPLING LINE. CONTAINMENT BOUNDARY VALVE, CV-4-951, LOCATED JUST INSIDE CONTAINMENT ON THAT LINE WAS CYCLED IN AN ATTEMPT TO STOP THE LEAK. CV-4-951 WOULD NOT CLOSE WHEN GIVEN A CLOSE SIGNAL FROM THE CONTROL ROOM. THIS SEQUENCE OF EVENTS WAS INTERPRETED AS A LOSS OF CONTAINMENT INTEGRITY AS DEFINED IN TECH SPEC 1.5. DURING THIS EVENT, CV-4-956A REMAINED OPERABLE AND CLOSED WHICH WOULD PREVENT A FLOW PATH TO OUTSIDE CONTAINMENT. THE CAUSE OF THE EVENT WAS THE TEST CONNECTION LEAKAGE AND THE MALFUNCTION OF CV-4-951. THE REASON FOR THE MALFUNCTION OF CV-4-951 WILL BE INVESTIGATED WHEN THE VALVE IS REPAIRED DURING THE NEXT UNIT OUTAGE OF SUFFICIENT DURATION. CORRECTIVE ACTIONS: 1) THE POWER SUPPLY TO CV-4-951 WAS DISCONNECTED AND THE VALVE WAS VERIFIED TO HAVE FAILED CLOSED AS DESIGNED. MANUAL ISOLATION VALVE 4-977A UPSTREAM OF CV-4-951 WAS CLOSED ALSO. 2) THE TEST CONNECTION WAS REPAIRED AND THE LEAKAGE STOPPED. 3) DUE TO ALARA CONSIDERATIONS, CV-4-951 AND 4-977A WILL REMAIN CLOSED, AS THE SYSTEM IS NOT REQUIRED AT POWER OPERATION. CV-4-951 WILL BE INSPECTED AND REPAIRED DURING THE NEXT OUTAGE OF SUFFICIENT DURATION. SIMILAR LERS: 250-85-002, 251-85-001, 250-84-034, -84-031, -84-020, 251-84-009.

[337] TURKEY POINT 4 DOCKET 50-251 LER 85-010
 CONSTRUCTION WORKERS BUMP ESF RELAY CAUSE TURBINE AND REACTOR TRIPS.
 EVENT DATE: 051585 REPORT DATE: 061485 NSSS: WE TYPE: PWR

(NSIC 194746) ON MAY 15, 1985, AT 1:07 PM, A TURBINE TRIP AND A SUBSEQUENT REACTOR TRIP OCCURRED DUE TO THE INADVERTENT ACTUATION OF AN ENGINEERED SAFETY FEATURES (ESF) RELAY. WHEN THIS ESF TURBINE RELAY WAS INADVERTENTLY BUMPED, THIS SIMULATED A HI-HI "C" STEAM GENERATOR LEVEL SIGNAL WHICH TRIPPED THE TURBINE GENERATOR AND BOTH STEAM GENERATOR FEEDWATER PUMPS. THE RPS TURBINE TRIP LOGIC SUBSEQUENTLY TRIPPED THE REACTOR. THE TRIP OF BOTH STEAM GENERATOR FEEDWATER PUMPS INITIATED AUXILIARY FEEDWATER FLOW TO THE STEAM GENERATORS. FOLLOWING THE TRIP THE PLANT WAS STABILIZED IN A HOT STANDBY CONDITION. SIMILAR OCCURRENCES: 250-84-003, 250-84-005, 250-84-014, AND 250-85-004. THE REACTOR AND TURBINE TRIP RESULTED FROM THE PHYSICAL ACTUATION OF AN ESF RELAY WHICH WAS INADVERTENTLY BUMPED BY A CONSTRUCTION WORKER DURING APPENDIX R MODIFICATIONS PERFORMED INTERIOR TO A ENGINEERED SAFEGUARDS CABINET. A POST-TRIP REVIEW WAS PERFORMED TO ASSESS THE PROPER OPERATION OF SAFETY-RELATED EQUIPMENT AND SYSTEMS. SAFETY-RELATED EQUIPMENT WERE VERIFIED TO HAVE FUNCTIONED AS DESIGNED UPON ACTUATION OF THE REACTOR PROTECTION SYSTEM FEATURES. SIMILARLY, THE POST-TRIP REVIEW ESTABLISHED THAT THE TRANSIENT BEHAVIOR OF PERTINENT PLANT PARAMETERS FOR THE REACTOR COOLANT SYSTEM AND STEAM GENERATORS RESPONDED NORMALLY.

[338] WATERFORD 3 DOCKET 50-382 LER 85-006
 INADVERTENT CONTAINMENT SPRAY ACTUATION AND REACTOR COOLANT PUMP SEAL DAMAGE.
 EVENT DATE: 022085 REPORT DATE: 032005 NSSS: CE TYPE: PWR
 VENDOR: BYRON JACKSON PUMPS, INC.

(NSIC 194804) ON FEBRUARY 20, OPERATIONS PERSONNEL AT WATERFORD 3 WERE PERFORMING A FUNCTIONAL TEST OF THE PLANT PROTECTION SYSTEM. AT 1436 HOURS CST, WHILE PERFORMING A MATRIX TEST ON CHANNEL D, OPERATIONS PERSONNEL FAILED TO RESET THE INITIATION RELAYS FOR THE CONTAINMENT SPRAY ACTUATION SIGNAL RESULTING IN AN INADVERTENT CONTAINMENT SPRAY ACTUATION. FOLLOWING VERIFICATION OF NORMAL CONTAINMENT PRESSURE, BOTH CONTAINMENT SPRAY PUMPS WERE SECURED. LESS THAN 1000 GALLONS OF WATER WAS SPRAYED INTO THE CONTAINMENT. AT 1439 HOURS OPERATIONS PERSONNEL ATTEMPTED TO RESTORE COMPONENT COOLING WATER (CCW) TO THE REACTOR COOLANT (RC) PUMPS BY OPENING CONTAINMENT ISOLATION VALVES CC-641, -710, AND -713. COOLING WATER COULD NOT BE RESTORED, HOWEVER, BECAUSE THE 1A, 2A, AND 2B RC PUMP SEAL COOLER ISOLATION VALVES CLOSED AND COULD NOT BE OPENED. A SUBSEQUENT EVALUATION REVEALED THAT THE CCW DISCHARGE CONTAINMENT ISOLATION VALVE CLOSED ABOUT ONE (1) SECOND BEFORE THE INLET VALVE CAUSING A PRESSURE SPIKE IN THE CCW PIPING. THE RESULTING SPIKE INCREASED PRESSURE WITHIN THE COOLER PIPING ABOVE 125 PSIG, WHICH RESULTED IN THE CLOSURE OF THE COOLER ISOLATION VALVES. THESE VALVES CANNOT BE OPENED UNTIL THE PRESSURE IN THE PIPING DECREASES BELOW THE 125 PSIG SETPOINT. NO RESET WAS AVAILABLE AND THE PRESSURE IN THE PIPING REMAINED ABOVE THE 125 PSIG SETPOINT.

[339] WATERFORD 3 DOCKET 50-382 LER 85-009
 CONTAINMENT AIR LOCK SURVEILLANCE MISSED.
 EVENT DATE: 032085 REPORT DATE: 041985 NSSS: CE TYPE: PWR

(NSIC 194812) AT 1459 HOURS CST ON MARCH 20, WATERFORD 3 WAS IN MODE 1 WHEN OPERATIONS PERSONNEL DISCOVERED THAT THE SURVEILLANCE USED TO PROVE THE OPERABILITY OF THE CONTAINMENT AIR LOCK HAD NOT BEEN PERFORMED WITHIN THE REQUIRED TIME FRAME SPECIFIED IN THE TECH SPECS. THE SURVEILLANCE WAS SATISFACTORILY COMPLETED SHORTLY THEREAFTER. THIS EVENT WAS REPORTED TO THE COMMISSION PURSUANT TO 10CFR50.36(C)(2).

[340] WATERFORD 3 DOCKET 50-382 LER 85-013
 FAILED CONDENSER MINI-RECIRC VALVE CAUSES FEEDWATER PUMP TRIP.
 EVENT DATE: 040485 REPORT DATE: 050385 NSSS: CE TYPE: PWR
 VENDOR: CROWTER, INC.
 NKG INSULATOR

(NSIC 194593) AT 0430 HRS CST ON 4-4-85 OPERATIONS PERSONNEL, WHILE PERFORMING A ROUTINE RCS LEAKAGE TEST, CALCULATED AN UNIDENTIFIED LEAKAGE OF 1.7 GPM. THE EXCESSIVE LEAKAGE WAS DUE TO THE FAILURE OF LETDOWN VOLUME CONTROL TANK RELIEF VALVE, CVC-115, TO PROPERLY SEAT AFTER IT INADVERTENTLY LIFTED ON 4-3. DURING THE PROCESS OF POSITIVELY IDENTIFYING THE LEAK, AT 1002 HRS MAIN FEEDWATER PUMP B TRIPPED ON LOW SUCTION PRESSURE AND WATER LEVELS IN THE SG'S BEGAN TO DECREASE. AT 1007 HRS, AN UNCOMPLICATED REACTOR TRIP, COINCIDENT WITH AN EMERGENCY FEEDWATER ACTUATION SIGNAL, OCCURRED DUE TO LOW WATER LEVEL IN THE SG'S. THE FEEDWATER PUMP TRIPPED DUE TO A BROKEN YOKE, ON VALVE CD-137C, CONDENSER MINI-RECIRC VALVE. BECAUSE OF THE BROKEN YOKE, CD-137C OPENED, INCREASING THE FLOW OF CONDENSATE WATER TO THE CONDENSER HOTWELL, RESULTING IN A LOW SUCTION PRESSURE. PLANT CONDITIONS WERE STABILIZED IN MODE 3. AT 1319 HRS OPERATIONS PERSONNEL INITIATED A PLANT COOLDOWN IN ACCORDANCE WITH TECH SPEC 3.4.5.2. HOWEVER, SINCE THE LEAK DID NOT ORIGINATE FROM THE RCS, THE ABOVE SHUTDOWN WAS NOT REQUIRED. A FLOW PATH FROM THE RCS VIA THE LEAK IN CVC-115 TO THE BORIC ACID CONCENTRATOR STEAM CHEST VENT OCCURRED. THE CONTAMINATED WATER FLOWED TO THE GLAND SEAL LEAKOFF TANK AND BACK INTO THE MAIN CONDENSER. FROM THE CONDENSER, THE CONTAMINATED CONDENSATE MADE ITS WAY INTO THE SG'S VIA THE NORMAL SECONDARY SYSTEM FLOW PATH.

[341] WATERFORD 3 DOCKET 50-382 LER 85-014
 OPEN CONDENSATE DRAIN VALVE RESULTS IN FEEDWATER PUMP TRIP/SCRAM.
 EVENT DATE: 041585 REPORT DATE: 051585 NSSS: CE TYPE: PWR

(NSIC 194732) ON APRIL 15, 1985, OPERATIONS PERSONNEL WERE RETURNING CONDENSATE PUMP B TO SERVICE FOLLOWING ROUTINE MAINTENANCE. AS THE CONDENSATE PUMP SUCTION ISOLATION VALVE, CD-125B, WAS OPENED, THE TURBINE OPERATOR OBSERVED A RAPID IN-LEAKAGE OF AIR INTO THE MAIN CONDENSER HOTWELL. THE OPERATOR OBSERVED A DRAIN VALVE, CD-127B, ON THE CONDENSATE PUMP SUCTION PIPING WAS NOT CLOSED PRIOR TO OPENING THE SUCTION ISOLATION VALVE. THE OPERATOR IMMEDIATELY CLOSED THE DRAIN VALVE; HOWEVER, THE SURGE OF AIR INTO THE HOTWELL PRECIPITATED A RAPID PERTURBATION IN HOTWELL LEVEL WHICH CAUSED A RAPID INCREASE IN THE WATER LEVEL IN THE FEEDWATER PUMP TURBINE DRAIN TANK TRIPPING THE OPERATING FEEDWATER PUMP. OPERATIONS PERSONNEL ATTEMPTED TO COMPENSATE FOR THE DECREASE IN FEEDWATER FLOW. HOWEVER, AT 1013 HOURS CENTRAL STANDARD TIME WATER LEVELS IN THE STEAM GENERATORS REACHED THE REACTOR TRIP AND EMERGENCY FEEDWATER ACTUATION SIGNAL SETPOINT. THIS EVENT WAS REPORTED TO THE COMMISSION PURSUANT TO 10CFR50.72(B)(2)(II).

[342] WATERFORD 3 DOCKET 50-382 LER 85-015
 INOPERABLE LIQUID EFFLUENT MONITOR.
 EVENT DATE: 042285 REPORT DATE: 052285 NSSS: CE TYPE: PWR

(NSIC 194733) ON MARCH 22, 1985 WATERFORD 3 STEAM ELECTRIC STATION WAS AT 50% REACTOR POWER WHEN OPERATIONS PERSONNEL, AFTER COMPLETING THE RELEASE OF BORIC ACID CONDENSATE TANK B, DISCOVERED THAT, BECAUSE OF A VALVE MISALIGNMENT, THERE WAS NO PROCESS FLOW THROUGH PROCESS RADIATION MONITOR PRM-IRE-0627 DURING THE ABOVE RELEASE. ALTHOUGH A SAMPLE TAKEN PRIOR TO THE RELEASE REVEALED THAT THE ACTIVITY IN THE TANK WAS WELL WITHIN ACCEPTABLE LIMITS, A SECOND INDEPENDENT SAMPLE SHOULD HAVE BEEN TAKEN AS REQUIRED BY TECH SPEC 3.3.3.10. BECAUSE THE DISCHARGE CHECKLIST, AS OUTLINED IN PROCEDURE OP-7-001, BORON MANAGEMENT SYSTEM, GIVES OPERATORS THE OPTION OF EITHER PERFORMING A VERIFICATION OF THE VALVE LINEUP OR VERIFYING THAT A COMPLETED COPY OF THE STANDBY SYSTEM VALVE LINEUP IS

ON-FILE, A VALVE LINEUP VERIFICATION WAS NOT PERFORMED PRIOR TO THE RELEASE. THIS OPTION HAS SUBSEQUENTLY BEEN REMOVED FROM THE PROCEDURE.

[343] WATERFORD 3 DOCKET 50-382 LER 85-016
PRESSURIZER HEATER CAPACITY LESS THAN TECHNICAL SPECIFICATION LIMIT.
EVENT DATE: 042585 REPORT DATE: 052485 NSSS: CE TYPE: PWR

(NSIC 194806) ON APRIL 25, WATERFORD 3 OPERATIONS PERSONNEL DISCOVERED THAT ONE OF THE TWO BANKS OF PRESSURIZER HEATERS POWERED FROM THE 1E BUS, DID NOT HAVE A NOMINAL CAPACITY OF 150 KW AS REQUIRED BY TECH SPEC 3.4.35. AN IMMEDIATE INVESTIGATION REVEALED THAT OPERATIONS PERSONNEL REMOVED FROM SERVICE WHAT WAS THOUGHT TO BE A SPARE BREAKER LOCATED IN POWER DISTRIBUTION PANEL 376B. HOWEVER, DUE TO A DRAWING DISCREPANCY, THIS BREAKER WAS IN ACTUALITY THE LOADED BREAKER. SINCE ONE OF THE HEATERS WAS NOT OPERABLE, THE CAPACITY OF THE SECOND BANK OF PROPORTIONAL HEATERS WAS ABOUT 50 KW LESS THAN THAT REQUIRED BY TECH SPEC. THE DRAWING DISCREPANCY HAS SINCE BEEN CORRECTED.

[344] WATERFORD 3 DOCKET 50-382 LER 85-017
REACTOR TRIP ON INADVERTENT CLOSURE OF MAIN STEAM ISOLATION VALVE.
EVENT DATE: 050585 REPORT DATE: 060485 NSSS: CE TYPE: PWR
VENDOR: WKM VALVE DIVISION

(NSIC 194777) AT 0007 HOURS ON MAY 5, A REACTOR TRIP OCCURRED AS A RESULT OF AN INADVERTENT CLOSURE OF MAIN STEAM ISOLATION VALVE NUMBER 2. DUE TO A FAULTY HYDRAULIC PRESSURE TRANSDUCER, THE HYDRAULIC PUMPS FOR MSIV NUMBER 2 WERE CONSTANTLY CYCLING IN AN EFFORT TO COMPENSATE FOR THE FAULTY PRESSURE INDICATION. ONE OF THE MOTOR DRIVEN HYDRAULIC PUMPS THEN TRIPPED ON THERMAL OVERLOAD (THIS WAS THE RESULT OF THE CONSTANT CYCLING OF THE PUMP) AND, AS A RESULT OF BACK LEAKAGE THROUGH ITS DISCHARGE CHECK VALVE, WAS ROTATING BACKWARDS DUE TO REVERSE FLOW FROM THE OPERATING MOTOR-DRIVEN HYDRAULIC PUMP. BECAUSE OF THESE FAILURES, OIL PRESSURE IN THE VALVE ACTUATOR DECREASED UNTIL THE VALVE FULLY CLOSED. THE FAULTY COMPONENTS HAVE SINCE BEEN REPAIRED.

[345] WATERFORD 3 DOCKET 50-382 LER 85-018
PRESSURIZER SPRAY VALVE LEAKS.
EVENT DATE: 051185 REPORT DATE: 061085 NSSS: CE TYPE: PWR

(NSIC 194778) ON 5/11/85 WATERFORD 3 STEAM ELECTRIC STATION WAS AT 65% REACTOR POWER WHEN OPERATIONS PERSONNEL CALCULATED AN UNIDENTIFIED LEAKAGE OF 6.1 GALLONS PER MINUTE. AN UNUSUAL EVENT WAS DECLARED AT 0710 HOURS AND AT 0945 HOURS OPERATIONS PERSONNEL INITIATED AN ORDERLY PLANT SHUTDOWN. REACTOR POWER WAS GRADUALLY REDUCED UNTIL 1543 HOURS WHEN AN UNCOMPLICATED REACTOR TRIP OCCURRED FROM APPROXIMATELY 1% POWER DUE TO A HIGH WATER LEVEL IN STEAM GENERATOR NUMBER 2. AT 2143 HOURS ON 5/13/85 WATERFORD 3 ENTERED MODE 5 (COLD SHUTDOWN). THE LEAK ORIGINATED IN THE PACKING GLANDS OF PRESSURIZER SPRAY VALVES RC-301A, B. THE PACKING GLANDS FOR BOTH VALVES WERE MODIFIED TO IMPROVE THEIR RELIABILITY.

[346] WATERFORD 3 DOCKET 50-382 LER 85-019
MISSED SAMPLE ON GAS DECAY TANK.
EVENT DATE: 051585 REPORT DATE: 061485 NSSS: CE TYPE: PWR

(NSIC 194779) AT 0900 HOURS ON MAY 15, 1985 WATERFORD 3 STEAM ELECTRIC STATION WAS IN MODE 5 (COLD SHUTDOWN) WHEN CHEMISTRY PERSONNEL DISCOVERED THAT THE OXYGEN SAMPLE, AS REQUIRED BY TECH SPEC 3.3.3.11 TABLE 3.3-13 ACTION 40, TAKEN AT 1730 HOURS ON MAY 14, 1985, WAS INADVERTENTLY TAKEN FROM THE ISOLATED RATHER THAN THE IN-SERVICE GAS DECAY TANK. A REVIEW OF THE SAMPLES TAKEN ON THE GAS DECAY TANK

IN QUESTION REVEALED THAT ALL CHEMICAL CRITERIA WERE WITHIN THE REQUIRED TOLERANCES.

[347] WATERFORD 3 DOCKET 50-382 LER 85-020
CONDENSATE POLISHER'S BACKWASH PROGRAMMER FAILURE.
EVENT DATE: 051885 REPORT DATE: 061785 NSSS: CE TYPE: PWR

(NSIC 194847) AT 1808 HOURS ON MAY 18, WATERFORD 3 DUE TO A MALFUNCTION OF THE CONDENSATE POLISHER PROGRAMMER, AN UNCOMPLICATED REACTOR TRIP, ALONG WITH AN EMERGENCY FEEDWATER ACTUATION SIGNAL, OCCURRED DUE TO A LOW WATER LEVEL IN THE STEAM GENERATORS. PLANT CONDITIONS WERE SUBSEQUENTLY STABILIZED IN MODE 3 (HOT STANDBY). AS THE PROGRAMMER BEGAN THE AUTOMATIC SEQUENCE FOR PERFORMING THE BACKWASH/PRECOAT OF CONDENSATE POLISHER VESSEL A, THE SEQUENCER BYPASSED THE FIRST STEP IN THE CYCLE, WHICH IS TO ISOLATE THE APPROPRIATE VESSEL. SINCE THE VESSEL WAS NOT ISOLATED AND THE VESSEL VENT VALVE WAS OPEN, A PRESSURE PERTURBATION OCCURRED IN THE CONDENSATE AND FEEDWATER SYSTEMS PRECIPITATING A MAIN FEEDWATER PUMP (AT 1806 HOURS) TRIP ON LOW SUCTION PRESSURE. THE BACKWASH CYCLE WAS SATISFACTORILY TESTED ON MAY 20, 1985, AND THE OPERATIONS DEPARTMENT HAS PLACED ADDITIONAL CONTROLS ON THE PROCESS TO PREVENT THE RECURRENCE OF THE ABOVE EVENT.

[348] WOLF CREEK 1 DOCKET 50-482 LER 85-017
RUSKIN FIRE DAMPERS' FIRE RATING DEGRADED.
EVENT DATE: 031185 REPORT DATE: 052485 NSSS: WE TYPE: PWR
VENDOR: RUSKIN MANUFACTURING COMPANY

(NSIC 194509) ON 4-24-85, IT WAS DETERMINED THAT OBSERVED CONDITIONS ON SOME FIRE DAMPERS SUPPLIED BY RUSKIN MANUFACTURING COMPANY WERE NOT IN ACCORDANCE WITH THE AS-DESIGNED CONDITIONS AND THAT THE FIRE RATING OF THESE DAMPERS WAS POTENTIALLY DEGRADED FROM THE ORIGINAL 3-HR FIRE RATING APPROVED BY UNDERWRITERS LABS. THESE CONDITIONS HAD EXISTED SINCE INSTALLATION OF THE FIRE DAMPERS AND ARE A VIOLATION OF TECH SPEC 3.7.11 'FIRE BARRIER PENETRATIONS'. THE VIOLATION IS CONSIDERED TO HAVE EXISTED FROM THE DATE OF LICENSE ISSUE (3-11-85) UNTIL FIRE WATCHES WERE ESTABLISHED FOR ALL AFFECTED FIRE DAMPERS ON 4-24-85. PRIOR TO 4-24, PRECAUTIONARY FIRE WATCHES HAD BEEN ESTABLISHED WHEN INDIVIDUAL DAMPER CONDITIONS INDICATED THE POSSIBILITY OF A DEGRADED FIRE RATING.

[349] WOLF CREEK 1 DOCKET 50-482 LER 85-001
ESP ACTUATION - CONTAINMENT PURGE AND CONTROL ROOM VENTILATION ISOLATION.
EVENT DATE: 031385 REPORT DATE: 041285 NSSS: WE TYPE: PWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 194693) ON THREE OCCASIONS BETWEEN THE DATES OF MARCH 13, 1985 AND MARCH 19, 1985, AN ENGINEERED SAFETY FEATURES ACTUATION SIGNAL (ESPAS) WAS INITIATED BY A CONTAINMENT RADIATION MONITOR SPURIOUS ALARM CAUSING A CONTAINMENT PURGE ISOLATION SIGNAL (CPIS) AND A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS). THESE EVENTS OCCURRED DURING AND IMMEDIATELY FOLLOWING INITIAL FUEL LOADING. ON EACH OCCASION, ALL REQUIRED ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY. NO RADIATION ABOVE NORMAL BACKGROUND WAS PRESENT. TROUBLESHOOTING IDENTIFIED A FAULTY RELAY IN THE RADIATION MONITOR AS THE PROBABLE CAUSE OF THE SPURIOUS ALARMS. THE RELAY HAS BEEN REPLACED AND NO SPURIOUS ALARMS HAVE BEEN RECEIVED SINCE MARCH 19, 1985.

[350] WOLF CREEK 1 DOCKET 50-482 LER 85-002
TECHNICAL SPECIFICATION VIOLATION.
EVENT DATE: 031385 REPORT DATE: 041285 NSSS: WE TYPE: PWR

(NSIC 194694) AT 1547 CST ON MARCH 13, 1985, DURING INITIAL FUEL LOADING, IT WAS DISCOVERED THAT A CONTROL ROOM AIR INTAKE RADIATION ELEMENT HAD BEEN IN BYPASS FOR GREATER THAN 1 HOUR WITHOUT ISOLATING THE CONTROL ROOM EMERGENCY VENTILATION SYSTEM AND INITIATING OPERATION OF THE CONTROL ROOM EMERGENCY VENTILATION SYSTEM IN THE RECIRCULATION MODE. THIS IS IN VIOLATION OF A TECH SPEC - LIMITING CONDITION OF OPERATION. UPON DISCOVERY THE RADIATION ELEMENT WAS IMMEDIATELY RETURNED TO SERVICE. THE OTHER CONTROL ROOM AIR INTAKE RADIATION ELEMENT WAS OPERABLE DURING THIS TIME PERIOD. NO RADIATION ABOVE NORMAL BACKGROUND WAS PRESENT DURING THIS PERIOD.

[351] WOLF CREEK 1 DOCKET 50-482 LER 85-009
SPURIOUS SIGNAL GIVES CONTAINMENT PURGE, FUEL BUILDING, AND CONTROL ROOM VENTILATION ISOLATIONS.
EVENT DATE: 041285 REPORT DATE: 051085 NSSS: WE TYPE: PWR

(NSIC 194507) AT 1114 CST ON 4-12-85, AN ESPAS WAS INITIATED WHEN SEVERAL RADIATION MONITORS WERE DEENERGIZED DUE TO A GROUND FAULT INDICATION TRIPPING A 480V POWER SUPPLY BREAKER TO A 120V DISTRIBUTION PANEL. THIS RESULTED IN A CONTAINMENT PURGE ISOLATION SIGNAL (CPIS), FUEL BLDG VENTILATION ISOLATION SIGNAL (FBVIS) AND CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS). ALL REQUIRED ESP'S EQUIPMENT RESPONDED PROPERLY EXCEPT FOR SGK05A, A CLASS 1E ELECTRICAL EQUIPMENT AIR CONDITIONING UNIT, WHICH HAD PREVIOUSLY BEEN TAKEN OUT OF SERVICE FOR MAINTENANCE. TROUBLESHOOTING IDENTIFIED A CURRENT IMBALANCE BETWEEN LEGS AT THE 480V FEEDER BREAKER AS THE PROBABLE CAUSE OF THE BREAKER TRIP. THE BREAKER WAS RESET AND POWER RESTORED TO THE AFFECTED RADIATION MONITORS AT 1247. THE PLANT WAS IN MODE 5 PRIOR TO INITIAL CRITICALITY AT THE TIME OF THE EVENT AND REDUNDANT RADIATION MONITORS WERE OPERABLE. NO RADIATION ABOVE NORMAL BACKGROUND WAS PRESENT.

[352] WOLF CREEK 1 DOCKET 50-482 LER 85-010
CONTINUOUS FIRE WATCH NOT MAINTAINED WITH AUXILIARY BUILDING PRE-ACTION SPRINKLER SYSTEM OUT OF SERVICE.
EVENT DATE: 041885 REPORT DATE: 051385 NSSS: WE TYPE: PWR

(NSIC 194736) AT 0830 CST ON APRIL 13, 1985, WHILE THE PLANT WAS IN MODE 5, IT WAS DISCOVERED THAT A PRE-ACTION SPRINKLER SYSTEM FOR AN AREA CONTAINING REDUNDANT SYSTEMS OR COMPONENTS HAD BEEN TAKEN OUT OF SERVICE WITHOUT ESTABLISHING THE REQUIRED CONTINUOUS FIRE WATCH. THE PRE-ACTION SPRINKLER SYSTEM PROTECTING THE CABLE TRAYS ON ELEVATION 2000 OF THE AUXILIARY BUILDING WAS TAKEN OUT OF SERVICE FOR MAINTENANCE ON THE SPRINKLER SYSTEM SUPPLY VALVE KCXV165. BECAUSE TECH SPEC 3.7.10.2.B. DEFINES THAT THIS AREA CONTAINS REDUNDANT SYSTEMS OR COMPONENTS A CONTINUOUS FIRE WATCH MUST BE ESTABLISHED IF A SPRINKLER SYSTEM IS INOPERABLE. DUE TO AN OVERSIGHT, THE AFFECTED AREA WAS PROTECTED BY AN HOURLY FIRE WATCH PATROL RATHER THAN THE REQUIRED CONTINUOUS FIRE WATCH. THIS IS IN VIOLATION OF A TECH SPEC - LIMITING CONDITION FOR OPERATION. UPON DISCOVERY, THE AFFECTED PLANT AREA WAS IMMEDIATELY PLACED UNDER CONTINUOUS FIRE WATCH. DURING THE TIME THE PRE-ACTION SPRINKLER SYSTEM WAS OUT OF SERVICE THE AFFECTED AREAS WERE PROTECTED BY THE INSTALLED FIRE DETECTION SYSTEM AND AN HOURLY FIRE WATCH PATROL WITH BACKUP FIRE SUPPRESSION EQUIPMENT LOCATED IN THE AREA.

[353] WOLF CREEK 1 DOCKET 50-482 LER 85-012
INADVERTENT ESP ACTUATION - SAFETY INJECTION INITIATION.
EVENT DATE: 041985 REPORT DATE: 051785 NSSS: WE TYPE: PWR
VENDOR: LIMITORQUE CORP.

(NSIC 194695) AT 1619 CST ON APRIL 19, 1985, AN INADVERTENT TRAIN 'B' SAFETY INJECTION (SI) OCCURRED. THE PLANT WAS IN MODE 4 PRIOR TO INITIAL CRITICALITY WITH THE REACTOR COOLANT SYSTEM (RCS) AT 369 PSIG AND 212 DEGREES F AT THE TIME

OF THE EVENT. THE SAFETY INJECTION WAS INITIATED DURING PERFORMANCE OF A SURVEILLANCE TEST WHEN A REACTOR OPERATOR INADVERTENTLY UNBLOCKED A STEAMLINE LOW PRESSURE SI SIGNAL. ALL ENGINEERED SAFETY FEATURES EQUIPMENT REQUIRED TO ACTUATE WITH THE PLANT IN MODE 4 RESPONDED PROPERLY WITH ONE EXCEPTION. VALVE EF-HV-60, A MOTOR-OPERATED ESSENTIAL SERVICE WATER ISOLATION VALVE DID NOT FULLY CLOSE (APPROXIMATELY 3 PERCENT OPEN). SUBSEQUENT TO THE EVENT, A LOOSE LIMIT SWITCH LUG WAS FOUND IN THE VALVE MOTOR OPERATOR AND HAS BEEN REPAIRED. THE SAFETY INJECTION WAS TERMINATED AT 1628 AND THE PLANT WAS RESTORED TO A NORMAL CONFIGURATION IN ACCORDANCE WITH PLANT PROCEDURES AT 1811.

[354] WOLF CREEK 1 DOCKET 50-482 LER 85-014
CHLORINE MONITOR TRIPS CAUSING CONTROL ROOM VENTILATION ISOLATION.
EVENT DATE: 042185 REPORT DATE: 052185 NSSS: WE TYPE: PWR

(NSIC 194508) AT 1922 CST ON 4-21-85, AN ESPAS WAS INITIATED WHEN A CONTROL ROOM CHLORINE MONITOR RAN OUT OF PAPER CAUSING A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS). THE PLANT WAS IN MODE 4 AT THE TIME OF THE EVENT AND ALL REQUIRED ESP'S EQUIPMENT RESPONDED PROPERLY. THE ESTABLISHED SCHEDULE FOR CHANGING THE FILTER PAPER TAPES IN THE CONTROL ROOM CHLORINE MONITORS WAS EVERY SUNDAY ON DAY SHIFT. AN I&C TECHNICIAN HAD ROUTINELY PERFORMED THIS FUNCTION EACH SUNDAY BUT HAD RECENTLY BEEN REASSIGNED TO NIGHT SHIFT. BY OVERSIGHT, THE FUNCTION OF CHANGING THE FILTER PAPER TAPES WAS LEFT ASSIGNED TO THE SAME INDIVIDUAL. ON SUNDAY NIGHT, 4-21-85, THE I&C TECHNICIAN WAS ON THE WAY TO PERFORM THE FILTER PAPER CHANGE OUT WHEN THE CRVIS OCCURRED. TO PREVENT RECURRENCE THE SCHEDULE FOR CHANGING THE FILTER PAPER TAPES IN THE CONTROL ROOM CHLORINE MONITORS HAS BEEN INCREASED TO TWICE WEEKLY.

[355] WOLF CREEK 1 DOCKET 50-482 LER 85-019
INADVERTENT ACTUATION OF AUX FEEDWATER.
EVENT DATE: 042685 REPORT DATE: 052485 NSSS: WE TYPE: PWR

(NSIC 194510) AT 1854 CST ON 4-26-85, AN AUX FEEDWATER ACTUATION SIGNAL (AFAS) OCCURRED WHEN A BLOCK SWITCH, WHICH PREVENTS AFAS WHEN BOTH MAIN FEEDWATER PUMPS (MFP) ARE SECURED, WAS PLACED IN THE 'PERMIT' POSITION. SINCE BOTH MFPs WERE SECURED, AN AFAS WAS INITIATED. THIS SIGNAL ACTUATES THE MOTOR-DRIVEN AUX FEEDWATER PUMPS (MDAPP) AND THE SG BLOWDOWN AND SAMPLE ISOLATION SIGNAL (SGESIS). THE MDAPPs WERE NOT IN SERVICE AS ALLOWED BY TECH SPECS. ALL ESP'S EQUIPMENT REQUIRED TO RESPOND TO THE SGESIS FUNCTIONED PROPERLY. THE PLANT WAS IN MODE 4, HOT SHUTDOWN, ENTERING MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY AT THE TIME OF THE EVENT. THE SG BLOWDOWN AND SAMPLE ISOLATION VALVES WERE RESTORED TO A NORMAL CONFIGURATION IN ACCORDANCE WITH PLANT PROCEDURES AT 1933 CST.

[356] WOLF CREEK 1 DOCKET 50-482 LER 85-021
TESTING ERROR RESULTS IN SAFETY INJECTION AND MAIN STEAMLINE ISOLATION.
EVENT DATE: 042885 REPORT DATE: 052485 NSSS: WE TYPE: PWR

(NSIC 194789) ON APRIL 28, 1985, AT APPROXIMATELY 1550 CDT, AN ENGINEERED SAFETY FEATURES (ESF) ACTUATION OCCURRED RESULTING IN A SAFETY INJECTION (SI) INTO THE REACTOR COOLANT SYSTEM (RCS), AND MAIN STEAMLINE ISOLATION. THE INITIATING SIGNAL WAS LOW STEAMLINE PRESSURE ON STEAM GENERATOR (S/G) "D." AT THE TIME OF THE EVENT, THE PLANT WAS IN HOT STANDBY PRIOR TO INITIAL CRITICALITY. ALL REQUIRED ESP EQUIPMENT RESPONDED PROPERLY. AN UNUSUAL EVENT WAS DECLARED AND SUBSEQUENTLY TERMINATED. THE APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES WERE NOTIFIED. THE CAUSE OF THE LOW STEAMLINE PRESSURE SIGNAL HAS BEEN DETERMINED TO BE AN ANTICIPATORY TRIP GENERATED BY THE RATE-SENSITIVE S/G PRESSURE CIRCUITRY DUE TO A DECREASE IN STEAMLINE PRESSURE WHEN A MAIN STEAMLINE ISOLATION VALVE (MSLIV) WAS OPENED BEFORE PRESSURE WAS EQUALIZED THROUGH THE MSLIV BYPASS VALVES.

[357] WOLF CREEK 1 DOCKET 50-482 LER 85-020
 ESF ACTUATION - FEEDWATER ISOLATION AND TURBINE TRIP.
 EVENT DATE: 042985 REPORT DATE: 052985 NSSS: WE TYPE: PWR

(NSIC 194798) AT 0147 CDT ON APRIL 29, 1985, AN ENGINEERED SAFETY FEATURES ACTUATION SIGNAL (ESFAS) WAS INITIATED WHEN WATER LEVEL IN STEAM GENERATOR "C" WAS INCREASED TO THE HIGH LEVEL SETPOINT. THIS RESULTED IN A FEEDWATER ISOLATION SIGNAL (FWIS), AND MAIN TURBINE AND STEAM GENERATOR FEED PUMP TURBINE TRIP SIGNALS BEING INITIATED. THE MAIN TURBINE AND STEAM GENERATOR FEED PUMP TURBINES WERE NOT IN OPERATION AT THE TIME OF THIS EVENT, AND ALL REQUIRED ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY. THE CAUSE FOR HIGH LEVEL IN S/G C WAS DUE TO THE ISOLATION VALVE FOR THE S/G "C" FCV, WHICH WAS BELIEVED TO HAVE BEEN FULLY CLOSED, WAS APPROXIMATELY 5 TURNS OPEN. THE MAJOR CONTRIBUTING FACTOR IN THIS COGNITIVE PERSONNEL ERROR WAS THE BELIEF THAT THE MANUAL ISOLATION VALVE FOR S/G "C" FCV WAS INITIALLY CLOSED. THE PLANT WAS IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY AT THE TIME OF THIS EVENT. THE REACTOR COOLANT SYSTEM WAS AT NORMAL OPERATING PRESSURE AND APPROXIMATELY 505 DEGREES F.

[358] WOLF CREEK 1 DOCKET 50-482 LER 85-022
 SAFETY INJECTION AND MAIN STEAMLINE ISOLATION ON SPURIOUS LO STEAM LINE PRESSURE SIGNAL.
 EVENT DATE: 043085 REPORT DATE: 053085 NSSS: WE TYPE: PWR

(NSIC 194511) ON 4-30-85, AT 1143 CDT, A SAFETY INJECTION AND MAIN STEAMLINE ISOLATION OCCURRED DUE TO A LOW STEAMLINE PRESSURE SIGNAL GENERATED BY INTERFERENCE FROM A HAND-HELD RADIO TRANSMISSION. THE PLANT WAS IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY WITH THE RCS AT NORMAL OPERATING TEMPERATURE, 557 F, AND PRESSURE, 2250 PSIG, AT THE TIME OF THE EVENT. ALL REQUIRED ESF'S EQUIPMENT RESPONDED PROPERLY. AN UNUSUAL EVENT WAS DECLARED AND SUBSEQUENTLY CANCELLED. THE APPROPRIATE FEDERAL, STATE, AND LOCAL AGENCIES WERE NOTIFIED. THE SAFETY INJECTION WAS TERMINATED PER PLANT PROCEDURES BY 1155 CDT. THE USE OF RADIO COMMUNICATIONS WITHIN THE PLANT HAS BEEN SEVERELY RESTRICTED DUE TO THIS INCIDENT.

[359] WOLF CREEK 1 DOCKET 50-482 LER 85-023
 TEST ERROR RESULTS IN REACTOR TRIP AND FEEDWATER ISOLATION.
 EVENT DATE: 050185 REPORT DATE: 053085 NSSS: WE TYPE: PWR

(NSIC 194790) AT 0533 CDT ON MAY 1, 1985, A REACTOR PROTECTION SYSTEM (RPS) TRIP SIGNAL AND AN ENGINEERED SAFETY FEATURES ACTUATION SIGNAL (ESFAS) WERE INITIATED WHEN TEST EQUIPMENT USED TO SUPPORT A STARTUP TEST PROCEDURE WAS BEING REMOVED FROM A PROCESS CONTROL CABINET. THIS RESULTED IN AN OVERTEMPERATURE DELTA-T (OTDT) REACTOR TRIP, WHICH IN TURN RESULTED IN A FEEDWATER ISOLATION SIGNAL (FWIS). ALL CONTROL RODS WERE FULLY INSERTED AT THE TIME OF THIS EVENT, AND ALL REQUIRED ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY. THE PLANT WAS IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY AT THE TIME OF THIS EVENT. REACTOR COOLANT SYSTEM TEMPERATURE AND PRESSURE WAS 545 DEGREES F AND APPROXIMATELY 1900 PSIG RESPECTIVELY.

[360] WOLF CREEK 1 DOCKET 50-482 LER 85-024
 SPURIOUS SG LEVEL SIGNAL CAUSES FEEDWATER ISOLATION AND AUXILIARY FEEDWATER ACTUATION.
 EVENT DATE: 050185 REPORT DATE: 053085 NSSS: WE TYPE: PWR

(NSIC 194791) AT 1100 CDT ON MAY 1, 1985, AN ENGINEERED SAFETY FEATURES ACTUATION SIGNAL (ESFAS) WAS INITIATED WHEN STEAM GENERATOR "A" LEVEL INDICATION "SPIKED" LOW. THIS RESULTED IN A FEEDWATER ISOLATION SIGNAL (FWIS) AND AN AUXILIARY FEEDWATER ACTUATION SIGNAL (AFAS) BEING INITIATED. ALL REQUIRED ENGINEERED

SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY. THE PLANT WAS IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY AT THE TIME OF THIS EVENT WITH THE REACTOR COOLANT SYSTEM AT APPROXIMATELY 1900 PSIG AND 550 DEGREES F. SUBSEQUENT INVESTIGATIONS REVEALED THAT THE LEVEL INDICATION SPIKE WAS TRIGGERED BY A HAND-HELD RADIO TRANSMISSION FROM THE IMMEDIATE AREA OF THE STEAM GENERATOR LEVEL TRANSMITTERS.

[361] WOLF CREEK 1 DOCKET 50-482 LER 85-025
TWO MAIN STEAMLINE ISOLATION VALVES INOPERABLE.
EVENT DATE: 050185 REPORT DATE: 053085 NSSS: WE TYPE: PWR
VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 194512) AT 1720 CDT ON 5-1-85, WITH THE PLANT IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY, 2 MAIN STEAMLINE ISOLATION VALVES (MSLIV) WERE DECLARED INOPERABLE. SINCE TECH SPEC 3.7.1.5 ALLOWS ONLY 1 MSLIV TO BE INOPERABLE, THIS LCO COULD NOT BE MET AND TECH SPEC 3.0.3 WAS ENTERED. AS REQUIRED BY TECH SPEC 3.0.3, A COOLDOWN FROM NORMAL OPERATING TEMPERATURE AND PRESSURE TO MODE 4, HOT SHUTDOWN, WAS INITIATED. THE COOLDOWN WAS TERMINATED AND TECH SPEC 3.0.3 WAS EXITED AT 2052 CDT WHEN 1 INOPERABLE MSLIV WAS RETURNED TO SERVICE. IN ACCORDANCE WITH THE ACTION STATEMENT OF TECH SPEC 3.7.1.5, THE REMAINING INOPERABLE MSLIV WAS MAINTAINED CLOSED, AND THE PLANT WAS RETURNED TO NORMAL OPERATING TEMPERATURE AND PRESSURE AT 2228 CDT. THE REMAINING INOPERABLE MSLIV WAS RETURNED TO SERVICE AT 1330 CDT ON 5-2-85. THE HYDRAULIC OIL PUMPS ON BOTH VALVES WERE REPLACED AND THE VALVES WERE TESTED DEMONSTRATING OPERABILITY.

[362] WOLF CREEK 1 DOCKET 50-482 LER 85-013
SIX SPURIOUS CONTROL ROOM VENTILATION ISOLATIONS.
EVENT DATE: 050685 REPORT DATE: 053185 NSSS: WE TYPE: PWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 194787) ON SIX DIFFERENT OCCASIONS, AN ENGINEERED SAFETY FEATURES ACTUATION SIGNAL (ESFAS) WAS INITIATED BY A CONTROL ROOM INTAKE RADIATION MONITOR SPURIOUS ALARM CAUSING A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS). THE INCIDENTS OCCURRED AT 0155 AND 1650 CDT ON MAY 6, 1985, 1054 CDT ON MAY 15, 1985, 1037 CDT ON MAY 23, 1985, 1814 CDT ON MAY 26, 1985, AND 1407 CDT ON MAY 30, 1985. ALL REQUIRED ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY ON EACH OCCASION. SUBSEQUENT INVESTIGATION OF EACH INCIDENT IDENTIFIED A MISMATCH BETWEEN THE SOFTWARE AND HARDWARE IN THE RM-80 MICROPROCESSING UNIT FOR THE RADIATION MONITOR AS THE PROBABLE CAUSE OF THE SPURIOUS ALARMS. THE PLANT WAS IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY AT THE TIME OF THE FIRST THREE INCIDENTS. DURING THE MAY 23, 1985 AND MAY 30, 1985 OCCURRENCES, THE PLANT WAS IN MODE 2 WITH THE REACTOR CRITICAL AT A POWER LEVEL OF $10E-8$ AMPS INTERMEDIATE RANGE. ON MAY 26, 1985, THE PLANT WAS IN MODE 3, HOT STANDBY, WITH A SOURCE RANGE INDICATION OF 25 COUNTS/SEC (CPS). ALL INCIDENTS OCCURRED WITH THE REACTOR COOLANT SYSTEM AT NORMAL OPERATING PRESSURE AND TEMPERATURE.

[363] WOLF CREEK 1 DOCKET 50-482 LER 85-026
SPURIOUS SIGNAL GIVES CONTAINMENT PURGE, FUEL BUILDING AND CONTROL ROOM VENTILATION ISOLATIONS.
EVENT DATE: 050685 REPORT DATE: 053085 NSSS: WE TYPE: PWR

(NSIC 194792) AT 0852 CDT ON MAY 6, 1985, AN ENGINEERED SAFETY FEATURES ACTUATION SIGNAL (ESFAS) WAS INITIATED WHEN TWO RADIATION MONITORS WERE DEENERGIZED DUE TO AN INADVERTENT LOSS OF POWER TO A SAFETY RELATED 480VAC LOAD CENTER. THIS RESULTED IN A CONTAINMENT PURGE ISOLATION SIGNAL (CPIS), FUEL BUILDING VENTILATION ISOLATION SIGNAL (FBVIS) AND A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS). ALL REQUIRED ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY WITH THE EXCEPTION OF SOME EQUIPMENT WHICH WAS UNABLE TO START DUE TO

BEING POWERED FROM THE LOAD CENTER WHICH WAS INADVERTENTLY DEENERGIZED. REDUNDANT EQUIPMENT DID RESPOND AND FUNCTION PROPERLY. THE CAUSE FOR THE LOSS OF POWER WAS IDENTIFIED AND POWER WAS RESTORED WITHOUT FURTHER INCIDENT. THE PLANT WAS IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY AT THE TIME OF THE EVENT WITH THE REACTOR COOLANT SYSTEM AT NORMAL OPERATING PRESSURE AND TEMPERATURE.

[364] WOLF CREEK 1 DOCKET 50-482 LER 85-027
LOW STEAM PRESSURE SIGNAL CAUSES SAFETY INJECTION, MAIN STEAMLINE ISOLATION, AND REACTOR TRIP.
EVENT DATE: 050685 REPORT DATE: 053185 NSSS: WE TYPE: PWR

(NSIC 194793) ON MAY 6, 1985, AT APPROXIMATELY 1225 CDT, AN ENGINEERED SAFETY FEATURES (ESF) ACTUATION OCCURRED RESULTING IN A SAFETY INJECTION (SI) AND A MAIN STEAMLINE ISOLATION DUE TO A LOW STEAMLINE PRESSURE SIGNAL ON STEAM GENERATOR "A." AT THE TIME OF THE EVENT, THE PLANT WAS IN HOT STANDBY PRIOR TO INITIAL CRITICALITY. THE REACTOR COOLANT SYSTEM AVERAGE TEMPERATURE WAS APPROXIMATELY 530 DEGREES F AND PRESSURE WAS 2241 PSIG. THE MAIN STEAMLINE ISOLATION VALVES WERE CLOSED AND STEAM GENERATORS "A" AND "C" WERE SLOWLY BEING FED TO ADJUST LEVEL. WITH NO REACTOR COOLANT SYSTEM FLOW THROUGH THE STEAM GENERATORS, THE ADDITION OF FEEDWATER COOLED THE STEAM GENERATORS AND CONSEQUENTLY DECREASED STEAMLINE PRESSURE TO THE TRIP SETPOINT. AN UNUSUAL EVENT WAS DECLARED AND TERMINATED. THE APPROPRIATE FEDERAL, STATE, AND LOCAL AGENCIES WERE NOTIFIED. ALL ESF EQUIPMENT RESPONDED PROPERLY, AND THE SAFETY INJECTION WAS TERMINATED BY APPROXIMATELY 1243 CDT. DURING THE SUBSEQUENT RESTORATION OF THE VENTILATION SYSTEMS, AN ADDITIONAL ESF ACTUATION OCCURRED AND IS DISCUSSED IN LER 85-029-00.

[365] WOLF CREEK 1 DOCKET 50-482 LER 85-029
LOW FLOW TO CONTAINMENT RAD MONITOR GIVES PURGE AND VENTILATION ISOLATIONS.
EVENT DATE: 050685 REPORT DATE: 053185 NSSS: WE TYPE: PWR

(NSIC 194794) ON MAY 6, 1985, AT APPROXIMATELY 1340 CDT, A CONTAINMENT PURGE ISOLATION SIGNAL (CPIS), A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS), AND A FUEL BUILDING VENTILATION ISOLATION SIGNAL (FBVIS) OCCURRED WHILE RECOVERING FROM A SAFETY INJECTION THAT OCCURRED AT 1225 CDT ON MAY 6, 1985. THIS SAFETY INJECTION IS DISCUSSED IN LER 85-027-00. THE CPIS, CRVIS, AND FBVIS WERE CAUSED BY FLOW NOT BEING RESTORED TO THE CONTAINMENT ATMOSPHERE RADIATION MONITORS DURING RECOVERY FROM THE SAFETY INJECTION AND WAS DUE TO A PROCEDURAL DEFICIENCY WHICH HAS BEEN CORRECTED. AT THE TIME OF THIS EVENT, THE PLANT WAS IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY AND THE REACTOR COOLANT SYSTEM WAS BEING RETURNED TO NORMAL OPERATING TEMPERATURE, 557 DEGREES F, AND PRESSURE, 2250 PSIG, AFTER THE PREVIOUS SAFETY INJECTION. ALL REQUIRED ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY. THE ACTUATED VENTILATION SYSTEMS WERE RESTORED TO NORMAL CONFIGURATION BY APPROXIMATELY 1415 CDT.

[366] WOLF CREEK 1 DOCKET 50-482 LER 85-030
FEEDWATER ISOLATION DUE TO SG TWO-OUT-OF-FOUR HIGH LEVEL TRIP.
EVENT DATE: 051885 REPORT DATE: 061485 NSSS: WE TYPE: PWR

(NSIC 194705) AT 2131 CDT ON MAY 18, 1985, AN ENGINEERED SAFETY FEATURES ACTUATION SIGNAL (ESFAS) WAS INITIATED WHEN A STEAM GENERATOR (S/G) LEVEL TRANSMITTER SENSED AN ERRONEOUS HIGH-LEVEL CONDITION. SINCE A REDUNDANT TRANSMITTER HAD PREVIOUSLY BEEN REMOVED FROM SERVICE FOR A SURVEILLANCE TEST, THIS RESULTED IN A S/G TWO-OUT-OF-FOUR HIGH LEVEL TRIP WHICH CAUSED A FEEDWATER ISOLATION SIGNAL (FWIS) TO BE INITIATED. ALL REQUIRED ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY. THE PLANT WAS IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY AT THE TIME OF THIS EVENT. THE REACTOR COOLANT SYSTEM WAS AT NORMAL OPERATING TEMPERATURE AND APPROXIMATELY 1900 PSIG. THE SPECIFIC CAUSE HAS NOT BEEN DETERMINED, HOWEVER INVESTIGATION REVEALED THAT THE MOST PROBABLE CAUSE

OF THE ERRONEOUS LEVEL INDICATION WAS A PRESSURE PERTURBATION IN A COMMON SENSING LINE DUE TO A SEPARATE WORK ACTIVITY.

[367] WOLF CREEK 1 DOCKET 50-482 LER 85-032
CONTAINMENT PURGE AND CONTROL ROOM VENTILATION ISOLATION.
EVENT DATE: 052185 REPORT DATE: 061485 NSSS: WE TYPE: PWR

(NSIC 194703) AT 0923 CDT ON MAY 21, 1985, AN ENGINEERED SAFETY FEATURES ACTUATION SIGNAL (ESFAS) WAS INITIATED DURING THE PERFORMANCE OF A SURVEILLANCE PROCEDURE WHEN AN ESFAS CABINET TEST SWITCH WAS REPOSITIONED IN ERROR. THIS RESULTED IN A CONTAINMENT PURGE ISOLATION SIGNAL (CPIS) AND A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS) BEING INITIATED. ALL REQUIRED ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY. THE CAUSE OF THE EVENT WAS SUBSEQUENTLY IDENTIFIED AS A PERSONNEL ERROR. FURTHER INVESTIGATION INTO THIS EVENT HAS CONCLUDED THAT A PROCEDURAL PROBLEM DOES NOT EXIST, AND THAT THE ESFAS CABINET TEST SWITCHES ARE CLEARLY IDENTIFIED. A CONTRIBUTING FACTOR IN THIS EVENT WAS THE FACT THAT THE SUBJECT TEST SWITCHES ARE LOCATED GREATER THAN SIX FEET ABOVE THE FLOOR, AND VISIBILITY CAN BE IMPAIRED WHEN REACHING OVERHEAD TO OPERATE THE SWITCHES. THE PLANT WAS IN MODE 3, HOT STANDBY, PRIOR TO INITIAL CRITICALITY AT THE TIME OF THIS EVENT. THE REACTOR COOLANT SYSTEM WAS AT NORMAL OPERATING PRESSURE AND TEMPERATURE. THERE WAS NO DAMAGE TO PLANT EQUIPMENT OR RELEASE OF RADIOACTIVITY AS A RESULT OF THIS EVENT.

[368] WOLF CREEK 1 DOCKET 50-482 LER 85-033
CONTROL ROOM VENTILATION ISOLATION.
EVENT DATE: 052385 REPORT DATE: 062185 NSSS: WE TYPE: PWR
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 194711) AT 1904 CDT ON MAY 23, 1985, A MANUAL CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS) WAS INITIATED FOLLOWING THE AUTOMATIC REPOSITIONING OF A PORTION OF THE COMPONENTS WITHIN THE CRVIS ACTUATION GROUP TO THEIR EMERGENCY RECIRCULATION MODE OF OPERATION. ALL REQUIRED ENGINEERED SAFETY FEATURES EQUIPMENT RESPONDED PROPERLY FOLLOWING THE MANUAL ACTUATION. THE PLANT WAS IN MODE 2 WITH THE REACTOR CRITICAL AT ZERO POWER LEVEL. THE REACTOR COOLANT SYSTEM WAS AT NORMAL OPERATING PRESSURE AND TEMPERATURE. THE MOST PROBABLE CAUSE OF THE INITIAL COMPONENT ACTUATION WAS AN ELECTRONIC SPIKE FROM A CONTROL ROOM CHLORINE MONITOR WHICH WAS DISPLAYING ERRATIC BEHAVIOR. THIS SPIKE COULD HAVE BEEN OF SUFFICIENT MAGNITUDE TO MOMENTARILY TRIP THE ASSOCIATED CRVIS BISTABLE BUT OF INSUFFICIENT DURATION TO ACTUATE ALL OF THE COMPONENTS WITHIN THE CRVIS ACTUATION GROUP. NO CHLORINE WAS PRESENT AS DETERMINED BY A REDUNDANT MONITOR. THERE WAS NO DAMAGE TO PLANT EQUIPMENT OR RELEASE OF RADIOACTIVITY AS A RESULT OF THIS EVENT.

[369] WOLF CREEK 1 DOCKET 50-482 LER 85-034
TECHNICAL SPECIFICATION CONTAINMENT WATER LEVEL INSTRUMENT OUT-OF-SERVICE.
EVENT DATE: 052485 REPORT DATE: 061485 NSSS: WE TYPE: PWR

(NSIC 194702) ON MAY 24, 1985, AT APPROXIMATELY 1600 CDT, A CONTAINMENT WATER LEVEL INSTRUMENT USED FOR ACCIDENT MONITORING WAS FOUND IN AN OUT-OF-SERVICE CONDITION. AN OBSTRUCTION ON THE SLIDE-POLE WOULD HAVE PREVENTED THE INSTRUMENT FLOAT FROM ARISING TO THE MAXIMUM CONTAINMENT FLOOD LEVEL AND COULD HAVE RESULTED IN ERRONEOUSLY LOW INDICATIONS OF CONTAINMENT WATER LEVEL DURING AN ACCIDENT CONDITION. THE OBSTRUCTION WAS SUBSEQUENTLY REMOVED AND THE CONTAINMENT WATER LEVEL INSTRUMENT WAS RETURNED TO SERVICE. THE SOURCE OF OBSTRUCTION - TAPE WRAPPED AROUND THE SLIDE POLE - IS BELIEVED TO BE FROM AN INSULATION ACTIVITY IN THE GENERAL AREA OF THE INSTRUMENT. SINCE THE DURATION OF THIS OUT-OF-SERVICE CONDITION IS BELIEVED TO BE GREATER THAN SEVEN DAYS, A VIOLATION OF TECH SPEC

ACTION STATEMENT 3.3.3.6A IS CONSIDERED TO HAVE OCCURRED. REDUNDANT CONTAINMENT WATER LEVEL INSTRUMENTATION WAS IN SERVICE DURING THIS TIME.

[370] WPPSS 2 DOCKET 50-397 LER 84-031 REV 3
 UPDATE ON CABLES FOUND UNINSULATED (APPENDIX R).
 EVENT DATE: 041284 REPORT DATE: 011785 NSSS: GE TYPE: BWR

(NSIC 194163) WHILE PERFORMING A REVIEW AND UPDATE OF THE WNP-2 APPENDIX R SAFE SHUTDOWN ANALYSIS, 10 CABLES REQUIRED FOR SAFE PLANT SHUTDOWN FOLLOWING A FIRE WERE IDENTIFIED ON 4-12-84 AS UNPROTECTED FROM FIRE (I.E., NO THERMOLAG FIRE PROTECTION MATERIAL HAD BEEN APPLIED TO THESE CABLES). THESE CABLES PROVIDED NECESSARY INDICATION AND CONTROL FOR THE DG, STANDBY SERVICE WATER, RHR, AND REACTOR BLDG HVAC SYSTEMS. DURING A SUBSEQUENT ONGOING INDEPENDENT REVIEW OF THIS ANALYSIS, ON 11-6-84 ANOTHER CABLE WAS IDENTIFIED AS UNPROTECTED FROM FIRE OVER A SHORT (15 FT) LENGTH OF VERTICAL CABLE TRAY. THIS CABLE PROVIDED AN ISOLATION SIGNAL TO A 1" RHR BYPASS VALVE. THIS SAME REVIEW IDENTIFIED 4 ADDITIONAL CABLES AS BEING UNPROTECTED ON 12-5-84. 3 OF 4 CABLES REQUIRE THE ADDITION OF THERMOLAG COATING TO THEIR ASSOCIATED CONDUITS. THE CABLES PROVIDED NECESSARY CONTROL AND INDICATION FOR THE DG, STANDBY SERVICE WATER, RHR AND REACTOR BLDG HVAC SYSTEMS. THE REMAINING CABLE REQUIRES WIRING CHANGES TO INCLUDE A TRANSFER SWITCH IN THE CIRCUIT TO PROVIDE ELECTRICAL ISOLATION FROM THE CONTROL ROOM. ON 12-21-84, IT WAS DISCOVERED THAT THE EMERGENCY STOP SWITCH (EPB-DG2) FOR THE DIV 2 EMERGENCY DG WAS NOT ISOLATED FROM THE MAIN CONTROL ROOM BY A REMOTE SHUTDOWN TRANSFER SWITCH.

[371] WPPSS 2 DOCKET 50-397 LER 85-022
 HPCS SYSTEM INOPERABLE WHEN LOGIC BUS DEENERGIZED.
 EVENT DATE: 030885 REPORT DATE: 032885 NSSS: GE TYPE: BWR

(NSIC 194595) ON 3-7-85, PLANT PERSONNEL ACCIDENTLY SHEARED OFF 2 HPCS INITIATION STATUS LAMP SOCKETS WHILE REPLACING NAMEPLATE IDENTIFICATION TAGS ON CONTROL ROOM BACK PANEL P-625. UPON DISCONNECTING WIRES FROM THE LAMP SOCKETS TO FACILITATE REPLACEMENT, THE HPCS MINIMUM FLOW VALVE STARTED TO CYCLE AND THE 'LOSS OF BUS POWER' ANNUNCIATOR FOR HPCS WAS ILLUMINATED. UPON ATTACHING THE LEADS TO THE NEW SOCKETS, SYSTEM STATUS RETURN TO NORMAL. AT THIS POINT, THE OPERATIONS CREW INVOLVED THE TECHNICAL STAFF IN THE PROBLEM AND AGAIN REVIEWED SYSTEM ELEMENTARY DRAWINGS IN AN ATTEMPT TO EXPLAIN THE PHENOMENA EXPERIENCED. WHEN NO JUSTIFICATION FOR THE CONDITIONS COULD BE DETERMINED, IT WAS AGREED TO REPLACE THE REMAINING BROKEN SOCKET AND MORE CLOSELY MONITOR SYSTEM RELAYS AND COMPONENT ACTUATIONS. AGAIN, CERTAIN SYSTEM RELAYS CHANGED STATUS AND THE MINIMUM FLOW VALVE STARTED TO OPEN. DURING BOTH PERIODS OF MAINTENANCE AN OPERATOR WAS STATIONED AT THE HPCS CONTROL ROOM CONSOLE AS ADDED ASSURANCE THAT THE SYSTEM WOULD BE AVAILABLE. INVESTIGATION INTO THE INCIDENT CONCLUDED ON 3-8-85 AT 1000 HRS WHEN IT WAS DETERMINED, BY REFERENCE TO PANEL CONNECTION DIAGRAMS, THAT THE COMMON SIDE OF ALL THE SYSTEM INITIATION STATUS LIGHTS WAS WIRED IN SERIES ON THE PORTION OF THE CIRCUIT CLOSEST TO THE POWER SOURCE. THUS, DISCONNECTING ANY OF THE LAMP SOCKETS RESULTED IN DE-ENERGIZING THE ENTIRE LOGIC BUS FOR THE SYSTEM.

[372] WPPSS 2 DOCKET 50-397 LER 85-024
 REACTOR SCRAM INITIATED BY DEH FAILURE.
 EVENT DATE: 032285 REPORT DATE: 041785 NSSS: GE TYPE: BWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194782) A REACTOR SCRAM ON APRM HI FLUX OCCURRED AT 1500 HOURS ON 3/22/85 WHILE OPERATING AT 100% POWER. THE HIGH FLUX EXCURSION WAS A RESULT OF AN INCREASING REACTOR PRESSURE TRANSIENT INDUCED BY A RAPID CLOSING MOTION OF THE TURBINE GOVERNOR VALVES (GV). GV CLOSURE WAS CAUSED BY A DIGITAL ELECTRO-HYDRAULIC (DEH) SYSTEM LOGIC CIRCUIT FAILURE WHICH ALLOWED A GV CLOSE

SIGNAL INSTEAD OF THE PRESSURE CONTROL SIGNAL TO BE SELECTED BY THE DEH ANALOG COMPUTER. THE GV CLOSE SIGNAL WAS GENERATED AS A RESULT OF "RESETTING" THE DEH DIGITAL COMPUTER. TWO SUBSEQUENT REACTOR PROTECTION SYSTEM (RPS) ACTUATIONS ON REACTOR WATER LEVEL 3 (WITH ALL RODS FULLY INSERTED) OCCURRED WHILE CONTROLLING REACTOR PRESSURE WITH SAFETY RELIEF VALVES (SRVS) DURING RECOVERY OPERATIONS WITH THE MAIN STEAM ISOLATION VALVE (MSIVS) ISOLATED.

[373] WPPSS 2 DOCKET 50-397 LER 85-026
CONTROL ROOM CHLORINE DETECTOR ACTUATES DUE TO TAPE DEPLETION.
EVENT DATE: 033185 REPORT DATE: 041785 NSSS: GE TYPE: BWR
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 194503) AN AUTOMATIC START OF THE CONTROL ROOM EMERGENCY FILTRATION SYSTEM OCCURRED WHEN A FALSE HIGH CHLORINE SIGNAL WAS GENERATED DUE TO CHLORINE DETECTOR TAPE DEPLETION. EXISTING CONTROLS ARE BEING REEMPHASIZED TO PREVENT RECURRENCE. PLANT PROCEDURE PPM 10.24.166 REQUIRES DAILY INSPECTION OF THE DETECTION TAPE. AN EXAMINATION OF THE DAILY INSPECTION CHECKLIST LOG SHEET AND SUBSEQUENT INVESTIGATION DETERMINED THE FOLLOWING: A PERIOD OF 2 DAYS EXISTS IN THE DAILY INSPECTION RECORDS WHICH DO NOT DOCUMENT INSPECTION OF THE DETECTOR TAPE. THE DETECTOR TAPE MAY NOT HAVE BEEN CHECKED DURING THIS PERIOD. THERE IS A POSSIBILITY THAT EXCESSIVE DETECTION TAPE COULD HAVE BEEN USED DURING DAILY ZEROING OF THE CHLORINE DETECTOR, CAUSING EARLY DEPLETION OF DETECTION TAPE. SIMILAR EVENT: 84-057, -093, AND -128.

[374] YANKEE ROWE DOCKET 50-029 LER 85-001
DETERMINATION OF INAPPROPRIATE LOCA METHODOLOGY ASSUMPTION/PREVIOUSLY APPROVED.
EVENT DATE: 051385 REPORT DATE: 061285 NSSS: WE TYPE: PWR

(NSIC 194822) ON 5/13/85 AT 1132 HOURS, WHILE OPERATING AT 100% POWER, IT WAS LEARNED THAT THE LOCA ANALYSIS MAY NOT BE IN COMPLIANCE WITH THE REQUIREMENTS OF SECTION I.A OF APPENDIX K TO 10 CFR 50 PERTAINING TO AXIAL POWER DISTRIBUTION ASSUMPTIONS. A NOTIFICATION WAS MADE PURSUANT TO 10 CFR 50.72(B)(1)(II)(A) AT 1154 HOURS. TO ASSURE THAT THE PLANT OPERATION IS WITHIN ANALYZED CONDITIONS, A MORE RESTRICTIVE CONTROL ROD LIMIT WAS IMMEDIATELY IMPLEMENTED. THE CONDITION WAS DISCOVERED DURING A REVIEW OF THE LOCA ANALYSIS AS THE RESULT OF A NOTIFICATION FROM THE NRC OF DEFICIENCIES IN THE EXXON LOCA ANALYSIS. THIS REPORT IS SUBMITTED DUE TO THE DETERMINATION THAT THE APPROVED LOCA EVALUATION MODEL (SEE NRC LETTER TO YAEC, DATED 12/4/75, AMENDMENT NO. 21 TO FACILITY OPERATING LICENSE NO. DPR-3) IS NO LONGER VALID BECAUSE THE ASSUMPTIONS REGARDING CORE AXIAL POWER DISTRIBUTION ARE INAPPROPRIATE. THIS LOCA ANALYSIS IS BASED ON A CHOPPED-COSINE AXIAL POWER DISTRIBUTION WHEN IN FACT A MORE LIMITING TOP-SKEWED AXIAL PROFILE COULD EXIST DURING PERIODS OF PLANT OPERATION. AS A RESULT, THE PLANT MAY HAVE OPERATED WITH AN AXIAL POWER PROFILE WHICH WOULD RESULT IN MORE SEVERE CALCULATED CONSEQUENCES THAN IDENTIFIED IN THE LOCA ANALYSIS. A MORE RESTRICTIVE CONTROL ROD LIMIT WILL BE IMPOSED DURING THE REMAINDER OF THIS CORE CYCLE AND EVALUATION OF FUTURE CORES' OPERATION IS CONTINUING. LER 77-30 DID REPORT A LOCA ERROR.

[375] YANKEE ROWE DOCKET 50-029 LER 85-002
CHECK VALVES NOT TESTED IN ACCORDANCE WITH THE ISI PROGRAM.
EVENT DATE: 052485 REPORT DATE: 062385 NSSS: WE TYPE: PWR

(NSIC 194823) ON MAY 24, 1985 WHILE OPERATING IN MODE 1 AT 100 PERCENT THERMAL POWER, AN INADEQUACY OF AN INSERVICE INSPECTION (ISI) PROGRAM IMPLEMENTING PROCEDURE WAS IDENTIFIED. THE INADEQUACY CONCERNED THE FREQUENCY AND METHOD OF TESTING A CONTAINMENT ISOLATION CHECK VALVE, CS-V-621. THE PROCEDURE AS PERFORMED QUARTERLY DID NOT DEMONSTRATE A POSITIVE STROKE (CLOSED POSITION) OF THE VALVE. ASME SECTION XI PERMITS STROKE TESTING QUARTERLY OR DURING COLD

SHUTDOWN (REFUELING). A POSITIVE STROKE OF CS-V-621 IS NOT PRACTICAL DURING PLANT OPERATION DUE TO SYSTEM CONFIGURATION AND TECH SPECS OPERABILITY REQUIREMENTS FOR THE SAFETY INJECTION SYSTEM. THIS PROCEDURAL INADEQUACY DID NOT PROPERLY IMPLEMENT TECH SPEC 4.0.5 AND IS THE RESULT OF PERSONNEL ERROR DURING ISI PROGRAM DEVELOPMENT. CORRECTIVE ACTIONS INCLUDED A REVIEW TO DETERMINE IF ANY SIMILAR INADEQUACIES IN RELATED VALVE SURVEILLANCE PROCEDURES EXISTED. THE REVIEW DETERMINED THAT TWO ADDITIONAL CHECK VALVES, LOCATED IN A SEPARATE SYSTEM, COULD NOT BE POSITIVELY STROKE TESTED DURING PLANT OPERATION. CORRECTIVE ACTIONS TO PREVENT RECURRENCE WILL INCLUDE APPROPRIATE REVISIONS TO THE ISI PROGRAM AND IMPLEMENTING PROCEDURES TO CORRECTLY INDICATE TESTING OF THE CHECK VALVES DURING COLD SHUTDOWN (REFUELING) IN ACCORDANCE WITH ASME SECTION SI REQUIREMENTS. THE IMPORTANCE OF ADEQUATE REVIEW OF ALL TECH SPEC IMPLEMENTING PROCEDURES WILL BE STRESSED TO ALL PERSONNEL.

[376] ZION 1 DOCKET 50-295 LER 84-040
 MISSED QUARTERLY SURVEILLANCE OF CONTAINMENT RADIATION MONITOR.
 EVENT DATE: 080284 REPORT DATE: 062185 NSSS: WE TYPE: PWR

(NSIC 194465) A MANAGEMENT REVIEW ON 5-23-85 OF THE CONTAINMENT SPING RADIATION MONITOR (1RIA-PR40) SURVEILLANCE RECORDS AND A STATION COMMITMENT TO THE PROPOSED RADIOLOGICAL ENV TECH SPECS (RETS) REVEALED THAT THE INITIAL QUARTERLY CHANNEL FUNCTIONAL TEST, WHICH WOULD HAVE BEEN DUE 8-2-84, HAD NOT BEEN PERFORMED. UNIT 1 WAS IN COLD SHUTDOWN AT THE TIME THIS SURVEILLANCE WAS DUE. THE CHANNEL FUNCTIONAL TEST FOR THE FOLLOWING PERIOD, PERFORMED ON 8-23-84, VERIFIED THAT THE MONITOR WAS WITHIN TOLERANCE. THE INITIAL SURVEILLANCE WAS MISSED DUE TO MISCOMMUNICATION AND MISUNDERSTANDING BETWEEN THE TECHNICAL STAFF, INSTRUMENT MAINTENANCE, AND RADIATION/CHEMISTRY DEPARTMENTS REGARDING THE SCOPE OF A STATION COMMITMENT (ON SITE REVIEW OSR/30/84). THE ON SITE REVIEW, CONDUCTED ON 4-9-84, WAS PERFORMED IN ORDER TO DEFINE THE SURVEILLANCE REQUIREMENTS FOR 1RIA-PR40 BECAUSE TECH SPECS FOR THIS MONITOR, WHICH REPLACED R-11 AND R-12, HAD NOT BEEN ISSUED. THE INSTRUMENT MAINTENANCE AND RADIATION/CHEMISTRY DEPARTMENTS HAD ACKNOWLEDGED THE ADHERENCE TO A CALIBRATION FREQUENCY OF AT LEAST ONCE PER REFUELING CYCLE BUT THE QUARTERLY FUNCTIONAL TEST REQUIRED BY RETS WAS NOT RECOGNIZED AS A TECH SPEC SURVEILLANCE.

[377] ZION 1 DOCKET 50-295 LER 85-014
 FAILURE OF OFF-GAS AIR EJECTOR RADIATION MONITOR.
 EVENT DATE: 020885 REPORT DATE: 052385 NSSS: WE TYPE: PWR

(NSIC 194473) ON 2-8-85, DURING A PURGE OF UNIT 1 CONTAINMENT WHILE IN COLD SHUTDOWN, THE OFF-GAS AIR EJECTOR NOBLE GAS RADIATION MONITOR (1RE-0015) WAS DISCOVERED TO BE FAILED LOW. THIS VIOLATED TECH SPEC 3.12.1.C, WHICH REQUIRES THIS MONITOR TO BE OPERABLE DURING RELEASE OF GASEOUS WASTES. THE PURGE WAS SECURED AND SHIFTLY GRAB SAMPLES WERE TAKEN TO MEET TECH SPEC 4.12.1.C WHICH IS THE REQUIRED ACTION FOR AN INOPERABLE MONITOR. HOWEVER SINCE THERE IS NO ACTION STATEMENT ASSOCIATED WITH TECH SPEC 3.12.1.C EXCEPT THAT LISTED UNDER SURVEILLANCE REQUIREMENT 4.12.1.C THIS REPORT IS BEING SUBMITTED AS A CONSERVATIVE ACTION. INVESTIGATION SHOWED THE FAILURE TO BE CAUSED BY A FAULTY TRANSISTOR IN THE TEST/CALIBRATE PRINTED CIRCUIT (PC) BOARD AND A DEFECTIVE RATE PC BOARD. BOTH BOARDS WERE REPLACED AND THE MONITOR WAS RECALIBRATED AND RETURNED TO SERVICE ON 2-11-85. SINCE THE UNIT WAS IN COLD SHUTDOWN, NO CONDENSER OFF-GAS FLOW WAS PRESENT. THERE WERE NO SAFETY IMPLICATIONS. THE NEW RADIOLOGICAL EFFLUENT TECH SPECS (CURRENTLY UNDER REVIEW) WILL NOT REQUIRE THIS MONITOR TO BE OPERABLE DURING COLD SHUTDOWN. THIS MONITOR HAS FAILED IN THE PAST FOR OTHER REASONS. NO FURTHER ACTION IS NECESSARY.

[378] ZION 1 DOCKET 50-295 LER 85-008
COMPONENT COOLING WATER TO RCP BEARING OIL COOLERS LOST.
EVENT DATE: 021685 REPORT DATE: 031885 NSSF: WE TYPE: PWR
OTHER UNITS INVOLVED: ZION 2 (PWR)
VENDOR: CROSBY VALVE

(NSIC 194171) UNIT 1 WAS AT COLD SHUTDOWN AND UNIT 2 WAS AT FULL POWER. SHORTLY AFTER ISOLATING 1MOV-CC9414 ON THE UNIT 1 COMPONENT COOLING RETURN LINE FROM THE RCP BEARING OIL COOLERS, A DECREASE IN COMPONENT COOLING SURGE TANK LEVEL WAS OBSERVED. LEAKAGE WAS STOPPED BY ISOLATING COMPONENT COOLING TO RCP BEARING OIL COOLERS. THE LEAK DID NOT RETURN WHEN RCP BEARING OIL COOLING WAS RESTORED. THE CAUSE OF THE LEAK WAS RCP BEARING OIL COMPONENT COOLING RELIEF VALVE 1CC9427, WHICH HAD LIFTED AND FAILED TO RESEAT. A SIMILAR EVENT OCCURRED ON 2-3-84 WHEN A DIFFERENT RELIEF VALVE IN THAT SYSTEM LIFTED AND FAILED TO RESEAT. BOTH OF THESE VALVES HAD BEEN REMOVED AND INSPECTED EARLIER. IN REINSTALLATION, THE NOZZLE RINGS HAD BEEN IMPROPERLY SET, THROUGH MISINTERPRETATION OF THE ZERO REFERENCE. ANALAGOUS VALVES ON UNIT 2 WERE CHECKED FOR THIS PROBLEM AND HAVE BEEN EVALUATED AS TO THEIR SAFETY SIGNIFICANCE. REPAIRS ARE BEING DONE AT THE EARLIEST DATA WITH REGARDS TO RELIEF CAPACITY AND SAFETY SIGNIFICANCE.

1379] ZION 1 DOCKET 50-295 LER 85-007
POTENTIAL UNMONITORED RELEASE OF AIRBORNE ACTIVITY.
EVENT DATE: 021885 REPORT DATE: 031585 NSSS: WE TYPE: PWR
VENDOR: MOORE PRODUCTS COMPANY

(NSIC 194667) DURING A ROUTINE OUTAGE SURVEILLANCE 1PY-RV85, THE CURRENT-TO-PNEUMATIC PRESSURE CONVERTER WAS FOUND FAILED TO ZERO. THIS CAUSED 1PCV-RV85B TO OPEN AND CREATED AN UNMONITORED ALTERNATE VENT PATH FROM THE UNIT 1 CONTAINMENT. CALCULATIONS MADE FROM THE HIGHEST ACTIVITY VENT FROM UNIT 1 CONTAINMENT UTILIZING THE TECH SPEC DISPERSION FACTOR SHOW THAT IF ALL GASEOUS AND PARTICULATE ACTIVITY WAS RELEASED THROUGH THE PURGE INLET RATHER THAN THE NORMAL VENT OUTLET, THE RELEASE WOULD STILL BE WELL WITHIN 10CFR20 LIMITS AT THE SITE BOUNDARY. TO PREVENT A RECURRENCE OF THIS INCIDENT, THE STANDING ORDERS NOW REQUIRE VERIFICATION OF PCV-RV85A&B POSITION PRIOR TO VENTING, AND A MODIFICATION HAS BEEN SUBMITTED TO CHANGE THE VENT DUCTING SO THAT A VACUUM IN THE CONTAINMENT WILL BE BROKEN BY DRAWING ON THE PURGE VALVE ROOM ATMOSPHERE RATHER THAN ON THE OUTSIDE AIR INTAKE.

[380] ZION 1 DOCKET 50-295 LER 85-013
REACTOR CAVITY INADVERTENTLY DILUTED.
EVENT DATE: 040285 REPORT DATE: 050285 NSSS: WE TYPE: PWR
VENDOR: GRINNELL CORP.

(NSIC 194573) ON 4-2-85, THE UNIT 1 REACTOR CAVITY WAS INADVERTENTLY DILUTED DURING THE EMERGENCY CORE COOLING SYSTEMS (ECCS) FULL FLOW TEST. DURING THE TEST ECCS PUMPS TAKE A SUCTION OFF THE RWST AND FILL THE REACTOR VESSEL/CAVITY. TWO SEPARATE CALCULATIONS WERE PERFORMED TO DETERMINE THE SHUTDOWN MARGIN AFTER THE DILUTION EVENT. THE FIRST METHOD WAS USING SOURCE RANGE COUNTS. USING THIS METHOD, SHUTDOWN MARGIN REMAINED GREATER THAN 10% (14.2% AS CALCULATED). THE SECOND METHOD USED WAS TO ATTEMPT TO DETERMINE THE BORON CONCENTRATION IN THE VESSEL AFTER THE DILUTION EVENT. THE SECOND METHOD CONSERVATIVELY DID NOT ASSUME COMPLETE MIXING AND RESULTED IN LOWER SHUTDOWN MARGINS, BUT THE SOURCE RANGE METHOD WAS BELIEVED TO BE A MORE ACCURATE INDICATION OF SHUTDOWN MARGIN. SEVERAL LONG AND SHORT TERM CORRECTIVE ACTIONS HAVE BEEN DEVELOPED TO PREVENT RECURRENCE.

[381] ZION 1 DOCKET 50-295 LER 85-015
 PARTIAL LOSS OF COMPONENT COOLING.
 EVENT DATE: 041785 REPORT DATE: 051785 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: ZION 2 (PWR)
 VENDOR: CROSBY VALVE

(NSIC 194474) SHORTLY AFTER STOPPING A COMPONENT COOLING PUMP, THE RELIEF VALVE 1CC9428 (CC EXCESS LETDOWN HX) LIFTED AND REMAINED OPEN DUE TO A MISPOSITIONED NOZZLE RING. UNIT 1 WAS IN REFUELING MODE AND UNIT 2 WAS AT 99% POWER OPERATION. THIS TYPE OF EVENT HAS HAPPENED TWICE PREVIOUSLY AT ZION (LER 295/85-008 AND DIR 84-020-00). IN THE FOLLOW-UP TO DIR 84-020-00, IT WAS DECIDED TO KEEP 1(2) CC9428 ISOLATED PENDING FURTHER INVESTIGATIONS. THE COMPONENT COOLING TO THE EXCESS LETDOWN HEAT EXCHANGER WAS TO REMAIN VALVED OUT ON BOTH UNITS UNLESS ABSOLUTELY NECESSARY. SINCE THE SECOND RELIEF LIFTING EVENT, THE STATION HAS BEEN WORKING ON PROPERLY RESETTING THE IMPROPERLY SET NOZZLE RINGS, WHICH CAUSED THE PROBLEM, ON ALL CC RELIEF VALVES, AT THE EARLIEST POSSIBLE DATE. BEFORE 1CC9428 HAD BEEN RESET, PERSONNEL PERFORMING A 10 YR ISI HYDROSTATIC TEST VALVE LINEUP UNISOLATED THE LINE CONTAINING THE RELIEF VALVE AND FAILED TO RE-ISOLATE IT IN THE RESTORED VALVE LINEUP. THE PRESSURE SPIKE FROM STOPPING A PUMP CAUSED IT TO LIFT. SINCE THE NOZZLE RING WAS STILL SET INCORRECTLY, IT FAILED TO RESEAT UNTIL THE LINE WAS AGAIN ISOLATED. APPROX 6000 GALS OF WATER WAS DUMPED TO UNIT 1 CONTAINMENT.

[382] ZION 1 DOCKET 50-295 LER 85-017
 SAFETY-RELATED SNUBBERS INOPERABLE DUE TO SEAL FAILURE.
 EVENT DATE: 051485 REPORT DATE: 061385 NSSS: WE TYPE: PWR
 VENDOR: GRINNELL CORP.

(NSIC 194753) DURING VISUAL INSPECTIONS OF SEISMIC SUPPRESSORS (SNUBBERS) PER TECH SPEC 4.22.1.A, TWO SNUBBERS WERE FOUND INOPERABLE. FAILURE OF THE SNUBBERS TO LOCK-UP WITHIN ACCEPTED VELOCITY LIMITS WAS DUE TO POOR SEAL CONDITIONS. ALL AFFECTED SNUBBERS WERE REBUILT WITH NEW ETHYLENE PROPYLENE SEALS, TESTED AND REINSTALLED. THE SNUBBERS ARE DESIGNED FOR A LOW PROBABILITY SEISMIC EVENT.

[383] ZION 1 DOCKET 50-295 LER 85-018
 CONTAINMENT ISOLATION VALVE LEAKAGE EXCEEDING LIMITS.
 EVENT DATE: 051685 REPORT DATE: 061485 NSSS: WE TYPE: PWR
 VENDOR: GRINNELL CORP.

(NSIC 194754) DURING PERFORMANCE OF TYPE C LEAK TESTING PER TECH SPEC SURVEILLANCE 15.6.10.E TWO VALVES WERE FOUND TO HAVE EXCESSIVE LEAKAGE. THE MAXIMUM ALLOWED LEAKAGE IS 285 SCFH. 1RC-8033 (NITROGEN TO PRESSURIZER RELIEF TANK ISOLATION VALVE) WAS LEAKING AT 255 SCFH AND 1DT9157 (NITROGEN TO RC DT ISOLATION VALVE) WAS LEAKING AT 262 SCFH. BOTH VALVES HAVE SINCE BEEN REPAIRED AND RETESTED. 1RC8033 NOW HAS 3.0 SCFH LEAKAGE AND 1DT-9157 HAS ZERO LEAKAGE. 1DT-9157 HAS A CHECK VALVE (1NT-9258) IN SERIES WITH IT. THIS CHECK VALVE WAS TESTED AND FOUND TO LEAK AT 5.0 SCFH. THIS WOULD HAVE BEEN THE MAXIMUM VALUE OF LEAKAGE THROUGH 1DT-9157 IN THE EVENT OF A LOCA. 1RC-8033 HAS A MANUAL ISOLATION VALVE (1RC-8045) IN SERIES WITH IT. COMBINED LEAKAGE FOR BOTH VALVES AFTER REPAIR OF 1RC-8033 WAS 3.0 SCFH WHICH MEANS THAT LEAKAGE THROUGH 1RC-8045 WAS LESS THAN OR EQUAL TO 3.0 SCFH AND 1RC-8045 COULD HAVE PROVIDED ISOLATION IN THE EVENT OF A LOCA.

[384] ZION 2 DOCKET 50-304 LER 85-003
 DIESEL GENERATOR TRIPS DURING TEST.
 EVENT DATE: 021385 REPORT DATE: 031585 NSSS: WE TYPE: PWR
 VENDOR: AMOT CONTROL CORP.

(NSIC 194175) ON 2-13-85 UNIT 2 WAS AT 99%, 0 DG WAS OUT OF SERVICE, OFF-SITE POWER WAS VERIFIED. AT 0100 HRS '2B' DG WAS STARTED FOR PT-11, 'DG LOADING TEST'. AT 0127 HRS '2B' DG TRIPPED WHILE THE OPERATOR WAS ATTEMPTING TO INCREASE GENERATOR LOAD FROM 2MW. A GSEP UNUSUAL EVENT WAS DECLARED FOR HAVING 2 OF 3 DG'S INOPERABLE. ALL NECESSARY NOTIFICATIONS WERE MADE. 'O' DG WAS PROMPTLY CLEARED FOR SERVICE AND STARTED UP PER PT-11. AT 0345, PT-11 WAS COMPLETED ON 'O' DG AND THE GSEP UNUSUAL EVENT WAS TERMINATED. TROUBLESHOOTING EFFORTS COULD NOT POSITIVELY DETERMINE THE CAUSE OF THE '2B' DG TRIP. '2B' DG WAS RETURNED TO SERVICE AFTER COMPLETING A SUCCESSFUL 4 HR PT-11 AT 2215 HRS ON 2-13-85. ON 2-28-85 '2B' DG TRIPPED DURING PT-11 AT 2MW. ENGINE TROUBLE ANNUNCIATION WAS MORE COMPLETE. THIS TRIP AND THE 2-13-85 '2B' DG TRIP WERE TRACED TO A MASTER TRIP VALVE THAT WOULD INTERMITTENTLY FAIL TO COMPLETELY RESET. THE MASTER TRIP VALVE WAS REPLACED. NO FURTHER CORRECTION IS NECESSARY.

[385] ZION 2 DOCKET 50-304 LER 85-008
REACTOR TRIP CAUSED BY PERSONNEL ERROR.
EVENT DATE: 031785 REPORT DATE: 041685 NSSS: WE TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 194669) WHILE AT STEADY STATE POWER OPERATION, UNIT 2 REACTOR TRIPPED DUE TO A TURBINE TRIP INDUCED BY ACTUATION OF "A" PHASE MAIN POWER TRANSFORMER BACK-UP DIFFERENTIAL (HU-4) RELAY. THE RELAY INITIATED A TRIP SIGNAL WHEN AN OPERATOR OPENED TEST CUTOFF SWITCHES IN THE RELAY CURRENT SENSING LEADS. OPERATING AND ELECTRICAL MAINTENANCE WERE ISOLATING CIRCUIT COMPONENTS AT THE TIME TO LOCATE A D.C. GROUND IN THE GENERATOR AND TRANSFORMER PROTECTION CABINETS. WHEN SELECTING THE SWITCHES TO BE OPENED, THE CIRCUIT DRAWING WAS MIS-INTERPRETED BY OPERATING AND ELECTRICAL MAINTENANCE PERSONNEL INVOLVED. THE PLANT RESPONDED TO THE EVENT WITH NO EQUIPMENT PROBLEMS AND OPERATING PERSONNEL VERIFIED A SAFE SHUTDOWN CONDITION BY FOLLOWING THE EMERGENCY OPERATING PROCEDURE EOP-1. PERSONNEL INVOLVED WERE INFORMED OF THE CORRECT SWITCHING SCHEME TO ISOLATE COMPONENT. TO PREVENT RECURRENCE, A STATION "PRO" INVESTIGATION WAS INITIATED. THAT INVESTIGATION IS NOW UNDER REVIEW BY THE PLANT MANAGER. THE FINAL STUDY AND ITS RECOMMENDATIONS WILL BE THE SUBJECT OF A SUPPLEMENTAL REPORT

[386] ZION 2 DOCKET 50-304 LER 85-009
FAILURE TO WITHDRAW REACTOR VESSEL SURVEILLANCE CAPSULE "X".
EVENT DATE: 040985 REPORT DATE: 050985 NSSS: WE TYPE: PWR

(NSIC 194715) DURING THE UNIT 2 1984 OUTAGE, THE UNIT 2 REACTOR VESSEL MATERIAL SURVEILLANCE CAPSULE "X" WAS NOT REMOVED AS SPECIFIED UNDER THE PRESENT TECH SPEC 4.3.4 CAPSULE WITHDRAWAL SCHEDULE DUE TO AN ADMINISTRATIVE OVERSIGHT. A PREPARED CHANGE TO TECH SPEC 4.3.4 WILL INCORPORATE A REVISED SURVEILLANCE CAPSULE WITHDRAWAL SCHEDULE AS REQUIRED UNDER THE CURRENT APPENDIX H OF 10 CFR 50. THE REVISED SCHEDULE INCLUDES ALL REMAINING CAPSULES, INCLUDING CAPSULE "X", WHICH UNDER THIS PROPOSAL WOULD NOT BE SCHEDULED FOR REMOVAL UNTIL APPROXIMATELY 1987. A PROCEDURE CHANGE IS BEING MADE WHICH WILL REQUIRE THE CALCULATION OF REACTOR VESSEL EFFECTIVE FULL POWER YEARS (EPFY) ON A REGULAR BASIS.

[387] ZION 2 DOCKET 50-304 LER 85-010
MISSED BORIC ACID TRANSFER PUMP SURVEILLANCE.
EVENT DATE: 042285 REPORT DATE: 052285 NSSS: WE TYPE: PWR

(NSIC 194476) THE REQUIRED WEEKLY FUNCTIONAL TEST OF BORIC ACID TRANSFER PUMPS WAS MISSED, DUE TO AN OVERSIGHT ON THE PART OF THE SHIFT SUPERVISORS. TO PREVENT RECURRENCE, THE OPERATING STAFF WILL TRACK REQUIRED WEEKLY SURVEILLANCES. A DAILY REVIEW WILL BE MADE OF SURVEILLANCES DUE THAT DAY, AND THE SHIFT SUPERVISOR WILL BE NOTIFIED OF ANY WHICH ARE OUTSTANDING. NO FURTHER ACTION IS NECESSARY. IN CALENDAR 1984, ZION STATION REPORTED 4 MISSED SURVEILLANCES BY THE OPERATING

[388] ZION 2 DOCKET 50-304 LER 85-011
FAILURE TO REVIEW HYDROGEN MONITOR PANELS.
EVENT DATE: 050385 REPORT DATE: 053185 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: ZION 1 (PWR)
VENDOR: COMSIP DELPHI INC.

(NSIC 194755) DURING SHIFTLY SURVEILLANCE OF THE UNIT 1 AND 2 HYDROGEN MONITOR PANELS, IT WAS NOTED THAT THE PREVIOUS SHIFT'S SURVEILLANCE HAD NOT BEEN PERFORMED. THIS IS A VIOLATION OF TECH SPEC 4.8.8.B.1. NO CHANGES FROM PREVIOUS PANEL STATUS WERE NOTED WHEN SURVEILLANCE WAS RESUMED. THERE WERE NO SAFETY IMPLICATIONS. THE MISSED SURVEILLANCE WAS DUE TO PERSONNEL ERROR. THE RAD-CHEM TECHNICIAN ON DUTY HAD NOT ATTENDED A TRAINING SESSION ON THE REQUIREMENT (DUE TO ILLNESS) AND WAS UNAWARE OF ITS EXISTENCE. HE HAS SINCE BEEN TRAINED. TWO RAD-CHEM FOREMEN FAILED TO NOTE FROM THE SHIFT TURNOVER THAT THE SURVEILLANCE HAD BEEN MISSED. THIS WAS DISCUSSED WITH THEM. ALL RAD-CHEM FOREMEN WILL RECEIVE A MEMO ON THIS SUBJECT AND IT WILL BE A TOPIC OF DISCUSSION AT THE NEXT GROUP MEETING. NO FURTHER ACTION IS NECESSARY.

COMPONENT INDEX

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13. 1. ABSTRACT (200 words or less) This monthly report contains Licensee Event Report (LER) operational information that was processed into the LER data file of the Nuclear Safety Information Center (NSIC) during the one month period identified on the cover of the document. The LERs, from which this information is derived, are submitted to the Nuclear Regulatory Commission (NRC) by nuclear power plant licensees in accordance with federal regulations. Procedures for LER reporting for revisions to those events occurring prior to 1984 are described in NRC Regulatory Guide 1.16 and NUREG-1061, <i>Instructions for Preparation of Data Entry Sheets for Licensee Event Reports</i> . 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, <i>Licensee Event Report System - Description of Systems and Guidelines for Reporting</i> , provides supporting guidance and information on the revised LER rule. The LER summaries in this report are arranged alphabetically by facility name and then chronologically by event date for each facility. Component, system, keyword, and component vendor indexes follow the summaries. Vendors are those identified by the utility when the LER form is initiated; the keywords for the component, system, and general keyword indexes are assigned by the computer using correlation tables from the Sequence Coding and Search System.			
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