
Licensee Event Report (LER) Compilation

For month of June 1985

Oak Ridge National Laboratory

Prepared for
U.S. Nuclear Regulatory
Commission

Available from

Superintendent of Documents
U.S. Government Printing Office
Post Office Box 37082
Washington, D.C. 20013-7082

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

Single copies of this publication
are available from National Technical
Information Service, Springfield, VA 22161

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Manuscript Completed: July 1985
Date Published: July 1985

Oak Ridge National Laboratory
Nuclear Safety Information Center
Oak Ridge, TN 37831

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

Abstract

This monthly report contains Licensee Event Report (LER) operational information that was processed into the LER data 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 2 DOCKET 50-368 LER 85-001
INADVERTENT RECIRCULATION ACTUATION SIGNAL DURING PLANT PROTECTION SYSTEM TESTING.
EVENT DATE: 010285 REPORT DATE: 020695 NSSS: CE TYPE: PWR

(NSIC 193476) ON 1-2-85, DURING MONTHLY SURVEILLANCE TESTING OF PLANT PROTECTION SYSTEM CHANNEL 'A', WITH THE UNIT AT 100% FULL POWER, AN INADVERTENT ACTUATION SYSTEM (RAS) OCCURRED. THE RAS AUTOMATICALLY CAUSED THE SUCTION FOR THE SAFETY INJECTION PUMPS TO BE SHIFTED FROM THE REFUELING WATER TANK (RWT) TO THE CONTAINMENT SUMP RESULTING IN GRAVITY DRAINING OF 50,000 GALS OF BORATED WATER FROM THE RWT TO THE REACTOR BUILDING SUMP. THE CAUSE OF THE EVENT WAS ATTRIBUTED TO A SPURIOUS RAS SIGNAL GENERATED WITHIN THE MATRIX LOGIC CIRCUIT IN ESPAS TRIP PATH #4 WHILE TRIP PATH #2 WAS IN THE TRIPPED CONDITION DURING REQUIRED SURVEILLANCE TESTING. THIS RESULTED IN A 2 OUT OF 4 TRIP LOGIC SEQUENCE AND SUBSEQUENT RAS ACTUATION. RWT LEVEL WAS RESTORED IN 3 HRS AND NORMAL PROCESSING OF THE BORATED WATER IN THE CONTAINMENT SUMP COMMENCED. SUBSEQUENT TESTING OF THE ESPAS TRIP PATH #4 LOGIC MATRIX RELAYS DID NOT IDENTIFY A RELAY DEGRADATION OR FAILURE, HOWEVER, THE MATRIX RELAY CARD WHICH IS SUSPECTED TO HAVE CAUSED THE ACTUATION WAS REPLACED.

[2] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 85-002
REFUELING WATER TANK LEVEL TRANSMITTERS INOPERABLE DUE TO FREEZING.
EVENT DATE: 012185 REPORT DATE: 022185 NSSS: CE TYPE: PWR
VENDOR: ROSEMOUNT, INC.

(NSIC 193622) ON 1-20-85, AT 0415 HRS WITH THE UNIT OPERATING AT 100% FULL POWER, RWT LEVEL TRANSMITTERS 2LT-5639-3 AND 2LT-5640-4 FAILED HIGH DUE TO TRANSMITTER FREEZING AS A RESULT OF AMBIENT WEATHER CONDITIONS, APPROX 2 DEGREES F WITH A 20 MPH WIND SPEED. THIS RENDERED CHANNELS 3 AND 4 OF THE RECIRCULATION ACTUATION SYSTEM INOPERABLE AND CAUSED ENTRY INTO THE ACTION REQUIREMENTS OF TECH SPEC 3.3.2.1. AT 0525 HRS, RAS CHANNEL 1 LEVEL TRANSMITTER 2LT-5636-1 ALSO FAILED HIGH DUE TO TRANSMITTER FREEZING. THIS RESULTED IN 3 OF 4 RWT LEVEL TRANSMITTERS BEING INOPERABLE AND CAUSED ENTRY INTO TECH SPEC 3.0.3. AT 0618 HRS TECH SPEC 3.0.3 WAS EXITED WHEN CHANNEL 3 LEVEL TRANSMITTER OPERABILITY WAS RESTORED. TECH SPEC 3.3.2.1 ACTION WAS EXITED AT 1530 HRS WHEN CHANNEL 1 LEVEL TRANSMITTER OPERABILITY WAS RESTORED. CORRECTIVE ACTIONS INCLUDED CONSTRUCTION OF TEMPORARY ENCLOSURES AROUND THE EXISTING TRANSMITTER WEATHER PROTECTION CABINETS AND PROVIDING ADDITIONAL HEAT SOURCES FOR THE INSTRUMENTATION TO SUPPLEMENT INSTALLED FREEZE PROTECTION. NO DAMAGE TO THE INSTRUMENTATION WAS OBSERVED AND INSTRUMENTATION CALIBRATION WAS VERIFIED PRIOR TO DECLARING AN INSTRUMENT OPERABLE. ADDITIONAL ENGINEERING AND OPERATIONS EVALUATION OF THIS EVENT IS IN PROGRESS. SIMILAR EVENTS: 368/79-001, 368/79-002, 368/79-101, 368/80-091, AND 368/81-009.

[3] ARNOLD DOCKET 50-331 LER 84-040
AUXILIARY TRANSFORMER FAILURE AND REACTOR SCRAM.
EVENT DATE: 110484 REPORT DATE: 120484 NSSS: GE TYPE: BWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 193503) DURING NORMAL OPERATION AT 56% POWER ON 11-4-84, THE AUX TRANSFORMER THROUGH WHICH ONSITE POWER IS FED TO THE NONESSENTIAL BUSES CATASTROPHICALLY FAILED, CAUSING THE MAIN GENERATOR BREAKERS AS WELL AS THE AUX TRANSFORMER BREAKERS TO THE NONESSENTIAL BUSES TO OPEN. THE MAIN TURBINE TRIPPED AND THE REACTOR SCRAMMED FROM TURBINE STOP VALVE CLOSURE AS DESIGNED. THE FAILURE ALSO CAUSED DAMAGE AND CARBON DEPOSITS ON TWO 161 KV LINE INSULATOR STRINGS AND BUSHINGS OF THE ADJACENT STARTUP TRANSFORMER PRIMARY. THE DELUGE SYSTEMS FOR BOTH TRANSFORMERS INITIATED. THE CARBON DEPOSITS CAUSED THE STARTUP TRANSFORMER TO TRIP ON A PHASE TO GROUND FAULT. WHEN THE STARTUP TRANSFORMER TRIPPED, THE ESSENTIAL LOADS TRANSFERRED TO THE STANDBY TRANSFORMER BUT ALL NONESSENTIAL LOADS WERE LOST. GIVEN THESE CONDITIONS, THE SCRAM AND RECOVERY

(NSIC 193465) ON 1-23-85 DURING NORMAL POWER OPERATION, THE RWCU SYSTEM ISOLATED TWICE AS A RESULT OF MOMENTARY SPURIOUS SIGNALS IN THE RWCU LEAK DETECTION INSTRUMENTATION. ON 1-25-85 THE SYSTEM ALSO ISOLATED IN AN IDENTICAL MANNER. IN EACH EVENT THE RWCU SYSTEM WAS VERIFIED TO BE FREE OF ACTUAL LEAKAGE CONDITIONS AND RETURNED TO NORMAL OPERATION. THIS EVENT IS A REPETITION OF EVENTS REPORTED IN LER'S 84-019, 84-022, 84-036 AND 84-039. MAINTENANCE PERSONNEL INSPECTED THE SYSTEM AND FOUND NO APPARENT CAUSE FOR THE SPURIOUS SIGNALS. THE SYSTEM WILL BE EXTENSIVELY TESTED DURING THE PRESENT REFUEL OUTAGE (COMMENCED 2-1-85) IN AN EFFORT TO ELIMINATE SPURIOUS ACTUATIONS.

(INSIC 193417) ON 1-28-85 AT 0250 HRS, WITH THE REACTOR IN NORMAL POWER OPERATION, THE HPCI WAS DECLARED INOPERABLE DUE TO THE FAILURE OF THE HPCI TURBINE STOP VALVE TO OPEN DURING THE COURSE OF A MONTHLY SURVEILLANCE TEST. PER TECH SPECS 3.5.D.2 AND 4.5.D.2, DUANE ARNOLD ENERGY CENTER ENTERED A 7 DAY LCO. AFTER CYCLING AND FLUSHING WITH OIL THE HPCI TURBINE STOP VALVE PILOT OIL TRIP SOLENOID VALVE, THE TURBINE STOP VALVE WAS FOUND TO FUNCTION AS PER DESIGN. HPCI WAS DECLARED OPERABLE ON 1-29-85 AND THE 7 DAY LCO CANCELLED. THE ROOT CAUSE OF THE INOPERABILITY OF HPCI WAS THE PILOT OIL TRIP SOLENOID VALVE FOR THE TURBINE STOP VALVE BEING STUCK IN THE OPEN POSITION. UPON EXAMINATION ON 2-8-85, WITH THE REACTOR SHUTDOWN FOR A REFUEL OUTAGE, THE DIAPHRAGM OF THE TRIP SOLENOID VALVE WAS FOUND TO HAVE SOME DISINTEGRATION, RESULTING IN THE VALVE'S PLUNGER BEING STUCK ABOVE THE SEAT. DISCUSSIONS WITH THE MANUFACTURER, SKINNER VALVE, INDICATE THE CAUSE OF THE DIAPHRAGM DISINTEGRATION WAS END-OF-LIFE FAILURE. THE VALVE WAS REPLACED, AND PREVENTIVE MAINTENANCE TO REPLACE THE VALVE'S EXPENDABLE PARTS IS SCHEDULED FOR EVERY THIRD REFUEL OUTAGE. NO PERIODIC REPLACEMENT REQUIREMENTS FOR THIS VALVE PREVIOUSLY HAD BEEN IDENTIFIED BY THE TURBINE VENDOR, TERRY STEAM TURBINE CO. THE VENDOR WILL BE INFORMED OF THE DETAILS OF THIS LER.

(NSIC 193418) AT 2351 HRS ON 2-2-85, THE DUANE ARNOLD ENERGY CENTER EXPERIENCED A RPS TRIP SHORTLY AFTER A CONTROLLED SHUTDOWN FOR A SCHEDULED REFUEL OUTAGE DUE TO AN AVERAGE POWER RANGE MONITOR UPSCALE (GREATER THAN 15% REACTOR POWER) TRIP. AT THE TIME OF THE EVENT, THE REACTOR HAD BEEN IN SHUTDOWN FOR APPROX 4 HRS WITH PRESSURE LESS THAN 200 PSIG. ALL CONTROL RODS WERE FULLY IN PRIOR TO THE RPS TRIP AND THERE WAS NO SUBSEQUENT ROD MOVEMENT OR POST-SCRAM TRANSIENT. THE APRM SCRAM ORIGINATED FROM A SHORTED LPRM THAT HAS COMMON INPUTS TO THE 'A' AND 'B' APRM CHANNELS. INVESTIGATION IS UNDERWAY TO DETERMINE THE LPRM FAILURE MODE AND TO IMPLEMENT CORRECTIVE ACTIONS. PRELIMINARY TROUBLESHOOTING HAS REVEALED THAT

THERE WAS A DIMINISHED RESISTANCE POINT ALONG THE LPRM SIGNAL OUTPUT. TESTING HAS INDICATED THAT THIS PROBLEM IS NOT LOCATED IN THE LPRM CABINET OR CABLING, BUT IS MOST LIKELY STEMMING FROM THE SIGNAL CABLE CONNECTOR BENEATH THE VESSEL OR A FAILED DETECTOR. IT IS ANTICIPATED THAT THE LPRM WILL BE REPAIRED AND RETURNED TO OPERABLE STATUS PRIOR TO STARTUP. AS THE REACTOR WAS AT 0% POWER AND IN THE SHUTDOWN MODE, NO VESSEL PARAMETER CHANGES WERE EXPERIENCED.

[7] ARNOLD DOCKET 50-331 LER 85-005
FOUR MSIV'S AND FEEDWATER CHECK VALVES LEAK.
EVENT DATE: 020685 REPORT DATE: 030885 NSSS: GE TYPE: BWR
VENDOR: ANCHOR/DARLING VALVE CO.

(INSC 193572) WHILE THE PLANT WAS IN A COLD SHUTDOWN CONDITION DURING A REFUEL OUTAGE, TYPE C LOCAL LEAK RATE VALVE TESTING WAS BEING CONDUCTED ON CONTAINMENT ISOLATION VALVES. ON 2-6-85, FOUR MSIV'S (ONE ON EACH STEAM LINE) FAILED TO MEET THE LEAKAGE CRITERIA OF 11.5 STANDARD CUBIC FT PER HR SPECIFIED IN TECH SPEC 4.7.A.2.C.3. AS THE LEAKAGE PAST THE REDUNDANT VALVE ON EACH STEAM LINE WAS LESS THAN THE CRITERIA, THE DESIGN BASIS ISOLATION FUNCTION OF THE MSIV'S WAS STILL MAINTAINED. HOWEVER, THE LEAKAGE PAST THE VALVES EXCEEDED THE CAPACITY OF THE MSIV LEAKAGE CONTROL SYSTEM (USING DESIGN BASIS ACCIDENT ASSUMPTIONS). THE MSIV LCS OPERABILITY IS NOT REQUIRED TO MAINTAIN POSTULATED DESIGN BASIS ACCIDENT RADIOLOGICAL CONSEQUENCES WITHIN 10 CFR 100 LIMITS AS STATED IN UFAR, SECTION 6.7. WHILE TESTING THE FEEDWATER CHECK VALVES LOCATED INSIDE CONTAINMENT (A AND B INBOARD FEEDWATER CHECKS), IT WAS DISCOVERED THAT BOTH EXCEEDED THEIR SPECIFIED LOCAL LEAK RATE CRITERIA. THE LEAKAGE PAST THE INBOARD AND OUTBOARD VALVE IN THE 'B' FEEDWATER LINE WOULD LIKELY EXCEED THE TOTAL ALLOWABLE CONTAINMENT LEAK RATE (TYPE B AND TYPE C TESTS) OF .6 LA. IT IS NOTED THAT THESE VALVES WERE TESTED WITH AIR AND THEY WOULD MOST LIKELY BE FILLED WITH WATER IN ACCIDENT CONDITIONS. TESTING, THEREFORE, IS A CONSERVATIVE PREDICTION OF LEAK RATES. ALL OF THE VALVES ARE CURRENTLY BEING REPAIRED AND WILL BE SUCCESSFULLY RETESTED BEFORE THE OUTAGE ENDS.

[8] ARNOLD DOCKET 50-331 LER 85-006
INADVERTENT DIESEL GENERATOR AND STANDBY FILTER UNIT INITIATION.
EVENT DATE: 030385 REPORT DATE: 040385 NSSS: GE TYPE: BWR

(INSC 193680) ON 3-3-85, WITH THE REACTOR SHUTDOWN AND DEFUELED FOR A REFUELING OUTAGE, ALL APPLICABLE LOADS WERE BEING TRANSFERRED FROM 4160 V ESSENTIAL BUS 1A3 TO ESSENTIAL BUS 1A4 IN ANTICIPATION OF DEENERGIZING 1A3 FOR BREAKER MAINTENANCE. THE 'A' AND 'B' INSTRUMENT AC DISTRIBUTION PANELS WERE BEING TRANSFERRED FROM 1A3 TO 1A4 VIA CONTROL ROOM INSTRUCTIONS TO AN AUX OPERATOR. AS A RESULT, THE 'A' CONTROL ROOM STANDBY FILTER UNIT AND A GROUP III ISOLATION WERE AUTO-INITIATED. WHILE RESETTNG THE ISOLATIONS AND ALARMS RESULTING FROM THE 'A' INSTRUMENT PANEL BEING DEENERGIZED, THE PREPLANNED SEQUENCE TO DEENERGIZE 1A3 WAS CONTINUED. UPON DEENERGIZING 1A3, THE 'A' STANDBY DG, WHICH HAD NOT BEEN LOCKED OUT, BEGAN TO AUTO-START ON A PERCEIVED LOSS OF OFFSITE POWER TO 1A3. THE GENERATOR WAS QUICKLY SECURED BEFORE IT COULD START AND ASSUME A LOAD. AS LONG-TERM CORRECTIVE ACTIONS, REVIEW AND REVISION OF APPLICABLE PROCEDURES AND INSTRUCTIONS TO PROVIDE BETTER OPERATOR GUIDANCE IS BEING INITIATED.

[9] BEAVER VALLEY 1 DOCKET 50-334 LER 85-003
INADVERTENT REACTOR TRIP AND SAFETY INJECTION OCCURS.
EVENT DATE: 011685 REPORT DATE: 021485 NSSS: WE TYPE: PWR

(NSIC 193577) ON 1-16-85, AT 1528 HRS, METER AND CONTROL REPAIRMEN WERE PERFORMING MAINTENANCE SURVEILLANCE PROCEDURE 6.40, 'T-RC 432 DELTA-T T-AVG PROTECTION INSTRUMENT CHANNEL III CALIBRATION', WHEN THE FEEDER BREAKER FROM VITAL BUS III TO A PORTION OF PROTECTION CHANNEL III OPENED. THIS PRODUCED

(NSIC 193446) DURING NORMAL STARTUP OF UNIT 1, AN UNIDENTIFIED DRYWELL LEAKAGE RATE IN EXCESS OF THAT ALLOWED BY TECH SPECS WAS NOTED. AN ORDERLY SHUTDOWN WAS INITIATED IN ACCORDANCE WITH TECH SPEC REQUIREMENTS. THE LEAK WAS IDENTIFIED TO BE CAUSED BY A TEMPORARY HOSE WHICH WAS USED TO TEST A CORE SPRAY CHECK VALVE LOCATED INSIDE THE DRYWELL BETWEEN THE INBOARD AND OUTBOARD ISOLATION VALVES. IN ADDITION TO THE HOSE LEAK, A SMALL CRACK IN A SOCKET WELD WAS DISCOVERED ON 'A' RECIRCULATION DISCHARGE BONNET VENT VALVE 68-509 ON PRINCIPAL RECIRCULATION VALVE PCV-68-3. THE BONNET VENT VALVES AND ASSOCIATED PIPE WERE REMOVED. THE SOCKET OPENING WAS PLUGGED AND SEAL WELDED. THE CAUSE FOR THE WELD TO CRACK WAS FATIGUE FAILURE DUE TO VIBRATION. NO SAFETY LIMITS WERE EXCEEDED. PROCEDURE INADEQUACY WAS THE ROOT CAUSE FOR THE FIRST EVENT. THE PERTINENT PROCEDURES HAVE BEEN REVISED TO PREVENT FURTHER OCCURRENCES.

(NSIC 193447) UNIT 1 WAS SHUT DOWN FOR MAINTENANCE, UNIT 2 WAS IN A REFUELING OUTAGE, AND UNIT 3 WAS AT 100% POWER. ALL 3 UNITS WERE AFFECTED BY THE EVENT. ON 1-24-85, DURING THE PERFORMANCE OF SURVEILLANCE INSTRUCTION 4.2.B.39A, CORE SPRAY LOGIC FUNCTIONAL TEST, A MAINTENANCE ELECTRICIAN WAS REPLACING THE COVER ON RELAY 14A-K37A. THE ARMATURE OR CONTACT FINGERS WERE BUMPED WITH THE COVER CAUSING THE RELAY TO PICKUP AND SEAL IN. (THIS RELAY IS ONE OF THE DRYWELL HIGH PRESSURE AND REACTOR LOW LEVEL INITIATION RELAYS.) THIS RESULTED IN STARTING ALL UNIT 1, 2, AND 3 DG'S AND CORE SPRAY PUMPS 3A AND 3C. ANNUNCIATIONS WERE IMMEDIATELY RECEIVED IN THE CONTROL ROOM AND THE LICENSED REACTOR OPERATOR, AFTER VERIFYING NO UNUSUAL EVENT WAS PRESENT, SECURED THE AFFECTED EQUIPMENT. STRIKING OF THE ARMATURE WAS CAUSED BY INSUFFICIENT ATTENTION TO THE TASK BEING PERFORMED. PREVIOUS EVENTS - BFR0-50-296/84-008 AND 50-259/84-032.

(NSIC 193393) ON 2-5-85, DURING FUNCTIONAL TESTING OF THE PROTECTIVE RELAYS FOR THE UNIT 2 STATION TRANSFORMER A AND B, UNIT 2 MAIN TRANSFORMER, AND UNIT 2 MAIN

(NSIC 193664) DURING SURVEILLANCE TESTING OF THE HPCI SYSTEM, THE TIME TO REACH RATED FLOW WAS MEASURED TO BE 2 SECS LONGER THAN THE 25 SECS SPECIFIED BY THE SURVEILLANCE INSTRUCTION. THE HPCI SYSTEM WAS SUBSEQUENTLY DECLARED INOPERABLE. UPON INVESTIGATION, IT WAS IDENTIFIED THAT THE TIME REQUIRED TO OPEN THE TURBINE GOVERNOR AND TRIP VALVES WAS SLOWER THAN NORMAL. THE CAUSE OF THE SLOW RESPONSE WAS A BALL VALVE ON THE TURBINE HYDRAULIC SYSTEM WHICH WAS FOUND INADVERTENTLY CLOSED. THE AUX OIL PUMP WAS ALSO RUNNING AT A SLOWER THAN RATED SPEED. THE BALL VALVE WAS OPENED, OIL PRESSURE SETTINGS WERE RESET, AND THE TEST WAS LATER PASSED. THE HANDLE ON THE BALL VALVE HAS BEEN REMOVED, AND THE TURBINE HYDRAULIC SYSTEM OIL HAS BEEN CLEANED. ADDITIONAL EVALUATION OF THE AUX OIL PUMP PERFORMANCE IS BEING PURSUED. PREVIOUS EVENTS - 296/85-003, 260/83-009 AND 296/81-024.

(NSIC 193603) DURING PERFORMANCE OF THE HPCI SYSTEM MOTOR OPERATED VALVE OPERABILITY SURVEILLANCE INSTRUCTION 4.5.E.1.C ON UNIT 1, THE HPCI INVERTER FUSE CLEARED. DURING THE TEST, THE INVERTER FAILURE ALARM INITIATED WHEN FLOW CONTROL VALVES 73-6A AND 73-6B WERE BEING CYCLED. AN INVESTIGATION SHOWED THAT THE HPCI INVERTER FUSE HAD BLOWN. THE HPCI INVERTER, PCV-73-6A AND PCV-73-6B ARE ALL CONNECTED IN PARALLEL ACROSS THE SAME DC POWER SOURCE. INVESTIGATIONS REVEALED FAILED 1500 OHM RESISTORS THAT ARE IN CONJUNCTION WITH A DIODE, PARALLEL THE SOLENOID COILS OF PCV-73-6A AND PCV-73-6B. THE RESISTOR DIODE COMBINATION LIMITS THE VOLTAGE TRANSIENTS IN THE CIRCUIT. THE FUSE WAS REPLACED, AND SURVEILLANCE INSTRUCTIONS 4.5.E.1.C AND 4.5.E.1.B WERE SUCCESSFULLY COMPLETED. REDUNDANT SYSTEMS WERE AVAILABLE AS REQUIRED BY TECH SPEC 3.5.E.2. AN INVESTIGATION DID NOT REVEAL ANY CAUSE FOR THE FUSE CLEARING. THIS IS CONSIDERED A RANDOM EVENT. SIMILAR EVENTS: 260/83-028, 260/83-034 AND 260/83-046.

(NSIC 193665) FOLLOWING INDUCTION HEATING STRESS IMPROVEMENT ON UNIT 2, THE REMOVAL OF A THERMOCOUPLE REVEALED A THROUGH WALL CRACK APPROX 1 INCH LONG AT A WELD LOCATED AT THE JUNCTION OF A RECIRCULATION SYSTEM HEADER AND 1 OF ITS RISERS. RESULTS SUGGEST INTERGRANULAR STRESS CORROSION CRACKING OF THE BASE METAL HEAT-AFFECTED ZONE. THIS CRACK WILL BE REPAIRED BY WELD OVERLAY AND SIMILAR WELDS WILL BE PENETRANT TESTED PRIOR TO STARTUP. SIMILAR EVENTS: 296/79-019, 260/82-040, 296/84-006 AND 260/84-008.

[16] BROWNS FERRY 2 DOCKET 50-260 LER 85-003
UNPLANNED INITIATION OF REACTOR PROTECTION SYSTEM.
EVENT DATE: 022785 REPORT DATE: 032985 NSSS: GE TYPE: BWR

(NSIC 193666) DURING THE CYCLE 5 REFUELING OUTAGE FOR UNIT 2, AN AUTOMATIC SCRAM OCCURRED DURING A MODIFICATION TO THE RPS. ALL FUEL HAD BEEN PREVIOUSLY REMOVED FROM THE REACTOR VESSEL. AN AUTOMATIC SCRAM OCCURRED WHEN FUSES WERE REMOVED FROM THE CIRCUITRY IN THE RPS. AFTER DETERMINING THE CAUSE OF THE SCRAM, THE UNIT OPERATOR TOOK ACTIONS NECESSARY TO RESET THE SCRAM. THE WORKPLAN USED TO CONTROL THE MODIFICATION OF THE RPS WAS DEFICIENT IN THAT THERE WAS NO STEP TO ALERT THE REACTOR OPERATOR THAT A REACTOR SCRAM WOULD OCCUR WHEN THE STEP IN THE WORKPLAN TO REMOVE THE FUSES WAS PERFORMED. THIS SHOULD HAVE BEEN IDENTIFIED BECAUSE AN AUTOMATIC SCRAM IS EXPECTED WHEN THESE RPS FUSES ARE PULLED. IN THIS SENSE, THE SCRAM INITIATION WAS UNEXPECTED AND NOT PART OF A PREPLANNED SEQUENCE.

[17] BROWNS FERRY 2 DOCKET 50-260 LER 85-002
MAIN STEAM RELIEF VALVES ACTUATING OUTSIDE OF SETPOINT.
EVENT DATE: 030785 REPORT DATE: 040285 NSSS: GE TYPE: BWR
VENDOR: TARGET ROCK CORP.

(NSIC 193604) THE 13 TWO-STAGE TARGET ROCK MSRV'S ON UNIT 2 WERE REMOVED AND SENT TO WYLE LABS FOR TESTING. TECH SPEC 2.2.A REQUIRES ACTUATION WITHIN 1% OF THE SETPOINT. THIS CRITERIA WAS MET BY 4 OF THE VALVES AND NOT MET BY 8 OF THE VALVES. THE 13TH VALVE IS BEING DISASSEMBLED TO GATHER DATA ON THE SETPOINT DRIFT PHENOMENA. THE APPARENT CAUSE OF THE SETPOINT DRIFT IS STICKING OF THE PILOT DISC IN COMBINATION WITH INADEQUATE CLEARANCE BETWEEN THE PILOT ROD AND LINER IN THE LABYRINTH SEAL. THIS PROBLEM IS BEING ASSESSED BY THE BWR OWNER'S GROUP. GE CO. ANALYSIS SHOWS A TOTAL AVERAGE SETPOINT DEVIATION OF 5% WOULD NOT AFFECT NUCLEAR SAFETY. THE TOTAL AVERAGE DEVIATION FOR THE 12 VALVES TESTED WAS 2.33%. PREVIOUS EVENTS - 296/83-060, 296/80-054, 260/82-027, 260/81-074, 259/83-036 AND 259/81-025.

[18] BROWNS FERRY 3 DOCKET 50-296 LER 85-005
UNIDENTIFIED LEAKAGE IN DRYWELL.
EVENT DATE: 021085 REPORT DATE: 030185 NSSS: GE TYPE: BWR

(NSIC 193453) ON 2-10-85, FOLLOWING UNIT SHUTDOWN DUE TO IRM PROBLEMS AND UNIDENTIFIED DRYWELL LEAKAGE, A CRACKED WELD ON A 0.75-INCH TEST CONNECTION LINE ON THE REACTOR WATER CLEANUP SYSTEM WAS DISCOVERED. THE LEAK WAS LESS THAN 1 GAL PER MIN, AND TECH SPEC LIMITS ALLOW 5 GALS PER MIN. THE CRACKED WELD IS LOCATED AT A POINT WHERE THE TEST LINE ATTACHES TO THE RWC SYSTEM BETWEEN FLOW CONTROL VALVE 69-1 AND THE DRYWELL PENETRATION. THE TEST LINE IS DOWNSTREAM OF THE INBOARD ISOLATION 69-1 AND UPSTREAM OF THE OUTBOARD ISOLATION 69-2. THE TEST LINE IS THE ONLY OUTLET ON THE PRINCIPAL LINE BETWEEN THE 2 ISOLATION VALVES. CLOSER INVESTIGATION REVEALED THAT A 'U'-BOLT PIPE CLAMP WAS MISSING FROM THE TEST CONNECTION HANGER ALLOWING EXCESSIVE MOVEMENT DUE TO SYSTEM VIBRATION CAUSING THE PIPE WELD TO CRACK. THE PIPE WAS REPLACED AND TESTED, AND THE HANGER CLAMP WAS REINSTALLED. PREVIOUS EVENTS - 50-259/85-001.

[19] BRUNSWICK 1 DOCKET 50-325 LER 84-021
AUTOMATIC ACTUATION OF CONTROL BUILDING EMERGENCY FILTRATION.
EVENT DATE: 091084 REPORT DATE: 100184 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 193501) ON 9-10-84, AT 0155, TRAIN B OF THE CONTROL BLDG EMERGENCY AIR FILTRATION SYSTEM AUTOMATICALLY STARTED DUE TO A SPURIOUS FIRE ALARM IN THE COMMON UNIT 1/UNIT 2 CONTROL ROOM. WITHIN APPROX 4 MINS OF THE EVENT, THE TRAIN WAS SECURED AND RETURNED TO STANDBY. AT THE TIME OF THE EVENT, UNIT 1 WAS

OPERATING AT 100% POWER AND UNIT 2 WAS IN A REFUELING/MAINTENANCE OUTAGE. IN ADDITION, THE REDUNDANT CBEAF SYSTEM TRAIN A WAS IN STANDBY. FOLLOWING THIS EVENT AN INVESTIGATION WAS INDETERMINATE IN REVEALING THE CAUSE OF THE SPURIOUS FIRE ALARM. THE ACTUATION OF A CBEAF SYSTEM TRAIN PLACES THE AFFECTED UNIT IN ITS DESIGNED MODE OF OPERATION.

[20] BRUNSWICK 1 DOCKET 50-325 LER 84-035
BYPASSED POSITION INDICATIONS INPUT FOR CONTROL RODS IN TWO ADJACENT CELLS.
EVENT DATE: 121184 REPORT DATE: 011085 NSSS: GE TYPE: LWR

(NSIC 193443) DURING A REACTOR STARTUP ON 12-11-84, AT 0115, IT WAS DISCOVERED THAT THE ROD POSITION INDICATION SYSTEM 'FULL-IN' 'FULL-OUT BYPASS SWITCH FOR CONTROL ROD 06-31 WAS BYPASSED TO THE FULL-IN POSITION. THE BYPASS SWITCH FOR CONTROL ROD 10-31 HAD BEEN BYPASSED TO THE FULL-IN POSITION ON 12-4-84 AND WAS UNDER AN LCO. AS CONTROL RODS 06-31 AND 10-31 ARE IN ADJACENT CONTROL CELLS, THE 2 CONTROL CELL SEPARATION CRITERIA FOR BYPASSED CONTROL RODS, AS SPECIFIED IN TECH SPEC 3.1.3.7, WAS NOT MET. WITHIN 10 MINS, THE RPIS FULL-IN POSITION INDICATION OF CONTROL ROD 10-31 WAS UNBYPASSED. WHEN IDENTIFIED, NEITHER ROD HAD BEEN WITHDRAWN. BETWEEN 1600 AND 1810 ON 12-10-84, PLANT TECHNICIANS BYPASSED, WITH OPERATIONS' CONSENT, THE FULL-IN RPIS POSITION INPUT FOR CONTROL ROD 06-31 WHILE TROUBLESHOOTING POSITION INDICATION PROBLEMS WITH THE ROD. A UNIT 1 REACTOR STARTUP COMMENCED ON 12-10-84 AT 1810. COMMUNICATIONS BETWEEN THE PLANT TECHNICIANS AND OPERATIONS PERSONNEL PRIOR TO STARTUP FAILED TO IDENTIFY THAT THE 06-31 BYPASS SWITCH WAS STILL IN BYPASS. AS A RESULT OF THIS EVENT, SIGNS (WHICH REFLECT THAT A LIMITING CONDITION FOR OPERATION MAY BE REQUIRED DUE TO MANIPULATION OF RPIS SWITCHES OR RELAYS) HAVE BEEN INSTALLED ON UNITS 1 AND 2. IN ADDITION, REAL-TIME TRAINING FOR LICENSED OPERATORS AND PLANT I/C TECHNICIANS CONCERNING THIS EVENT AND INDEPENDENT VERIFICATION PROCEDURES WILL BE CONDUCTED.

[21] BRUNSWICK 1 DOCKET 50-325 LER 84-018
INADVERTENT INITIATION OF CONTROL BUILDING EMERGENCY AIR FILTRATION SYSTEM.
EVENT DATE: 122684 REPORT DATE: 012285 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 193500) ON 12-26-84, AT 2205, TRAIN 2A OF THE UNITS 1 AND 2 COMMON CONTROL BLDG EMERGENCY AIR FILTRATION SYSTEM AUTOMATICALLY INITIATED. AT THE TIME THE REDUNDANT CBEAF SYSTEM TRAIN 2B WAS IN STANDBY. IN ADDITION, BOTH UNITS WERE OPERATING AT RESPECTIVE POWER LEVELS OF 92% AND 100%. FOLLOWING A DETERMINATION THAT AN ACTUAL FIRE CONDITION DID NOT EXIST CBEAF TRAIN 2A WAS RETURNED TO STANDBY. THE CONTROL OPERATORS OF BOTH UNITS BECAME AWARE OF THIS EVENT THROUGH APPROPRIATE CONTROL ROOM ALARM ANNUNCIATORS AND INDICATIONS. THE SUBJECT CBEAF SYSTEM INITIATION RESULTED FROM THE SPURIOUS ACTUATION, DUE TO TOBACCO SMOKE, OF A FIRE DETECTOR IN THE SHIFT OPERATING SUPERVISOR'S OFFICE OF THE UNITS' COMMON CONTROL ROOM AREA. AN INSPECTION OF THE DETECTOR REVEALED IT WAS IN A STATE OF INCREASED SENSITIVITY DUE TO AN ACCUMULATION OF DIRT AND PARTICULATES WITHIN THE DETECTOR CHAMBER. THE DETECTOR WAS CLEANED AND RETURNED TO SERVICE. TO HELP REDUCE THE NUMBER OF SPURIOUS CBEAF SYSTEM INITIATIONS, FIRE DETECTORS THROUGHOUT THE UNITS COMMON CONTROL BLDG, WHICH ARE SUSCEPTIBLE TO SPURIOUS ACTUATIONS, ARE BEING CLEANED. IN ADDITION, PLANT ENGINEERING IS EVALUATING REDUCING THE NUMBER OF CONTROL BLDG FIRE DETECTORS THAT WOULD AUTOMATICALLY INITIATE THE CBEAF SYSTEM. THE INITIATION OF A CBEAF SYSTEM TRAIN PLACES THE AFFECTED TRAIN INTO ITS MOST CONSERVATIVE MODE OF OPERATION.

[22] BRUNSWICK 1 DOCKET 50-325 LER 85-003
INADEQUATE TESTING PROCEDURES FOR COMMON AC EMERGENCY BUSES' DEGRADED AND UNDER-VOLTAGE RELAYS AND LOSS OF EMERGENCY BUS.
EVENT DATE: 010885 REPORT DATE: 020785 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 193676) ON 1-8-85, IT WAS DETERMINED THAT ADEQUATE SURVEILLANCE TESTING PROCEDURES DID NOT EXIST TO FUNCTIONALLY VERIFY OPERABILITY OF DEGRADED VOLTAGE AND LOSS OF VOLTAGE ACTUATION RELAY CIRCUITRY ON UNITS 1 AND 2 COMMON EMERGENCY AC ELECTRICAL E-BUSES 1-4. THE APPLICABLE TECH SPEC TO THESE RELAYS IS 4.3.3.2. STANDING INSTRUCTIONS TO TRIP THE MASTER-SLAVE FEEDER BREAKERS OF THE SUBJECT E-BUSES ON BUS DEGRADED VOLTAGE AND TO TRIP ANY OPERATING UNIT RHR SYSTEM OR CORE SPRAY SYSTEM PUMP ON LOSS OF POWER TO THE SUBJECT E-BUSES WERE IMPLEMENTED. ALSO, SPECIAL PROCEDURES WERE DEVELOPED TO FUNCTIONALLY VERIFY OPERABILITY OF THE CONCERNED LOGIC. ON 1-10-85, AT 1318, WHILE PREPARING TO PERFORM THE SPECIAL PROCEDURE (A LOGIC SYSTEM FUNCTIONAL TEST) ON THE DEGRADED VOLTAGE RELAYS OF E-BUS E-1, THE MASTER-SLAVE FEEDER BREAKERS TO THE BUS AUTOMATICALLY OPENED. THE EMERGENCY BUS DG REENERGIZED E-1 WITHIN 10 SECS. UNIT 1 GROUP 3 AND 6 ISOLATIONS OCCURRED. WITHIN 32 MINS, THE MASTER-SLAVE FEEDER BREAKERS TO E-1 WERE RECLOSED. AT THE TIME OF THIS PROCEDURAL DEFICIENCY DISCOVERY AND THE LOSS OF E-1 UNITS 1 AND 2 WERE OPERATING AT RESPECTIVE POWER LEVELS OF 88 AND 99%.

[23] BRUNSWICK 1 DOCKET 50-325 LER 85-006
ISOLATION OF THE CONTROL BLDG HVAC SYSTEM DUE TO SPURIOUS CHLORINE DETECTION ALARM.
EVENT DATE: 011185 REPORT DATE: 020885 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 193414) ON 1-11-85, AT 2210, AN AUTOMATIC ISOLATION OF THE UNITS 1 AND 2 COMMON CONTROL BLDG HEATING VENTILATING AIR CONDITIONING (CBHVAC) SYSTEM OCCURRED, PER DESIGN, DUE TO ACTUATION OF THE SYSTEM AIR INTAKE PLENUM CHLORINE DETECTOR, 1X-AT-2977. THE SUBJECT ISOLATION WAS REVEALED THROUGH APPROPRIATE CONTROL ROOM ALARM ANNUNCIATIONS. AN INSPECTION OF THE PLANT AREA DETERMINED THAT ACTUAL CHLORINE ALARM CONDITIONS DID NOT EXIST. DURING THE EVENT, THE REDUNDANT DETECTOR, 2X-AT-2977, DID NOT ACTUATE. AT THE TIME, THE CHLORINE SUPPLY WAS NOT PRESENT WITHIN THE PLANT EXCLUSION ZONE. UNITS 1 AND 2 WERE OPERATING AT RESPECTIVE POWER LEVELS OF 87 AND 90% BEFORE AND AFTER THE EVENT. THE EVENT IS ATTRIBUTED TO INCREASED SENSITIVITY OF THE 1X DETECTOR DUE TO A LACK OF ELECTROLYTE SOLUTION DRIP FLOW IN THE DETECTOR. THE ELECTROLYTE DRIP FLOW PROBLEM RESULTED FROM A FUNGI GROWTH WITHIN THE DETECTOR. IT IS FELT DUST OR OTHER PARTICULATE FOREIGN DEBRIS ENTERED THE DETECTOR SAMPLE CHAMBER, AND DUE TO THE INCREASED DETECTOR SENSITIVITY, A SPURIOUS ACTUATION OF THE DETECTOR RESULTED. THE DETECTOR WAS CLEANED TO REMOVE THE FUNGI ACCUMULATION, THE DRIP RATE REESTABLISHED, AND THE DETECTOR WAS RETURNED TO SERVICE. THE DESIGN PROBLEM AFFECTING THE SUBJECT DETECTORS, WHICH INVOLVES THE REFERENCED DETECTOR FUNGI GROWTH, IS ADDRESSED IN LER 1-84-32. AN EVALUATION CONCERNING REPLACEMENT OF THE SUBJECT DETECTORS IS IN PROGRESS.

[24] BRUNSWICK 1 DOCKET 50-325 LER 85-007
AUTOMATIC INITIATIONS OF CONTROL BUILDING EMERGENCY AIR FILTRATION SYSTEM.
EVENT DATE: 011585 REPORT DATE: 021485 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 193463) ON 1-15, 16, 22, 1985, AUTOMATIC INITIATIONS OF THE UNITS 1 AND 2 COMMON CONTROL BLDG EMERGENCY AIR FILTRATION SYSTEM TRAINS 2A AND 2B OCCURRED WITH A CUMULATIVE TOTAL OF 5 INITIATIONS. TWO INITIATIONS RESULTED FROM INCREASED SENSITIVITY OF A CONTROL ROOM AREA FIRE DETECTOR DUE TO ACCUMULATION OF DIRT AND PARTICULATE IN THE DETECTOR CHAMBER. TWO INITIATIONS RESULTED FROM SPRAY PAINTING FUMES IN THE CONTROL ROOM AREA. ONE INITIATION RESULTED FROM ACTUATION OF A FIRE DETECTOR IN THE UNIT 2 BATTERY ROOM DUE TO OVERHEATED STRIP ELEMENTS IN A TEMPORARY HEATER FOR THE ROOM. THE CONTROL OPERATORS OF BOTH UNITS BECAME AWARE OF THESE EVENTS THROUGH APPROPRIATE CONTROL ROOM ALARM ANNUNCIATIONS AND INDICATIONS. AT THE TIME OF EACH INITIATION, THE CORRESPONDING REDUNDANT TRAIN WAS IN STANDBY. BOTH UNITS WERE AT POWER OPERATION. FOLLOWING THE PAINT FUME INITIATIONS, THE AFFECTED CBEAF SYSTEM TRAIN WAS UTILIZED TO REMOVE THE

PAINT FUMES. THE CHARCOAL WAS REPLACED AND THE TRAIN WAS RETURNED TO STANDBY. CHARCOAL SAMPLES OF THE TRAIN WERE REMOVED AND ARE BEING ANALYZED TO DETERMINE THE IMPACT OF THE PAINT FUMES. AFTER EACH OF THE OTHER INITIATIONS, THE AFFECTED TRAINS WERE RETURNED TO STANDBY FOLLOWING VERIFICATION THAT FIRE CONDITIONS DID NOT EXIST. THE SUBJECT FIRE DETECTOR WAS CLEANED AND RETURNED TO SERVICE. CONTROL BLDG FIRE DETECTORS, SUSCEPTIBLE TO SPURIOUS ACTUATIONS, ARE BEING CLEANED.

[25] BRUNSWICK 1 DOCKET 50-325 LER 85-008
MAIN CONDENSER LOW VACUUM TRIP OF THE UNIT MAIN TURBINE.
EVENT DATE: 012485 REPORT DATE: 022285 NSSS: GE TYPE: BWR
VENDOR: TRANSAMERICA DELAVAL

(NSIC 193415) ON 1-24-85, AT 2312, A UNIT 1 REACTOR SCRAM AUTOMATICALLY OCCURRED DUE TO A MAIN TURBINE TRIP AND STOP VALVE CLOSURE RESULTING FROM A LOW VACUUM IN THE UNIT MAIN CONDENSER. UNIT 1 WAS AT REACTOR POWER LEVEL OF 37%. A CONTROLLED DECREASE IN REACTOR POWER WAS IN PROGRESS IN RESPONSE TO A STEADILY DECREASING MAIN CONDENSER VACUUM. DURING THE UNIT SCRAM RECOVERY, THE LOWEST REACTOR LEVEL RECORDED VALUE WAS 153". THIS WAS CONTROLLED BY USE OF THE REACTOR CONDENSATE SYSTEM. PRIMARY CONTAINMENT GROUP ISOLATIONS 2, 6, AND 8 OCCURRED. THE DECREASING MAIN CONDENSER VACUUM RESULTED FROM A BUILDUP OF DEMINERALIZED WATER IN THE UNIT 1 OFF-GAS FILTER AND THE UNITS 1 AND 2 COMMON STANDBY OFF-GAS FILTER. THE HIGH MOISTURE ON THESE FILTERS CREATED A BACK PRESSURE DUE TO THE REDUCED ABILITY TO PASS THE OFF-GAS FLOW. A DEFECTIVE LATCHING RELAY, 1-OG-LY-4910, IN THE UNIT OFF-GAS PIPING LOOP SEAL RESERVOIR LEVEL CONTROL CIRCUITRY, CAUSED THE RESERVOIR SOLENOID-OPERATED MAKEUP VALVE, 1-OG-SV-4906, TO REMAIN OPEN. OVERFLOW OF THE RESERVOIR INTO THE UNIT OFF-GAS PIPING FILTERS RESULTED. THE LATCHING RELAY, TRANSAMERICA DELAVAL PART NO. ST-28196, WAS REPLACED TO REESTABLISH PROPER LEVEL CONTROL OF THE LOOP SEAL RESERVOIR. THE UNIT 1 OFF-GAS FILTER AND UNITS 1 AND 2 COMMON STANDBY OFF-GAS FILTER WERE REPLACED. THE EVENT OCCURRED IN THE MOST LIMITING PLANT CONDITION.

[26] BRUNSWICK 1 DOCKET 50-325 LER 85-002
ISOLATION OF THE CONTROL BUILDING HVAC SYSTEM DUE TO CHLORINE DETECTION ALARM.
EVENT DATE: 020685 REPORT DATE: 030185 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 193412) ON 2-6-85, AT 2230, AN AUTOMATIC ISOLATION OF THE UNITS 1 AND 2 COMMON CONTROL BLDG HEATING VENTILATING AIR CONDITIONING (CBHVAC) SYSTEM OCCURRED, PER DESIGN, DUE TO ACTUATION OF THE SYSTEM AIR INTAKE PLENUM CHLORINE DETECTOR, 2X-AT-2977. THE ISOLATION WAS REVEALED THROUGH APPROPRIATE CONTROL ROOM ALARM ANNUNCIATIONS AND INDICATIONS. AN APPROPRIATE PLANT AREA INSPECTION SHOWED CHLORINE ALARM CONDITIONS DID NOT EXIST. WITHIN 10 MINS, THE DETECTOR WAS RESET AND THE CBHVAC SYSTEM RETURNED TO OPERATION. DURING THE EVENT, THE REDUNDANT DETECTOR, 1X-AT-2977, DID NOT ACTUATE. UNITS 1 AND 2 WERE OPERATING AT POWER LEVELS OF 59% AND 100% BEFORE AND AFTER THE EVENT. THE CAUSE OF THE EVENT IS ATTRIBUTED TO A SPURIOUS ACTUATION OF THE 2X DETECTOR. FUNCTIONAL TESTING OF THE DETECTOR SHOWED IT OPERABLE. THE DETECTOR WAS RETURNED TO SERVICE. THE SUBJECT 2X DETECTOR IS CURRENTLY FUNCTIONALLY TESTED WEEKLY TO ENSURE ITS OPERABILITY. A PRIOR SIMILAR EVENT INVOLVING THESE DETECTORS WAS REPORTED IN LER 1-84-32.

[27] BRUNSWICK 1 DOCKET 50-325 LER 85-005
INADEQUATE CHANNEL FUNCTIONAL TESTING OF THE ROD BLOCK MONITORS.
EVENT DATE: 021285 REPORT DATE: 030185 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BRUNSWICK 2 (BWR)

(NSIC 193413) ON 2-12-85, IT WAS DETERMINED PLANT PROCEDURES DID NOT ADEQUATELY

(NSIC 193677) ON 3-5-85, AT 0920, AND 3-11-85, AT 0430, TRAIN 2B OF THE UNITS 1 AND 2 COMMON CONTROL BLDG EMERGENCY AIR FILTRATION SYSTEM AUTOMATICALLY INITIATED DUE TO CONTROL BLDG FIRE ALARMS. IN EACH CASE, CBEAF SYSTEM TRAIN 2A WAS IN STANDBY. ON 3-5-85, THE UNITS WERE OPERATING AT 59% AND 100% (UNIT 2). ON 3-11-85, UNIT 1 WAS OPERATING AT 60% AND UNIT 2 WAS IN COLD SHUTDOWN. AFTER EACH EVENT, THE FIRE ALARM WAS RESET AND CBEAF TRAIN 2B WAS RETURNED TO STANDBY FOLLOWING A VERIFICATION THAT ACTUAL FIRE CONDITIONS DID NOT EXIST. CONTROL OPERATORS OF BOTH UNITS BECAME AWARE OF THESE EVENTS THROUGH APPROPRIATE CONTROL ROOM ALARM ANNUNCIATIONS AND INDICATIONS. THE FIRST EVENT ON 3-5-85 RESULTED FROM A CONTRACT ENGINEER PLUGGING A SMOKE DETECTOR, IN THE SOUTHWEST CORNER OF THE UNIT 2 CABLE SPREAD ROOM, BACK INTO ITS BASE. THE INVOLVED PERSON WAS APPROPRIATELY DISCIPLINED. MEMBERS OF THE INVOLVED SUPPORT GROUP HAVE RECEIVED SUITABLE RETRAINING CONCERNING THIS EVENT. THE SECOND EVENT ON 3-11-85 RESULTED FROM A SPURIOUS ACTUATION DUE TO TOBACCO SMOKE IN THE UNITS' COMMON CONTROL ROOM AREA. THE DETECTOR, PYROTRONICS MODEL NO. DIS 3/5A, WAS REPLACED AND ADJUSTED FOR SENSITIVITY TO HELP PREVENT FUTURE SIMILAR OCCURRENCES.

(NSIC 193678) ON 3-7-85, AT 1455, AND 3-22-85, AT 0557, THE UNITS 1 AND 2 COMMON CONTROL BLDG HEATING VENTILATING AIR CONDITIONING SYSTEM WAS MANUALLY ISOLATED DUE TO THE RECEIPT OF HIGH CHLORINE ALARMS AT THE CHLORINATION SYSTEM STORAGE LOCATION. THESE ISOLATIONS WERE CARRIED OUT IN ACCORDANCE WITH PLANT STANDING INSTRUCTIONS, WHICH WERE IMPLEMENTED DUE TO A DISCOVERED DESIGN DEFICIENCY INVOLVING THE CHLORINE ISOLATION FUNCTION OF THE CB HVAC SYSTEM IDENTIFIED IN LER 325/84-033. ON 3-7-85, THE UNITS WERE OPERATING AT POWER LEVELS OF 60% AND 100% (UNIT 2). ON 3-22-85, THE UNITS WERE OPERATING AT 60% AND 65% (UNIT 2). THE EVENT ON 3-7-85 OCCURRED SHORTLY AFTER THE ISOLATION VALVE TO THE CHLORINATION SYSTEM CHLORINE TANK CAR WAS OPENED WHILE CANCELLING AN EQUIPMENT CLEARANCE. THE CAUSE OF THE EVENT ON 3-22-85 COULD NOT BE DETERMINED. IN EACH CASE, AN AUX OPERATOR DISPATCHED TO THE AREA FOUND NO EVIDENCE OF A CHLORINE LEAK. WITHIN APPROX 40 MINS OF THE FIRST EVENT AND 23 MINS OF THE SECOND EVENT, THE CB HVAC SYSTEM WAS RETURNED TO NORMAL SERVICE. ISOLATION OF THE CB HVAC SYSTEM, WHETHER AUTOMATICALLY OR MANUALLY INITIATED, PLACES THE SYSTEM INTO ITS MOST CONSERVATIVE CONDITION.

[30] BRUNSWICK 1 DOCKET 50-325 LER 85-014
 STEAM LEAK CAUSES 2 AUTOMATIC ISOLATIONS OF RCIC.
 EVENT DATE: 030985 REPORT DATE: 040385 NSSS: GE TYPE: BWR
 VENDOR: VELAN VALVE CORP.

(NSIC 193679) ON 3-9-85 AT 1615 AND 1706 THE UNIT 1 RCIC SYSTEM AUTOMATICALLY ISOLATED DUE TO ACTUATION OF THE RCIC EQUIPMENT ROOM VENTILATION DIFFERENTIAL HIGH TEMPERATURE INSTRUMENT 1-E51-DTS-N601A. THIS SHUT THE INBOARD STEAM ISOLATION VALVE 1-E51-V20 AND CAUSED LOCALIZED HIGH TEMPERATURE CONDITIONS DETECTED BY N601A. UNIT 1 WAS OPERATING AT 60% POWER. THESE EVENTS ARE REVEALED TO THE UNIT 1 CONTROL OPERATOR THROUGH APPROPRIATE CONTROL ROOM ALARM ANNUNCIATIONS. THE RCIC SYSTEM WAS ISOLATED AND PLACED UNDER CLEARANCE FOR REPAIRS TO 1-E51-V20. APPROPRIATE REPAIRS TO V20, VELAN MODEL NO. W4-274B-2TS, WERE MADE AND THE RCIC SYSTEM WAS RETURNED TO SERVICE ON 3-13-85, AT 1900. 1-E51-V20 IS THE INSTRUMENT INBOARD ROOT ISOLATION VALVE TO THE HIGH LEVEL TRANSMITTER OF THE RCIC SYSTEM TURBINE STEAM SUPPLY INLET DRAIN POT. DURING THE PERIOD THE RCIC SYSTEM WAS UNAVAILABLE, THE UNIT HPCI SYSTEM WAS AVAILABLE TO FULFILL THE RCIC SYSTEM FUNCTIONS, IF REQUIRED.

[31] BRUNSWICK 2 DOCKET 50-324 LER 84-017
 ERRONEOUS RWCU SYSTEM AREA HIGH TEMPERATURE SIGNAL.
 EVENT DATE: 113084 REPORT DATE: 122184 NSSS: GE TYPE: BWR
 VENDOR: SCAM INSTRUMENT CORP.

(NSIC 193499) ON 11-30-84, AT 1456, THE UNIT 2 RWCU SYSTEM INLET PRIMARY CONTAINMENT INBOARD AND OUTBOARD ISOLATION VALVES, 2-G31-F001 AND F004, AUTOMATICALLY CLOSED DUE TO A GROUP 3 PRIMARY CONTAINMENT ISOLATION RESULTING FROM A FALSE INDICATION OF AN RWCU AREA HIGH TEMPERATURE CONDITION. THIS EVENT WAS REVEALED TO THE UNIT 2 CONTROL OPERATOR THROUGH THE RWCU SYSTEM STEAM LEAK DETECTION AMBIENT TEMPERATURE HIGH ALARM ANNUNCIATOR ON THE UNIT 2 CONTROL ROOM REACTOR TURBINE GAUGE BOARD. AT THE TIME, UNIT 2 WAS IN COLD REACTOR SHUTDOWN. THE ERRONEOUS RWCU SYSTEM AREA HIGH TEMPERATURE INPUT ORIGINATED FROM RWCU AREA TEMPERATURE HIGH ISOLATION INSTRUMENT, 2-G31-TS-N600F. INDIVIDUAL COMPONENT BREAKDOWN IN THE N600F INSTRUMENT MODULE, RILEY/SCAM INSTRUMENT CORP. PART NO. 86PTGF-EG-5243, CAUSED THE INSTRUMENT TO SEE AN ERRONEOUS HIGH TEMPERATURE CONDITION. THE MODULE WAS REPLACED AND N600F WAS RETURNED TO SERVICE WITHIN 8 HRS AND 45 MINS OF THE EVENT.

[32] BRUNSWICK 2 DOCKET 50-324 LER 85-003
 CONTAINMENT ISOLATION OCCURS DURING RESPONSE TIME TESTING OF TURBINE STOP VALVES.
 EVENT DATE: 031085 REPORT DATE: 040985 NSSS: GE TYPE: BWR

(NSIC 193613) ON 3-10-85, AT 0215, WHILE PERFORMING THE RESPONSE TIME TEST OF THE UNIT 2 MAIN TURBINE STOP VALVE POSITION CIRCUITRY, PERIODIC TEST PT-45.1.6-2, AN UNEXPECTED PRIMARY CONTAINMENT GROUP 1 ISOLATION OCCURRED. THE APPLICABLE TECH SPEC TO THIS TESTING IS 4.3.1.3 AND TABLE 3.3.1-2. UNIT 2 WAS IN COLD SHUTDOWN. PT-45.1.6-2 REQUIRED AN ELECTRICAL TEST JUMPER BE INSTALLED ACROSS MAIN CONDENSER LOW VACUUM LOGIC CONTACTS 11 AND 12 OF THE RPS LOGIC RELAY C72-K10 FOR THE STOP VALVE (SV) UNDER TEST. THE TEST IS DESIGNED TO HAVE ONLY 1 VALVE OPEN AT A TIME; HOWEVER, WHEN SPEED SELECT WAS INITIATED WITH TURBINE RESET, SV-2 OPENED FOLLOWED BY SV-1, SV-3, AND SV-4. THE MAIN CONDENSER LOW VACUUM CIRCUITRY FOR THE RELAYS OF SV-2, SV-3, AND SV-4 CONSEQUENTLY OPENED CAUSING THE PRIMARY CONTAINMENT GROUP 1 ISOLATION. A REVIEW OF THE LOGIC DESIGN HAS DETERMINED THAT THIS SEQUENCE IS CORRECT PER DESIGN. PT-45.1.6-2 AND THE CORRESPONDING RESPONSE TIME TEST OF THE UNIT 1 MAIN TURBINE STOP VALVES, PT-45.1.6-1, HAVE BEEN REVISED TO PRECLUDE AN UNEXPECTED GROUP 1 ISOLATION. THE INVESTIGATION OF THIS EVENT REVEALED A SIMILAR PROCEDURAL CONCERN WITH THE FAST CLOSURE RESPONSE TIME TEST OF UNIT MAIN TURBINE CONTROL VALVES, PT-45.1.7. THIS CONCERN WILL BE RESOLVED BY 4-26-85 TO PREVENT AN INADVERTENT GROUP 1 ISOLATION AS A RESULT OF PERFORMING THE TEST.

[33] BYRON 1 DOCKET 50-454 LER 84-043
 TWO SEAL INJECTION HEADER TEST VALVES NOT TESTED FOLLOWING MAINTENANCE.
 EVENT DATE: 103184 REPORT DATE: 042285 NSSS: WE TYPE: PWR

(NSIC 193658) AT 1232 HRS WITH THE UNIT IN MODE 5, IT WAS DISCOVERED THAT 2 SEAL INJECTION HEADER TEST CONNECTION VALVES, 1CV066B AND 1CV067A, HAD BEEN RETURNED TO SERVICE PRIOR TO PERFORMANCE OF THE REQUIRED INSERVICE INSPECTIONS. SUBSEQUENTLY INSPECTIONS WERE COMPLETED WITH SATISFACTORY RESULTS. INVESTIGATION REVEALED 5 SIMILAR OCCURRENCES AFFECTING THE FOLLOWING EQUIPMENT: 1BR003A - LETDOWN REHEAT HEAT EXCHANGER DRAIN VALVE, 1SI8948B - SAFETY INJECTION ACCUMULATOR PRIMARY CHECK VALVE, 1FW017D - FEEDWATER CHEMICAL FEED CONNECTION CHECK VALVE, 1RH030A - RHR INLET LOW POINT DRAIN VALVE, AND OAB01PA - RECYCLE EVAPORATOR FEED PUMP. AGAIN, SUBSEQUENT INSPECTIONS WERE COMPLETED WITH SATISFACTORY RESULTS, WITH THE EXCEPTION OF THE 1FW017D VALVE WHICH HAS BEEN ISOLATED FROM SERVICE. THESE EVENTS WERE CAUSED BY FAILURES TO FOLLOW APPROVED PROCEDURES FOR REMOVING AND RETURNING EQUIPMENT OUT OF SERVICE AND PROCESSING NUCLEAR WORK REQUESTS. TO PREVENT REOCCURRENCE, THE METHOD OF PROCESSING SAFETY-RELATED WORK REQUESTS AND EXPEDITING TESTING REQUIREMENTS HAS BEEN REVIEWED AND REVISED. ALSO, MEMOS HAVE BEEN ISSUED TO THE SHIFT PERSONNEL TO CLARIFY THE PROCEDURAL INTENT OF PROCESSING WORK REQUESTS AND REMOVING AND RETURNING EQUIPMENT OUT OF SERVICE. FINALLY THE QUALITY CONTROL DEPARTMENT HAS ATTENDED TRAINING ON VERIFYING THAT THE ISI GROUP HAS SPECIFIED TESTING REQUIREMENTS ON SAFETY-RELATED WORK REQUESTS.

[34] BYRON 1 DOCKET 50-454 LER 85-008
 STEAM GENERATOR LOW LEVEL CAUSES TRIP.
 EVENT DATE: 010485 REPORT DATE: 020185 NSSS: WE TYPE: PWR

(NSIC 193251) WITH THE PLANT IN MODE 4, A REACTOR TRIP AND AUX FEEDWATER ACTUATION OCCURRED DUE TO A SG LOW-LOW LEVEL ALARM. THE OPERATORS INADVERTENTLY ALLOWED THE LEVEL TO DROP IN THE SG WHILE ENGAGED IN A SHIFT TURNOVER AND IN A MAIN STEAM VALVE LINEUP TO DRAIN CONDENSATION. THE OPERATING STAFF IS BEING APPRAISED FOR THIS EVENT THROUGH THE REQUIRED READING PROGRAM.

[35] BYRON 1 DOCKET 50-454 LER 85-011
 INOPERABILITY OF BOTH SI TRAINS.
 EVENT DATE: 011185 REPORT DATE: 020885 NSSS: WE TYPE: PWR

(NSIC 193380) AT 1354 ON 1-11-85, WHILE FILLING THE SAFETY INJECTION ACCUMULATORS, IT WAS OBSERVED BY THE SHIFT CONTROL ROOM ENGINEER THAT BOTH SI TRAINS FEEDING THE COLD LEG INJECTION HAD BEEN ISOLATED. THIS VIOLATED A TECH SPEC LIMITING CONDITION FOR OPERATION, SINCE BOTH TRAINS WERE INOPERABLE. THE ISOLATION OCCURRED WHEN THE OPERATOR, CONCERNED WITH OVERPRESSURIZING THE RCS, CLOSED A VALVE (PUMP B DISCHARGE LINE CROSSTIE ISOLATION) IN ADDITION TO THOSE LISTED IN THE ACCUMULATOR FILL PROCEDURE. TO PREVENT RECURRENCE OF THIS SITUATION, ALL DEPARTMENT HEADS HAVE BEEN NOTIFIED OF THE IMPORTANCE OF PROCEDURAL ADHERENCE AND CHANGES. ALL DEPARTMENT HEADS WILL ALSO BE NOTIFIED ABOUT ADDRESSING TECH SPECS REQUIREMENT CHANGES UPON SWITCHING OPERATIONAL MODES. ALSO, THERE IS A STATION COMMITMENT TO REVIEW ALL PROCEDURES WHERE ECCS SYSTEMS ARE INVOLVED TO VERIFY THAT THE TECH SPECS ARE UPHELD.

[36] BYRON 1 DOCKET 50-454 LER 85-012
 FAILURE TO TEST SG BLOWDOWN CONTAINMENT ISOLATION VALVE.
 EVENT DATE: 011785 REPORT DATE: 021485 NSSS: WE TYPE: PWR
 VENDOR: MASONEILAN INTERNATIONAL, INC.

(NSIC 193485) TECH SPEC SURVEILLANCE FOR SG BLOWDOWN CONTAINMENT ISOLATION VALVES WAS FOUND PAST ITS CRITICAL DATE WITH RESPECT TO VALVE 1SD005C. THE VALVE WAS

DECLARED INOPERABLE ON 1-17-85 AT 1200, AND THE ACTION REQUIREMENT WAS INITIATED. THE TECH STAFF INDIVIDUAL RESPONSIBLE FOR PERFORMING THIS SURVEILLANCE DELAYED IN IT'S EXECUTION TO ALLOW MAINTENANCE TO COMPLETE WORK ON OTHER SG ISOLATION VALVES WHICH ARE CONTAINED IN THE SAME SURVEILLANCE. THE SURVEILLANCE PROGRAM WAS CHANGED TO INCLUDE THE FREQUENCY ON COMPONENTS REQUIRING AN ACCELERATED TESTING INTERVAL AND THE TECH STAFF SUPERVISOR AND HIS ASSISTANTS WILL BE MADE AWARE OF SURVEILLANCES APPROACHING THEIR CRITICAL DATE.

[37] BYRON 1 DOCKET 50-454 LER 85-017
FAILURE TO DE-ENERGIZE PORV BLOCK VALVES.
EVENT DATE: 011985 REPORT DATE: 021985 NSSS: WE TYPE: PWR
VENDOR: COPES-VULCAN, INC.

(NSIC 193487) DURING THE PERFORMANCE OF START-UP TEST 2.63.33, REACTOR COOLANT SYSTEM LEAK TEST, BOTH PRESSURIZER PORV'S 1RY455A AND 1RY456, AND THEIR ASSOCIATED BLOCK VALVES, 1RY8000A AND 1RY8000B, HAD THEIR CONTROL SWITCHES PLACED TO THE CLOSED POSITION WITHOUT REMOVING POWER FROM THE BLOCK VALVES WITHIN THE REQUIRED ONE HR TECH SPEC LIMIT. THIS WAS DUE TO A MISINTERPRETATION OF THE APPLICABLE TECH SPEC LCO BY THE OPERATING PERSONNEL. TO CORRECT THE SITUATION, THE TEST WAS INTERRUPTED, THE VALVES WERE RETURNED TO OPERABLE STATUS, AND THE OPERATING PERSONNEL WERE BRIEFED ON THE INTENT OF THE TECH SPEC LCO. THE START UP TEST WAS THEN RE-ENTERED AND SUCCESSFULLY COMPLETED IN ADHERENCE TO THE TECH SPECS.

[38] BYRON 1 DOCKET 50-454 LER 85-016
TEST ERROR CAUSES ELECTRICAL SPIKE ON TRAIN A OF THE SSPS.
EVENT DATE: 012485 REPORT DATE: 021985 NSSS: WE TYPE: PWR

(NSIC 19 1486) WITH THE PLANT OPERATING IN MODE 3 AND START-UP TESTING WHICH INVOLVED THE SSPS IN PROGRESS, A REACTOR TRIP OCCURRED. THE TRIP OCCURRED WHEN AN INSTRUMENT MECHANIC GROUNDED A STRIP CHART RECORDER CONNECTOR WHICH INDUCED AN ELECTRICAL SPIKE ON THE TRAIN A (CHANNEL II) SSPS INPUTS. THE TRAIN A REACTOR TRIP BREAKER OPENED ON A SOURCE RANGE HIGH FLUX REACTOR TRIP SIGNAL. THE CONNECTOR WAS GROUNDED BECAUSE IT WAS NOT THE CORRECT SIZE FOR THE APPLICATION. RECURRENCE WILL BE PREVENTED BY USING THE CORRECT CONNECTORS IN THE FUTURE.

[39] BYRON 1 DOCKET 50-454 LER 85-020
SPURIOUS SAFETY INJECTION ACTUATION.
EVENT DATE: 021585 REPORT DATE: 031585 NSSS: WE TYPE: PWR
VENDOR: ITT-BARTON

(NSIC 193644) AT 1733 HRS, AN AUTOMATIC SAFETY INJECTION ACTUATION OCCURRED. THIS RESULTED WHEN 1 PRESSURIZER PRESSURE CHANNEL WAS UNDER MAINTENANCE AND A SECOND PRESSURE CHANNEL TRIPPED SPURIOUSLY, MAKING UP THE REQUIRED 2 OUT OF 4 LOGIC FOR AUTOMATIC SI ACTUATION. THE ROOT CAUSE OF THIS EVENT IS INDETERMINATE. HOWEVER, THE FACT THAT BOTH THE PRESSURE CHANNEL AND LEVEL CHANNEL SPIKED AND THEN QUICKLY RESET INDICATES SOME FORM OF DISTURBANCE TO THEIR RESPECTIVE TRANSMITTERS. AT THE TIME OF THE EVENT, THERE WERE 2 OPERATORS NEAR THE TRANSMITTERS. FOR EMERGENCY COMMUNICATION REASONS, THE OPERATORS DID HAVE A RADIO WITH THEM, AND IT IS POSSIBLE THAT THE RADIO WAS ACCIDENTALLY KEYED LEADING TO THE TRANSMITTERS' DISTURBANCE. THESE TRANSMITTERS, MANUFACTURED BY BARTON, ARE KNOWN TO BE SENSITIVE TO RADIO TRANSMISSION. BECAUSE IT IS BELIEVED THAT A RADIO WITHIN THE CONTAINMENT MAY HAVE ACCIDENTALLY KEYED AND CAUSED A DISTURBANCE TO THE PRESSURE CHANNEL, RADIOS WILL NO LONGER BE ALLOWED WITHIN THE CONTAINMENT TO ELIMINATE ANY FURTHER POSSIBILITY OF RADIO-TRANSMITTER INTERFERENCE.

[40] BYRON 1 DOCKET 50-454 LER 85-021
 FAILURE OF AN HOURLY FIRE WATCH DUE TO COMPUTER FAILURE.
 EVENT DATE: 021785 REPORT DATE: 031585 NSSS: WE TYPE: PWR

(NSIC 193645) ON 2-17-85, THE SECURITY COMPUTER FAILED, PREVENTING AN HOURLY FIRE WATCH FROM SECURITY TO GO INTO HIS ASSIGNED AREA. IN THE FUTURE, A KEY WILL BE ISSUED TO FIRE WATCH PERSONNEL WHEN COMPUTER ACCESS CANNOT BE OBTAINED. ACCESS KEYS FOR THIS PURPOSE HAVE BEEN PREPOSITIONED IN THE ACCESS CONTROL BLDG.

[41] BYRON 1 DOCKET 50-454 LER 85-022
 POWER RANGE EXCORE NEUTRON DETECTOR FAILURE CAUSED SCRAM.
 EVENT DATE: 021885 REPORT DATE: 031985 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 193646) DURING A POWER INCREASE TO APPROX 3.2% POWER, A UNIT 1 REACTOR TRIP OCCURRED DUE TO A HIGH POSITIVE RATE ON THE POWER RANGE EXCORE NEUTRON DETECTORS. THE TRIP WAS DUE TO THE LOWER DETECTOR ON 1 CHANNEL FAILING, WHILE AT THE SAME TIME A SECOND CHANNEL WAS OUT-OF-SERVICE FOR LOW POWER PHYSICS TESTING. THIS COMBINATION COMPLETED THE 2/4 LOGIC, THUS PRODUCING THE REACTOR TRIP. THE FAILED DETECTOR WAS REPLACED AND THERE HAVE BEEN NO FURTHER PROBLEMS.

[42] CALLAWAY 1 DOCKET 50-483 LER 84-036
 CONTROL ROOM VENTILATION ISOLATES ON SPURIOUS HIGH RADIATION SIGNALS.
 EVENT DATE: 062484 REPORT DATE: 092184 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 193659) BETWEEN 8-24-84 AND 9-14-84 SEVEN INCIDENTS OF UNPLANNED ESF ACTUATIONS OCCURRED DUE TO SPIKING PROBLEMS ASSOCIATED WITH RADIATION MONITOR GK-RE-4. 6 OF 7 ESF ACTUATIONS WERE INITIATED BECAUSE OF SPURIOUS SPIKES ON GK-RE-4 AND RESULTED IN CONTROL ROOM VENTILATION ISOLATION SIGNALS. THE REMAINING UNPLANNED ESF ACTUATION OCCURRED WHILE PERSONNEL WERE ATTEMPTING TO REMOVE A SCINTILLATOR TUBE ASSEMBLY FROM A MONITOR IN THE FUEL BLDG FOR INSTALLATION INTO GK-RE-4 AND RESULTED IN A CRVIS AND A FUEL BLDG ISOLATION SIGNAL. IN ADDITION TO REPLACING THE SCINTILLATOR TUBE ASSEMBLY FOR GK-RE-4, THE I/O CIRCUIT BOARD FOR THE MICROPROCESSING UNIT, RM-80, OF GK-RE-4 WAS ALSO REPLACED. NO SPURIOUS ALARMS ON GK-RE-4 HAVE BEEN RECEIVED SINCE 9-14-84. ALL INCIDENTS OCCURRED PRIOR TO INITIAL CRITICALITY WITH THE PLANT IN MODE 4, HOT SHUTDOWN, AND MODE 3, HOT STANDBY, DURING THE PERIOD. NO RADIATION ABOVE NORMAL BACKGROUND WAS PRESENT. SIMILAR EVENTS: 483/84-004 AND 483/84-025.

[43] CALLAWAY 1 DOCKET 50-483 LER 84-064
 REACTOR TRIPS DURING 50 PERCENT LOAD REDUCTION TEST.
 EVENT DATE: 121784 REPORT DATE: 011685 NSSS: WE TYPE: PWR

(NSIC 193513) ON 12-17-84 AT 0138 CST, WHILE INITIATING A 50% LOAD REDUCTION TEST FROM 100% POWER, A REACTOR TRIP WAS RECEIVED ON RAPIDLY DECREASING PRESSURIZER PRESSURE (RATE SENSITIVE). PRIOR TO THE LOAD REDUCTION TEST, THE PRESSURIZER PORV'S WERE BLOCKED DUE TO EXCESSIVE LEAKAGE. WHEN IT BECAME OBVIOUS TO THE REACTOR OPERATOR THAT THE PRESSURE TRANSIENT WOULD CHALLENGE THE PORV'S HE OPENED THE BLOCK VALVES. THE LIFTING OF THE PORV'S COUPLED WITH THE PRESSURIZER SPRAY VALVES BEING FULL OPEN CAUSED RAPIDLY DECREASING PRESSURE AND THE TRIP. THE PLANT WAS STABILIZED IN MODE 3 PER PROCEDURE. THE TEST PROCEDURE WAS REVISED AND THE TEST WAS REPEATED AND COMPLETED SUCCESSFULLY ON 12-19-84.

[44] CALLAWAY 1 DOCKET 50-483 LER 85-003
 SPURIOUS CONTROL ROOM VENTILATION ISOLATION SIGNALS.
 EVENT DATE: 011585 REPORT DATE: 021485 NSSS: WE TYPE: PWR
 VENDOR: GENERAL ATOMIC CO.

(NSIC 193381) BETWEEN THE DATES OF 1-15-85 AND 1-24-85 THREE INCIDENTS OF SPURIOUS SPIKES RECEIVED FROM CONTROL BLDG RADIATION MONITOR GK-RE-4 RESULTED IN CONTROL ROOM VENTILATION ISOLATION SIGNALS. THE INCIDENTS OCCURRED ON 1-15-85 AT 0450 CST, 1-20-85 AT 0944, AND 1-24-85 AT 0228 WITH THE PLANT OPERATING IN MODE 1 AT 48% POWER, 100% POWER, AND 89% POWER RESPECTIVELY. THE CAUSE OF THESE INCIDENTS AND PREVIOUSLY REPORTED INCIDENTS, REF LERS 84-004-1, 84-025, 84-036, AND 84-063, HAS BEEN DETERMINED TO BE AN INCOMPATIBILITY BETWEEN THE SOFTWARE AND HARDWARE IN THE RM-80 MICROPROCESSING UNIT FOR THE RADIATION MONITOR. THERE WAS NO DAMAGE TO PLANT EQUIPMENT OR RELEASE OF RADIOACTIVITY AS A RESULT OF THESE INCIDENTS. THESE INCIDENTS WERE NOT THE RESULT OF ACTUAL RADIATION LEVELS BUT OF SPURIOUS ELECTRONIC SIGNALS.

[45] CALLAWAY 1 DOCKET 50-483 LER 85-004
 TWO INADVERTENT CONTROL ROOM VENTILATION ISOLATIONS OCCUR.
 EVENT DATE: 012585 REPORT DATE: 022585 NSSS: WE TYPE: PWR

(NSIC 193488) ON 1-25-85 AND 2-2-85 CONTAINMENT PURGE ISOLATIONS AND CONTROL ROOM VENTILATION ISOLATIONS OCCURRED DUE TO INCORRECT HIGH RADIATION SIGNALS FROM A CONTAINMENT PROCESS MONITOR. ALL EQUIPMENT FUNCTIONED AS DESIGNED FOLLOWING THE ACTUATIONS. IN BOTH EVENTS, THE INCORRECT HIGH RADIATION SIGNAL WAS CAUSED BY A HIGH VACUUM AT THE INLET SAMPLE LINE TO THE CONTAINMENT PROCESS MONITOR. IN THE 1ST EVENT, THE HIGH VACUUM CONDITION OCCURRED DURING A TECH SPEC SURVEILLANCE PROCEDURE WHICH REQUIRED STROKE TESTING THE SAMPLE LINE ISOLATION VALVES TO THE MONITOR WITHOUT TAKING THE MONITOR OUT OF SERVICE. THE CAUSE OF THE 2ND HIGH VACUUM CONDITION IS SUSPECTED TO BE A MALFUNCTION OF THE INLET VALVES ON THE MONITOR ITSELF. THE SURVEILLANCE PROCEDURE RESPONSIBLE FOR THE 1ST EVENT IS CURRENTLY BEING REVISED TO REQUIRE TAKING THE MONITOR OUT OF SERVICE PRIOR TO STROKING THE SAMPLE LINE ISOLATION VALVES. ADDITIONALLY, THE OPERATING CONSOLE FOR THE CONTAINMENT PROCESS MONITORING SYSTEM HAS BEEN MARKED INDICATING THE POSSIBLE MALFUNCTION OF THE SAMPLE LINE VALVES OF THE PROCESS MONITOR. A PLANT WORK REQUEST HAS BEEN ISSUED TO INVESTIGATE THE OPERATION OF THE SAMPLE LINE VALVES TO THE MONITOR. CORRECTIVE ACTIONS PERTAINING TO THESE EVENTS ARE EXPECTED TO BE COMPLETE BY 3-1-85.

[46] CALVERT CLIFFS 1 DOCKET 50-317 LER 85-001
 SAFETY INJECTION TANK CHECK VALVE LEAKAGE CAUSES SHUTDOWN.
 EVENT DATE: 011685 REPORT DATE: 020885 NSSS: CE TYPE: PWR
 VENDOR: ATWOOD & MORRILL CO., INC.

(NSIC 193357) AT 1416 ON 1-16-85 A 10 MIN SIT CHECK VALVE INLEAKAGE TEST WAS COMPLETED. INITIAL RESULTS INDICATED EXCESSIVE INLEAKAGE INTO 2 SIT'S. THE RESULTS WERE PRESENTED TO THE PLANT OPERATIONS AND SAFETY REVIEW COMMITTEE (POSRC). IT WAS DECIDED THAT THE HIGH PRESSURE SAFETY INJECTION FLOW RATE SPECIFIED IN THE TECH SPECS COULD NOT BE ASSURED. ADDITIONALLY, UNDER CERTAIN CIRCUMSTANCES, THE SIT INLEAKAGE COULD RENDER THE TANKS INOPERABLE. BASED ON THIS INFO THE POSRC RECOMMENDED THAT BOTH UNIT 1 HIGH PRESSURE SAFETY INJECTION HEADERS BE DECLARED INOPERABLE. REACTOR SHUTDOWN WAS COMPLETED AT 1845. TWO SIT OUTLET CHECK VALVES WERE OVERHAULED ON 1-17-85. EACH VALVE'S SEATING SURFACE O-RING WAS FOUND APPROX 1/3 DEGRADED. THE ETHYLENE PROPYLENE O-RINGS HAD BEEN UPGRADED PREVIOUSLY DUE TO THEIR INABILITY TO WITHSTAND THE TEMPERATURE ENVIRONMENT IN WHICH THESE VALVES OPERATE. BOTH O-RINGS WERE REPLACED WITH A MORE HEAT RESISTANT O-RING. BOTH CHECK VALVES WERE SUBSEQUENTLY SATISFACTORILY LEAK TESTED. THE FOLLOWING CORRECTIVE ACTIONS WILL BE TAKEN AS A RESULT OF THIS EVENT: ALL SIT OUTLET CHECK VALVES WILL BE LEAK TESTED QUARTERLY, THE REMAINING 6

SIT OUTLET CHECK VALVES WILL BE OVERHAULED DURING THEIR 1985 REFUELING OUTAGE. THE ETHYLENE PROPYLENE O-RINGS WILL BE REPLACED BY THE HIGHER TEMPERATURE RESISTANT DUPONT KALREZ COMPOUND, CHANGES TO TECH SPECS FOR A FLEXIBLE MINIMUM FLOW RATE FOR LOWEST 3 HIGH PRESSURE SI LEG FLOWS WILL BE PURSUED.

[47] CATAWBA 1 DOCKET 50-413 LER 84-031
DIESEL GENERATOR AUTOMATIC STARTS DURING 6.9KV TRANSFER TEST.
EVENT DATE: 121684 REPORT DATE: 011585 NSSS: WE TYPE: PWR

(NSIC 193511) ON 12-16-84, AT 1606:37 HRS, DG 1B STARTED ON A BLACKOUT SIGNAL DURING THE AUTOMATIC TRANSFER TEST OF THE 6900V NORMAL AUX POWER SYSTEM. THE 6900V TIE BREAKER CIRCUITRY OPERATED PROPERLY, RESTORING THE 4160V BUS VOLTAGE TO NORMAL APPROXIMATELY 149 MILLI-SECONDS AFTER A LOSS OF VOLTAGE. THIS INCIDENT IS CLASSIFIED AS A DESIGN DEFICIENCY. THE PRESENT DESIGN ALLOWS AN UNDERVOLTAGE CONDITION TO BE DETECTED ON THE ESSENTIAL BUSES BEFORE THE TIE BREAKER CLOSING TO RESTORE THE NORMAL VOLTAGE. UNIT 1 WAS IN MODE 6 AT THE TIME. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73 SECTION (A)(2)(IV).

[48] CATAWBA 1 DOCKET 50-413 LER 85-002
ICE CONDENSER LOWER INLET DOORS BLOC. D CLOSED.
EVENT DATE: 123184 REPORT DATE: 02 '85 NSSS: WE TYPE: PWR

(NSIC 193377) ON 12-31-84, AT 2226 HR UNIT 1 ENTERED MODE 4, HOT SHUTDOWN, WITH THE ICE CONDENSER LOWER INLET DOORS BLOC. CLOSED, THUS RENDERING THE DOORS INOPERABLE. TECH SPEC 3.6.5.3 REQUIRES THE LOWER INLET DOORS TO BE OPERABLE IN MODES 1, 2, 3, AND 4. THIS INCIDENT WAS NOT DISCOVERED UNTIL 1-9-85 AT 1900 HRS. CATAWBA UNIT 1 WAS IN MODE 2, START-UP, WHEN THIS INCIDENT WAS DISCOVERED. A WORK REQUEST WAS ISSUED FOLLOWING THE DISCOVERY OF THIS INCIDENT, AND THE LOWER INLET DOORS WERE UNBLOCKED AT 2155 HRS. THIS INCIDENT IS REPORTABLE PURSUANT TO 10CFR50.73(A)(2)(V) AND 10CFR50.72(B)(2)(III). THIS EVENT IS CLASSIFIED AS A PERSONNEL ERROR. AFTER ENTERING MODE 5 (COLD SHUTDOWN) AND PRIOR TO ENTERING MODE 6 (REFUELING) THE ICE CONDENSER LOWER INLET DOORS ARE PHYSICALLY BLOCKED CLOSED TO ENSURE THAT THE LOWER INLET DOORS DO NOT INADVERTENTLY OPEN. THIS IS REQUIRED BY OPERATIONS PROCEDURE OP/1/A/6100/02, CONTROLLING PROCEDURE FOR UNIT SHUTDOWN. PRIOR TO ENTERING MODE 4 (HOT SHUTDOWN) THE DOOR BLOCKING DEVICES ARE REQUIRED TO BE REMOVED PER A STEP IN OP/1/A/6100/01, CONTROLLING PROCEDURE FOR UNIT STARTUP. THE PROCEDURAL STEP VERIFYING THAT THE ICE CONDENSER LOWER INLET DOOR BLOCKING DEVICES WERE REMOVED WAS SIGNED-OFF WHEN IN FACT, THE LOWER INLET DOOR BLOCKING DEVICES WERE STILL INSTALLED.

[49] CATAWBA 1 DOCKET 50-413 LER 85-001
INADVERTENT REACTOR SCRAM AND AUXILIARY FEEDWATER PUMP START DURING TESTS.
EVENT DATE: 010485 REPORT DATE: 020185 NSSS: WE TYPE: PWR

(NSIC 193376) ON 1-4-85, AT 1352:56 HRS, MOTOR-DRIVEN AUX FEEDWATER PUMPS 1A AND 1B AUTOMATICALLY STARTED DURING TESTING OF THE TURBINE IMPULSE CHAMBER PRESSURE. THE TESTING INITIATED AN INADVERTENT REACTOR TRIP SIGNAL, WHICH IN TURN, AUTOMATICALLY TRIPPED MAIN FEEDWATER PUMP 1A, AND STARTED CA PUMPS 1A AND 1B. AT THE TIME OF THE INCIDENT, UNIT 1 WAS IN MODE 3 (HOT STANDBY), WITH AN AVERAGE REACTOR COOLANT TEMPERATURE OF 559 F AND PRESSURIZER PRESSURE OF APPROX 1830 PSIG. TO RECOVER FROM THE INCIDENT, THE IMPULSE PRESSURE TEST SWITCH WAS RETURNED TO NORMAL, THE REACTOR TRIP BREAKERS WERE CLOSED, CA PUMPS 1A AND 1B WERE TRIPPED, CF PUMPS 1A AND 1B WERE RESET, AND CF PUMP 1B WAS STARTED. THIS INCIDENT IS CLASSIFIED AS A PERSONNEL ERROR. THE INSTRUMENT AND ELECTRICAL SUPERVISOR OF THE TEST CREW DECIDED A STEP IN THE TURBINE IMPULSE PRESSURE CHAMBER TEST SECTION OF THE PROCEDURE WAS 'NOT APPLICABLE' WITHOUT THOROUGHLY ANALYZING THE IMPACT ON PLANT OPERATION. IF THAT STEP WOULD HAVE BEEN PERFORMED,

THIS INCIDENT WOULD NOT HAVE OCCURRED. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(IV), AND 10 CFR 50.72(B)(2)(II).

[50] CATAWBA 1 DOCKET 50-413 LER 85-003
INADVERTENT REACTOR TRIP BREAKER ACTUATION DURING TESTING.
EVENT DATE: 010985 REPORT DATE: 020885 NSSS: WE TYPE: PWR

(NSIC 193378) ON 1-9-85, AT 1430 HRS, RTB OPENED ON A HIGH FLUX SOURCE RANGE REACTOR TRIP SIGNAL. THIS SIGNAL OCCURRED DURING THE MONTHLY TESTING OF THE SOLID STATE PROTECTION SYSTEM. THE REACTOR DID NOT TRIP BECAUSE BYPASS BREAKER BYB WAS CLOSED. THE CONTROL ROOM OPERATOR THEN BLOCKED THE TRIP SIGNAL BY DEPRESSING THE SOURCE RANGE BLOCK PUSHBUTTON WHICH ALLOWED RECLOSING OF REACTOR TRIP BREAKER RTB. THIS INCIDENT IS CLASSIFIED AS A PROCEDURAL DEFICIENCY. THE PROCEDURE USED DURING THE TEST DID NOT PREVENT A SOURCE RANGE HIGH FLUX REACTOR TRIP SIGNAL FROM BEING GENERATED WHEN TESTING BETWEEN A P-6 (10E-10 AMPS ON THE INTERMEDIATE RANGE) CONDITION AND A P-10 (10% POWER) CONDITION. UNIT 1 WAS IN MODE 2 AT THE TIME OF THE INCIDENT. THIS INCIDENT IS REPORTABLE PURSUANT TO 10CFR50.73(A)(2)(IV) AND 10CFR50.72(B)(2)(II).

[51] CATAWBA 1 DOCKET 50-413 LER 85-004
MANUAL REACTOR TRIP FOLLOWING LOSS OF COOLING TO REACTOR COOLANT PUMP MOTORS.
EVENT DATE: 011485 REPORT DATE: 021385 NSSS: WE TYPE: PWR
VENDOR: BETTIS CORPORATION
POSI-SEAL

(NSIC 193379) ON 1-14-85, AT 1440 HRS, THE UNIT 1 REACTOR WAS MANUALLY TRIPPED. THE REACTOR COOLANT PUMPS HAD BEEN PREVIOUSLY SHUTDOWN DUE TO THE LOSS OF MOTOR COOLING WATER, AND THE ABILITY TO CONTROL UNIT REACTIVITY WAS THEREFORE LESS THAN DESIRABLE. THE LOSS OF MOTOR COOLING IS ATTRIBUTED TO A MALFUNCTION OF SERVICE WATER VALVE 1RN-A83, WHICH OPENS TO SUPPLY AN ALTERNATE SOURCE OF COOLING WATER TO THE REACTOR COOLANT PUMPS WHEN THE NORMAL SOURCE IS NOT AVAILABLE. ON 1-14-85, A VENDOR WAS ONSITE TO DRILL ADDITIONAL WELLS ASSOCIATED WITH THE CATHODIC PROTECTION SYSTEM. WHILE DRILLING, AN INSTRUMENT AIR SYSTEM LINE WAS DRILLED THROUGH. THE VI LINE WHICH WAS RUPTURED SUPPLIES CONTROL AIR TO THE CONT. CHILLED WATER CONTROL PANEL (1YV-CP-1). THE LOSS OF CONTROL AIR TO 1YV-CP-1 CAUSED THE YV CHILLERS AND PUMPS TO SHUTDOWN. THIS SYSTEM SUPPLIES THE NORMAL SOURCE OF COOLING WATER TO THE REACTOR COOLANT PUMP MOTORS. THE 4 SERVICE WATER SWAP-OVER VALVES, WHICH SUPPLY AN ALTERNATE WATER SOURCE, ARE SUPPLIED BY A DIFFERENT VI HEADER THAN 1YV-CP-1. THE SWAP-OVER VALVES THEREFORE DID NOT ATTEMPT TO REALIGN AS THEY DID NOT EXPERIENCE A LOSS OF CONTROL AIR. REALIZING THAT A SWAP-OVER TO SERVICE WATER HAD NOT OCCURRED, THE NCO REALIGNED THE YV CONTROL SWITCH FROM AUTO TO SERVICE WATER BUT DID NOT RECEIVE INDICATION THAT A SWAP-OVER HAD TAKEN PLACE. VERIFICATION REVEALED THAT 1RN-A83 WAS STILL CLOSED.

[52] CATAWBA 1 DOCKET 50-413 LER 85-005
POWER RANGE CHANNEL INOPERABLE DURING THE MODE CHANGE.
EVENT DATE: 011785 REPORT DATE: 021585 NSSS: WE TYPE: PWR

(NSIC 193438) BETWEEN 1-7-85, AND 1-20-85, CATAWBA UNIT 1 ENTERED MODE 2 FIVE TIMES WHILE TECH SPEC 3.0.4 WAS IN EFFECT. TECH SPEC 3.0.4 STATES THAT AN 'OPERATIONAL MODE' CANNOT BE ENTERED UNLESS THE APPLICABLE LIMITING CONDITIONS FOR OPERATION ARE MET WITHOUT BEING IN THE ASSOCIATED ACTION REQUIREMENTS. THIS TECH SPEC NONCOMPLIANCE, ASSOCIATED WITH 'POWER RANGE NEUTRON FLUX, NOT P-10', WAS DISCOVERED ON 1-17-85, DURING A REVIEW OF THE TECH SPEC ACTION ITEM LOG (TSAIL). UNIT 1 WAS IN MODE 2, STARTUP, AT THE TIME OF THE DISCOVERY. THIS INCIDENT IS CLASSIFIED AS A PERSONNEL ERROR. WHEN A POWER RANGE CHANNEL WAS REMOVED FROM SERVICE, THE TSAIL WAS NOT FILLED OUT PROPERLY IN RELATION TO THE 'NOT P-10' REQUIREMENT. THE ASSOCIATED PERSONNEL WERE NOT AWARE OF THIS ITEM,

WHICH REQUIRES ALL 4 CHANNELS OF THE POWER RANGE INSTRUMENTATION TO BE OPERABLE IN MODE 2. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73(A)(2)(I)(B).

[53] CATAWBA 1 DOCKET 50-413 LER 85-006
INADVERTENT COOLDOWN DURING NATURAL CIRCULATION TESTING.
EVENT DATE: 012085 REPORT DATE: 021985 NSSS: WE TYPE: PWR

(NSIC 193483) ON 1-20-85 AT 0100 HRS, REACTOR COOLANT AVERAGE TEMPERATURE (TAVE) DECREASED TO LESS THAN 541 F DURING THE PERFORMANCE OF PROCEDURE TP/1/A/2650/13 (NATURAL CIRCULATION VERIFICATION TEST). DURING THE TEST, FORCED CIRCULATION CEASED. THIS ALLOWED THE PRIMARY COOLANT AT THE SG'S TO BECOME COOLER THAN OTHER PORTIONS OF THE RCS. WHEN THE RCS PUMPS WERE RESTARTED, THE COOLER WATER CIRCULATED THROUGHOUT THE SYSTEM, THUS DECREASING T-AVE. A FACTOR THAT CAUSED THE PRIMARY COOLANT IN THE SG'S TO DECREASE WAS THAT AUX FEEDWATER WAS INSERVICE INSTEAD OF MAIN FEEDWATER (AUX FEEDWATER TEMPERATURE IS LESS THAN MAIN FEEDWATER TEMPERATURE). THEREFORE, MORE HEAT WAS BEING REMOVED FROM THE PRIMARY SYSTEM THAN MAY HAVE OTHERWISE BEEN EXPECTED. BECAUSE OF THIS THE ACTION STATEMENT OF TECH SPEC 3.10.3 WAS ENTERED, WHICH REQUIRES THAT T-AVE BE INCREASED TO GREATER THAN 541 F IN 15 MINS OR BE IN MODE 3 (HOT STANDBY) WITHIN THE NEXT 15 MINS. SINCE T-AVE COULD NOT BE INCREASED ABOVE 541 F IN 15 MINS, UNIT 1 WAS PLACED IN HOT STANDBY AT 0128 HRS ON 1-20-85. THE UNIT WAS IN MODE 2 (STARTUP) AT THE TIME OF THE INCIDENT. DUE TO THE NATURE OF THIS INCIDENT AND AS THE ACTION STATEMENT OF TECH SPEC 3.10.3 WAS COMPLIED WITH THROUGHOUT, AN EVENT CAUSE CATEGORY IS NOT ASSIGNED. THIS INCIDENT IS REPORTABLE PURSUANT TO 10CFR50.73(A)(2)(I)(A) AND 10CFR50.72(B)(I)(A).

[54] CATAWBA 1 DOCKET 50-413 LER 85-011
BOTH TRAINS OF SAFETY INJECTION INOPERABLE.
EVENT DATE: 020785 REPORT DATE: 030885 NSSS: WE TYPE: PWR

(NSIC 193639) ON 2-7-85, FROM 0920 HRS TO 1030 HRS, AND FROM 1255 HRS TO 1325 HRS, SI TRAINS A AND B WERE INOPERABLE. THIS WAS DUE TO THE CONCURRENT INOPERABILITY OF SI PUMP 1B AND SOLID STATE PROTECTION SYSTEM TRAIN A. THIS INCIDENT WAS DISCOVERED AT APPROX 1300 HRS DURING REVIEW OF THE TECH SPEC ACTION ITEMS LOGBOOK (TSAIL). AFTER DISCOVERY OF THIS INCIDENT, THE SHIFT SUPERVISOR BEGAN THE NECESSARY CORRECTIVE ACTION TO RETURN SI PUMP 1B TO SERVICE AND AT 1325 HRS, SI PUMP 1B WAS DECLARED OPERABLE. THIS INCIDENT IS CLASSIFIED AS A PERSONNEL ERROR. THE SENIOR REACTOR OPERATOR (SRO) IN COMMAND SHOULD NOT HAVE ALLOWED BOTH TRAINS OF SI TO BE RENDERED INOPERABLE. CATAWBA UNIT 1 WAS IN MODE 2 AT THE TIME OF THIS INCIDENT. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73 (A)(2)(V), AND 10 CFR 50.72 (B)(2)(III).

[55] CATAWBA 1 DOCKET 50-413 LER 85-013
CONDUIT FIRESTOP SEALS NOT INSTALLED.
EVENT DATE: 022085 REPORT DATE: 032285 NSSS: WE TYPE: PWR

(NSIC 193640) DURING A RANDOM INSPECTION ON 2-20-85, CONDUITS PENETRATING FIRE BARRIERS WHICH DID NOT HAVE THEIR ENDS SEALED FOR FIRE PROTECTION WERE DISCOVERED. THIS WAS DETERMINED TO BE A GENERIC PROBLEM, AND A NONCONFORMING ITEM REPORT WAS WRITTEN. AFTER A SUBSEQUENT DETERMINATION OF INOPERABILITY, ALL CONDUITS THAT PENETRATE FIRE BARRIERS WERE TRACED DOWN, AND SEALS INSTALLED IN THEIR ENDS AS REQUIRED. THE APPLICABLE CONSTRUCTION PROCEDURE, CP469, DID NOT REQUIRE BUILDER CRAFT TO SEAL CONDUIT ENDS AS REQUIRED IN INSTALLATION SPECS. THEREFORE, THIS INCIDENT IS CLASSIFIED AS A PROCEDURAL DEFICIENCY. ALSO, A CONTRIBUTING CAUSE OF PERSONNEL ERROR, IS ASSIGNED TO THIS INCIDENT DUE TO THE FAILURE OF CONSTRUCTION QA TO ADEQUATELY REVIEW WORK AGAINST APPLICABLE SPECS. CATAWBA UNIT 1 WAS IN MODE 5, COLD SHUTDOWN, AT THE TIME OF THE INCIDENT. THIS INCIDENT IS REPORTABLE PURSUANT TO 10 CFR 50.73 (A)(2)(I)(B).

[56] CONNECTICUT YANKEE DOCKET 50-213 LER 85-001
 MAIN STEAM LINE DRAIN CONTAINMENT ISOLATION VALVE LEAKS.
 EVENT DATE: 011485 REPORT DATE: 020585 NSSS: WE TYPE: PWR
 VENDOR: MASONEILAN INTERNATIONAL, INC.

(NSIC 193385) DURING A ROUTINE INSPECTION, A BODY TO BONNET STEAM LEAK WAS DISCOVERED ON A MAIN STEAM LINE DRAIN VALVE. THE VALVE (MS-TV-1212) IS A CONTAINMENT ISOLATION VALVE AND IS REQUIRED TO CLOSE WITHIN 60 SECONDS. THE VALVE IS LOCATED ON THE MAIN STEAM HEADER LEADING TO THE BLOWDOWN TANK. AN OPERATOR TIGHTENED DOWN ON THE BODY TO BONNET BOLTS IN AN ATTEMPT TO STOP THE LEAK. THE VALVE WAS FURMANITED. THE VALVE WAS TESTED FOR FULL STEM TRAVEL AND STROKE TIME. THE VALVE DID NOT CLOSE OR EXHIBIT ANY STEM TRAVEL WHEN TESTED. THE INOPERABLE VALVE WAS ISOLATED BY LOCKING CLOSED THE NEXT DOWN STREAM MANUAL VALVE (BD-V-501A) AS REQUIRED BY PLANT TECH SPECS. THE INOPERABLE VALVE WILL BE REPAIRED OR REPLACED DURING THE NEXT COLD SHUTDOWN. VALVE MS-TV-1212 WILL REMAIN INOPERABLE AND VALVE BD-V-501A WILL ACT AS CONTAINMENT ISOLATION UNTIL THE NEXT COLD SHUTDOWN WHEN CORRECTIVE ACTION WILL BE INITIATED.

[57] COOK 1 DOCKET 50-315 LER 84-029
 MISSED AUXILIARY BUILDING VENT SAMPLE.
 EVENT DATE: 111284 REPORT DATE: 121184 NSSS: WE TYPE: PWR

(NSIC 193498) ON 11-12-84 AT 1000 HRS WITH THE RCS IN MODE 1 AT 50% POWER, TECH SPEC 3.3.3.10 TABLE 3.3-13 ITEM 3A ACTION STATEMENT NUMBER 28 WAS NOT MET. THIS OCCURRED WHEN A CHEMICAL/RADIATION PROTECTION TECHNICIAN FAILED TO TAKE THE REQUIRED 8 HR GRAB SAMPLE AND ANALYZE IT FOR GROSS ACTIVITY AS REQUIRED BY THE ACTION STATEMENT DUE TO THE INOPERABILITY OF THE AUX BLDG VENT RADIATION MONITOR (IEEE FUNCTION IDENTIFIER - IL). WITH THE RADIATION MONITOR OPERABLE THE GRAB SAMPLE WAS REQUIRED AT 1000 HRS. THE SAMPLE WAS ACTUALLY TAKEN AT 1036 HRS WHICH EXCEEDS THE ACTION STATEMENT REQUIREMENT BY 36 MINS. TO PREVENT RECURRENCE THE CHEMICAL/RADIATION PROTECTION TECHNICIAN WAS REINSTRUCTED IN THE IMPORTANCE OF TECH SPEC REQUIRED SAMPLING AND THAT THESE SAMPLES MUST TAKE PRIORITY OVER OTHER WORK.

[58] COOK 1 DOCKET 50-315 LER 84-028
 MISSED HOURLY INSPECTION OF INOPERABLE FIRE DOORS.
 EVENT DATE: 111584 REPORT DATE: 121184 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 193497) ON 11-15-84, WITH UNITS 1 AND 2 OPERATING AT 100% POWER A FIRE WATCH FAILED TO MAKE THE 0600 HOURLY INSPECTION OF INOPERABLE FIRE DOORS (IEEE FUNCTION IDENTIFIER - DR). THESE DOORS (UNIT 1, NO. 323, 333, 339 - UNIT 2, NO. 324, 326, 340) PROTECTED THE REACTOR CABLE TUNNELS IN BOTH UNITS AND ARE REQUIRED BY TECH SPECS 3.7.10. INVESTIGATION INTO THIS INCIDENT REVEALED THAT THE FIRE WATCH IN QUESTION HAD MADE THE REQUIRED DOOR INSPECTIONS COMMENCING AT 2400 HRS (11-14-84) UNTIL 0500 HRS (11-15-84). PRIOR TO THE 0600 INSPECTION THE FIRE WATCH BECAME INVOLVED IN OTHER DUTIES AND LOST TRACK OF TIME. THE MISSED INSPECTIONS WERE NOT REALIZED UNTIL IT WAS TIME TO PERFORM THE 0700 HR INSPECTIONS. THE DOOR INSPECTIONS WERE COMPLETED FOR THE REQUIRED 0700 INSPECTION. TO PREVENT RECURRENCE THE INCIDENT WAS DISCUSSED WITH THE FIRE WATCH BY THE FIRE WATCH DISPATCHER AND THE CONTRACTOR'S ON SITE SUPERVISOR. THE FIRE WATCH ALSO RECEIVED A WRITTEN REPRIMAND. PREVIOUS OCCURRENCES OF A SIMILAR NATURE INCLUDE: LER 84-027.

[59] COOK 1 DOCKET 50-315 LER 85-002
 MISSED AUXILIARY BUILDING VENT SAMPLES.
 EVENT DATE: 011885 REPORT DATE: 021385 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: COOK 2 (PWR)

(NSIC 193408) ON 1-18-85 AT 1400 HRS WITH UNIT 1 RCS IN MODE 5 AND UNIT 2 RCS IN MODE 1 AT 100% REACTOR THERMAL POWER, IT WAS DISCOVERED THAT TECH SPEC 3.11.2.1 SURVEILLANCE REQUIREMENT 4.11.2.1.2; TABLE 4.11.2 ITEM D TABLE NOTATION C WAS NOT MET. THIS VIOLATION OCCURRED DAILY FROM 1-11-85 WHEN UNIT 1 WAS SHUTDOWN THROUGH 1-17-85 WHEN THE REQUIRED DAILY AUX BLDG VENT SAMPLE (FOLLOWING EACH SHUTDOWN, STARTUP OR SIMILAR OCCURRENCE WHICH LEADS TO A SIGNIFICANT INCREASE OR DECREASE IN RADIOIODINE IN THE RCS) WAS NOT TAKEN AS REQUIRED BY THE TABLE NOTATION. THE 'ROUTINE' WEEKLY ANALYSIS, CONDUCTED ON 1-16-85 PER TECH SPEC 3.11.2.1 SURVEILLANCE REQUIREMENT 4.11.2.1.2 TABLE 4.11-2 ITEM D INDICATED NO ABNORMAL IODINE LEVEL ON THE VENT STACK. AS A CORRECTIVE ACTION, THE REQUIRED DAILY SAMPLES WERE COLLECTED AND ANALYZED ON 1-18-85 AND 1-19-85. THE 1-18-85 AND 1-19-85 SAMPLES ALSO INDICATED NO ABNORMAL IODINE LEVELS ON THE VENT STACK SAMPLES. TO PREVENT RECURRENCE THE SURVEILLANCE REQUIREMENT HAS BEEN ADDED TO THE CHEMICAL SECTION SURVEILLANCE SCHEDULE AND PROCEDURES ARE BEING REVISED TO INCLUDE THE REQUIREMENT FOR INCREASED VENT STACK SURVEILLANCE FOLLOWING A SIGNIFICANT CHANGE IN REACTOR COOLANT IODINE LEVELS.

[60] COOK 1 DOCKET 50-315 LER 85-004
INADVERTENT HIGH CONTAINMENT RADIATION ALARM CAUSES CONTAINMENT ISOLATION.
EVENT DATE: 012985 REPORT DATE: 022585 NSSS: WE TYPE: PWR

(NSIC 193356) ON 1-29-85 AT 1521 HRS WITH THE REACTOR IN MODE 1 AT 8% POWER, A HIGH ALARM WAS RECEIVED ON THE LOWER CONTAINMENT RADIATION MONITOR (ERS-1401) THAT RESULTED IN A CONTAINMENT ISOLATION, AN AUTOMATIC ACTUATION OF AN ESP (TECH SPEC 3.3.2.1, TABLE 3.3-4, ITEM 3.C.3). REACTOR POWER WAS BEING INCREASED CAUSING THE CONTAINMENT AIRBORNE ACTIVITY TO TREND UPWARD. THE SETPOINT FOR THE ERS-1401 HIGH ALARM WAS $9.53E-2$ MICRO CURIES WHICH IS 1.2 TIMES THE LAST 10 MIN AVERAGE. TECH SPEC REQUIRES A SETPOINT VALUE LESS THAN OR EQUAL TO 2 TIMES THE BACKGROUND. THE ALARM RESULTED IN THE AUTOMATIC CLOSURE OF THE TRAIN B CONTAINMENT ISOLATION VALVE FOR THE CONTAINMENT PRESSURE RELIEF SYSTEM (VCR-207) WHICH WAS IN SERVICE AT THIS TIME. AT THE TIME OF THIS OCCURRENCE THE CONTAINMENT PRESSURE RELIEF PROCEDURE DID NOT ADDRESS EXPECTED RESULTS OR PREPLANNED SEQUENCES AS IDENTIFIED IN 10 CFR 50.73(A)(3)(IV). THERE WERE NO ADVERSE CONSEQUENCES FROM THIS EVENT, ALL SYSTEM COMPONENTS FUNCTIONED AS DESIGNED. TO PREVENT RECURRENCE A PROCEDURE CHANGE WILL BE MADE BY 3-8-85 TO IDENTIFY EXPECTED RESULTS OR PREPLANNED SEQUENCES WHICH WILL PREVENT THE NEED TO REPORT ANY SIMILAR EXPECTED INCIDENTS OF THIS NATURE. PREVIOUS SIMILAR OCCURRENCES: 50-315/84-012; 50-315/84-003; 50-316/84-010.

[61] COOK 1 DOCKET 50-315 LER 85-006
FIRE DAMPERS IMPROPERLY CLASSIFIED.
EVENT DATE: 020685 REPORT DATE: 030885 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: COOK 2 (PWR)
VENDOR: AMERICAN WARMING & VENTILATING INC.

(NSIC 193456) ON 2-6-85 AT 1300 HRS WITH UNIT 1 REACTOR IN MODE 1 AT 70% POWER AND UNIT 2 REACTOR IN MODE 1 AT 100% POWER, AN AUX BLDG ACCESS CONTROL AREA VENTILATION DUCT FIRE DAMPER WAS FOUND CLOSED DURING THE PERFORMANCE OF MAINTENANCE ACTIVITIES IN THE AREA. INITIAL INVESTIGATION OF THE CONDITION DETERMINED THAT THE FIRE DAMPER WAS DESIGNED TO PERFORM A SAFETY FUNCTION BUT HAD BEEN MISIDENTIFIED AS NON-SAFETY-RELATED DURING THE SAFETY-RELATED FIRE DAMPER IDENTIFICATION PROGRAM OF 1982. AS A RESULT OF THE IMPROPER IDENTIFICATION, THE DAMPER WAS RESET AND SURVEILLANCE TESTED PURSUANT TO TECH SPEC 4.7.10.3 AT 0817 HRS ON 2-7-85. A CONTINUING INVESTIGATION INTO THIS EVENT INDICATED THAT FOUR ADDITIONAL FIRE DAMPERS WERE NOT INCLUDED IN THE TABULATION OF SAFETY-RELATED FIRE DAMPERS. ALL 5 FIRE DAMPERS ARE BEING ADDED TO THE FIRE DAMPER SURVEILLANCE TEST SCHEDULE. A COMPREHENSIVE REVIEW OF PLANT FIRE DAMPERS IS CURRENTLY BEING PERFORMED. A FOLLOW-UP REPORT WILL BE SUBMITTED WHEN THIS REVIEW IS COMPLETE.

[62] COOK 2 DOCKET 50-316 LER 85-002
 HIGH STEAM DUMP FLOW CAUSES LOW SG LEVEL.
 EVENT DATE: 011285 REPORT DATE: 020885 NSSS: WE TYPE: PWR

(NSIC 193457) ON 1-12-85 AT 1503 HRS, WITH THE REACTOR IN MODE 2 AND AT 2% REACTOR THERMAL POWER, AN AUTOMATIC ESF ACTUATION OCCURRED RESULTING IN A REACTOR TRIP. THE INITIATING EVENT WAS A LOW-LOW LEVEL IN SG 22. THE LOW SG LEVEL WAS DUE TO AN UNEXPECTED INCREASE IN STEAM FLOW EXPERIENCED WHILE RETURNING AN ISOLATED STEAM DUMP VALVE TO SERVICE. THE REACTOR TRIP AND AUTOMATIC ESF ACTUATION FUNCTIONED AS DESIGNED. TO PREVENT RECURRENCE, THE SHIFT SUPERVISOR DISCUSSED THIS EVENT WITH SHIFT PERSONNEL AND AN OPERATING MEMO WAS WRITTEN TO ALL OPERATORS DISCUSSING THIS EVENT.

[63] COOK 2 DOCKET 50-316 LER 85-003
 VITAL INVERTER AND APW THROTTLE VALVE FAILURES.
 EVENT DATE: 012685 REPORT DATE: 022585 NSSS: WE TYPE: PWR
 VENDOR: SOLID STATE CONTROLS, INC.

(NSIC 193458) ON 1-26-85 AT 0925 HRS, WHILE AT 96% POWER, THE FAILURE OF THE 120V AC VITAL BUS III INVERTER RESULTED IN AN OPEN INDICATION OF THE LOOP 3 REACTOR COOLANT PUMP BREAKER. THE INDICATION IN COINCIDENCE WITH REACTOR POWER GREATER THAN THE P-8 SETPOINT INITIATED A REACTOR TRIP. DURING THE REACTOR TRIP SEQUENCE, THE TURBINE DRIVEN AUX FEEDWATER PUMP FAILED TO AUTOMATICALLY START. THE CAUSE OF THE INVERTER FAILURE WAS NOT DETERMINED, THEREFORE, ALL SUSPECT COMPONENTS WERE REPLACED. THE INVERTER WAS THEN LOAD TESTED AND RETURNED TO SERVICE. THE FAILURE OF THE TDAFP TO AUTOMATICALLY START WAS THE RESULT OF EXCESSIVE CLEARANCE IN THE TRIP AND THROTTLE VALVE LATCHING MECHANISM. TO PREVENT RECURRENCE: 1) A DESIGN CHANGE HAS BEEN APPROVED THAT REPLACES THE EXISTING INVERTERS WITH A DESIGN FEATURING INCREASED RELIABILITY, 2) A PROCEDURE WILL BE WRITTEN BY 8-1-85, TO ENSURE THAT PRECISE AND CONSISTENT TDAFP TRIP AND THROTTLE VALVE LATCHING MECHANISM ADJUSTMENTS ARE MAINTAINED, AND 3) AN ACCELERATED TESTING PROGRAM HAS BEEN IMPLEMENTED CONSISTING OF WEEKLY TDAFP STARTS, AND VISUALLY CORRECT TRIP AND THROTTLE VALVE LATCHING DURING EACH OPERATING SHIFT. THIS SUPPLEMENTAL TESTING WILL BE CONTINUED UNTIL TDAFP RELIABILITY IS ASSURED. PREVIOUS FAILURES: 315/84-008, 315/80-020, 315/79-022, 316/83-081, 316/83-052, AND 316/81-027.

[64] COOPER DOCKET 50-298 LER 85-001
 DEFUELING OPERATIONS WITHOUT SECONDARY CONTAINMENT INTEGRITY.
 EVENT DATE: 092284 REPORT DATE: 021485 NSSS: GE TYPE: BWR

(NSIC 193355) DURING PLANT SHUTDOWN CONDITIONS, A SECONDARY CONTAINMENT LEAK TEST WAS PERFORMED TO VERIFY SECONDARY CONTAINMENT INTEGRITY PRIOR TO DEFUELING OPERATIONS. THIS TEST IS REQUIRED BY COOPER NUCLEAR STATION TECH SPECS. PARAGRAPH 4.7.C.1.C. AFTER COMPLETION OF WHAT WAS CONSIDERED TO BE A SATISFACTORY SECONDARY CONTAINMENT LEAK TEST, THE REACTOR CORE WAS COMPLETELY DEFUELED. AFTER DEFUELING OPERATIONS HAD BEEN COMPLETED, IT WAS DISCOVERED THAT PLANT CONDITIONS HAD EXISTED DURING THE SECONDARY CONTAINMENT LEAK TEST WHICH INVALIDATED THE RESULTS. THEREFORE, FUEL HANDLING OPERATIONS HAD BEEN CONDUCTED WITHOUT VERIFICATION OF SECONDARY CONTAINMENT INTEGRITY, WHICH IS A VIOLATION OF COOPER NUCLEAR STATION TECH SPECS. THIS VIOLATION WAS CAUSED BY A COMBINATION OF PROCEDURAL AND PERSONNEL ERRORS, WITH NO GENERIC IMPLICATIONS.

[65] DAVIS-BESSE 1 DOCKET 50-346 LER 85-001
 ATMOSPHERIC VENT VALVE TESTING INADEQUACIES.
 EVENT DATE: 010985 REPORT DATE: 020785 NSSS: BW TYPE: PWR
 VENDOR: CONTROL COMPONENTS

(NSIC 193681) ON 1-9-85, A REVIEW OF THE ATMOSPHERIC VENT VALVE TESTING

DETERMINED THAT ATMOSPHERIC VENT VALVE TEST SCHEDULING WAS DEFICIENT AT DAVIS-BESSE UNIT 1. IT WAS DETERMINED THAT ATMOSPHERIC VENT VALVE, ICS 11A, HAD NOT BEEN TESTED IN ACCORDANCE WITH TECH SPEC 4.6.3.1.2.A FROM 9-15-77 TO 10-5-80. TECH SPEC 4.6.3.1.2.A REQUIRES ICS 11A TO BE DEMONSTRATED OPERABLE AT LEAST ONCE PER 18 MONTHS BY VERIFYING THAT ON A CONTAINMENT ISOLATION TEST SIGNAL, EACH AUTOMATIC ISOLATION VALVE ACTUATES TO ITS ISOLATION POSITION. THE DEFICIENCY OCCURRED DUE TO A PROBLEM IN THE SURVEILLANCE TEST PROGRAM. ICS 11A TESTING HAS NOW BEEN INCORPORATED INTO THE SURVEILLANCE TEST COMPUTER PROGRAM PERTINENT TO TECH SPEC 4.6.3.1.2.A.

[66] DAVIS-BESSE 1 DOCKET 50-346 LER 85-002
 REACTOR TRIPS DURING ZERO POWER PHYSICS TESTING.
 EVENT DATE: 011585 REPORT DATE: 021485 NSSS: BW TYPE: PWR

(NSIC 193467) ON 1-15-85, THE STATION WAS PERFORMING THE ZERO POWER PHYSICS TESTING WITH THE REACTOR IN A CRITICAL CONDITION. IT WAS DISCOVERED THE INTEGRATED CONTROL SYSTEM WAS CONTROLLING SG #1 LEVEL BELOW THE DESIRED SETPOINT. THE MAIN FEEDWATER VALVES WERE PLACED IN MANUAL TO ALLOW ADJUSTMENTS IN THE INTEGRATED CONTROL SYSTEM LOW LEVEL LIMIT CONTROL. SG #1 LEVEL CONTINUED TO DECREASE SLIGHTLY DOWN TO THE SG LOW LEVEL STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM TRIP SETPOINT. THIS ACTUATED THE ANTICIPATORY REACTOR TRIP SYSTEM WHICH DEENERGIZED THE CONTROL RODS.

[67] DAVIS-BESSE 1 DOCKET 50-346 LER 85-003
 CONTAINMENT VENTILATION ISOLATION ON SPURIOUS HIGH RADIATION SIGNAL.
 EVENT DATE: 012585 REPORT DATE: 022285 NSSS: BW TYPE: PWR
 VENDOR: VICTOREEN INSTRUMENT DIVISION

(NSIC 193682) ON 1-25-85, THE STATION EXPERIENCED A SFAS LEVEL 1 ACTUATION. THE ACTUATION ISOLATED CONTAINMENT ATMOSPHERE FROM THE REST OF THE PLANT. THERE WAS NO EFFECT ON POWER OPERATION WITH THE STATION IN MODE 1 AT 39% OF RATED THERMAL POWER. THE STATION HAD REMOVED THE CHANNEL 3 SFAS CONTAINMENT RADIATION DETECTOR FROM SERVICE 2 DAYS EARLIER AND PLACED ITS CHANNEL IN THE TRIPPED CONDITION PER THE ACTION STATEMENT OF TECH SPEC 3.3.2.1 TO PERMIT MAINTENANCE. WHEN THE CHANNEL 4 SFAS CONTAINMENT RADIATION DETECTOR SPIKED, IT CAUSED THE LEVEL 1 ACTUATION. WITHIN 10 MINS RE2007 WAS RESET, AND ACTUATED EQUIPMENT WAS RESTORED TO NORMAL. THIS IS BEING REPORTED UNDER 10CFR50.73(A)(2)(IV) AS AN EVENT THAT RESULTED IN THE AUTOMATIC ACTUATION OF AN ESP. SIMILAR EVENT: 346/83-036.

[68] DIABLO CANYON 1 DOCKET 50-275 LER 84-035
 TURBINE TRIP AND FEEDWATER ISOLATION.
 EVENT DATE: 121584 REPORT DATE: 011485 NSSS: WE TYPE: PWR

(NSIC 192735) THIS VOLUNTARY LER IS BEING SUBMITTED FOR INFORMATION PURPOSES ONLY. AT 1200 PST, 12-15-84, WITH UNIT 1 IN MODE 2 AND WITH THE TURBINE LATCHED BUT NOT ROLLING, A P-14 HI-HI SG WATER LEVEL TURBINE TRIP AND FEEDWATER ISOLATION OCCURRED. THE REACTOR REMAINED CRITICAL. ALL AUTOMATIC EQUIPMENT RESPONDED AS DESIGNED. NO SYSTEMS AS LISTED IN FSAR CHAPTER 6, ESFS, WERE FOUND TO HAVE ACTUATED. WHILE RETURNING PRESSURE CONTROL VALVES 1, 6, AND 8 TO SERVICE, THE 10% ATMOSPHERIC DUMPS WERE SET TO MAINTAIN SG PRESSURE AT APPROX 1035 PSIG. THE 10% DUMPS DID NOT OPEN IN SUFFICIENT TIME TO MAINTAIN SG 1-2 PRESSURE BELOW THE SETPOINT FOR SAFETY VALVES RV-7 AND RV-9 BECAUSE OF LAG TIMES IN THE OPENING CIRCUITRY. THESE SAFETY VALVES OPENED DEPRESSURIZING SG 1-2 SUCH THAT SWELL CAUSED THE WATER LEVEL TO EXCEED THE HI-HI SETPOINT. SG 1-2 FEEDWATER WAS RESTORED, THE TURBINE WAS RELATCHED AND THE 10% STEAM DUMP SETPOINT WAS VERIFIED AS CORRECT. NO FURTHER CORRECTIVE ACTION WAS NECESSARY. SAFETY VALVE ACTUATIONS OF THIS TYPE HAVE BEEN EXPERIENCED DURING PREVIOUS OPERATIONS. ALL SETPOINTS HAVE BEEN VERIFIED AS CORRECT.

[69] DIABLO CANYON 1
FIRE BARRIERS INOPERABLE.

DOCKET 50-275

LER 85-004

EVENT DATE: 010485 REPORT DATE: 020485

NSSS: WE

TYPE: PWR

(NSIC 193520) ON 1-4-85, WITH UNIT 1 IN MODE 2, THE 30-DAY TIME PERIOD ALLOWED FOR THE SUBMITTAL OF A SPECIAL REPORT ON NONFUNCTIONAL FIRE BARRIERS HAD BEEN EXCEEDED. ON 11-28-84, THE INSTALLATION OF A PA SYSTEM CABLE IN THE 4KV CABLE SPREADING ROOMS CAUSED 2 FIRE BARRIERS TO BECOME NONFUNCTIONAL. TECH SPEC 3.7.10, ACTION STATEMENT A REQUIRES THAT A SPECIAL REPORT BE SUBMITTED WITHIN 30 DAYS FOR FIRE BARRIERS THAT REMAIN NONFUNCTIONAL IN EXCESS OF 7 DAYS. THE UNSEALED PENETRATIONS WERE DISCOVERED DURING A WALKDOWN ON 1-8-85. THE FIRE BARRIERS WERE REPAIRED AND DECLARED FUNCTIONAL ON 1-9-85. THE CAUSE OF THIS EVENT WAS THE FAILURE TO FOLLOW PROCEDURES. CONSTRUCTION PERSONNEL FAILED TO LIST 2 FIRE BARRIERS ON A CLEARANCE REQUEST. TO PREVENT RECURRENCE, ALL PROJECT TEAM PERSONNEL WHO PREPARE CR'S AND THE CONSTRUCTION ENTRY PERMIT ARE RECEIVING ADDITIONAL TRAINING EMPHASIZING THAT THE LOCATIONS FOR WORK MUST BE CORRECTLY, COMPLETELY, AND UNIFORMLY IDENTIFIED ON THE CR.

[70] DIABLO CANYON 1
INADVERTENT LOSS OF BOTH RHR TRAINS.

DOCKET 50-275

LER 85-005

EVENT DATE: 012085 REPORT DATE: 021585

NSSS: WE

TYPE: PWR

(NSIC 193345) AT 2303 PST, 1-20-85, WITH UNIT 1 IN MODE 5 (COLD SHUTDOWN) BOTH RHR TRAINS BECAME INOPERABLE FOR APPROX 6 MINS. THIS EVENT WAS CAUSED BY A PLANT TECHNICIAN CHECKING THE WRONG BREAKER AND VERIFYING IT AS BEING OPEN. WHEN OVERPRESSURE PROTECTION CHANNEL PT-403 WAS REMOVED FROM SERVICE, AN INTERLOCK BETWEEN THE PROTECTION CHANNEL AND RHR PUMP INLET VALVE, MOV 8702, RESULTED IN VALVE CLOSURE AND BOTH RHR LOW FLOW ALARM. AT 2309, MOV 8702 WAS REOPENED. AT 2312 RHR PUMP 1-1 WAS RESTARTED AND RHR FLOW ESTABLISHED. ALL TECH SPEC ACTION STATEMENTS WERE MET. AN INCIDENT REVIEW BOARD MET AND MADE RECOMMENDATIONS TO REVISE SURVEILLANCE TEST PROCEDURES (STP'S) I-68A AND I-69A. THE PROCEDURES WILL INFORM THE TECHNICIAN THAT THE BREAKER MAY BE FOUND OPEN OR CLOSED AND, IF FOUND CLOSED, OPERATIONS DEPARTMENT SHOULD BE NOTIFIED TO OPEN IT. ALSO, THE EVENT WAS REVIEWED WITH ALL AFFECTED PERSONNEL STRESSING THE IMPORTANCE OF VERIFYING THE CORRECT BREAKER. SIMILAR EVENT 275/84-004.

[71] DIABLO CANYON 1
INOPERABILITY OF BOTH RHR TRAINS DURING ESP ACTUATION.

DOCKET 50-275

LER 85-006

EVENT DATE: 012585 REPORT DATE: 022585

NSSS: WE

TYPE: PWR

(NSIC 193346) AT 1750 PST, 1-25-85, WITH UNIT 1 IN MODE 5 (COLD SHUTDOWN), A LOSS OF VITAL 4KV BUS VOLTAGE RESULTED IN THE AUTOSTARTS OF DG 1-2, CONTAINMENT FAN COOLER SYSTEM 1-5, AND AUX SALTWATER PUMP 1-2, AND THE TRANSFER OF THE CONTROL ROOM VENTILATION SYSTEM TO MODE 4. IN ADDITION, FOR APPROX 2 MINS, THE DECAY HEAT REMOVAL CAPABILITY WAS LOST WHEN THE CLOSURE OF THE LOOP 4 RHR SUCTION VALVE (MOV-8702) RESULTED IN BOTH RHR TRAINS BEING ISOLATED FROM THE RCS. THE RHR SUCTION VALVE WAS SUBSEQUENTLY OPENED AND RHR FLOW ESTABLISHED WITHIN 2 MINS. ALL OTHER AFFECTED EQUIPMENT AND SYSTEMS WERE RETURNED TO THEIR NORMAL STANDBY CONDITIONS. INVESTIGATION HAS SHOWN THAT THE CAUSE OF THIS EVENT WAS MISADJUSTMENT OF THE AUX SWITCHES ON THE BUS G FEEDER BREAKERS (HG 13 AND 14). THE AUX SWITCHES WERE ADJUSTED TO A NEW TOLERANCE AND THE BREAKERS WERE TESTED WITH SATISFACTORY RESULTS. TO PREVENT RECURRENCE, PROCEDURE E-51.2, "4.16KV CIRCUIT BREAKER PM (PREVENTATIVE MAINTENANCE)," IS BEING REVISED TO IDENTIFY THE SPECIFIC AUX SWITCH ADJUSTMENT REQUIRED FOR THE BUS FEEDER BREAKERS. SIMILAR EVENTS 275/85-004 AND 85-005.

[72] DIABLO CANYON 1 DOCKET 50-275 LER 85-007
 CONTROL ROOM VENTILATION AUTO-TRANSFERS.
 EVENT DATE: 020485 REPORT DATE: 030585 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: DIABLO CANYON 2 (PWR)

(NSIC 193541) AT 1004 PST, 2-4-85, AND AT 1005 PST, 2-5-85, WITH UNIT 1 IN MODE 1, THE CONTROL ROOM VENTILATION SYSTEM AUTOMATICALLY TRANSFERRED FROM NORMAL MODE TO THE PRESSURIZATION MODE. THE CRVS WAS RETURNED TO NORMAL OPERATING MODE ON BOTH DAYS AS SOON AS THE MODE CHANGE WAS DETERMINED TO BE SPURIOUS. BOTH EVENTS WERE CAUSED BY A CONTRACTOR TECHNICIAN PERFORMING STARTUP TESTING ACTIVITIES ON UNIT 2 SOLID STATE PROTECTION SYSTEM. HE INADVERTENTLY CONNECTED WIRING IN THAT SYSTEM WHICH ACTIVATED THE CRVS MODE CHANGES. ALTHOUGH THOSE CIRCUITS HAD BEEN PREVIOUSLY DISCONNECTED TO PREVENT UNIT 2 SIGNALS FROM ACTUATING ESF EQUIPMENT COMMON TO BOTH UNITS, THE DISCONNECTED LEADS WERE NOT ADEQUATELY IDENTIFIED AS THE REASON FOR PREVENTING THIS AUTOMATIC FUNCTION. TO PREVENT RECURRENCE, ALL SIGNALS FROM UNIT 2 SSPS WHICH AFFECT COMMON EQUIPMENT WILL BE IDENTIFIED WITH A NOTATION ON THE TAG AND ON THE JUMPER LOG. THIS NOTATION WILL REQUIRE THE UNIT 1 SHIFT FOREMAN'S APPROVAL PRIOR TO RETURN OF THESE CIRCUITS TO NORMAL.

[73] DIABLO CANYON 1 DOCKET 50-275 LER 85-008
 FAILURE TO TAKE REACTOR COOLANT SAMPLE FOLLOWING POWER RANGE.
 EVENT DATE: 020585 REPORT DATE: 030785 NSSS: WE TYPE: PWR

(NSIC 193347) THIS VOLUNTARY LER IS BEING SUBMITTED FOR INFO ONLY AS DESCRIBED IN ITEM 19 OF SUPPL. 1 TO NUREG-1022. AT 0115 PST, 2-5-85, THE TIME LIMIT FOR PERFORMING AN ISOTOPIC IODINE ANALYSIS AS REQUIRED BY THE SURVEILLANCE REQUIREMENTS OF TECH SPEC 4.4.8 (TABLE 4.4-4, ITEM 4.B) WAS EXCEEDED. THE SURVEILLANCE REQUIRED IS THAT A REACTOR COOLANT SAMPLE BE ANALYZED WITHIN 2-6 HRS IF A THERMAL POWER CHANGE EXCEEDING 15% OF THE RATED THERMAL POWER OCCURS WITHIN A 1-HR PERIOD. THERMAL POWER HAD BEEN CHANGED FROM 36% TO 20% OF RATED THERMAL POWER OVER APPROX A 37 MIN PERIOD. SAMPLING WAS COMPLETED AT 0930 ON 2-6-85, AND THE IODINE CONCENTRATION WAS WELL WITHIN THE REQUIRED LIMITS. THIS EVENT WAS CAUSED BY A COMMUNICATIONS FAILURE BETWEEN A LICENSED OPERATOR AND A SHIFT TECHNICIAN. TO PREVENT RECURRENCE, OPERATING PROCEDURE, OPERATING ORDER 0-3, "NOTIFYING THE SHIFT CHEM/RAD TECH OF TECH SPEC REQUIREMENTS", HAS BEEN REVISED TO REQUIRE A LOG ENTRY OF THE TIME OF NOTIFICATION, DESCRIPTION OF THE REQUIREMENTS, AND NAME OF THE TECHNICIAN NOTIFIED. THE PROCEDURE REV ALSO INCLUDES THE ADDITION OF A STATEMENT EMPHASIZING THE IMPORTANCE OF MAKING SURE THE TECHNICIAN UNDERSTANDS THE NATURE OF THE REQUIREMENT. IN ADDITION, ALL OPERATORS ARE BEING TRAINED IN THE NEW PROCEDURAL REQUIREMENTS.

[74] DIABLO CANYON 1 DOCKET 50-275 LER 85-010
 SEALED SOURCE SURVEILLANCE TEST NOT PERFORMED WITHIN SPECIFIED TIME PERIOD.
 EVENT DATE: 020585 REPORT DATE: 030585 NSSS: WE TYPE: PWR

(NSIC 193348) ON 2-5-85, WITH UNIT 1 IN MODE 1 (POWER OPERATION), AN INTERNAL CHEMISTRY AND RADIATION PROTECTION (CARP) AUDIT OF THE RADIOACTIVE SOURCE CONTROLS PROGRAM DETERMINED THAT THE 6 MONTH LEAK TEST ON A 400 MICROCURIE CESIUM-137 CHECK SOURCE (SOURCE #400) WAS NOT PERFORMED WITHIN THE TIME REQUIREMENTS (DUE 9-11-83) OF RADIATION CONTROL PROCEDURE RCP D-10, "HANDLING AND ACCOUNTABILITY OF RADIOACTIVE SOURCES," AND TECH SPEC 4.7.8.1.2, ITEM A.1. THE SEALED SOURCE WAS SUBSEQUENTLY LEAK-TESTED ON 2-5-85, AND FOUND TO HAVE NO LEAKS. THE CAUSE OF THIS EVENT WAS THE INCORRECT CLASSIFICATION OF THE SEALED SOURCE AS 'EXEMPT' ON THE HARD COPY AND COMPUTER TRACKING RECORDS PREPARED BY PLANT TECH PERSONNEL. THE INTERNAL AUDIT CONSISTED OF AN INVENTORY OF ALL RADIOACTIVE SOURCES AND THE CHECK AGAINST APPLICABLE TESTING REQUIREMENTS. ONLY SOURCE #400 WAS FOUND TO BE UNSATISFACTORY. TO PREVENT RECURRENCE, THE APPLICABLE RECORDS HAVE BEEN CORRECTED. IN ADDITION, SOURCES REQUIRING LEAK TESTS WILL BE SEGREGATED IN SPECIAL MANUAL AND COMPUTER FILES. ALSO, CARP PERSONNEL ARE

RECEIVING RADIOACTIVE SOURCE CONTROL TRAINING WITH PARTICULAR EMPHASIS ON THE REQUIREMENTS OF PROCEDURE RCP D-10.

[75] DIABLO CANYON 1 DOCKET 50-275 LER 85-009
 ESP ACTUATION DUE TO FREQUENCY INTERFERENCE FROM RADIO TRANSMITTER.
 EVENT DATE: 021385 REPORT DATE: 031385 NSSS: WE TYPE: PWR

(NSIC 193521) WHILE IN MODE 1, UNIT 1 RECEIVED A STEAM LINE DIFFERENTIAL PRESSURE SAFETY INJECTION SIGNAL. THIS RESULTED IN A SAFETY INJECTION, TURBINE TRIP, AND REACTOR TRIP. ALL AUTOMATIC EQUIPMENT RESPONDED AS DESIGNED. THE PLANT WAS STABILIZED IN MODE 3 IN ACCORDANCE WITH PROCEDURES. ALL SYSTEMS AND EQUIPMENT AFFECTED BY THIS EVENT WERE RETURNED TO NORMAL OPERATION. INVESTIGATION SHOWED THAT THE EVENT HAD BEEN INITIATED BY SECURITY (CONTRACTOR) PERSONNEL USING A PORTABLE RADIO TRANSMITTER IN THE AREA OF MAIN STEAM LINE 1-2'S PRESSURE TRANSMITTERS. RADIO FREQUENCY INTERFERENCE FROM A PORTABLE RADIO TRANSMITTER WAS DEMONSTRATED TO CAUSE A LOW PRESSURE INDICATION ON NEARBY STEAM PRESSURE TRANSMITTERS ONLY IF THEIR CABINET DOORS WERE OPEN. TO PREVENT RECURRENCE, THE PIPE RACKS LOCATED OUTSIDE CONTAINMENT, THE CONTAINMENT PENETRATION AREAS, AND INSIDE CONTAINMENT HAVE BEEN POSTED AS 'NO RADIO TRANSMISSION' AREAS. IN ADDITION OPERATING PROCEDURE OF K-9E, 'HANDIE TALKIE OPERATION,' HAS BEEN REVISED TO INCLUDE THESE ADDITIONAL POSTED AREAS.

[76] DIABLO CANYON 1 DOCKET 50-275 LER 85-011
 MANUAL REACTOR TRIP DUE TO AUTOMATIC SHUTDOWN OF MAIN FEEDWATER PUMPS.
 EVENT DATE: 021785 REPORT DATE: 031985 NSSS: WE TYPE: PWR

(NSIC 193609) AT 0415 PST, 2-17-85, WITH UNIT 1 IN MODE 1, PLANT OPERATORS INITIATED A MANUAL REACTOR TRIP IN RESPONSE TO THE AUTOMATIC SHUTDOWN OF MAIN FEEDWATER PUMPS 1-1 AND 1-2 FROM EXCESSIVE THRUST BEARING WEAR INDICATION. IN ACCORDANCE WITH PROCEDURES, THE PRIMARY PLANT WAS STABILIZED IN MODE 3. THE THRUST BEARING WEAR INDICATORS WERE DETERMINED TO BE CONSERVATIVELY SET TO ALLOW FOR READJUSTMENT AS OPERATIONAL AND TRANSIENT DATA BECOME AVAILABLE. NO DAMAGE WAS OBSERVED. TO PREVENT RECURRENCE, THE THRUST BEARING WEAR DETECTION SYSTEM HAS BEEN TEMPORARILY RESET TO NEW VALUES RECOMMENDED BY THE VENDOR. SUBSEQUENT TO THIS REACTOR TRIP, SEVERAL EVENTS TOOK PLACE IN THE BALANCE OF PLANT. THE MOST IMPORTANT WAS A WATER HAMMER EVENT IN ONE OF THE MAIN FEEDWATER BYPASS LINES WHICH IS NOT COVERED BY THE ASME CODE SECTION XI. A DETAILED ACCOUNT OF ALL THE EVENTS WILL BE REPORTED IN A SUPPLEMENT TO THIS LER.

[77] DRESDEN 2 DOCKET 50-237 LER 85-003
 INADVERTENT GROUP 2 ISOLATION.
 EVENT DATE: 012985 REPORT DATE: 022585 NSSS: GE TYPE: BWR
 VENDOR: ROSEMOUNT, INC.

(NSIC 193341) DURING REFUELING OUTAGE, WITH LEVEL TRANSMITTER 2-263-57B OUT OF SERVICE AND AN INTENTIONAL 1/2 GROUP ISOLATION SIGNAL PRESENT, LEVEL TRANSMITTERS 2-263-57A, 2-263-58A AND 2-263-58B WERE TAKEN OUT OF SERVICE RESULTING IN A GROUP 2 ISOLATION. ALL SYSTEMS RESPONDED AS DESIGNED TO THIS EVENT. THE OUTAGES WERE CLEARED AND ISOLATIONS RESET. THE TRANSMITTERS WERE BEING TAKEN OUT OF SERVICE FOR MODIFICATION TESTING. THESE ROSEMOUNT TYPE TRANSMITTERS REPLACED THE PREVIOUSLY INSTALLED YARWAY TYPE TRANSMITTERS UNDER THE ENVIRONMENTAL QUALIFICATION PROGRAM. THE CAUSE OF THIS EVENT WAS OPERATOR ERROR. THE SHIFT FOREMAN DID NOT VERIFY IF JUMPERS STILL EXISTED ON THE GROUP 2 ISOLATION RELAYS. THE SAME SHIFT FOREMAN HAD SUCCESSFULLY TAKEN ALL 4 LEVEL TRANSMITTERS OUT OF SERVICE ON 1-25-85. THE FOREMAN RECOGNIZED HIS ERROR AND REALIZES THAT HE SHOULD HAVE VERIFIED THE EXISTENCE OF JUMPERS ON THE GROUP 2 RELAYS. THIS IS THE FIRST OCCURRENCE OF THIS TYPE AT DRESDEN STATION.

[78] DRESDEN 2 DOCKET 50-237 LER 85-005
 INADVERTENT GROUP II ISOLATION OCCURS.
 EVENT DATE: 013085 REPORT DATE: 022885 NSSS: GE TYPE: BWR

(NSIC 193387) DURING A NORMAL REFUELING OUTAGE, A GROUP II ISOLATION OCCURRED WHILE RETURNING LEVEL TRANSMITTER 2-263-58B TO SERVICE. THE EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE SINCE THE REACTOR WAS DEFUELED AND ALL SCRAMS WERE JUMPED. ALL SYSTEMS ASSOCIATED WITH THE GROUP II FUNCTIONED AS DESIGNED. THE ROOT CAUSE OF THIS EVENT IS STILL UNDER INVESTIGATION AT THIS WRITING. A SUPPLEMENT REPORT WILL BE ISSUED WHEN THE ROOT CAUSE IS DETERMINED.

[79] DRESDEN 2 DOCKET 50-237 LER 85-004
 REACTOR SCRAMS WHEN RPS BUS IS MOMENTARILY DE-ENERGIZED.
 EVENT DATE: 020685 REPORT DATE: 030585 NSSS: GE TYPE: BWR

(NSIC 193386) WHILE CLEARING THE OUTAGE ON THE 2A-2 RPS SHUNT BREAKER FOR TESTING FOLLOWING REPAIR, WITH THE UNIT SHUT DOWN FOR REFUELING, THE RPS POWER SUPPLY WAS SWITCHED FROM RESERVE (125V BUS) TO NORMAL (RPS MG SET). THIS CAUSED RPS CHANNEL B TO BECOME MOMENTARILY DE-ENERGIZED, AND A FULL SCRAM OCCURRED. WHEN THE SHIFT FOREMAN REACHED THE SCENE, HE OBSERVED THAT RPS WAS ON NORMAL POWER, AND THUS WAS POWERED BY AN UNTESTED BREAKER. NOT KNOWING OF THE FIRST SCRAM, HE HAD THE POWER RETURNED TO RESERVE, AND A SECOND SCRAM OCCURRED (7 MINS AFTER THE FIRST). THE SHIFT FOREMAN HAD LEFT A NOTE TO THE A OPERATOR INFORMING HIM NOT TO TRANSFER THE POWER FROM RESERVE TO NORMAL, BUT THE A OPERATOR DID NOT RECEIVE THE NOTE. TO PREVENT THIS TYPE OF PROBLEM FROM RECURRING, A PROCEDURE WILL BE CREATED TO ENSURE THAT ALL PREREQUISITES TO RPS POWER SUPPLY TRANSFER HAVE BEEN COMPLETED.

[80] DRESDEN 2 DOCKET 50-237 LER 85-007
 IRM AND SRM SURVEILLANCES MISSED.
 EVENT DATE: 021585 REPORT DATE: 031485 NSSS: GE TYPE: BWR

(NSIC 193539) DURING NORMAL REFUELING OUTAGE ROUTINE WEEKLY OPERATING SURVEILLANCES DOS 700-1, 2, 3, AND 4 WERE NOT COMPLETED ON A WEEKLY BASIS AS REQUIRED BY TECH SPECS. THE SURVEILLANCES WERE NOT COMPLETED FOR 1 WEEKLY PERIOD. THE SAFETY SIGNIFICANCE WAS MINIMAL AS THE REACTOR WAS IN REFUELING AND THE SURVEILLANCES MISSED WERE SRM/IRM ROD BLOCKS. WITH THE REACTOR IN REFUEL ONLY 1 ROD CAN BE OUT OF THE CORE AT ANY GIVEN PERIOD. THE EVENT WAS CAUSED BY OPERATOR ERROR AS THE SURVEILLANCES WERE OVERLOOKED ON THE WEEKLY SCHEDULE.

[81] DRESDEN 2 DOCKET 50-237 LER 85-006
 REACTOR SCRAM DURING UNDERVOLTAGE TESTS.
 EVENT DATE: 021785 REPORT DATE: 031485 NSSS: GE TYPE: BWR

(NSIC 193517) WITH THE UNIT SHUTDOWN FOR REFUELING, THE FEEDER BREAKER FROM TRANSFORMER 22 TO BUS 23 WAS OPENED PER DOS 6600-6 (BUS UNDERVOLTAGE AND ECCS INTEGRATED FUNCTIONAL TEST FOR 2(3) DG). THE EXPECTED HALF-SCRAM WAS RECEIVED ON RPS CHANNEL B DUE TO LOSS OF POWER. HOWEVER, CHANNEL A ALSO RECEIVED A HALF-SCRAM ON REACTOR WATER LOW LEVEL, CAUSING A FULL SCRAM. AS A PART OF THE ENV QUALIFICATION MODIFICATION, THE REACTOR WATER LOW LEVEL RELAYS AND SWITCHES WERE REPLACED, AND TRIP UNITS ADDED. DURING THE DESIGN OF THIS CHANGE, THE RPS POWER SUPPLY SYSTEM DIVISIONS TO THE TRIP UNITS WERE CROSSED, DUE TO A MISUNDERSTANDING, ON PART OF THE ARCHITECT ENGINEER, OF THE POWER SUPPLY DIVISIONALIZATION. THIS ERROR WAS NOT IDENTIFIED IN REVIEWS BY THE STATION NUCLEAR ENGINEERING DEPARTMENT AND STATION PERSONNEL. WITH THIS ERROR MADE, WHEN CHANNEL B POWER WAS DISRUPTED, THE CHANNEL A REACTOR WATER LOW LEVEL SWITCHES ALSO OPENED, CREATING THE CHANNEL A HALF-SCRAM AND THE FULL SCRAM. TO CORRECT THIS PROBLEM, THE POWER SUPPLIES WILL BE REDESIGNED, REWIRED, AND FUNCTIONALLY TESTED.

[82] DRESDEN 2 DOCKET 50-237 LER 85-008
 REACTOR SCRAM DUE TO RPS MG SET TRIP.
 EVENT DATE: 022285 REPORT DATE: 032085 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193662) WITH THE UNIT SHUT DOWN FOR REFUELING, AND NO SURVEILLANCES IN PROGRESS, THE 'B' RPS MG SET TRIPPED, RESULTING IN THE LOSS OF POWER TO RPS CHANNEL A. BECAUSE THE REACTOR WAS LESS THAN 600 PSI, WITH NO CONDENSER VACUUM, A SCRAM OCCURRED PER DESIGN. RPS POWER WAS TRANSFERRED TO THE RESERVE BUS, AND THE SCRAM WAS RESET. THE MG SET WAS BRIDGED AND MEGGERED, AND FOUND TO BE IN GOOD OPERATING CONDITION. INSPECTION OF THE MG SET POWER SUPPLY SHOWED THAT THE THERMAL OVERLOAD RELAYS TRIPPED EARLY. THE OVERLOAD RELAYS WERE REPLACED, WITH THE SAME SIZE AND TYPE RELAY, AND A ROUTINE BREAKER INSPECTION WAS PERFORMED. NO FURTHER CORRECTIVE ACTION WAS CONSIDERED NECESSARY.

[83] DRESDEN 2 DOCKET 50-237 LER 85-009
 STANDBY LIQUID CONTROL OPERABILITY SURVEILLANCE NOT PERFORMED IMMEDIATELY.
 EVENT DATE: 022385 REPORT DATE: 031985 NSSS: GE TYPE: BWR

(NSIC 193593) DURING REFUELING OUTAGE, WITH FUEL IN THE REACTOR AND MODE SWITCH IN REFUEL THE 2A STANDBY LIQUID CONTROL PUMP WAS TAKEN OUT OF SERVICE ON 2-21-85 AT 1715. OPERABILITY TEST FOR THE REDUNDANT PUMP 2B WAS NOT PERFORMED UNTIL 0430 ON 2-23-85. THIS EVENT CONSTITUTES A VIOLATION OF TECH SPEC 4.4.B, WHICH REQUIRES THAT THE REDUNDANT COMPONENT BE IMMEDIATELY DEMONSTRATED OPERABLE WHEN FUEL IS IN THE REACTOR AND MODE SWITCH IN REFUEL. CONTROL ROD DRIVE M-8 WAS ALSO CYCLED FOR FRICTION TESTING DURING THIS TIME INTERVAL. THIS EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE SINCE PRELIMINARY CALCULATIONS BY THE NUCLEAR ENGINEERS INDICATE THAT THE CORE LOADING REACTIVITY MARGIN ($R + .25\% \Delta K$) WAS MET. THE UNIT DIESEL, 'B' LPCI SUBSYSTEM AND CORE SPRAY SYSTEM WERE ALSO OPERABLE AT THE TIME OF THIS EVENT. SIMILAR EVENT 237/85-007.

[84] DRESDEN 2 DOCKET 50-237 LER 85-010
 FIRE DOOR LEFT OPEN.
 EVENT DATE: 030585 REPORT DATE: 040185 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: DRESDEN 3 (BWR)

(NSIC 193594) ON 3-5-85, DURING NORMAL REFUELING OPERATIONS, THE FIRE DOOR FOR THE UNIT 2 125V BATTERY ROOM ENCLOSURE WAS FOUND OPEN WITHOUT A FIRE WATCH ESTABLISHED WITHIN 1 HR PER TECH SPEC 3.12.F.2. THE DOOR WAS IMMEDIATELY CLOSED. IT WAS DETERMINED THAT THE DOOR HAD BEEN OPENED FROM 0800 ON 3-5-85 TO 0942 THAT SAME DAY. SAFETY SIGNIFICANCE IS CONSIDERED MINIMAL DUE TO THE FACT THAT THE DOOR WAS LEFT OPEN A RELATIVELY SHORT PERIOD OF TIME AND THAT THE ENCLOSURE IS PROTECTED BY SMOKE DETECTORS WHICH ALARM IN THE CONTROL ROOM. THE REASON FOR LEAVING THE DOOR IN THE OPEN POSITION AND THE EXTENT OF THE CORRECTIVE ACTIONS IS STILL UNDER INVESTIGATION. A SUPPLEMENT WILL BE ISSUED ON 4-10-85 WITH THE RESULTS OF THIS INVESTIGATION.

[85] DRESDEN 2 DOCKET 50-237 LER 85-011
 REACTOR VESSEL NOT VENTED WITH VESSEL BELOW MINIMUM PRESSURIZATION TEMPERATURE.
 EVENT DATE: 030685 REPORT DATE: 040385 NSSS: GE TYPE: BWR

(NSIC 193595) DURING REFUELING OUTAGE, WITH THE REACTOR MODE SWITCH IN SHUTDOWN THE SHIFT CONTROL ROOM ENGINEER OBSERVED THAT THE REACTOR VESSEL WAS NOT VENTED AT LESS THAN 149 F. MECHANICAL MAINTENANCE HAD COMPLETED THE REPLACEMENT OF THE HEAD VENT PIPING ON 3-6-85 AT 1830 WITH THE HEAD VENT VALVES CLOSED AND OUT OF SERVICE. MINS LATER THE SCRE NOTICED THIS CONDITION AND AFTER ENSURING THAT NO PERSONNEL HAZARD WOULD EXIST IF THE HEAD VENT VALVES WERE OPENED, PROMPTLY ORDERED THE HEAD VENT VALVES OPEN AT 1923. THE TOTAL DURATION OF THIS EVENT WAS

53 MINS. THIS EVENT WAS A VIOLATION OF THE VENTING REQUIREMENT IN TECH SPEC 3.6.B.1. THIS EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE AS NO CONTROL ROD DRIVE OR CONDENSATE PUMPS WERE RUNNING. BECAUSE THE MODE SWITCH WAS IN SHUTDOWN ALL CONTROL RODS WERE FULLY INSERTED AND COULD NOT BE MOVED, THEREFORE NO POTENTIAL FOR A CONTROL ROD DROP ACCIDENT EXISTED. THE EVENT WAS CAUSED BY THE LACK OF PROCEDURAL STEPS TO ENSURE THAT A VENT PATH EXISTS PRIOR TO COMPLETION OF THE HEAD VENT PIPING REPLACEMENT. PREVIOUS SIMILAR OCCURRENCE REPORTED BY RO #84-6 ON DOCKET 50-249.

[86] DRESDEN 2 DOCKET 50-237 LER 85-012
 REACTOR SCRAMS DURING RPS POWER SOURCE REALIGNMENT.
 EVENT DATE: 030985 REPORT DATE: 040485 NSSS: GE TYPE: BWR

(NSIC 193596) DURING REACTOR REFUELING WITH THE MODE SWITCH IN SHUTDOWN WHILE PERFORMING DRESDEN OPERATING PROCEDURE DOP 7000-1, RPS OPERATING PROCEDURE TO REALIGN POWER SOURCES, A FULL SCRAM OCCURRED. BECAUSE THE REACTOR WAS DEPRESSURIZED AND THE MSIV'S CLOSED, BYPASS CIRCUITRY IS NEEDED TO MAINTAIN RPS ELECTRICAL CONTINUITY. HOWEVER, ALL 4 BYPASS CIRCUIT RELAYS WILL DE-ENERGIZE AND CONTINUITY LOST, UNLESS RELAY CONTACTS ARE BLOCKED, WHEN SWITCHING A SAFETY CHANNEL TO ITS NORMAL FEED FROM ITS RESERVE. THE STYROFOAM BLOCK INSERTED TO BLOCK CLOSED THE 590-112 RELAY CONTACTS WAS MISALIGNED. THIS ALLOWED THE CONTACTS TO OPEN RESULTING IN A FULL SCRAM RATHER THAN A HALF SCRAM AS ANTICIPATED. THE SAFETY SIGNIFICANCE WAS MINIMAL AS ALL PROTECTIVE SYSTEMS FUNCTIONED AS DESIGNED IN RESPONSE TO THIS EVENT. AS A RESULT OF PREVIOUS SCRAM PROBLEMS ALL DRESDEN TECH STAFF CALIBRATION PROCEDURES WERE REVISED TO REQUIRE JUMPER WIRES RATHER THAN BLOCKS. HOWEVER, OPERATING PROCEDURES WERE NOT REVISED TO REFLECT THIS CHANGE. THE CORRECTIVE ACTION WILL REQUIRE THE USE OF WIRE JUMPERS AND NOT BLOCKS IN ANY SITUATION WHERE A FULL SCRAM COULD OCCUR IF THE BLOCK FAILS. APPROPRIATE OPERATING PROCEDURES WILL BE REVISED. THE LAST PREVIOUS OCCURRENCE WAS REPORTED UNDER LER #84-4 ON DOCKET 50-249.

[87] DRESDEN 2 DOCKET 50-237 LER 85-013
 ATWS ALTERNATE ROD INSERTION TRIP OCCURS.
 EVENT DATE: 031085 REPORT DATE: 040885 NSSS: GE TYPE: BWR

(NSIC 193597) DURING THE ASME HYDROSTATIC TEST PERFORMED FOLLOWING REFUELING OUTAGE MAINTENANCE, THE ATWS ALTERNATE ROD INSERTION WAS INITIATED BY AN ATWS CHANNEL A LOW REACTOR VESSEL LEVEL SIGNAL. THE SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE UNIT WAS IN SHUTDOWN AND THE ATWS SYSTEM FUNCTIONED AS DESIGNED. FIRST OCCURRENCE OF THIS TYPE AT DRESDEN. THE CAUSE OF THE EVENT WAS A LEAKING ISOLATION VALVE WHICH ALLOWED HYDROSTATIC PRESSURE TO BLEED INTO 1 SIDE OF THE LEVEL DIAPHRAGM CAUSING AN APPARENT LOW LEVEL CONDITION. THE EQUALIZING VALVES TO THE DIAPHRAGM WERE THEN OPENED AND ALL OTHER EQUALIZING VALVES ON LEVEL DIAPHRAGMS WERE OPENED TO PREVENT A RECURRENCE DURING THE HYDRO. A REVISION TO DOS 201-2 HAS BEEN INITIATED TO ADD THE PREREQUISITE TO OPEN ALL EQUALIZING VALVES LEADING TO LEVEL CELLS PRIOR TO PERFORMING THE HYDRO.

[88] DRESDEN 3 DOCKET 50-249 LER 85-002
 REACTOR SCRAM ON INADVERTENT LOW VESSEL WATER LEVEL.
 EVENT DATE: 020185 REPORT DATE: 022685 NSSS: GE TYPE: BWR
 VENDOR: YARWAY CORP.

(NSIC 193390) DURING NORMAL UNIT OPERATION, THE REACTOR SCRAMMED ON LOW WATER LEVEL WITHOUT A KNOWN CAUSE. AT THE TIME OF THE SCRAM THE PROCESS COMPUTER WAS OFF LINE, AND COULD NOT PROVIDE ANY DATA TO ASSIST IN THE ROOT CAUSE INVESTIGATION. SUBSEQUENT INVESTIGATION REVEALED THAT THE SCRAM WAS CAUSED BY VIBRATION FROM AN ISI STANDARD WHICH INADVERTENTLY HIT THE FLOOR NEAR INSTRUMENT RACK 2203-6. TO HELP REDUCE INADVERTENT SCRAMS, NO CONTRACTOR WORK IS ALLOWED

(NSIC 193599) DURING NORMAL OPERATION WITH UNIT 3 AT 81% POWER, THE INSTRUMENT MECHANICS WENT TO CALIBRATE THE TORUS LEVEL TRANSMITTER AND REPORTED FINDING THE MANUAL ISOLATION VALVE 3-1699-15 TO THE TORUS SIGHT GLASS LOCKED IN THE OPEN POSITION. AN HR EARLIER, AN EQUIPMENT ATTENDANT HAD PERFORMED DOS 1600-E2, 'TORUS LEVEL VERIFICATION USING LOCAL SIGHT GLASS', WHICH REQUIRES OPENING THE 3-1699-15 VALVE. IT IS SUSPECTED THAT THE VALVE WAS INADVERTENTLY LEFT PARTIALLY LOCKED OPEN (APPROX 2 TURNS; 6 TURNS FULL TRAVEL) BY THE OPERATOR INSTEAD OF LOCKED CLOSED AS PER DOS 1600-2. SAFETY SIGNIFICANCE WAS MINIMAL BECAUSE ALL OTHER ISOLATION VALVES WERE IN THE PROPER POSITION, AND ALL FITTINGS AND THE LOCAL SIGHT GLASS WERE INTACT. AT NO TIME WAS THE PRIMARY CONTAINMENT OPEN TO SECONDARY CONTAINMENT. ALSO, AS PART OF PREVIOUS MODIFICATIONS, THE TORUS SIGHT GLASS, PIPE CAPS, AND ALL ASSOCIATED PIPING DOWNSTREAM OF THE MANUAL ISOLATION VALVES WERE LOCAL LEAK RATE TESTED TO A PRESSURE OF 48 PSIG WHICH PROVES THAT THE INTEGRITY OF THE PRIMARY CONTAINMENT WOULD NOT BE BREACHED DURING AN ACCIDENT. DURING A DISCUSSION WITH THE NRC RESIDENT INSPECTOR WHICH OCCURRED 30 DAYS AFTER THE EVENT IT WAS DECIDED THIS EVENT SHOULD BE AN LER INSTEAD OF JUST A DVR SINCE TECH SPEC 3.7.A.2 WAS VIOLATED DUE TO THE INHERENT DEFINITION OF PRIMARY CONTAINMENT AS SEEN IN TECH SPEC 1.0.R. THIS IS THE REASON FOR THE DELAY IN REPORTING THE EVENT.

(INSC 193391) ON 2-6-85, WITH UNIT 3 AT 91% POWER AND DURING NORMAL OPERATION, THE MECHANICAL MAINTENANCE DEPARTMENT REQUESTED THAT THE UNIT 3 HPCI ROOM COOLER BE TURNED ON TO REDUCE HEAT IN THE WORK AREA. NOTICING NO FAN OPERATION, THE MECHANIC CHECKED THE COOLER AND FOUND THAT THE BELTS HAD FALLEN OFF. THE HPCI SYSTEM WAS DECLARED INOPERABLE AND WORK WAS BEGUN TO REPLACE THE BELTS. THE HPCI ROOM COOLERS ARE USED TO MAINTAIN THE HPCI ROOM AREA AT A TEMPERATURE BELOW 200 F. WHEN THE HPCI AREA TEMPERATURE REACHES 200 F, AN HPCI SYSTEM ISOLATION OCCURS. IN 1983, IN RESPONSE TO IE INFO NOTICE NO. 83-56, DRESDEN STATION COMMITTED TO DECLARING THE HPCI SYSTEM INOPERABLE WHENEVER THE COOLER CANNOT PERFORM ITS DESIGNED FUNCTION. WITHIN 3 HRS OF FINDING THE HPCI ROOM COOLER BELTS MISSING, ELECTRICAL MAINTENANCE MECHANICS REPLACED THE BELTS AND VERIFIED THAT THE HPCI ROOM COOLER FANS RAN PROPERLY. THEREFORE, THE HPCI SYSTEM WAS DECLARED OPERABLE. A DISCUSSION OF THIS EVENT AND AN EVENT WHICH SIMULTANEOUSLY AFFECTED THE OPERABILITY OF THE HPCI SYSTEM IS DOCUMENTED IN REPORTABLE OCCURRENCE 85-03 ON DOCKET 50-249.

[91] DRESDEN 3 DOCKET 50-249 LER 85-004
 REACTOR VESSEL WATER LEVEL SWITCHES' SETPOINTS DRIFT.
 EVENT DATE: 021585 REPORT DATE: 031285 NSSS: GE TYPE: BWR
 VENDOR: YARWAY CORP.

(NSIC 193545) UNDER NORMAL OPERATIONS, WHILE PERFORMING DIS 500-2 (REACTOR VESSEL LOW WATER LEVEL SCRAM AND LOW LOW WATER LEVEL ISOLATION), LEVEL INDICATING SWITCH 3-263-58B WAS FOUND TO TRIP AT 116.5 INCHES WATER (DIFFERENTIAL PRESSURE), IN EXCESS OF TECH SPECS LIMIT OF 114.5 INCHES WATER. THE SWITCH WAS IMMEDIATELY READJUSTED. LATER THE SAME DAY, LEVEL INDICATING SWITCH 3-263-57B WAS FOUND TO TRIP AT 127 INCHES WATER, ALSO IN EXCESS OF THE TECH SPEC'S LIMIT. THE SECOND DISCOVERY CREATED A RETROACTIVE DEGRADATION OF THE CHANNEL B LOW LOW REACTOR WATER LEVEL ISOLATION FUNCTION, ALTHOUGH 2-263-58B WAS NO LONGER IN EXCESS OF THE TECH SPEC. THE EVENTS WERE CAUSED BY SETPOINT DRIFT. IMMEDIATELY FOLLOWING THEIR RESPECTIVE DISCOVERIES, THE LEVEL SWITCHES WERE ADJUSTED AND RECALIBRATED PER DIS 500-2. IN ADDITION, THESE SWITCHES ARE SCHEDULED TO BE REPLACED DURING THE UPCOMING UNIT 3 OUTAGE AS A PART OF THE ENVIRONMENTAL QUALIFICATION MODIFICATION.

[92] DRESDEN 3 DOCKET 50-249 LER 85-005
 UNDERVOLTAGE PROTECTION ON 4KV BUS LOST.
 EVENT DATE: 021685 REPORT DATE: 031585 NSSS: GE TYPE: BWR

(NSIC 193538) ON 2-16 AND 17, 1985 WITH UNIT 2 IN A REFUEL OUTAGE AND UNIT 3 AT 99% POWER, PLANS WERE MADE TO RUN DOS 6600-5 AND DOS 6600-6, ECCS UNDERVOLTAGE TEST FOR UNIT 2 AND UNIT 2/3 DG, RESPECTIVELY, PER THE DIRECTION OF THE UNIT 2 OPERATING ENGINEER. THE 2/3 DG WAS PLANNED TO BE BROUGHT BACK INTO SERVICE AT 0730 ON 2-16 FROM A PLANNED INSPECTION PER DIRECTION OF THE UNIT 3 OPERATING ENGINEER. THE A-MAN, PER DOS 6600-5, PROCEEDED TO HANG CAUTION CARDS ON THE KNIFE SWITCHES. THE A-MAN INADVERTENTLY HUNG THE CARDS ON THE UNIT 3 DG KNIFE SWITCH LOCATIONS INSTEAD OF UNIT 2 AND PROCEEDED TO OPEN THE CORRESPONDING KNIFE SWITCHES. DOS 6600-5 STATES ONLY TO HANG THE CAUTION CARDS WITHOUT INSTRUCTIONS TO CHANGE SWITCH POSITIONS. SWITCH POSITIONS SHOULD NOT BE CHANGED UNTIL THE UNDERVOLTAGE TEST, DOS 6600-5, IS IN PROGRESS. UPON OPENING THE SWITCHES, THE ALARM IN THE CONTROL ROOM '4KV BUS 34-1 VOLTAGE DEGRADED' ANNUNCIATED. THE FOREMAN IN CHARGE OF THE TEST PRUDENTLY RESPONDED TO THE ALARM WHICH RESTORED UNIT 3 DG OPERABILITY. BECAUSE OF THE IMMEDIATE ACTION TAKEN BY THE SHIFT FOREMAN, THE UNIT OPERATED WELL WITHIN TECH SPEC 3.0.A. SAFETY SIGNIFICANCE WAS MINIMAL BECAUSE THE PROBABILITY OF A DESIGN BASIS ACCIDENT (LOSS OF OFF-SITE POWER AND A GUILLOTINE BREAK OF THE RECIRCULATION SUCTION PIPE) IS VERY LOW FOR SUCH A SHORT PERIOD OF TIME. THIS IS THE FIRST OCCURRENCE OF AN EVENT OF THIS TYPE.

[93] DRESDEN 3 DOCKET 50-249 LER 85-006
 HPCI ROOM COOLER INOPERABILITY.
 EVENT DATE: 022285 REPORT DATE: 031885 NSSS: GE TYPE: BWR

(NSIC 193598) DURING NORMAL OPERATION, THE OPERATING DEPARTMENT DISCOVERED THAT THE SERVICE WATER LEADING TO THE UNIT 3 HPCI ROOM COOLER WAS VALVED OUT, CAUSING IT AND THE HPCI SYSTEM TO BE INOPERABLE. SAFETY SIGNIFICANCE WAS MINIMAL SINCE THE ISOLATION CONDENSER AND AUTOMATIC DEPRESSURIZATION SYSTEMS WERE OPERABLE AND CAPABLE OF RELIEVING HIGH REACTOR PRESSURE. THE VALVES WERE IMMEDIATELY OPENED AND SYSTEM OPERABILITY WAS RESTORED. THE CAUSE OF THE EVENT WAS PERSONNEL ERROR. AN INVESTIGATION REVEALED THAT STATION PERSONNEL VALVED OUT THE SERVICE WATER SUPPLY TO THE UNIT 3 HPCI ROOM COOLER SOMETIME BETWEEN 1-14-85 AND 1-23-85, WITHOUT PROPER AUTHORIZATION. RESULTS OF THIS INVESTIGATION PRODUCED A LIST OF RECOMMENDATIONS FOR CORRECTIVE ACTIONS. ONE OF THESE CORRECTIVE ACTIONS IS THAT ALL SERVICE WATER SUPPLY VALVES TO HPCI, LPCI, AND CONTAINMENT COOLING SERVICE WATER VAULT COOLERS WILL BE LOCKED OPEN TO PREVENT A RECURRENCE. THIS IS THE FIRST OCCURRENCE OF AN EVENT OF THIS TYPE.

[94] DRESDEN 3 DOCKET 50-249 LER 85-007
 TORUS WATER SAMPLE LINE FOUND OPEN.
 EVENT DATE: 030285 REPORT DATE: 032685 NSSS: GE TYPE: BWR

(NSIC 193663) DURING NORMAL UNIT OPERATION, THE SHIFT FOREMAN DISCOVERED 2 NORMALLY CLOSED TORUS WATER SAMPLE VALVES OPEN. TORUS WATER WAS DRAINING THROUGH THESE VALVES INTO THE WEST CORNER ROOM SUMP VIA A LENGTH OF 3/8-INCH REINFORCED TYGON TUBING. UNIT 3 TORUS WATER IS SAMPLED FROM THE MINIMUM FLOW LINE OF THE EMERGENCY CORE COOLING SYSTEMS JOCKEY PUMP. THE VALVES WERE IMMEDIATELY CLOSED AND LATER LOCKED CLOSED. THIS EVENT WAS A VIOLATION OF PRIMARY CONTAINMENT INTEGRITY TECH SPEC 3.7.A.2. THE CAUSE OF THIS EVENT WAS PERSONNEL ERROR, HOWEVER, IT IS NOT KNOWN WHO OPENED THE VALVES. TORUS WATER SAMPLING PROCEDURES WILL BE CHANGED TO REFLECT THE EXISTENCE OF LOCKS; AN OPERATOR WILL BE IN ATTENDANCE TO UNLOCK THESE VALVES WHEN THIS SAMPLE IS PULLED, AND CLOSE AND LOCK THEM AFTER THE SAMPLE IS TAKEN. A WALKDOWN OF ACCESSIBLE PORTIONS OF ECCS SYSTEMS WILL BE PERFORMED TO DETERMINE IF LOCKS MUST BE ADDED TO OTHER LOCATIONS. THIS EVENT WAS OF MINIMAL SAFETY SIGNIFICANCE SINCE TOPUS LEVEL WAS BEING MAINTAINED WITHIN THE TECH SPEC LIMITS. ALSO, THE SAMPLE FLOW OCCURRED BELOW THE TORUS WATER LEVEL THROUGH A SMALL FITTING DIRECTLY TO A SUMP INSIDE THE SECONDARY CONTAINMENT. SIMILAR OCCURRENCE REPORTED BY RO 85-9 ON 50-249.

[95] FARLEY 1 DOCKET 50-348 LER 85-001
 UNSEALED GAPS ABOVE MASONRY FIRE WALLS.
 EVENT DATE: 021485 REPORT DATE: 032285 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: FARLEY 2 (PWR)

(NSIC 193616) GAPS ALONG PORTIONS OF THE TOPS OF 2 FIRE WALLS WERE NOT SEALED WITHIN 7 DAYS AS REQUIRED BY TECH SPEC 3.7.12. AT 1500 ON 2-14-85 IT WAS DISCOVERED THAT UNSEALED GAPS EXISTED BETWEEN THE TOPS OF 2 MASONRY FIRE WALLS AND THE CEILINGS OF THE ROOMS. THESE GAPS WERE LOCATED ABOVE PORTIONS OF THE WEST WALL OF THE CABLE SPREADING ROOM OF BOTH UNIT 1 AND 2. DESIGN DRAWINGS SHOWED THAT THESE GAPS SHOULD HAVE HAD STEEL ANGLE RUNNING ON BOTH SIDES OF THE GAP WITH THE STEEL ANGLE ANCHORED TO THE CEILING AND RTV SEALANT BETWEEN THE STEEL ANGLE AND THE WALL. THE DESIGN WAS NOT IMPLEMENTED FULLY DUE TO PHYSICAL CONSTRAINTS. AT THE TIME OF INSTALLATION, ENGINEERING EVALUATIONS HAD BEEN PERFORMED TO JUSTIFY THE ABSENCE OF THE STEEL ANGLE. HOWEVER, THESE EVALUATIONS WERE BASED ON STRUCTURAL CONSIDERATIONS AND DID NOT ADDRESS FIRE PROTECTION CONSIDERATIONS. A PLANTWIDE WALKDOWN OF 3 HR RATED MASONRY FIRE WALLS REVEALED 18 UNSEALED GAPS AT THE TOPS OF FIRE WALLS. FIREWATCH PATROLS WERE ESTABLISHED AS REQUIRED IN ACCORDANCE WITH TECH SPEC 3.7.12. DESIGN CHANGES ARE BEING DEVELOPED FOR SEALING THESE GAPS. A SUPPLEMENTAL REPORT WILL BE PROVIDED WHEN THE IMPLEMENTATION SCHEDULE IS AVAILABLE.

[96] FARLEY 2 DOCKET 50-364 LER 84-013
 HOURLY FIRE WATCH NOT PERFORMED AS REQUIRED.
 EVENT DATE: 110784 REPORT DATE: 120784 NSSS: WE TYPE: PWR

(NSIC 193504) TECH SPEC 3.3.3.9 ACTION STATEMENTS REQUIRE THE POSTING OF AN HOURLY FIRE WATCH PATROL WITHIN 1 HR WHENEVER CERTAIN FIRE DETECTION INSTRUMENTS ARE INOPERABLE. HOWEVER, AT 2315 ON 11-7-84, IT WAS DETERMINED THAT NO FIRE WATCH PATROL HAD BEEN POSTED WHEN THE MAIN CONTROL ROOM ANNUNCIATION CAPABILITY FOR FIRE PROTECTION SYSTEM 2A-100 SMOKE DETECTORS WAS RENDERED INOPERABLE AT APPROX 2205 ON 11-7-84. THE SMOKE DETECTORS AND THE SPRINKLER SYSTEM ASSOCIATED WITH FIRE PROTECTION SYSTEM 2A-100 REMAINED OPERABLE. ONLY THE MAIN CONTROL ROOM ANNUNCIATOR FOR THIS SYSTEM WAS INOPERABLE. AN ALTERNATE MAIN CONTROL ROOM ALARM METHOD, THE PLANT COMPUTER ALARM DISPLAY, ALSO REMAINED OPERABLE DURING THIS PERIOD. AN HOURLY FIRE WATCH PATROL WAS ESTABLISHED AT 2317 AND WAS MAINTAINED UNTIL NO LONGER REQUIRED.

[97] FARLEY 2 DOCKET 50-364 LER 85-002
 DIESEL GENERATOR INADVERTENTLY STARTED DURING TESTING.
 EVENT DATE: 011685 REPORT DATE: 021185 NSSS: WE TYPE: PWR

(NSIC 193425) AT 2032 ON 1-6-85, AN ACTUATION OF ESF EQUIPMENT OCCURRED WHEN THE 2C DG STARTED AUTOMATICALLY AND SUPPLIED POWER TO THE 2J 4160V BUS. THE 2J BUS HAD BEEN DEENERGIZED DUE TO A PERSONNEL ERROR DURING TESTING WHEN THE BREAKER BETWEEN THE STARTUP TRANSFORMER AND THE 2G BUS (WHICH POWERS THE 2J BUS) WAS INADVERTENTLY TRIPPED OPEN. TESTING WAS BEING CONDUCTED TO VERIFY THE PROPER IMPLEMENTATION OF A DESIGN CHANGE TO THE B2G SEQUENCER. TROUBLESHOOTING DETERMINED THAT A WIRING ERROR HAD BEEN MADE DURING THE IMPLEMENTATION OF THE DESIGN CHANGE. TESTING WAS CONTINUED AFTER THE ERROR HAD BEEN LOCATED AND CORRECTED. HOWEVER, TEST PERSONNEL FAILED TO VERIFY THAT PROPER CONDITIONS EXISTED BEFORE RESTARTING THE TEST. THEY DID NOT RECOGNIZE THAT A LEAD IN THE B2G SEQUENCER AUX PANEL WHICH WAS REQUIRED TO BE LIFTED FOR THE TEST HAD BEEN LANDED DURING THE TROUBLESHOOTING. SIMULATION OF REDUCED GRID VOLTAGE DURING THE TEST WITH THE LEAD IMPROPERLY LANDED CAUSED THE BREAKER TO OPEN. THE UNIT WAS IN A REFUELING OUTAGE AND ALL FUEL HAD BEEN REMOVED FROM THE REACTOR VESSEL. THE BUSES WERE REENERGIZED FROM THE STARTUP TRANSFORMER AND THE 2C DG WAS SHUT DOWN. THE 2C DG OPERATED FOR ABOUT 13 MINS.

[98] FARLEY 2 DOCKET 50-364 LER 85-003
 REFUELING WATER LEVEL LESS THAN REQUIRED WITH INOPERABLE RHR LOOP.
 EVENT DATE: 012385 REPORT DATE: 021885 NSSS: WE TYPE: PWR

(NSIC 193367) ON 2 OCCASIONS ON 1-23-85, TECH SPEC 3.0.4 WAS VIOLATED IN THAT THE WATER LEVEL ABOVE THE REACTOR PRESSURE VESSEL FLANGE WAS DECREASED BELOW 23 FT WHILE 13 SNUBBERS HAD BEEN REMOVED FOR SURVEILLANCE TESTING FROM THE A TRAIN RHR LOOP. REMOVAL OF THE SNUBBERS MADE THE A TRAIN RHR LOOP INOPERABLE FROM A TECH SPECS POINT OF VIEW EVEN THOUGH IT WAS CAPABLE OF PROVIDING WATER TO THE RCS AND THE REFUELING CANAL. TECH SPECS REQUIRE BOTH TRAINS OF RHR TO BE OPERABLE IN MODE 6 WHEN THE WATER LEVEL ABOVE THE TOP OF THE REACTOR PRESSURE VESSEL FLANGE IS LESS THAN 23 FT.

[99] FARLEY 2 DOCKET 50-364 LER 85-004
 CONTINUOUS FIRE WATCH NOT MAINTAINED AS REQUIRED.
 EVENT DATE: 012685 REPORT DATE: 022185 NSSS: WE TYPE: PWR

(NSIC 193368) AT APPROX 1730 ON 1-26-85 IT WAS DETERMINED THAT CONTINUOUS FIRE WATCHES REQUIRED BY TECH SPEC 3.7.11.2 HAD BEEN TERMINATED IMPROPERLY AT 1647 ON 1-26-85. THE FIRE WATCHES WERE NECESSARY BECAUSE FIRE PROTECTION SPRINKLER SYSTEMS 2A-101 AND 2A-25 HAD BEEN MADE INOPERABLE BY HAVING BEEN PLACED IN OVERRIDE DUE TO WELDING IN THE AREAS COVERED BY THESE SYSTEMS. THE SPRINKLER SYSTEMS WERE PLACED BACK IN SERVICE AT 1735 ON 1-26-85. THE FOREMAN IN CHARGE OF THE WELDING IN THESE AREAS RELEASED THE FIRE WATCHES AT 1647 WITHOUT FIRST CONTACTING THE SHIFT FOREMAN SO THAT THE SPRINKLER SYSTEMS COULD BE PLACED BACK IN SERVICE. THIS WAS CONTRARY TO PROCEDURAL REQUIREMENTS AND SPECIFIC VERBAL INSTRUCTIONS BY THE SHIFT FOREMAN. THIS EVENT WAS CAUSED BY PERSONNEL ERROR. THE INDIVIDUAL INVOLVED HAS BEEN COUNSELED CONCERNING THE ESTABLISHMENT AND TERMINATION OF CONTINUOUS FIRE WATCHES.

[100] FITZPATRICK DOCKET 50-333 LER 84-023
 LOSS OF FEEDWATER FLOW CAUSES LOW VESSEL LEVEL.
 EVENT DATE: 110484 REPORT DATE: 112184 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CORP. (NUCLEAR ENG DIV)
 LIMITORQUE CORP.

(NSIC 192547) WITH THE REACTOR AT APPROX 30% POWER FOLLOWING AN OUTAGE, A REACTOR

TRIP OCCURRED DUE TO REACTOR VESSEL LOW WATER LEVEL. PRIOR TO THE EVENT THE CONTROL ROOM OPERATOR MADE A FLOW ADJUSTMENT TO THE CONDENSATE BYPASS FLOW WHICH SUPPLIES COOLING FLOW TO THE AIR EJECTOR CONDENSER AND THE STEAM PACKING EXHAUSTER. THE CONDENSATE BYPASS FLOW CONTROLLER WAS MALFUNCTIONING WHICH APPEARS TO HAVE CAUSED THE BYPASS FLOW CONTROL VALVE TO STROKE FULLY CLOSED. IT IS SUSPECTED THAT THE LARGE INCREASE IN BYPASS FLOW RATE CAUSED THE OPERATING REACTOR FEED PUMP TO TRIP ON LOW SUCTION PRESSURE RESULTING IN A LOSS OF FEED WATER FLOW. REACTOR VESSEL LEVEL WAS RESTORED TO NORMAL WITH THE HIGH PRESSURE COOLANT INJECTION SYSTEM. THE REACTOR CORE ISOLATION COOLING SYSTEM FAILED TO OPERATE DUE TO A SHORTED OUT STEAM SUPPLY VALVE MOTOR. THE CONDENSATE BYPASS FLOW CONTROLLER WAS REPLACED AND THE REACTOR CORE ISOLATION COOLING STEAM SUPPLY VALVE MOTOR WAS REPLACED.

[101] FITZPATRICK DOCKET 50-333 LER 85-005
 FAILURE OF PERSONNEL PENETRATION DOOR LATCH.
 EVENT DATE: 020685 REPORT DATE: 031085 NSSS: GE TYPE: BWR

(NSIC 193579) SECONDARY CONTAINMENT INTEGRITY WAS APPARENTLY BREACHED DURING FULL POWER OPERATION FOR 30 SECS. THE CAUSE WAS THE OPENING OF THE REACTOR BLDG INNER TRACK BAY PERSONNEL DOOR WHICH CREATED A PRESSURE DIFFERENTIAL AND CAUSED THE OUTER TRACK BAY DOOR TO MOVE DUE TO A FAULTY LATCH MECHANISM. THE PERSONNEL DOOR WAS SHUT AND SECONDARY CONTAINMENT RESTORED. LONG TERM CORRECTIVE ACTION INCLUDES: A) POSTING OF AN OPERATOR AID TO PROVIDE GUIDANCE ON PROPER DOOR OPERATION AND B) INVESTIGATION INTO AN IMPROVED LATCHING MECHANISM.

[102] FITZPATRICK DOCKET 50-333 LER 85-004
 TORUS VACUUM BREAKER INOPERATIVE DUE TO SCAFFOLDING.
 EVENT DATE: 021285 REPORT DATE: 030785 NSSS: GE TYPE: BWR

(NSIC 193419) DURING NORMAL PLANT OPERATION 1 OF THE 2 REACTOR BLDG PRESSURE SUPPRESSION CHAMBER VACUUM BREAKER VALVES WAS MADE INOPERABLE AND REMAINED SO IN EXCESS OF THE TECH SPEC LCO, PARAGRAPH 3.7.A.4. IT WAS DISCOVERED THAT SCAFFOLDING BUILT FOR AN UNRELATED EVOLUTION HAD BEEN PLACED SO AS TO RESTRICT THE MOVEMENT OF THE VALVES WEIGHT ARM. THIS SCAFFOLDING WAS ERECTED ABOUT 12 DAYS PREVIOUS AND THE VALVE IS ASSUMED TO HAVE BEEN INOPERATIVE FOR THE 12 DAYS. THE LCO EXPIRED AFTER 7 DAYS. CORRECTIVE ACTION INCLUDED IMMEDIATE REMOVAL OF THE INTERFERENCE, COUNSELING OF THE CRAFT SUPERVISORS AND FOREMEN INVOLVED, AND TRAINING OF ALL CRAFT SUPERVISORS IN THE NEED TO PREVENT INTERFERENCE WITH PLANT EQUIPMENT IN THE COURSE OF THEIR WORK. EACH VACUUM BREAKER IS CAPABLE OF 100% RELIEF CAPACITY. THUS, ADEQUATE VACUUM BREAKER CAPACITY REMAINED OPERABLE THROUGHOUT THE INCIDENT FOR A DESIGN BASIS EVENT.

[103] FITZPATRICK DOCKET 50-333 LER 85-006
 ERRONEOUS LOAD MISMATCH SIGNAL GIVES TURBINE TRIP AND SCRAM.
 EVENT DATE: 021585 REPORT DATE: 031285 NSSS: GE TYPE: BWR

(NSIC 193555) WHILE PERFORMING AN INFREQUENT TEST ON THE MAIN TURBINE ELECTROHYDRAULIC CONTROL POWER LOAD UNBALANCE CIRCUIT DURING SHUTDOWN FOR REFUELING, A TURBINE TRIP AND REACTOR SCRAM OCCURRED. INVESTIGATION OF THE TRIP REVEALED THAT THE INSTRUMENT ROOT VALVE FOR THE PRESSURE TRANSMITTER WHICH PROVIDES THE POWER INPUT TO THE UNBALANCE CIRCUIT WAS CLOSED. WHEN POWER WAS REDUCED TO PERFORM THE TEST, THE TRANSMITTER COULD NOT EQUALIZE THE LOWER ACTUAL PRESSURE. WHEN THE TEST WAS PERFORMED WITH THE ERRONEOUS HIGH PRESSURE INDICATION, A LOAD UNBALANCE WAS SENSED WHICH RESULTED IN A TURBINE TRIP AND SCRAM. AFTER THE TRIP, THE PLANT CONTINUED ITS SHUTDOWN TO THE COLD CONDITION FOR REFUELING. LONG TERM CORRECTIVE ACTION INCLUDES A MODIFICATION TO THE TRIP CIRCUITRY AND THE INCLUSION OF VALVE LINEUPS FOR THOSE INFREQUENTLY PERFORMED BALANCE OF PLANT TESTS WHICH COULD DIRECTLY RESULT IN REACTOR SCRAMS.

[104] FITZPATRICK DOCKET 50-333 LER 85-007
 INADVERTENT REACTOR PROTECTION SYSTEM ACTUATION.
 EVENT DATE: 022085 REPORT DATE: 031595 NSSS: GE TYPE: BWR

(NSIC 193564) WHILE SHUTDOWN DURING A REFUELING OUTAGE WITH REACTOR WATER LEVEL AT REFUELING LEVEL, A PROTECTIVE TAGGING EVOLUTION WAS IN PROGRESS TO REMOVE AN RPV LEVEL TRANSMITTER FROM SERVICE IN PREPARATION FOR THE ANALOG TRANSMITTER TRIP SYSTEM MODIFICATION. THE RPV LEVEL TRANSMITTER BEING REMOVED FROM SERVICE SHARED A COMMON SENSING LINE WITH THE RPV LEVEL SWITCHES WHICH ACTUATE THE RPS ON RPV LOW WATER LEVEL. DURING THE PROTECTIVE TAGGING EVOLUTION, THE COMMON SENSING LINE WAS DRAINED WHICH RESULTED IN THE ACTUATION OF THE RPS DUE TO AN ERRONEOUS LOW LEVEL SIGNAL. ACTUAL RPV WATER LEVEL REMAINED AT THE REFUELING LEVEL. IMMEDIATE CORRECTIVE ACTION WAS TO RESTORE THE RPS TO NORMAL. THE OPERATING SHIFT, CONDUCTING THE PROTECTIVE TAGGING EVOLUTION, WAS COUNSELLED ON THE IMPORTANCE OF VERIFYING INTERFACE BETWEEN INSTRUMENTATION.

[105] FITZPATRICK DOCKET 50-333 LER 85-008
 EXCESSIVE LEAKAGE OF PRIMARY CONTAINMENT ISOLATION VALVE.
 EVENT DATE: 030185 REPORT DATE: 031485 NSSS: GE TYPE: BWR
 VENDOR: VELAN VALVE CORP.

(NSIC 193557) DURING THE PERFORMANCE OF LLRT, REACTOR RECIRC PUMP MINI-PURGE PENETRATION X-31AC WAS FOUND WITH LEAKAGE THAT MAY EXCEED THE LIMIT OF 0.6 LA CONTAINED IN TECH SPEC 4.7.A.2.B.2. THE CAUSE OF THE LEAKAGE WAS VALVE DISC TO SEAT LEAKAGE. VALVE REPAIRS HAVE BEEN COMPLETED FOR THIS PENETRATION. ADDITIONAL LOCAL LEAK RATE TESTING REMAINS INCOMPLETE AT THIS TIME. DETAILS OF THE COMPLETED LLRT WILL BE PROVIDED IN THE SUPPLEMENTAL REPORT.

[106] FITZPATRICK DOCKET 50-333 LER 85-009
 MAIN STEAM SAFETY/RELIEF VALVES FOUND OUT OF TOLERANCE.
 EVENT DATE: 032285 REPORT DATE: 040485 NSSS: GE TYPE: BWR
 VENDOR: TARGET ROCK CORP.

(NSIC 193615) DURING THE 1985 SCHEDULED REFUEL OUTAGE, 6 TARGET ROCK SAFETY/RELIEF VALVES WERE REMOVED FOR TESTING IN ACCORDANCE WITH TECH SPEC 2.2.B AND 4.6.E.1. OF THE 6 VALVES TESTED, 3 HAD SETPOINT VALUES OUTSIDE THE ALLOWABLE TOLERANCES. POSSIBLE CAUSES OF THIS EVENT ARE INADEQUATE CLEARANCES IN THE LABERINTH SEAL AREA OR PILOT SEAT LEAKAGE. MANUAL AND ADS FUNCTIONS ARE NOT AFFECTED BY SETPOINT DRIFT. ALL 6 VALVES HAVE BEEN OVERHAULED BY TARGET ROCK CORP. AND TESTED BY WYLE LABS. ALL VALVES NOW MEET ALL APPLICABLE SPECS.

[107] GINNA DOCKET 50-244 LER 85-001
 COMPUTER ROD POSITION DEVIATION ALARM.
 EVENT DATE: 011685 REPORT DATE: 021585 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 193398) ON 1-16-85 A SERIES OF BLOWN FUSES IN THE COMPUTER RESULTED IN ACTUATION OF ABOUT 90 ALARMS ON THE COMPUTER ALARM TYPEWRITER AT THE TIME THAT I&C TECHNICIANS WERE REMOVING AND RESTORING FOXBORO CHANNELS FOR PERIODIC TEST PROCEDURES. THE COMPUTER TECHNICIAN WAS SWAPPING TREND AND LOG TYPEWRITERS. A PRINTOUT ALERTING THE OPERATOR TO CONTROL ROD BANKS NOT BEING UPDATED AT 1200 HRS WENT UNNOTICED DUE TO PREVIOUS ALARM ACTIVITY. SUBSEQUENT PRINTOUTS FOR RODS NOT UPDATED OCCURRED AND THIS PRINTOUT WAS DETECTED WHEN THE AFTERNOON SHIFT OPERATOR ATTEMPTED TO PERFORM THE COMPUTER PROGRAM CHECK AT 1634 HRS. THE ROD BANKS WERE UPDATED AT 1703 HRS. PROCEDURE S-26.2 (COMPUTER OUT OF SERVICE) AND TECH SPEC TABLE 4.1-1 ITEM #9 DICTATES THAT CONTROL ROD POSITION INDICATORS SHOULD BE INITIATED WITHIN 4 HRS OF THE ALARM.

[108] GRAND GULF 1 DOCKET 50-416 LER 84-051
 RCIC SPURIOUSLY ISOLATES TWICE.
 EVENT DATE: 110284 REPORT DATE: 120384 NSSS: GE TYPE: BWR

(NSIC 193512) ON 11-2 AND 3-84, TWO RCIC ISOLATIONS OCCURRED DUE TO HIGH FLOW ON THE RCIC STEAM LINE. DURING PLANT STARTUP ON 11-2, A RCIC COLD QUICK START TEST WAS IN PROGRESS WHEN LARGE AMOUNTS OF STEAM WERE NOTED COMING FROM ONE OF THE MECHANICAL FLANGES ON THE TURBINE CASING. THE TURBINE WAS MANUALLY TRIPPED. WHEN THE TURBINE TRIPPED, A TRANSIENT IN THE STEAM SUPPLY LINE CAUSED OSCILLATIONS IN THE HIGH STEAM FLOW TRANSMITTER E31-N084A AND THE RCIC ISOLATION OCCURRED. APPROX 12 HRS LATER THE ISOLATION VALVES WERE REOPENED IN ORDER TO PLACE RCIC IN STANDBY. STEAM FLOWING THROUGH THESE REOPENED VALVES CAUSED A HIGH STEAM FLOW SIGNAL IN THE RCIC STEAM LINE BREAK DETECTION SYSTEM ON ONE OF THE ELBOW TAP LOOP SEALS FOR THE STEAM FLOW TRANSMITTER, CAUSED A HIGH RESIDUAL DIFFERENTIAL PRESSURE SIGNAL TO BE PRESENT PRIOR TO WARMING THE LINE. THIS IS CONSIDERED AN ISOLATED EVENT. IN BOTH CASES HIGH PRESSURE CORE SPRAY WAS OPERABLE.

[109] GRAND GULF 1 DOCKET 50-416 LER 85-001
 UNSEALED PENETRATIONS IN FIRE RATED WALL.
 EVENT DATE: 121384 REPORT DATE: 021285 NSSS: GE TYPE: BWR

(NSIC 193439) AN UNSEALED, UNIDENTIFIED OPENING WAS FOUND IN A FIRE RATED WALL BETWEEN ROOMS OC402 AND OC403 OF THE CONTROL BLDG. THE OPENING WAS APPROX 7' X 6" ALONG THE TOP OF THE WALL WITH 2 NOTCH OUTS FOR PENETRATING ITEMS AND HAD BEEN IN THIS CONDITION SINCE CONSTRUCTION OF THE PLANT. FIRE PILLOWS USED AS TEMPORARY FIRE STOPS HAD BEEN PACKED IN THE OPENING.

[110] GRAND GULF 1 DOCKET 50-416 LER 85-003
 TECHNICAL SPECIFICATION SURVEILLANCE (DOSE EQUIVALENT IODINE ANALYSES) NOT PERFORMED.
 EVENT DATE: 011885 REPORT DATE: 021885 NSSS: GE TYPE: BWR

(NSIC 193440) ON 5 OCCASIONS FROM 10-84 TO 1-85, CHEMISTRY PERSONNEL FAILED TO PERFORM DOSE EQUIVALENT IODINE/ISOTOPIC ANALYSES FOLLOWING REACTOR SCRAMS AS REQUIRED BY TECH SPECS. TECH SPEC TABLE 4.11.2.1.2-1 REQUIRES CERTAIN RADIOACTIVE GASEOUS RELEASE ANALYSES TO BE PERFORMED FOLLOWING STARTUP FROM COLD SHUTDOWN, OR FOLLOWING A THERMAL POWER CHANGE EXCEEDING 15% OF THE RATED THERMAL POWER WITHIN A 1 HR PERIOD. THIS REQUIREMENT IS EXEMPTED IF 1) ANALYSIS SHOWS THAT THE DOSE EQUIVALENT I-131 CONCENTRATION IN THE PRIMARY COOLANT HAS NOT INCREASED MORE THAN A FACTOR OF 3, AND 2) THE NOBLE GAS MONITOR SHOWS THAT EFFLUENT ACTIVITY HAS NOT INCREASED MORE THAN A FACTOR OF 3. THE ERROR MADE BY UTILITY CHEMISTRY PERSONNEL WAS ATTRIBUTED IN PART TO CONFUSION ON THE APPLICATION OF THE EXEMPTION STATEMENT OF TECH SPEC 3.4.5.C.1 WHICH ALLOWS RELAXATION OF THE 15% POWER CHANGE REQUIREMENT DURING THE STARTUP TEST PROGRAM. NEITHER THE EXEMPTION NOR PLANT PROCEDURES SPECIFY WHAT VALUES TO USE IN DETERMINING THE FACTOR OF 3. AN ADDITIONAL CONTRIBUTING CAUSE WAS POOR COMMUNICATIONS BETWEEN CONTROL ROOM AND CHEMISTRY LAB PERSONNEL WHEN POWER LEVEL CHANGES WERE MADE.

[111] GRAND GULF 1 DOCKET 50-416 LER 85-004
 REACTOR SCRAMS ON LOW WATER LEVEL.
 EVENT DATE: 012785 REPORT DATE: 022685 NSSS: GE TYPE: BWR

(NSIC 193586) DURING STARTUP TUNING ON THE REACTOR FEEDWATER SYSTEM, A FEED PUMP FLOW IMBALANCE CAUSED A LEVEL TRANSIENT RESULTING IN A REACTOR SCRAM. THE TUNING WAS PERFORMED DURING STARTUP TEST CONDITION 3 TO OBTAIN CALIBRATION DATA FOR THE FEEDWATER PUMP CONTROLLER. THE CALIBRATION USING THE COMPLETED DATA SHOULD MAKE

THE FEED PUMPS MORE RESPONSIVE TO CHANGING PLANT PARAMETERS. THE REQUIRED CALIBRATION DATA WAS OBTAINED WITHOUT FURTHER RELIANCE ON THIS TUNING METHOD.

[112] GRAND GULF 1 DOCKET 50-416 LER 85-002
 REACTOR SCRAM ON LOW REACTOR WATER LEVEL.
 EVENT DATE: 012985 REPORT DATE: 022685 NSSS: GE TYPE: BWR

(NSIC 193484) THE HEATER DRAIN PUMP WAS BEING PLACED IN THE PUMP FORWARD MODE WHEN THE N23-F054 VALVE (HEATER DRAIN PUMP DISCHARGE TO THE FEED PUMP SUCTION HEADER) COULD NOT BE OPENED. A CHANGE IN SYSTEM LINEUP WAS ESTABLISHED TO DECREASE DIFFERENTIAL PRESSURE ACROSS THE VALVE IN AN ATTEMPT TO CRACK THE VALVE OPEN. THIS RESULTED IN F054 GOING FULL OPEN WHICH DIVERTED CONDENSATE SUPPLY TO THE REACTOR FEED PUMPS BACK TO THE HOTWELL. A REACTOR LOW LEVEL SCRAM OCCURRED FOLLOWING FEED PUMP TRIPS ON LOW SUCTION PRESSURE.

[113] GRAND GULF 1 DOCKET 50-416 LER 85-005
 SURVEILLANCE ON IRM DETECTORS NOT PERFORMED WITHIN TIME LIMIT.
 EVENT DATE: 012985 REPORT DATE: 022885 NSSS: GE TYPE: BWR

(NSIC 193441) ON 1-29-85, UNIT 1 SCRAMMED AND WAS RESTARTED THE SAME DAY. TECH SPECS REQUIRE THAT THE IRM WEEKLY SURVEILLANCE BE PERFORMED PRIOR TO STARTUP UNLESS IT HAS BEEN PERFORMED WITHIN THE PREVIOUS WEEK. THE WEEKLY SURVEILLANCE WAS PERFORMED ON 1-27-85. THE 'DETECTOR NOT FULLY INSERTED' ROD BLOCK PORTION WAS NOT DONE, HOWEVER, SINCE THE PLANT WAS AT POWER AND IRM DETECTORS ARE NOT INSERTED IN THIS PLANT CONDITION. THIS PORTION OF THE IRM SURVEILLANCE WAS NOT PERFORMED PRIOR TO STARTUP AS REQUIRED BECAUSE THE SHIFT SUPERVISOR DID NOT REALIZE THAT THIS PORTION HAD NOT BEEN COMPLETED ON 1-27-85. THE LAST TIME IT HAD BEEN CHECKED SATISFACTORILY WAS ON 1-20-85.

[114] GRAND GULF 1 DOCKET 50-416 LER 85-006
 RCIC SYSTEM CONTAINMENT ISOLATION.
 EVENT DATE: 020785 REPORT DATE: 030785 NSSS: GE TYPE: BWR
 VENDOR: RILEY COMPANY, THE - PANALARM DIVISION

(NSIC 193535) ON 2-7-85, THE RCIC TURBINE STEAM SUPPLY INBOARD ISOLATION VALVE ISOLATED ON A SPURIOUS RHR EQUIPMENT AREA HIGH AMBIENT TEMPERATURE SIGNAL. THE CAUSE OF THE SPURIOUS SIGNAL IS UNDETERMINED. THE TEMPERATURE SWITCH IS A RILEY PANALARM DIVISION MODEL 86 PTGF. BY SYSTEM DESIGN, THE VALVE MAY BE ISOLATED BY A SINGLE INSTRUMENT CHANNEL.

[115] GRAND GULF 1 DOCKET 50-416 LER 85-007
 LOSS OF CONDENSER VACUUM CAUSES REACTOR SCRAM.
 EVENT DATE: 021085 REPORT DATE: 031285 NSSS: GE TYPE: BWR
 VENDOR: ASCO VALVES

(NSIC 193641) WHILE STEAM JET AIR EJECTORS WERE BEING TRANSFERRED FROM THE 'B' TRAIN TO THE 'A' TRAIN, CONDENSER VACUUM DECREASED TO THE TURBINE TRIP SETPOINT, TRIPPING THE TURBINE AND CAUSING A REACTOR SCRAM. SJAE 'A' WAS BEING PLACED IN SERVICE DUE TO APPARENT INTERCONDENSER FOULING OF SJAE 'B'. THE F003A VALVE, WHICH NEEDED TO BE OPEN TO INCREASE THE VACUUM, WAS FOUND TO HAVE DUAL INDICATION. THE F003A VALVE WOULD NOT RESPOND BECAUSE IT HAD TRIPPED ON THERMAL OVERLOAD (POSSIBLY DUE TO VALVE CYCLING). IT APPEARS THAT THE THERMAL OVERLOAD TRIP WAS CAUSED BY EXCESSIVE AUTOMATIC CYCLING OF THE VALVE ON LOW STEAM FLOW DUE TO UNDERSIZED PIPING TO THE SJAES. SUBSEQUENT TO THE SCRAM, WHILE SHUTTING MSIV'S TO LIMIT THE COOLDOWN RATE, 3 OF THE MSIV'S FAILED TO CLOSE NORMALLY. THE FAILURE OF THE MSIV'S TO STAY CLOSED AFTER BEING SHUT WITH THE TEST CIRCUIT AND

THEIR INABILITY TO BE CLOSED NORMALLY INDICATED A FAILURE OF THE DUAL SOLENOID VALVE TO TRANSFER WHEN DE-ENERGIZED. THE PLANT REPLACED ALL 8 SOLENOID VALVES.

[116] GRAND GULF 1 DOCKET 50-416 LER 85-008
SCRAM DUE TO LOSS OF FEEDWATER.
EVENT DATE: 021385 REPORT DATE: 031885 NSSS: GE TYPE: BWR

(NSIC 193642) AIR WAS BEING VENTED FROM THE TURBINE BLDG COOLING WATER SYSTEM WHEN THE UNIT 1 INSTRUMENT AIR COMPRESSOR TRIPPED DUE TO LOW COOLING WATER PRESSURE. THE UNIT 2 INSTRUMENT AIR COMPRESSOR WAS INOPERABLE AT THE TIME. BOTH TRAINS OF SERVICE AIR WERE PUT INTO SERVICE. THE CONDENSATE PRECOAT FILTERS ISOLATED ON LOW AIR PRESSURE IN THE TURBINE BLDG AIR HEADERS DUE TO AIR USAGE IN THE SYSTEM. THIS RESULTED IN THE TRIP OF THE OPERATING CONDENSATE, CONDENSATE BOOSTER, AND REACTOR FEED PUMPS. THE REACTOR SCRAMMED ON LOW REACTOR WATER LEVEL.

[117] GRAND GULF 1 DOCKET 50-416 LER 85-009
PROCEDURE ERROR CAUSED ECCS ACTUATION AND REACTOR SCRAM.
EVENT DATE: 021485 REPORT DATE: 031585 NSSS: GE TYPE: BWR

(NSIC 193643) MAINTENANCE TECHNICIANS RESTORING A VESSEL LEVEL INSTRUMENT TO SERVICE CAUSED A PRESSURE DISTURBANCE ON THE INSTRUMENT REFERENCE LEG RESULTING IN A DIV 2 ESF ACTUATION. THE CAUSE WAS DUE TO THE PARTICULAR CALIBRATION PROCEDURE NOT SPECIFYING THE VALVING SEQUENCE TO BE USED TO RETURN REACTOR VESSEL LEVEL INSTRUMENTATION TO SERVICE. WHENEVER THE RESTORATION SEQUENCE IS NOT SPECIFIED BY THE PARTICULAR CALIBRATION PROCEDURE, A GENERIC PROCEDURE IS UTILIZED TO RESTORE THE INSTRUMENT. HOWEVER, THE SEQUENCE SPECIFIED IN THE GENERIC PROCEDURE WAS THE REVERSE OF THE DESIRED SEQUENCE FOR RESTORING THIS INSTRUMENT. THE LOAD SHEDDING AND SEQUENCE SYSTEM ACTUATION CAUSED A LOSS OF DRYWELL COOLING AND INSTRUMENT AIR. SERVICE AIR WAS LOST WHEN THE P43F289 VALVE FAILED CLOSED CAUSING LOSS OF COOLING WATER TO THE AIR COMPRESSORS. THE SCRAM VALVES DRIFTED OPEN DUE TO THE TOTAL LOSS OF AIR, FILLING THE SCRAM DISCHARGE VOLUME AND CAUSING THE REACTOR TO SCRAM ON HIGH SCRAM DISCHARGE VOLUME LEVEL.

[118] GRAND GULF 1 DOCKET 50-416 LER 85-010
LOSS OF INVERTER CAUSES INADVERTENT ESF ACTUATION WHILE SHUTDOWN.
EVENT DATE: 022385 REPORT DATE: 032585 NSSS: GE TYPE: BWR

(NSIC 193688) WHILE PLACING A SECOND DIVISION 2 BATTERY CHARGER ON EQUALIZE, THE DIVISION 2 INVERTER TRIPPED ON HIGH VOLTAGE CAUSING A LOSS OF POWER TO SEVERAL REACTOR VESSEL LEVEL INSTRUMENTS. WHEN THE INVERTER AUTOMATICALLY RESET, A DIVISION 2 ESF INITIATION OCCURRED. A RELAY POWERED FROM THE INVERTER REENERGIZED BEFORE LEVEL INSTRUMENTS, WHICH FAILED LOW ON THE LOSS OF POWER, COULD RECOVER. THE RELAY INITIATED ESF SYSTEMS ON AN ERRONEOUS LOW REACTOR WATER LEVEL SIGNAL. THE ESF INITIATIONS INCLUDED THE ISOLATION OF THE CONTROL ROOM FRESH AIR UNIT, THE START OF THE 'B' STANDBY GAS TREATMENT SYSTEM, AN INJECTION BY LOW PRESSURE COOLANT INJECTION SUBSYSTEMS 'B' AND 'C', THE START OF THE STANDBY SERVICE WATER SYSTEM, AND A DIVISION 2 ISOLATION. A DESIGN ENHANCEMENT IS BEING PURSUED TO PREVENT RECURRENCE. PROCEDURES WILL BE REVISED TO REQUIRE ONLY ONE CHARGER TO BE PLACED IN SERVICE WHEN EQUALIZING. SIMILAR EVENT 416/84-001.

[119] HATCH 1 DOCKET 50-321 LER 85-002
SAFETY/RELIEF VALVE FAILS TO OPEN.
EVENT DATE: 011385 REPORT DATE: 021285 NSSS: GE TYPE: BWR

(NSIC 193459) ON 1-13-85 AT 0443 CST DURING PERFORMANCE OF THE 'RELIEF VALVE OPERABILITY' PROCEDURE (HNP-1-3901), THE 'B' SRV FAILED TO OPEN. ALSO, THE 'F'

AND 'G' SRV'S PRIMARY POSITION INDICATION DID NOT OPERATE AS EXPECTED. ON 1-13-85 AT 1000 CST, WHILE PERSONNEL WERE PERFORMING SECTION F.2 OF THE 'SAFETY/RELIEF VALVE POSITION PRIMARY AND SECONDARY INDICATIONS F.T.&C.' PROCEDURE (HNP-1-3820), THE 'A' SRV LIFTED. THE CAUSE OF THE 'B' SRV FAILING TO OPEN WAS DUE TO OPEN LINKS. THE CAUSE OF THE INDICATION PROBLEM WITH THE 'F' AND 'G' SRV'S WAS POSTULATED AS BEING MISLABELING OF NEW SRV TAIL PIPE PRESSURE SWITCHES INSTALLED THIS REFUELING OUTAGE. THE CAUSE OF THE 'A' SRV LIFTING WHILE TESTING THE 'F' SRV WAS DUE TO A PROCEDURAL ERROR. THE OPEN LINKS ON THE 'B' SRV WERE CLOSED, AND THE 'B' SRV WAS SUCCESSFULLY TESTED. THE INDICATION PROBLEMS WITH THE 'F' AND 'G' SRV'S WERE CORRECTED TEMPORARILY. THE PROCEDURAL PROBLEMS WITH HNP-1-3820 WERE CORRECTED ON 2-2-85. FUTURE CORRECTIVE ACTIONS ARE PLANNED.

[120] HATCH 1 DOCKET 50-321 LER 85-005
 FAILURE OF HPCI EXHAUST DIAPHRAGM AND CHECK VALVES.
 EVENT DATE: 012385 REPORT DATE: 021985 NSSS: GE TYPE: BWR
 VENDOR: ATWOOD & MORRILL CO., INC.
 CONTINENTAL WIRE & CABLE CORP.

(NSIC 193460) ON 1-23-85 AT 2200 CST WITH THE REACTOR MODE SWITCH IN THE RUN POSITION PLANT PERSONNEL WERE IN THE PROCESS OF TESTING THE HPCI WHEN THE EXHAUST DIAPHRAGM RUPTURED. THE HPCI TURBINE TRIPPED AND THE SYSTEM ISOLATED. AN INVESTIGATION DETERMINED THAT THE DIAPHRAGM RUPTURE WAS CAUSED BY WATER CARRYING OVER INTO THE EXHAUST LINE FROM THE EXHAUST LINE DRAIN POT DUE TO A BLOCKED DRAIN LINE. THE BLOCKED LINE WAS CLEARED AND THE RUPTURED DIAPHRAGM WAS REPLACED. DURING THE INVESTIGATION, PLANT PERSONNEL DETERMINED THAT E41-F049 (HPCI EXHAUST LINE CHECK VALVE) HAD A DEFECTIVE SEAL. AFTER REPLACING THE SEAL, PLANT PERSONNEL PERFORMED A LOCAL LEAK RATE TEST BY PRESSURIZING BETWEEN E41-F049 AND E41-F021 (HPCI EXHAUST LINE STOP CHECK VALVE). ON 1-28-85 AT 0845 CST, THE TEST VOLUME WOULD NOT PRESSURIZE; THUS, PLANT PERSONNEL ASSUMED THAT THE REQUIREMENTS OF TECH SPECS SECTION 4.7.A.2.G COULD NOT BE MET. ON 1-28-85, AT 0854 CST, THE PLANT WAS SHUTDOWN PER THE REQUIREMENTS OF TECH SPECS SECTION 3.7.A.8. E41-F021 WAS REPAIRED, E41-F049 AND E41-F021 PASSED THEIR LEAK RATE TEST AND THE REACTOR WAS STARTED UP ON 1-29-85. HPCI WAS SATISFACTORILY TESTED AND DECLARED OPERABLE ON 1-30-85.

[121] HATCH 1 DOCKET 50-321 LER 85-009
 LOSS OF AUTOMATIC FUNCTION OF A PRIMARY CONTAINMENT ISOLATION VALVE.
 EVENT DATE: 012385 REPORT DATE: 022185 NSSS: GE TYPE: BWR

(NSIC 193409) ON 1-23-85 AT 1252 CST, PLANT PERSONNEL PLACED CLEARANCE HOLD TAGS WERE ON THE TIP MACHINES IN ORDER FOR OTHER PLANT PERSONNEL TO PERFORM THE 'SUPPRESSION CHAMBER DT INSTRUMENT FT&C' PROCEDURE. HOWEVER, THE PERSONNEL PLACED THE CLEARANCE HOLD TAGS ON THE WRONG SWITCH -- THE CLEARANCE HOLD TAGS WERE HUNG ON THE TIP MACHINES' MODE SWITCHES INSTEAD OF THE DRIVE CONTROL SWITCHES. THIS RESULTED IN THE TIP BALL VALVES (I.E., INBOARD PRIMARY CONTAINMENT ISOLATION VALVES) BEING IN A CONDITION SUCH THAT THEY COULD NOT CLOSE AUTOMATICALLY ON A GROUP 2 ISOLATION AS REQUIRED BY TECH SPECS TABLE 3.7-1. THE OUTBOARD PRIMARY CONTAINMENT ISOLATION VALVES (I.E., THE TIP SHEAR VALVES) REMAINED OPERABLE; HOWEVER, THEY HAVE TO BE ACTUATED MANUALLY. THIS EVENT WAS THE RESULT OF PERSONNEL ERROR. THE PERSONNEL RESPONSIBLE FOR HANGING THE CLEARANCE HOLD TAGS ON THE WRONG TIP MACHINE SWITCHES WERE COUNSELED ON THEIR ERROR. ON 1-23-85 AT 1545 CST, UPON DISCOVERY OF THIS EVENT, THE TIP MACHINES WERE TURNED ON AND THE CLEARANCE HOLD TAGS WERE PLACED ON THE CORRECT SWITCHES (I.E., DRIVE CONTROL SWITCHES).

[122] HATCH 1 DOCKET 50-321 LER 85-014
 FAILURE TO TEST RCIC PUMP SUCTION PRESSURE INSTRUMENTS.
 EVENT DATE: 012885 REPORT DATE: 022785 NSSS: GE TYPE: BWR

(NSIC 193462) ON 2-4-85, PLANT I&C PERSONNEL DETERMINED THAT THE 'RCIC PUMP SUCTION PRESSURE INSTRUMENT FT&C' PROCEDURE (HNP-1-3417) HAD NOT BEEN PERFORMED BY ITS LATEST DATE OF 1-28-85 (I.E., ITS DUE DATE OF 1-21-85 PLUS THE 25% GRACE PERIOD ALLOWED BY TECH SPECS DEFINITION II). THIS PROCEDURE SATISFIES THE SURVEILLANCE REQUIREMENT FOR ITEM 4 OF TECH SPECS TABLE 4.2-3. THE CAUSE OF THIS EVENT IS PERSONNEL ERROR. THE SURVEILLANCE COMPUTER TRACKING SHEET (SHOWS THE DATES BETWEEN WHICH THE PROCEDURE MUST BE PERFORMED) HAD BEEN SIGNED OFF INDICATING THAT THIS PROCEDURE HAD BEEN PERFORMED. THUS, I&C PERSONNEL THOUGHT THE PROCEDURE HAD BEEN PERFORMED BECAUSE THE SIGN OFF SECTION OF THE TRACKING SHEET WAS COMPLETED. HOWEVER, THE PERSONNEL WHO SIGNED OFF THE PROCEDURE ON THE TRACKING SHEET REALIZED THAT HE HAD INADVERTENTLY SIGNED OFF THE WRONG PROCEDURE, AND HE PUT A SINGLE LINE THRU THE COMPLETION DATE FOR HNP-1-3417. THIS LINE WAS MEANT TO DENOTE THAT THE PROCEDURE HAD NOT BEEN PERFORMED; HOWEVER, THE LINE WAS VERY FINE IN COMPARISON TO THE SIZE OF THE SIGN OFF. THEREFORE, THE LINE WAS OVERLOOKED, AND OTHER I&C PERSONNEL WERE NOT AWARE THAT THE PROCEDURE HAD NOT BEEN PERFORMED UNTIL 2-4-85. BOTH SUPERVISION AND THE TECHNICIANS INVOLVED HAVE REVIEWED THE SERIOUS NATURE AND THE ROOT CAUSE OF THIS INCIDENT AND TAKEN STEPS TO PREVENT RECURRENCE. I&C PERSONNEL HAVE BEEN INSTRUCTED ON HOW TO CORRECT MISTAKES ON PLANT DOCUMENTS.

[123] HATCH 1 DOCKET 50-321 LER 85-006
 MAIN POWER TRANSFORMER OUTPUT LINE FELL AND UNIT SCRAMMED.
 EVENT DATE: 013085 REPORT DATE: 022685 NSSS: GE TYPE: BWR

(NSIC 193461) ON 1-30-85 AND AGAIN ON 2-2-85, THE UNIT'S SOUTH MAIN TRANSFORMER NUMBER 3 PHASE MAIN GENERATOR OUTPUT LINE FELL TO THE GROUND. THIS CAUSED THE MAIN GENERATOR TO TRIP, AND SUBSEQUENTLY SCRAMMED THE REACTOR IN BOTH EVENTS. AFTER AN INVESTIGATION IT WAS DETERMINED THAT THE OUTPUT POWER LINE WAS HELD WITH 10 THOUSAND POUND TENSILE STRENGTH INSULATORS INSTEAD OF THE 30 THOUSAND POUND TENSILE STRENGTH INSULATORS THAT WERE REQUIRED BY DESIGN DATA. THIS EVENT IS THE RESULT OF CONSTRUCTION PERSONNEL ERROR. AFTER THE SECOND EVENT NEW 30 THOUSAND POUND TENSILE STRENGTH INSULATORS WERE INSTALLED ON EACH END OF THE 3 MAIN GENERATOR OUTPUT LINES. IN BOTH EVENTS A GROUP II PRIMARY CONTAINMENT ISOLATION SIGNAL OCCURRED, AND ALL GROUP II PCI VALVES CLOSED AS REQUIRED. THESE EVENTS ARE REPORTABLE PER 10CFR50.73(A)(2)(IV), BECAUSE AN UNPLANNED ACTUATION OF AN ESP, INCLUDING THE RPS, OCCURRED.

[124] HATCH 1 DOCKET 50-321 LER 85-013
 REACTOR SHUTDOWN BECAUSE OF RECIRCULATION PUMP LEAKAGE.
 EVENT DATE: 021685 REPORT DATE: 031885 NSSS: GE TYPE: BWR
 VENDOR: BYRON JACKSON PUMPS, INC.

(NSIC 193573) ON 2-16-85 AT 1830 CST WITH THE REACTOR IN STEADY STATE OPERATION AT 2436 MWT, OPERATIONS PERSONNEL DETERMINED THAT DRYWELL FLOOR DRAIN TOTAL LEAKAGE HAD RISEN TO 32 GALS PER MIN, WHICH WAS IN EXCESS OF THE MAX LEAKAGE ALLOWED BY TECH SPECS SECTION 3.6.G.1.C. AT 1840 CST, OPERATIONS PERSONNEL BEGAN A REACTOR POWER REDUCTION IN PREPARATION FOR TRIPPING AND ISOLATING THE 'B' REACTOR RECIRCULATION PUMP, BECAUSE IT HAD BEEN DETERMINED THAT ITS SHAFT SEALS WERE LEAKING. AT 1858 CST, OPERATIONS PERSONNEL INITIATED AN ORDERLY SHUTDOWN, TRIPPED AND ISOLATED THE 'B' REACTOR RECIRCULATION PUMP. DRYWELL FLOOR DRAIN LEAKAGE THEN DECREASED TO APPROX 6.0 GALS PER MIN. AT 2124 CST, OPERATIONS PERSONNEL MANUALLY SCRAMMED THE REACTOR AS PART OF AN ORDERLY SHUTDOWN. SUBSEQUENTLY, THE 'B' REACTOR RECIRCULATION PUMP'S SHAFT SEAL CARTRIDGE WAS REBUILT AND REINSTALLED. THE PUMP WAS THEN SATISFACTORILY FUNCTIONALLY TESTED, AND REACTOR STARTUP COMMENCED ON 2-22-85 AT 1205 CST.

[125] HATCH 2 DOCKET 50-366 LER 85-001
 REACTOR SCRAM DUE TO INBOARD MSIV'S DRIFTING CLOSED.
 EVENT DATE: 011985 REPORT DATE: 021885 NSSS: GE TYPE: BWR

(NSIC 193474) ON 1-19-85 DURING PERFORMANCE OF THE 'MSIV TRIP TEST' PROCEDURE, THE 'A' INBOARD MSIV FAILED TO OPERATE WITHIN THE TIME LIMITS OF TECH SPECS SECTIONS 4.4.7, 4.6.3.3, AND ITEM A.1 OF TECH SPECS TABLE 3.6.3-1. PLANT PERSONNEL THEN CYCLED THE 'A' MSIV REPEATEDLY TO SEE IF ITS TIME WOULD CHANGE SUCH THAT IT WOULD MEET TECH SPECS. AT 0848 CST, DURING THIS CYCLING, THE INBOARD MSIV'S DRIFTED TO LESS THAN 90% OPEN, RESULTING IN AN UNPLANNED SCRAM. PLANT PERSONNEL PERFORMED AN INVESTIGATION, AND DETERMINED THAT THE CONTINUOUS CYCLINGS OF THE 'A' INBOARD MSIV RESULTED IN A HIGH RATE OF CHARGING FLOW (GREATER THAN OR EQUAL TO 30 SCFM) TO THE MSIV'S ACCUMULATOR WHICH CAUSED ISOLATION OF THE DRYWELL PNEUMATIC SYSTEM SUPPLY VALVES - THESE VALVES ISOLATE WHEN THE SUPPLY FLOW RATE IS GREATER THAN OR EQUAL TO 30 SCFM FOR 2 MINS. WHEN THE DRYWELL PNEUMATIC SYSTEM SUPPLY VALVES ISOLATED, THE MSIV'S STARTED DRIFTING CLOSED (DUE TO THEIR ACCUMULATORS NOT BEING CHARGED UP AND BEING ISOLATED FROM THEIR SUPPLY). PLANT PERSONNEL REVIEWED AND DETERMINED THAT PERSONNEL COULD USE IT TO CYCLE ALL OF THE INBOARD MSIV'S IN ORDER OR TO CYCLE AN INBOARD MSIV MORE THAN ONCE. THUS, BY USING THE PROCEDURE, PLANT PERSONNEL COULD PLACE A GREATER THAN OR EQUAL TO 30 SCFM DRAIN ON THE DRYWELL PNEUMATIC SYSTEM SUPPLY FOR 2 MINS. THUS, THIS EVENT WAS THE RESULT OF PROCEDURE INADEQUACY.

[126] HATCH 2 DOCKET 50-366 LER 85-004
 ESP ACTUATION DUE TO RPS MG SET TRIP.
 EVENT DATE: 012185 REPORT DATE: 021985 NSSS: GE TYPE: BWR

(NSIC 193475) ON 1-21-85, WITH THE REACTOR MODE SWITCH IN THE STARTUP AND HOT STANDBY POSITION AND REACTOR POWER AT 314 MWT (13% POWER), AND ON 1-23-85, WITH THE REACTOR MODE SWITCH IN THE RUN POSITION AT 1549 MWT (64% POWER), THE RWCU OUTBOARD ISOLATION VALVE ISOLATED DUE TO A 1/2 GROUP ISOLATION FROM CHANNEL 'B' OF RPS. THESE EVENTS WERE THE RESULT OF 'B' RPS MG SET TRIPPING DUE TO A FAILED VOLTAGE REGULATOR. THE FAILED VOLTAGE REGULATOR WAS REPLACED AND ADJUSTED TO APPROX 120 VOLTS. THE REGULATOR WAS THEN VERIFIED TO REGULATE (REMAIN AT 120V PLUS OR MINUS 2 VOLTS) UNDER VARYING LOADS PER THE MANUFACTURER'S RECOMMENDATION. THE MG SET WAS FUNCTIONALLY TESTED SATISFACTORILY AND RETURNED TO SERVICE ON 1-26-85.

[127] HATCH 2 DOCKET 50-366 LER 85-006
 CALIBRATION PROCEDURE FOR RCIC STEAM LINE DELTA-P INSTRUMENTS.
 EVENT DATE: 012485 REPORT DATE: 022285 NSSS: GE TYPE: BWR

(NSIC 193369) ON 1-24-85, DURING PERFORMANCE OF A BIENNIAL REVIEW OF THE 'RCIC STEAM LINE DELTA P INSTRUMENT FT&C' PROCEDURE (HNP-2-3410), PLANT PERSONNEL DETERMINED THAT THE PROCEDURE CONTAINED AN ERROR IN THE CALIBRATION OF RCIC STEAM LINE DIFFERENTIAL PRESSURE TRANSMITTERS 2E51-N057A AND 2E51-N057B. THE PROCEDURE (HNP-2-3410) ERROR RESULTED FROM AN ERROR WHERE THE TRANSMITTERS' STATIC HEAD CORRECTIONS WERE MISTAKENLY APPLIED TO THE INCORRECT SIDE OF EACH DIFFERENTIAL PRESSURE TRANSMITTER. AN LCO WAS INITIATED AND RCIC WAS ISOLATED AND DECLARED INOPERABLE AT 0950 CST ON 1-24-85. THE RCIC STEAM LINE DELTA P INSTRUMENT FT&C PROCEDURE (HNP-2-3410) WAS THEN REVISED, AND PRESSURE TRANSMITTERS 2E51-N057A AND 2E51-N057B WERE RECALIBRATED PER THE REV. RCIC WAS SATISFACTORILY RETURNED TO SERVICE AT 2120 CST ON 1-24-85. THIS EVENT IS REPORTABLE PER 10 CFR 50.73(A)(2)(I) BECAUSE THE PLANT WAS OPERATED (FROM 8-29-84 TO 1-24-85) IN A CONDITION THAT IS PROHIBITED BY TECH SPECS SECTION 3.3.2, TABLE 3.2.2-2, ITEM 5A. THIS EVENT IS THE RESULT OF A DEFECTIVE PROCEDURE.

[128] HATCH 2 DOCKET 50-366 LER 85-007
 RWCU ISOLATES ON FALSE HIGH AREA TEMPERATURE.
 EVENT DATE: 021085 REPORT DATE: 031185 NSSS: GE TYPE: BWR

(NSIC 193558) ON 2-10-85, AT 0045 CST, WITH THE REACTOR MODE SWITCH IN THE RUN POSITION AND REACTOR POWER AT 2431 MWT (100% POWER), THE RWCU INBOARD ISOLATION VALVE ISOLATED AS A RESULT OF A FALSE TRIP SIGNAL FROM RWCU ROOM INLET TEMPERATURE INSTRUMENT 2G31-N661A. AN INVESTIGATION REVEALED THAT 2G31-N661A FAILED DUE TO ITS TRIP CARD NOT HAVING A GOOD CONNECTION WITH ITS EDGE CONNECTOR. THIS BAD CONNECTION CAUSED AN INVALID TRIP SIGNAL TO OCCUR; CONSEQUENTLY, 2G31-F001 ISOLATED AND THE 'A' RWCU PUMP TRIPPED. NO ACTUAL OR POTENTIAL SAFETY CONSEQUENCES OR IMPLICATIONS RESULTED FROM THIS EVENT. THIS EVENT HAD NO IMPACT ON ANY OTHER UNIT 2 SYSTEMS OR ON UNIT 1.

[129] HUMBOLDT BAY DOCKET 50-133 LER 85-001
 FIRE WATER LINE FAILURE.
 EVENT DATE: 021385 REPORT DATE: 031485 NSSS: GE TYPE: BWR
 VENDOR: DRESSER INDUSTRIAL VALVE & INST DIV

(NSIC 193514) A TOTAL LOSS OF THE FIRE WATER SYSTEM OCCURRED DUE TO THE UNDERGROUND CORROSION FAILURE OF 2 CARBON STEEL TENSION TIE BOLTS FOR A DRESSER COUPLING. THE FAILURE ALLOWED THE DRESSER COUPLING TO SEPARATE. THIS DRESSER COUPLING IS THE CONNECTION DEVICE FROM THE 8 INCH FIRE PUMP DISCHARGE HEADER TO AN UNDERGROUND TEE IN THE 6 INCH FIRE MAIN. WITHIN 2 HRS OF DETECTION OF THE FAILURE, A TEMPORARY BACKUP TO THE FIRE SYSTEM WAS PROVIDED BY CONNECTING THE NEWLY INSTALLED FIRE HYDRANT FROM THE HUMBOLDT COMMUNITY SERVICE DISTRICT. SUBSEQUENTLY, THE DRESSER COUPLING WAS RESTORED TO ITS ORIGINAL CONDITION USING A NEWLY FABRICATED STAINLESS STEEL COLLAR AND 2 STAINLESS STEEL TIE BOLTS. AS THE FUTURE PREVENTIVE MEASURE, THE USE OF STAINLESS STEEL COLLAR AND TIE BOLTS WOULD MINIMIZE UNDERGROUND CORROSION AND POTENTIAL TOTAL LOSS OF THE FIRE WATER SYSTEM.

[130] HUMBOLDT BAY DOCKET 50-133 LER 85-002
 GOVERNOR LINKAGE FAILURES ON DIESEL-DRIVEN FIREPUMP.
 EVENT DATE: 022485 REPORT DATE: 032685 NSSS: GE TYPE: BWR
 VENDOR: FAIRBANKS MORSE

(NSIC 193660) DURING A ROUTINE TEST, THE NO. 2 FIRE PUMP WAS NOT ABLE TO ACHIEVE THE DESIGN FLOW AS REQUIRED BY TECH SPEC 10.A.1. ONE OTHER FIRE PUMP WAS OUT OF SERVICE, BEING REPAIRED. WITH ONLY 1 OPERABLE FIRE PUMP, THE FIRE WATER SYSTEM WAS DECLARED INOPERABLE AS REQUIRED BY THE TECH SPECS. AN INVESTIGATION DETERMINED THAT THE THREADS ON THE CAP SCREW CONNECTING THE THROTTLE LINKAGE TO THE FUEL INJECTION PUMP GOVERNOR WERE WORN. THE GOVERNOR SHAFT WAS REPLACED AND THE THROTTLE LINKAGE ADJUSTED. ONE FIRE PUMP WAS OPERABLE AT ALL TIMES. A BACKUP FIRE SYSTEM WAS ESTABLISHED WITHIN 24 HRS AS REQUIRED BY TECH SPECS.

[131] INDIAN POINT 2 DOCKET 50-247 LER 84-025
 MAIN GENERATOR FIRE AND SI PUMPS MALFUNCTION.
 EVENT DATE: 121984 REPORT DATE: 011885 NSSS: WE TYPE: PWR
 VENDOR: ALOYCO, INC.
 PACIFIC PUMPS

(NSIC 193649) ON THE EVENING OF 12-19-84, WITH THE UNIT AT FULL POWER, A FIRE OCCURRED AT THE GENERATOR EXCITER END SEAL DUE TO SEAL FAILURE AND HYDROGEN LEAKAGE. DURING OPERATOR-INITIATED SHUTDOWN, THE REACTOR TRIPPED ON LOW SG LEVEL AND SAFETY INJECTION OCCURRED ON A HIGH STEAM FLOW SIGNAL (COINCIDENT WITH A LOW AVERAGE TEMPERATURE OF THE RCS) DUE TO ACTUATION OF THE STEAM DUMP VALVES. THE BORON INJECTION TANK INJECTED ITS CONTENTS INTO THE SAFETY INJECTION SYSTEM. THERE WAS NO INJECTION OF BORATED WATER INTO THE RCS SINCE THE RCS WAS AT A

PRESSURE GREATER THAN SAFETY INJECTION SYSTEM SHUTOFF HEAD. DURING THE SUBSEQUENT WEEK, REPAIRS WERE MADE TO THE GENERATOR AND THE REACTOR BROUGHT CRITICAL. ON 12-28-84 TWO SAFETY INJECTION PUMPS WERE DECLARED INOPERABLE AFTER THEY MALFUNCTIONED IN AN ATTEMPT TO TOP OFF THE ECCS ACCUMULATORS; THE THIRD SAFETY INJECTION PUMP WOULD NOT MANUALLY TURNOVER. THE REACTOR WAS MANUALLY TRIPPED AND AN ORDERLY COOLDOWN COMMENCED. BY 1-1-85, THE THREE SAFETY INJECTION PUMPS WERE VERIFIED TO BE OPERABLE AND THE REACTOR BROUGHT CRITICAL. THE CAUSE OF THE MALFUNCTION OF THE SAFETY INJECTION PUMPS IS ATTRIBUTED TO A COMBINATION OF SOLIDIFIED BORIC ACID PREVENTING SUCTION FLOW AND GAS BINDING OF THE PUMPS. FLUSHING PROCEDURES HAVE BEEN MODIFIED TO ENSURE BETTER FLUSHING OF LINES WHERE THE POTENTIAL EXISTS FOR HIGH BORIC ACID CONCENTRATION, AND THE FUNCTION OF EQUIPMENT IS BEING MONITORED.

[132] INDIAN POINT 2 DOCKET 50-247 LER 85-001
 GENERATOR HYDROGEN LEAKAGE CAUSES MANUAL REACTOR TRIP.
 EVENT DATE: 020285 REPORT DATE: 030485 NSSS: WE TYPE: PWR
 VENDOR: AMERICAN MACHINE & FOUNDRY COMPANY

(NSIC 193389) ON 2-2-85 THE REACTOR WAS MANUALLY TRIPPED DURING AN ORDERLY SHUTDOWN COMMENCED WHEN A HYDROGEN LEAK/OIL MIST WAS OBSERVED AT THE SHAFT SEALS OF THE MAIN GENERATOR. FURTHER INSPECTION OF THE HYDROGEN SEAL OIL UNIT REVEALED THAT THE AIR SIDE BACKUP PUMP WAS IN OPERATION AND THE AIR SIDE CUNO FILTER COULD NOT BE ROTATED. THE HYDROGEN PRESSURE WAS OBSERVED TO DECREASE. SUBSEQUENT EXAMINATION OF THE CUNO FILTER INDICATED THAT INTERNAL SUPPORTS HAD MOST LIKELY FAILED AS A RESULT OF INCORRECT REASSEMBLY. THIS RESULTED IN AN INABILITY TO CLEAN THE CUNO FILTER, WHICH HAD CLOGGED, CAUSING THE SEQUENCE OF EVENTS DESCRIBED. THE CAUSE OF THE HYDROGEN LEAK WAS A MALFUNCTION OF AN OIL FILTER IN THE SEAL OIL SUPPLY LINE TO THE AIR SIDE HYDROGEN SEALS. REPAIRS WERE MADE TO THE FILTER WHICH CORRECTED THE HYDROGEN LEAKAGE.

[133] INDIAN POINT 2 DOCKET 50-247 LER 85-002
 MAIN FEEDWATER PUMP TRIPS ON LOSS OF CONTROL OIL.
 EVENT DATE: 020485 REPORT DATE: 030685 NSSS: WE TYPE: PWR

(NSIC 193445) WHILE OPERATING AT 100% POWER, THE #22 MAIN BOILER FEED PUMP AUTOMATICALLY TRIPPED UPON LOSS OF CONTROL OIL. THE OPERATORS RAPIDLY REDUCED STEAM FLOW TO THE TURBINE. THE STEAM DUMP VALVES WERE PLACED IN THE 'PRESSURE' MODE TO REDUCE STEAM DEMAND ASSOCIATED WITH STEAM DUMP OPERATION. TURBINE GENERATOR LOAD WAS REDUCED FROM 895 MEGAWATTS TO 550 MEGAWATTS IN 40 SECONDS. INCREASING RCS TEMPERATURE CAUSED A RISE IN PRESSURIZER LEVEL WITH A RESULTANT INCREASE IN PRESSURE. THE PRESSURIZER POWER OPERATED RELIEF VALVES (PORVS) CYCLED; HOWEVER, CLOSED BLOCK VALVES PREVENTED DISCHARGE OF REACTOR COOLANT TO THE PRESSURIZER RELIEF TANK. THUS THE REACTOR COOLANT PRESSURE ROSE UNTIL A REACTOR TRIP OCCURRED (DUE TO HIGH PRESSURIZER PRESSURE). THE CAUSE OF THE MALFUNCTION OF THE MAIN BOILER FEED PUMP CONTROL OIL SYSTEM WAS CLOGGED ORIFICES. FOULING OF THE OIL IS ATTRIBUTED TO AN INOPERABLE WESTPHALIA OIL/WATER SEPARATOR. UP TO THE TIME OF THE EVENT, THE WATER LEVEL ROSE TO 1% RESULTING IN INCREASED CORROSION AND PARTICLE AGGLOMERATION. THIS IN TURN, CLOGGED THE ORIFICES.

[134] INDIAN POINT 2 DOCKET 50-247 LER 85-003
 BOTH POST LOCA HYDROGEN RECOMBINERS INOPERABLE.
 EVENT DATE: 021385 REPORT DATE: 031185 NSSS: WE TYPE: PWR
 VENDOR: FISCHER & PORTER CO.
 UNION PACIFIC
 WESTINGHOUSE ELECTRIC CORP.

(NSIC 193544) ON 2-13-85 DURING A ROUTINE SURVEILLANCE TEST OF THE HYDROGEN

RECOMBINERS, BOTH UNITS WERE DECLARED INOPERABLE. RECOMBINER #21 EXPERIENCED A MALFUNCTION OF ITS OXYGEN SUPPLY FLOW REGULATING VALVE, WHILE RECOMBINER #22 EXPERIENCED A MALFUNCTION OF A PRESSURE SWITCH. RECOMBINER #21 WAS RESTORED TO SERVICE WITHIN THE REQUIRED 7 HR TIME LIMIT AND THE RECOMBINER #22 WILL BE RESTORED TO SERVICE WITHIN THE 30 DAY TIME PERIOD SPECIFIED IN THE TECH SPECS. THE POST-ACCIDENT CONTAINMENT VENTING SYSTEM, WHICH PROVIDES A DIVERSE CAPABILITY TO THE RECOMBINERS FOR HYDROGEN REMOVAL, WAS OPERABLE. FURTHER, ANALYSES OF THE DESIGN BASIS LOCA INDICATE THAT HYDROGEN CONCENTRATION WOULD NOT REACH THE RECOMBINER ACTIVATION LEVEL UNTIL 13 DAYS AFTER THE ACCIDENT, THUS PROVIDING SIGNIFICANT TIME FOR RESTORING A RECOMBINER IF NEEDED.

[135] INDIAN POINT 3 DOCKET 50-286 LER 85-001
INADVERTENT SI ACTUATION.
EVENT DATE: 012185 REPORT DATE: 022085 NSSS: WE TYPE: PWR
VENDOR: AUTOMATIC SWITCH COMPANY (ASCO)

(NSIC 193352) ON 1-21-85, A UNIT TRIP AND SAFETY INJECTION ACTUATION OCCURRED AS A RESULT OF LOW VOLTAGE ON 2 OUT OF 4 INSTRUMENT BUSES. THE REACTOR WAS AT 100% POWER AT THE TIME OF THE ACTUATION. INVESTIGATION DETERMINED THAT A GROUND HAD DEVELOPED ON BUS 32, DECREASING ITS VOLTAGE. IN AN ATTEMPT TO CORRECT THIS CONDITION, THE CONTROL ROOM OPERATORS MISTAKENLY SWITCHED BUS 31 TO BACKUP POWER. THE MOMENTARY VOLTAGE DROP AS BUS 31 SWITCHED TO BACKUP POWER CONCURRENT WITH THE EXISTING LOW VOLTAGE ON BUS 32, CAUSED THE TRIP AND SI ACTUATION. SINCE THE REACTOR COOLANT SYSTEM WAS AT NORMAL PRESSURE, NO WATER WAS INJECTED.

[136] INDIAN POINT 3 DOCKET 50-286 LER 85-002
STEAM GENERATOR HIGH LEVEL TRIPS CAUSED BY FEEDWATER PERTUBATIONS.
EVENT DATE: 012385 REPORT DATE: 022185 NSSS: WE TYPE: PWR
VENDOR: BAILEY METER COMPANY

(NSIC 193451) ON 1-23-85, A TURBINE TRIP AND SUBSEQUENT REACTOR TRIP WERE INITIATED BY A HIGH LEVEL IN NO. 31 SG. REACTOR POWER WAS 15% AND BEING INCREASED AT THE TIME OF TRIP. THE HIGH LEVEL WAS THE RESULT OF A FEEDWATER SYSTEM PERTURBATION INITIATED BY THE STARTING OF A SECOND CONDENSATE PUMP. THE UNIT HAD BEEN RETURNED TO CRITICALITY AND WAS AT 29% POWER AND INCREASING WHEN A SECOND HIGH LEVEL TRIP IN NO. 31 SG OCCURRED. THIS TRIP ALSO OCCURRED AFTER A FEEDWATER SYSTEM PERTURBATION THAT BEGAN WHEN THE RECIRCULATION VALVE FOR NO. 31 MAIN BOILER FEED PUMP WAS CLOSED. DELAYED RESPONSE WAS NOTED IN THE OPERATION OF NO. 31 MAIN FEEDWATER REGULATING VALVE AFTER THE SECOND TRANSIENT, AND WAS ALSO DETERMINED TO BE A CONTRIBUTING FACTOR IN THE FIRST TRIP. THE VALVE WAS REPAIRED AND CALIBRATED, AND THE UNIT WAS SUBSEQUENTLY SYNCHRONIZED TO THE BUS ON 1-23-85 AND RETURNED TO FULL POWER.

[137] KEWAUNEE DOCKET 50-305 LER 85-001
INADVERTENT ACTUATION OF A CONTAINMENT SPRAY TRAIN.
EVENT DATE: 012285 REPORT DATE: 022185 NSSS: WE TYPE: PWR
VENDOR: FOXBORO CO., THE

(NSIC 193406) AT 1437 ON 1-22-85, DURING FULL POWER OPERATION, THERE WAS AN INADVERTENT ACTUATION OF THE 1B INTERNAL CONTAINMENT SPRAY SYSTEM. THE 1B PUMP RAN FOR 1 MIN AND 40 SECONDS DISCHARGING AN ESTIMATED 2500 GALS OF BORATED WATER INTO THE CONTAINMENT BLDG BEFORE BEING SECURED. THE PUMP START OCCURRED DURING THE PERFORMANCE OF SP55-155, 'ENGINEERED SAFEGUARDS LOGIC TEST'. WHEN THE PUMP START OCCURRED, THE OPERATOR VERIFIED THAT IT WAS INADVERTENT, SECURED THE SYSTEM AND RESET CONTAINMENT SPRAY. THE OPERATORS RECEIVED VARIOUS BATTERY GROUND ALARMS AS A RESULT OF INSTRUMENT MALFUNCTIONS IN CONTAINMENT. AT 1525 IT WAS DISCOVERED THAT THE RWST LEVEL WAS BELOW TECH SPEC LIMITS, REFILLING WAS STARTED AND PREPARATIONS WERE MADE TO BEGIN A PLANT POWER REDUCTION. THE TWST LEVEL WAS

ABOVE TECH SPEC SETPOINT AT 1555 HENCE NO REDUCTION IN POWER WAS INITIATED. IMMEDIATE ACTIONS WERE TAKEN TO ASSESS THE SITUATION AND IDENTIFY THE CAUSE. LONG TERM ACTIONS PLANNED ARE TO CLEAN THE CONTAINMENT INTERIOR, AND PERFORM AN EVALUATION TO IDENTIFY POTENTIAL HARDWARE MODIFICATIONS WHICH WOULD PREVENT REOCCURRENCE.

[138] KEWAUNEE DOCKET 50-305 LER 85-002
LACK OF SEISMIC ANALYSIS FOR CONTAINMENT PENETRATION ATTACHMENT.
EVENT DATE: 012585 REPORT DATE: 022485 NSSS: WE TYPE: PWR

(NSIC 193455) ON 1-25-85, WITH THE PLANT AT FULL POWER OPERATION, WISCONSIN PUBLIC SERVICE CORP WAS NOTIFIED BY THEIR ARCHITECT ENGINEER THAT A SEISMIC ANALYSIS FOR THE NON-SAFETY-RELATED PIPING SECTION OF THE CONTAINMENT INTEGRATED LEAK RATE TEST PENETRATION COULD NOT BE LOCATED. THIS WAS IDENTIFIED DURING THE EVALUATION OF A PROPOSED MODIFICATION. TO CORRECT THIS DEFICIENCY, A DESIGN CHANGE WILL BE COMPLETED DURING THE IN-PROGRESS 1985 REFUELING/MAINTENANCE SHUTDOWN WITH A PROPER SEISMIC ANALYSIS OF THE AS-MODIFIED DESIGN. WPSC CONSIDERS THIS ITEM OF SUFFICIENT SIGNIFICANCE TO MERIT REPORTING TO THE COMMISSION WITHIN THE 'OTHER' CATEGORY OF 10 CFR 50.73.

[139] KEWAUNEE DOCKET 50-305 LER 85-003
REACTOR TRIPS ON STEAM GENERATOR LO-LO LEVEL.
EVENT DATE: 020885 REPORT DATE: 030885 NSSS: WE TYPE: PWR

(NSIC 193454) ON 2-8-85, A PLANT OPERATING MODE CHANGE WAS IN PROGRESS FROM 15% REACTOR POWER TO HOT SHUTDOWN. FOLLOWING THE TRANSFER OF SG LEVEL CONTROL FROM MAIN FEEDWATER TO AUX FEEDWATER AND THE MANUAL OPENING OF THE MAIN GENERATOR OUTPUT BREAKER, A LOW SEAL FLOW ALARM WAS RECEIVED ON THE MAIN FEEDWATER PUMP. THE CONTROL OPERATOR STOPPED THE MAIN FEEDWATER PUMP THINKING THAT A MORE RAPID LOAD REDUCTION AND FULL AUX FEEDWATER FLOW WOULD MAINTAIN SG LEVELS. THE REDUCED FLOW TO THE SG'S DECREASED THE SG VOLUME TO THE LO LEVEL ALARM SETPOINTS. AS THE PLANT SHUTDOWN CONTINUED, THE MAIN GENERATOR OUTPUT BREAKER WAS OPENED; THIS LOSS OF LOAD CAUSED INCREASED SECONDARY SYSTEM PRESSURE AND DECREASED THE INDICATED SG LEVEL TO THE LO-LO LEVEL REACTOR TRIP SETTING. THE INDICATED WATER LEVEL IN THE 1B SG WENT BELOW THE LO-LO LEVEL SETTING (17% NARROW RANGE LEVEL). THIS INITIATED A REACTOR TRIP. PLANT OPERATING PROCEDURES WERE FOLLOWED TO PLACE THE PLANT IN THE HOT SHUTDOWN OPERATING MODE. NO EQUIPMENT OR SYSTEM FAILURES CONTRIBUTED TO THIS EVENT. AS CORRECTIVE ACTION THE TEXT DESCRIPTION OF THIS EVENT WILL BE ROUTED TO PLANT REACTOR OPERATORS AND THE TRAINING DEPARTMENT. REFERENCE LER 305/84-010.

[140] KEWAUNEE DOCKET 50-305 LER 85-004
REACTOR COOLANT PUMP INADVERTENTLY STARTS.
EVENT DATE: 021085 REPORT DATE: 031385 NSSS: WE TYPE: PWR
VENDOR: MCGRAW EDISON CO., POWER SYSTEMS DIV

(NSIC 193610) AT 1230 CST ON 2-10-85 A CONTROL ROOM OPERATOR NOTICED THE 1B RCP RUNNING. SUBSEQUENT INVESTIGATIONS REVEALED THAT THE PUMP HAD INADVERTENTLY STARTED DUE TO A GROUNDED CONDITION IN THE ACTUATION CIRCUITRY ASSOCIATED WITH THE 4160V SWITCHGEAR. THE GROUND WAS CAUSED BY WATER ACCUMULATION IN A PRESSURE SWITCH AS A RESULT OF AN INADVERTENT CONTAINMENT SPRAY. THE GROUND PROVIDED ENOUGH CURRENT TO GATE THE SOLID STATE STARTING CIRCUITRY. AN EVALUATION OF THE EVENT SHOWED THAT DUE TO THE LOCATION OF THE SAFETY RELATED SWITCHGEAR AT THE PLANT AND THE ROUTING OF ASSOCIATED CABLES NO CREDIBLE SINGLE EVENT WOULD RESULT IN ACTUATION OF REDUNDANT TRAINS OF SWITCHGEAR IN A MANNER WHICH COULD VIOLATE THE ASSUMPTION OF THE SAFETY ANALYSIS. CONSEQUENTLY, THE EVENT POSED NO NUCLEAR SAFETY CONCERNS. THIS EVENT IS BEING REPORTED UNDER OTHER AS AN ITEM OF GENERAL INTEREST TO THE INDUSTRY.

[141] KEWAUNEE DOCKET 50-305 LER 85-005
 INADVERTENT ACTUATION OF AUXILIARY BUILDING SPECIAL VENTILATION FAN.
 EVENT DATE: 021185 REPORT DATE: 031385 NSSS: WE TYPE: PWR
 VENDOR: JOHNSON DIVISION, U.O.P.

(NSIC 193673) ON 2-11-85, WITH THE PLANT IN A REFUELING SHUTDOWN, A CONTROL ROOM OPERATOR DISCOVERED THAT THE 1A EXHAUST FAN OF THE AUX BLDG SPECIAL VENTILATION SYSTEM WAS RUNNING. INVESTIGATION REVEALED THAT THE COIL ON THE SOLENOID VALVE CONTROLLING AIR TO THE ZONE SV EXHAUST FILTER 1A INLET DAMPER HAD BURNT OUT, FAILING THE 3-WAY SOLENOID VALVE IN THE VENT POSITION. THIS OPENED THE INLET DAMPER WHICH IN TURN OPENED THE EXHAUST DAMPER AND STARTED THE FAN ON TRAIN A OF THE ABSV SYSTEM. THE SYSTEM FAILED IN THE SAFE POSITION. RELATED EVENTS - 305/84-013 AND 305/84-020.

[142] KEWAUNEE DOCKET 50-305 LER 85-006
 INCORRECT LOCATION OF STEAM GENERATOR TUBE PLUG.
 EVENT DATE: 022085 REPORT DATE: 031585 NSSS: WE TYPE: PWR

(NSIC 193611) ON 2-20-85, WHILE SHUTDOWN FOR REFUELING AND DURING THE SG TUBE EDDY CURRENT EXAMINATION, A TUBE IN THE 1A SG REQUIRING PLUGGING IN 1984 WAS FOUND PLUGGED IN THE HOT LEG ONLY. AN ADJACENT TUBE, NOT REQUIRING PLUGGING, WAS FOUND PLUGGED IN THE COLD LEG ONLY. THE TUBE THAT REQUIRED PLUGGING HAD A 55% THRU-WALL INDICATION IN 1984 AND A 91% THRU-WALL INDICATION IN 1985. THE CAUSE OF THIS EVENT REMAINS UNKNOWN; HOWEVER, IT IS SUSPECTED THAT THE COLD LEG TUBE SHEET WAS MISMARKED DURING THE 1984 SG TUBE PLUGGING EFFORT. TO PREVENT RECURRENCE OF THIS EVENT THE TUBESHEET TEMPLATES, RATHER THAN THE TUBESHEETS, ARE MARKED TO IDENTIFY THE TUBES TO BE PLUGGED. THESE TEMPLATES ARE INDEPENDENTLY VERIFIED PRIOR TO TUBE PLUGGING. THE INSTALLED PLUGS ARE VERIFIED AGAINST THE TUBE PLUGGING LIST AND A VIDEO TAPE IS MADE OF THE TUBE SHEETS FOR FINAL VERIFICATION. 26 TUBES IN THE 1A SG AND 22 TUBES IN THE 1B SG WERE REMOVED FROM SERVICE AS A RESULT OF TUBE PLUGGING IN 1985.

[143] LA SALLE 1 DOCKET 50-373 LER 84-073
 SPURIOUS TURBINE STOP VALVE OPEN SIGNAL GIVES PCIS GROUP I ISOLATION.
 EVENT DATE: 110684 REPORT DATE: 120484 NSSS: GE TYPE: BWR
 VENDOR: NAMCO CONTROLS

(NSIC 193505) ON 11-6-84, AT 1130 HRS, WHILE RESETTING THE UNIT 1 TURBINE LOGIC, THE NUMBER 1, 3 AND 4 TURBINE STOP VALVES OPENED. THIS RESULTED IN A REMOVAL OF THE BYPASS OF THE LOW CONDENSER VACUUM, GROUP I ISOLATION SIGNAL, THEREBY INITIATING A GROUP 1 CONTAINMENT ISOLATION. THE CAUSE FOR THE VALVE MOVEMENTS WAS DUE TO A POSITION SWITCH ON THE NUMBER 2 STOP VALVE. THE 'OPEN' POSITION SWITCH ON THE NUMBER 2 STOP VALVE WAS SIMULATING AN OPEN CONDITION. SINCE THE NUMBER 2 STOP VALVE IS THE MASTER FOR THE 1, 3 AND 4 STOP VALVES, THE OPEN INDICATION FROM SVOS-2 OPENED THE OTHER STOP VALVES. THE LIMIT SWITCH WAS ADJUSTED ON VALVE 1B21-MSV2 AND NOW OPERATES AS DESIGNED. NO PREVIOUS OCCURRENCES OF THIS EVENT ARE KNOWN.

[144] LA SALLE 1 DOCKET 50-373 LER 85-004
 UNSECURED HIGH RADIATION AREA.
 EVENT DATE: 011285 REPORT DATE: 020185 NSSS: GE TYPE: BWR

(NSIC 193371) AT 0800 HRS ON 1-12-85, HIGH RADIATION AREA DOOR 396 TO THE UNIT 1 REACTOR BLDG EQUIPMENT DRAIN PUMP ROOM WAS FOUND TO BE CLOSED BUT NOT SECURED. THE DOOR HAD BEEN ON ALARM WITHOUT RESET WHEN IT WAS INVESTIGATED AND PROPERLY LATCHED AND SECURED. THE CAUSE OF THIS OCCURRENCE WAS A FAULTY DOOR LATCH WHICH WAS SUBSEQUENTLY REPAIRED. A PREVIOUS OCCURRENCE INVOLVING A HIGH RADIATION DOOR

NOT LATCHING WHEN CLOSED DUE TO MECHANISM PROBLEMS IS DOCUMENTED IN LER 373/84-036.

[145] LA SALLE 1 DOCKET 50-373 LER 85-006
 CALIBRATION OF LEVEL SWITCH EXCEEDS TIME LIMIT.
 EVENT DATE: 011285 REPORT DATE: 021185 NSSS: GE TYPE: BWR
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 193427) AT 1039 ON 1-12-85, THE CALIBRATION OF LEVEL SWITCH, 1B21-N037B, EXCEEDED THE TIME ALLOWED FOR CALIBRATION, PER TECH SPEC TABLES 3.3.3-1 AND 3.3.5-1. THE CALIBRATION TOOK 26 MINS LONGER THAN THE ALLOWED 2 HRS. THIS WAS DUE TO THE SWITCH BEING FOUND OUTSIDE ITS DESIRED SETPOINTS; THE RECALIBRATION TOOK REPEATED ADJUSTMENTS. THIS TYPE OF SWITCH, ITT BARTON MODEL 288A, HAS REPEATEDLY HAD SETPOINT 'DRIFT' PROBLEMS, THE 1B21-N037A/B/C/D LEVEL SWITCHES ARE BEING REPLACED WITH NEW STYLE SWITCHES PER MODIFICATION M-1-1-84-091.

[146] LA SALLE 1 DOCKET 50-373 LER 85-007
 CONTROL ROOM HVAC CHLORINE DETECTOR SPURIOUS TRIP.
 EVENT DATE: 011685 REPORT DATE: 021385 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
 VENDOR: WALLACE & TIERNAN, INC.

(NSIC 193428) ON 1-16-85 AT 1545, THE 'A' CONTROL ROOM VENTILATION/AUX ELECTRIC EQUIPMENT ROOM VENTILATION SYSTEM CHLORINE DETECTOR (0AE-VC090A) ALARMED. THE 'A' VC/VE CHARCOAL FILTER TRAINS, 0VC01FA/0VE01FA (ODOR EATERS), WERE AUTOMATICALLY PLACED IN SERVICE AS A RESULT OF THE CHLORINE DETECTOR ALARM. AFTER DETERMINATION THAT THE ALARM WAS SPURIOUS, THE CHLORINE DETECTOR WAS RESET. A CAUSE FOR THE SPURIOUS CHLORINE DETECTOR ALARM CANNOT BE DETERMINED. AT THE TIME OF THE OCCURRENCE, BOTH UNIT 1 AND 2 WERE IN OPERATIONAL CONDITION 1 (RUN). THE ESP ACTUATION WHICH OCCURRED AS A RESULT OF THE CHLORINE DETECTOR ALARM PLACED THE HVAC SYSTEMS IN A CONSERVATIVE PLANT LINE-UP. ELECTROLYTE DRIP WAS VERIFIED TO BE CORRECT FOR THE DETECTOR WITH THE DETECTOR BEING RETURNED TO FULL OPERATION FOLLOWING ALARM RESET. THE CHLORINE DETECTOR IS MANUFACTURED BY WALLACE AND TIERNAN, A DIVISION OF PENNWALT CORP.

[147] LA SALLE 1 DOCKET 50-373 LER 85-010
 FREEZING AMBIENT TEMPERATURES CAUSES SPURIOUS AMMONIA DETECTOR ACTUATION.
 EVENT DATE: 012185 REPORT DATE: 021985 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 2 (BWR)
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193429) ON 1-21-85, TWO SEPARATE AMMONIA DETECTOR ALARMS OCCURRED ON THE 'A' AMMONIA DETECTOR (OXY-VC165A) FOR THE 'B' CONTROL ROOM VENTILATION/AUX ELECTRIC EQUIPMENT ROOM VENTILATION SYSTEM. NO AMMONIA CONCENTRATIONS EXISTED AT THE TIME OF THESE OCCURRENCES. EACH ALARM RESULTED IN AN ESP ACTUATION CONSISTING OF THE 'B' VENTILATION TRAINS BECOMING ALIGNED FOR CHARCOAL FILTER TRAIN (ODOR EATER) 0VC01FB/0VE01FB OPERATION AND RECIRCULATION VENTILATION LINE-UP. THE CAUSE FOR THE ALARM WAS DUE TO FREEZING AMBIENT TEMPERATURES AROUND THE DETECTOR RESULTING FROM SNOW BUILD-UP PROBLEMS ON THE TURBINE BLDG VENTILATION AND REACTOR BLDG VENTILATION SYSTEMS. EXCESSIVE SNOW BUILD-UP ON THE TURBINE BLDG VENTILATION INTAKE FILTERS NECESSITATED THE OPENING OF FILTER TRAIN DOORS. THIS IN TURN ALLOWED THE IMMEDIATE AREA OF THE AMMONIA DETECTOR TO REACH BELOW FREEZING TEMPERATURES RESULTING IN SPURIOUS ALARMS OF THE DETECTOR. A MODIFICATION, M-1-0-84-33, IS IN PROGRESS TO RE-DESIGN THE SUPPLY AIR INTAKE OF THESE VENTILATION SYSTEMS TO ELIMINATE ABNORMAL CONFIGURATIONS. THIS MODIFICATION WILL ALSO CORRECT THE FREEZING PROBLEM AFFECTING DETECTOR OPERATION. THE AMMONIA DETECTOR IS MANUFACTURED BY MDA SCIENTIFIC, INC.

[148] LA SALLE 1 DOCKET 50-373 LER 85-008
 REACTOR BUILDING VENTILATION EXHAUST ISOLATION DAMPERS FAIL.
 EVENT DATE: 020285 REPORT DATE: 022685 NSSS: GE TYPE: BWR
 VENDOR: AUTOMATIC SWITCH COMPANY (ASCO)

(NSIC 193578) ON 2-2-85 WITH UNIT 1 AT 96% POWER IN MODE 1, THE UNIT 1 REACTOR BLDG VENTILATION EXHAUST SECONDARY CONTAINMENT ISOLATION DAMPERS WERE FOUND TO BE INOPERABLE. A GSEP WAS INITIATED UNTIL THE DAMPERS WERE REPAIRED. THE SOLENOID VALVES THAT CONTROL THESE DAMPERS WERE FOUND TO BE MALFUNCTIONING AND WERE REBUILT. AFTER THE EVENT WAS RESOLVED IN UNIT 1 AT 1620 HRS, THE UNIT 2 VR ISOLATION DAMPERS WERE TESTED AND FOUND TO BE OPERABLE. THE SOLENOID VALVES USED IN THESE DAMPERS ARE TO BE REPLACED WITH AN UPGRADED TYPE. THE COMPONENTS IN THE FAILED SOLENOIDS ARE TO BE TESTED TO DETERMINE THE MODE OF FAILURE.

[149] LA SALLE 1 DOCKET 50-373 LER 85-011
 MSIV ISOLATES ON HIGH STEAM TUNNEL TEMPERATURE.
 EVENT DATE: 020285 REPORT DATE: 022285 NSSS: GE TYPE: BWR

(NSIC 193576) ON 2-2-85 AT 1200, A GROUP 1 ISOLATION OCCURRED ON UNIT 1 DUE TO HIGH MAIN STEAM TUNNEL AMBIENT AIR TEMPERATURE. THIS ISOLATION RESULTED IN A REACTOR SCRAM. AT THE TIME OF THIS EVENT, UNIT 1 WAS AT 96% POWER. REACTOR BLDG VENTILATION HAD BEEN SHUT DOWN FOR THE REPAIR OF THE SOLENOID VALVES ON ISOLATION DAMPERS, 1VR05YA AND 1VR05YB. DUE TO THE LACK OF VENTILATION FLOW, THE AMBIENT AIR TEMPERATURE IN THE MAIN STEAM TUNNEL INCREASED TO THE TRIP SETPOINT OF THE LEAK DETECTION SYSTEM RESULTING IN A GROUP 1 ISOLATION. FOLLOWING THE SCRAM, REACTOR PRESSURE WAS MAINTAINED BY THE 'U' SAFETY/RELIEF VALVE (SRV) ON THE LOW-LOW SETPOINT LOGIC AND REACTOR LEVEL WAS MAINTAINED BY REACTOR CORE ISOLATION COOLING AND INITIALLY BY THE MOTOR DRIVEN REACTOR FEEDWATER PUMP. DURING THE SRV ACTUATION, REACTOR WATER LEVEL WOULD SWELL 10-20 INCHES, THEN UPON SRV CLOSURE THE WATER LEVEL WOULD DROP 15-20 INCHES BELOW THE INITIAL WATER LEVEL, SOMETIMES REACHING THE LEVEL 3 SETPOINT CAUSING ANOTHER SCRAM. THIS RESULTED IN RECEIVING 6 ADDITIONAL SCRAM SIGNALS. ALL PLANT SYSTEMS RESPONDED AS DESIGNED FOR THIS TYPE EVENT. SAFE OPERATION OF THE PLANT WAS MAINTAINED AT ALL TIMES. UPON COMPLETION OF ISOLATION DAMPER 1VR05YA AND 1VR05YB REPAIR, THE REACTOR BLDG VENTILATION SYSTEM WAS RESTARTED TO COOL DOWN THE MAIN STEAM TUNNEL. WHEN THE GROUP 1 ISOLATION SIGNAL CLEARED, PRESSURE WAS EQUALIZED AND THE MSIV'S WERE OPENED.

[150] LA SALLE 1 DOCKET 50-373 LER 85-014
 VACUUM BREAKER CYCLED DURING DRYWELL NITROGEN INERTING.
 EVENT DATE: 020485 REPORT DATE: 030185 NSSS: GE TYPE: BWR
 VENDOR: GPE CONTROLS

(NSIC 193431) ON 2-4-85 AT 1939 HRS WITH UNIT 1 IN MODE 1 AT 35% POWER, A UNIT 1 VACUUM BREAKER VALVE OPENED AND RECLOSED TO EQUALIZE PRESSURE BETWEEN THE SUPPRESSION POOL AND THE DRYWELL. THE PERCENTAGE OF OXYGEN IN THE UNIT 1 DRYWELL AND SUPPRESSION POOL ATMOSPHERES HAD BECOME GREATER THAN 4%. NITROGEN INERTING OF THE PRIMARY CONTAINMENT WAS INITIATED TO CORRECT THE SITUATION. THE NITROGEN INERTING SYSTEM WAS THEN LINED UP TO THE DRYWELL AND SUPPRESSION POOL AREAS WITH THE EXCEPTION OF 2 MANUAL STOP VALVES, 1VQ057 AND 1VQ058. THE PROCEDURE INSTRUCTED THE OPERATOR TO 1) OPEN THE DRYWELL PURGE VALVES, WHICH ALLOWED THE PURGE FAN TO DRAW A SUCTION FROM THE DRYWELL AS WELL AS THE REACTOR BLDG RETURN AIR RISER, 2) THEN OPEN THE SUPPRESSION POOL PURGE VALVES, 1VQ031 AND 1VQ040 AND 3) OPEN THE REMAINING MANUAL STOP VALVES, 1VQ058 AND 1VQ057. WHEN THE DRYWELL PURGE VALVES WERE OPENED THE PURGE FAN LOWERED THE PRESSURE INSIDE THE DRYWELL WHILE THE PRESSURE INSIDE THE SUPPRESSION POOL REMAINED THE SAME. THE PRESSURE DIFFERENCE OCCURRED WHILE ADDING NITROGEN TO REDUCE THE DRYWELL OXYGEN CONCENTRATION. TO ELIMINATE UNNECESSARY CYCLING OF THE VACUUM BREAKERS, THE PROCEDURE USED TO ADD NITROGEN WILL BE REVISED.

[151] LA SALLE 1 DOCKET 50-373 LER 85-012
 SPURIOUS REACTOR WATER CLEANUP DIFFERENTIAL FLOW ISOLATION.
 EVENT DATE: 020885 REPORT DATE: 022585 NSSS: GE TYPE: BWR

(NSIC 193430) ON 2-8-85 AT 1630 HRS, WITH THE UNIT IN THE HOT SHUTDOWN MODE, THE UNIT 1 RWCU ISOLATED ON HIGH DIFFERENTIAL FLOW. THERE WERE NO FLOWPATH CHANGES OR EQUIPMENT ROTATIONS IN PROGRESS AT THE TIME OF THE TRIP. THE REACTOR BEING IN HOT SHUTDOWN, WITH THE RWCU SYSTEM BLOWING DOWN TO THE MAIN CONDENSER, ACCOUNTED FOR THE ISOLATION. CALIBRATION DEVIATIONS AND POSSIBLE FLOW PERTURBATIONS COMBINED WITH RWCU INLET AND OUTLET WATER TEMPERATURE, PRESSURE, AND DENSITY DIFFERENCES BETWEEN ACTUAL HOT SHUTDOWN OPERATIONS AND INSTRUMENT CALIBRATIONS CREATED A LARGE DIFFERENTIAL FLOW BASED PRIMARILY ON VOLUMETRIC CHANGES. PREVIOUS EVENTS OF THIS TYPE HAVE OCCURRED ON UNIT 1 AND 2 AS DESCRIBED IN THE FOLLOWING LER'S: 373/84-030; 373/84-033; 373/84-040; 373/84-055; 373/84-082; 373/85-003; 374/84-029; 374/84-041; 374/84-044; 374/84-054; 374/84-057; 374/84-064; 374/84-073; 374/84-079; 374/84-089; 374/84-093.

[152] LA SALLE 1 DOCKET 50-373 LER 85-016
 UNSECURED DOOR TO HIGH RADIATION AREA.
 EVENT DATE: 020885 REPORT DATE: 030785 NSSS: GE TYPE: BWR

(NSIC 193432) AT 1510 ON 2-8-85 WITH UNIT 1 IN HOT SHUTDOWN, DOOR #426, ENTRANCE TO THE UNIT 1 REACTOR WATER CLEANUP B HEAT EXCHANGER ROOM, WAS FOUND TO BE UNSECURED AND UNATTENDED. THIS IS CONTRARY TO TECH SPEC 6.1.1. AN INDIVIDUAL LEAVING THE AREA FAILED TO PROPERLY SECURE THE DOOR. UPON DISCOVERY OF THE OPEN DOOR, A RADIATION CHEMISTRY TECHNICIAN CLOSED AND SECURED THE DOOR. THE DOOR WAS VERIFIED CLOSED AND SECURED AT 1515 ON 2-8-85. THE INDIVIDUAL RESPONSIBLE WAS COUNSELED AS TO THE RESPONSIBILITY OF INSURING THAT HIGH RADIATION DOORS REMAIN SECURED. SIMILAR EVENTS: 373/84-034; 373/85-004; 374/84-022; 374/84-038 AND 374/84-070.

[153] LA SALLE 1 DOCKET 50-373 LER 85-017
 UNIT SCRAMS ON LOW REACTOR VESSEL LEVEL.
 EVENT DATE: 020885 REPORT DATE: 030785 NSSS: GE TYPE: BWR
 VENDOR: ANDERSON, GREENWOOD & CO.
 BALKSDALE VALVE COMPANY
 KLOCKNER-MOELLER
 TECHNO CORP.
 TERRY STEAM TURBINE COMPANY

(NSIC 193574) ON 2-8-85, AT 1018 HRS, WITH UNIT 1 AT 75% POWER THE REACTOR SCRAMMED ON LOW REACTOR VESSEL LEVEL. A LOW FEEDWATER PUMP SUCTION PRESSURE SIGNAL TRIPPED THE A AND B TURBINE-DRIVEN REACTOR FEEDWATER PUMPS. AN UNSUCCESSFUL ATTEMPT WAS MADE TO RESTART THE A TDRFP. WHEN VESSEL LEVEL REACHED ABOUT 12.5 INCHES, THE REACTOR SCRAMMED AND THE RECIRCULATION PUMPS SHIFTED TO LOW SPEED. WHEN THE VESSEL LEVEL REACHED ABOUT -50 INCHES, THE HIGH PRESSURE CORE SPRAY SYSTEM INITIATED, AND THE RECIRCULATION PUMPS TRIPPED AS REQUIRED. THE REACTOR CORE ISOLATION COOLING SYSTEM ALSO INITIATED BUT TRIPPED DUE TO OVERSPEED. THE MAIN STEAM ISOLATION VALVES CLOSED AND OTHER ISOLATIONS OCCURRED. SAFETY VALVE E OPENED TO RELIEVE VESSEL PRESSURE AT 1125 PSIG. VESSEL LEVEL DROPPED TO APPROX -60 INCHES BEFORE IT WAS RESTORED TO NORMAL. THE PRIMARY CAUSE OF THE UNIT SCRAM WAS PLACING A JUMPER IN THE FEEDWATER PUMP NPSH TRIP CIRCUIT WHICH DID NOT SERVE ITS INTENDED FUNCTION. THE JUMPER WAS INSTALLED UTILIZING A REVISION OF THE PRINT WHICH DID NOT REFLECT THE PRESENT SYSTEM CONFIGURATION. THE CIRCUIT HAD BEEN MODIFIED, MOD #1-1-82-293, DURING THE SEPT 1984, OUTAGE AND THE DRAWING CHANGE REQUEST HAD NOT YET BEEN PROCESSED.

[154] LA SALLE 1 DOCKET 50-373 LER 85-013
 REACTOR WATER CLEANUP ISOLATES ON HIGH DIFFERENTIAL FLOW.
 EVENT DATE: 021285 REPORT DATE: 030885 NSSS: GE TYPE: BWR

(NSIC 193559) ON 2-12-85 AT 0930 HRS, THE UNIT 1 RWCU ISOLATED ON HIGH DIFFERENTIAL FLOW WHILE FINISHING THE PRECOATING OF THE 'C' FILTER DEMINERALIZER AND PLACING IT ON HOLD. AT THE TIME OF THE OCCURRENCE, THE UNIT WAS IN OPERATING MODE 1 WITH REACTOR POWER AT APPROX 89%. BOTH THE 'A' AND 'B' FILTER DEMINERALIZERS WERE ON LINE. THE ISOLATION WAS A RESULT OF THE FOLLOWING CONDITIONS PRESENT AT THE TIME OF THE EVENT: AN INTERNAL SYSTEM LEAKAGE OBTAINED WHEN NONE OF THE 3 FILTER DEMINERALIZERS ARE ISOLATED AT THEIR INLET, FLOW PERTURBATIONS INCURRED WHEN PLACING AND/OR REMOVING A FILTER DEMINERALIZER ON/OFF LINE, AND A NORMAL OPERATING DIFFERENTIAL FLOW INDICATION BASED ON CALIBRATION DEVIATIONS AND TEMPERATURE DIFFERENCES BETWEEN THE INLET AND OUTLET FLOW SENSING LOOPS. FOLLOWING ISOLATION, THE RWCU SYSTEM WAS INSPECTED FOR EXTERNAL LEAKAGE WITH NONE BEING FOUND, UPON WHICH THE ISOLATION WAS RESET AND THE SYSTEM SATISFACTORILY RESTARTED. NO FURTHER SYSTEM ABNORMALITIES WERE NOTED. THESE LER'S ARE ASSOCIATED WITH RWCU DIFFERENTIAL FLOW TRIPS DURING EQUIPMENT ROTATIONS: 373/84-023, 373/84-032, 373/84-043, 373/84-045, 373/84-046, 373/84-050, 374/84-013, 374/84-023, 374/84-036, 374/84-037, 374/84-066.

[155] LA SALLE 1 DOCKET 50-373 LER 85-019
 DOOR TO HIGH RADIATION AREA LEFT UNSECURED.
 EVENT DATE: 021285 REPORT DATE: 030885 NSSS: GE TYPE: BWR

(NSIC 193561) AN EQUIPMENT ATTENDANT WAS AUTHORIZED TO PERFORM WORK IN THE RADWASTE PUMP AISLE, A HIGH RADIATION AREA ON 663' ELEVATION, TURBINE BLDG, AND GIVEN INSTRUCTIONS NOT TO USE DOOR 606 AS AN EXIT BECAUSE THERE WAS NO CHANGE AREA SET UP AT THAT END OF THE AISLE. SINCE THE REQUIRED WORK NECESSITATED THE USE OF THE RADIO SYSTEM AND COMMUNICATION FROM THE PUMP AISLE IS DIFFICULT, HE OPENED DOOR 606 TO STICK HIS RADIO ANTENNA OUT OF THE DOOR TO REACH THE GENERAL ACCESS REPEATER. WHEN HE OPENED THE DOOR, A RAD ROPE WITH A SIGN MOUNTED ON IT WAS KNOCKED DOWN WITH THE SIGN HOLDING THE DOOR AJAR. THE DOOR ALARMED AND IMMEDIATELY AFTER BEING NOTIFIED, AN RCT AND HIS FOREMAN FOUND THE DOOR AJAR, REMOVED THE SIGN AND REESTABLISHED THE REQUIRED HIGH RADIATION AREA CONTROL. IN ADDITION, A TAILGATE SESSION WAS HELD WITH THE RADIATION CHEMISTRY TECHNICIANS AND THEIR FOREMEN TO EMPHASIZE THE NEED TO CAREFULLY CONSIDER WHERE BOUNDARIES ARE PLACED AND HOW SIGNS ARE TO BE ATTACHED. THESE LER'S CONCERNING UNSECURED HIGH RADIATION DOORS HAVE BEEN REPORTED: 373/84-036, 84-034, 85-004, 85-016, 374/84-022, 84-038, AND 84-070.

[156] LA SALLE 1 DOCKET 50-373 LER 85-020
 DOOR TO HIGH RADIATION AREA LEFT UNSECURED.
 EVENT DATE: 021485 REPORT DATE: 030885 NSSS: GE TYPE: BWR

(NSIC 193560) WHILE PREPARING FOR WORK ON THE RADWASTE WASTE COLLECTOR FILTER CLEANING JOB, A RADIATION CHEMISTRY TECHNICIAN FOUND THE GATE WHICH SECURES THE HIGH RADIATION AREA UNLOCKED AND UNATTENDED AT 1100 ON 2-14-85. THIS IS CONTRARY TO TECH SPEC 6.1.1. THE RCT CLOSED AND SECURED THE GATE PRIOR TO EXITING THE AREA. A CONTRACTOR INDIVIDUAL WAS AUTHORIZED TO ENTER THE HIGH RADIATION AREA AT 0800 ON 2-14-85. THE INDIVIDUAL WAS AUTHORIZED TO ENTER THE HIGH RADIATION AREA AT 0800 ON 2-14-85. THE INDIVIDUAL DID NOT SECURE THE AREA WHEN EXITING. NO UNAUTHORIZED RADIATION EXPOSURE GREATER THAN 50 MILLIREM OCCURRED DURING THE PERIOD IN QUESTION. THE INDIVIDUAL AND HIS CO-WORKERS OF THE SPECIFIC CONTRACTOR WERE COUNSELED CONCERNING THEIR RESPONSIBILITIES FOR ENSURING THAT HIGH RADIATION AREAS REMAIN SECURED WHEN UNATTENDED. THERE HAVE BEEN 6 OCCURRENCES OF A SIMILAR NATURE AND THEY WERE REPORTED IN LERS: 373/84-034, 374/84-022, 374/84-038, 374/84-070, 373/85-004, 373/85-016.

[157] LA SALLE 1 DOCKET 50-373 LER 85-018
 MISSED OFF GAS HYDROGEN SAMPLE FREQUENCY.
 EVENT DATE: 021685 REPORT DATE: 030785 NSSS: GE TYPE: BWR

(NSIC 193554) AT 0200 ON 2-16-85 WITH THE UNIT AT 100% POWER, A 4 HR HYDROGEN GRAB SAMPLE WAS OBTAINED FOR THE UNIT 1 OFF GAS HYDROGEN RECOMBINER EFFLUENT PER TECH SPEC 3.3.7.11.1, ACTION 111 BECAUSE BOTH HYDROGEN ANALYZERS WERE INOPERABLE. HOWEVER, THIS SAMPLE WAS OBTAINED AT A FREQUENCY OF GREATER THAN 3.25 TIMES THE ALLOWABLE 4 HR SAMPLE FREQUENCY SINCE THE 1240 SAMPLE ON 2-15-85. THE THERMAL POWER OF UNIT 1 INCREASED BETWEEN 1650 ON 2-15-85 AND 0200 ON 2-16-85 AND THEREFORE AN 8 HR SAMPLING FREQUENCY WAS NOT AUTHORIZED. THE RESULTS OF THE SAMPLE PULLED AT 2100 ON 2-15-85 INDICATED 0% HYDROGEN. THE RESULTS OF THE SAMPLE PULLED AT 0200 ON 2-16-85 ALSO INDICATED 0% HYDROGEN. SAMPLES WERE PROCURED AT THE CORRECT SAMPLE FREQUENCY SUBSEQUENT TO THE OCCURRENCE. SIMILAR EVENTS: 373/84-027, 374/84-019 AND 374/84-053.

[158] LA SALLE 1 DOCKET 50-373 LER 85-015
 DRYWELL VACUUM BREAKER CYCLED.
 EVENT DATE: 021785 REPORT DATE: 030685 NSSS: GE TYPE: BWR
 VENDGR: GPE CONTROLS

(NSIC 193684) ON 2-17-85 AT 0219 HRS WITH UNIT 1 OPERATING AT 99% POWER, THE 'C' VACUUM BREAKER, 1VP001C, OPENED AND THEN CLOSED. THIS EVENT OCCURRED SHORTLY AFTER INITIATION OF THE B RHR SYSTEM IN THE SUPPRESSION POOL SPRAY MODE FOR SURVEILLANCE TESTING. INDICATIONS FROM THE AVAILABLE INSTRUMENTS SHOWED A GRADUAL DECREASE IN THE DRYWELL PRESSURE SEVERAL MINS PRIOR TO THE EVENT. THIS MIGHT BE ATTRIBUTED TO THE INSTRUMENT NITROGEN SYSTEM WHICH MAY BE DRAWING OFF MORE NITROGEN FROM THE DRYWELL THAN IT IS RETURNING. AN INCREASE IN THE SUPPRESSION POOL PRESSURE WAS ALSO OBSERVED. THE AVAILABLE DATA IS NOT SUFFICIENTLY ACCURATE ENOUGH TO VALIDATE THE ACTUAL DIFFERENTIAL PRESSURE WHICH EXISTED TO CAUSE THE VACUUM BREAKER TO CYCLE OPEN AND THEN CLOSE. ACTUATION OF THE VALVE TO RELIEVE PRESSURE DIFFERENTIALS BETWEEN THE SUPPRESSION POOL AND THE DRYWELL IS THE REQUIRED ACTION.

[159] LA SALLE 1 DOCKET 50-373 LER 85-021
 UNSECURED HIGH RADIATION AREA DOOR.
 EVENT DATE: 022085 REPORT DATE: 030885 NSSS: GE TYPE: BWR

(NSIC 193624) AT 1155 ON 2-20-85 WHILE PERFORMING A RADIOLOGICAL SURVEY OF THE SOLID RADWASTE PUMP ROOM IN THE 663 ELEVATION OF THE TURBINE BLDG, A RADIATION CHEMISTRY TECHNICIAN FOUND THE GATE WHICH SECURES THAT HIGH RADIATION AREA UNSECURED AND UNATTENDED. THIS IS CONTRARY TO TECH SPEC 6.1.1. THE RCT CLOSED THE GATE AND SECURED THE AREA WITH THE CHAIN AND LOCK. CONTRACTOR INDIVIDUALS THAT WERE AUTHORIZED AT 0845 ON 2-20-85 TO WORK IN THE AREA LEFT THE HIGH RADIATION AREA GATE PROPPED OPEN AND UNATTENDED WHEN EXITING THE AREA FOR THE LUNCH BREAK. NO UNAUTHORIZED RADIATION EXPOSURE OCCURRED DURING THE PERIOD IN QUESTION. THE INDIVIDUALS INVOLVED WERE COUNSELED AS TO THEIR RESPONSIBILITIES FOR ENSURING THAT HIGH RADIATION AREAS REMAIN SECURED AT ALL TIMES. IN ADDITION, THE CO-WORKERS OF THE SPECIFIC CONTRACTOR WERE MADE AWARE OF THEIR RESPONSIBILITIES FOR ENSURING THAT HIGH RADIATION AREAS REMAIN SECURED AT ALL TIMES DURING A 2-22-85 SAFETY MEETING. THERE HAVE BEEN 7 OCCURRENCES OF A SIMILAR NATURE AND THEY WERE REPORTED IN LERS AS FOLLOWS: 373/84-034, 374/84-033, 374/84-038, 374/84-070, 373/85-004, 373/85-016, AND 373/85-020.

[160] LA SALLE 1 DOCKET 50-373 LER 85-022
 RCIC STEAM LINE HIGH FLOW ISOLATION DURING WARMUP.
 EVENT DATE: 022285 REPORT DATE: 032185 NSSS: GE TYPE: BWR

(NSIC 193685) ON 2-22-85, AT 1823 THE UNIT 1 RCIC SYSTEM RECEIVED BOTH DIVISION 1 AND 2 ISOLATION SIGNALS ON HIGH RCIC STEAM LINE FLOW. UNIT 1 WAS IN OPERATIONAL CONDITION 1 AT 97% POWER. THE HIGH FLOW SIGNAL OCCURRED WHEN STEAM AT REACTOR PRESSURE WAS RELEASED INTO THE RCIC STEAM LINE FROM THE PIPING BETWEEN THE RCIC INBOARD AND OUTBOARD ISOLATION VALVES. THIS STEAM WAS TRAPPED WHEN THE INBOARD VALVES WERE CLOSED, PER PROCEDURE, TO BEGIN TO RETURN RCIC TO SERVICE FOLLOWING MAINTENANCE. OPENING THE OUTBOARD VALVE RELEASED THE STEAM INTO THE RCIC STEAM LINE, CAUSING THE HIGH FLOW SIGNAL. WHEN THE ISOLATION SIGNAL WAS RECEIVED, THE OUTBOARD ISOLATION VALVE WAS OPEN, AND IT CLOSED SATISFACTORILY. AFTER VERIFYING THAT THERE WAS NO DAMAGE TO THE RCIC PIPING, THE ISOLATION WAS RESET, AND WARMING UP OF RCIC WAS CONTINUED WITHOUT FURTHER INCIDENT. SIMILAR EVENT 373/84-060.

[161] LA SALLE 1 DOCKET 50-373 LER 85-023
UNSECURED DOOR TO HIGH RADIATION AREA.
EVENT DATE: 022385 REPORT DATE: 032185 NSSS: GE TYPE: BWR

(NSIC 193625) A RADIATION CHEMISTRY TECHNICIAN WAS GOING TO PERFORM A SURVEY IN THE UNIT 1 CONDENSATE POLISHER REGENERATION TANK ROOM. HE INSERTED THE KEY INTO THE LOCK ON THE GATE DOOR WHICH OPENED WITHOUT THE TECHNICIAN EVER TURNING THE KEY IN THE LOCK. THE DOOR APPARENTLY WAS CLOSED BUT NOT LOCKED DURING A PREVIOUS ENTRY. THIS AREA IS POSTED AS A HI HI RADIATION AREA, CONTAMINATED AREA, AUTHORIZED ENTRY ONLY. CONTRARY TO TECH SPEC 6.1.1, THE AREA WAS UNSECURED AND UNATTENDED. THE RCT WHO DISCOVERED THE UNSECURED DOOR SECURED THE DOOR AND REPORTED THE INCIDENT TO HIS FOREMAN. THE DOOR LATCH WAS NOT PROPERLY ADJUSTED WHICH PREVENTED THE DOOR FROM BEING SECURED WHEN CLOSED. THE ELECTRICAL MAINTENANCE PERSONNEL ADJUSTED THE DOOR LATCH.

[162] LA SALLE 1 DOCKET 50-373 LER 85-024
TRANSMISSION LINE FAULT CAUSES REACTOR SCRAM.
EVENT DATE: 030385 REPORT DATE: 032585 NSSS: GE TYPE: BWR

(NSIC 193686) ON 3-3-85, THE UNIT 1 REACTOR WAS AT 1055 MWE AND RAMPING UP IN POWER AT 10 MWE PER HR. AT 1654 HRS A REACTOR SCRAM OCCURRED, RESULTING FROM A TURBINE CONTROL VALVE FAST CLOSURE, DUE TO AN OFFSITE FAULT ON TRANSMISSION LINE 0101. UNIT 1 REACTOR WAS OPERATING AT 98% POWER. DUE TO A FAULT ON 345 KV TRANSMISSION LINE 0101, WHICH OPENED OIL CIRCUIT BREAKERS IN THE SWITCHYARD CAUSING A LOSS OF THE UNIT 1 MAIN TRANSFORMER AND TRANSMISSION LINE 0101 AND 0104. THIS RESULTED IN A POWER LOAD UNBALANCE ON THE MAIN TURBINE WHICH CLOSED THE TURBINE CONTROL VALVES RESULTING IN A REACTOR SCRAM. THE PLANT RESPONDED AS DESIGNED FOR AN EVENT OF THIS TYPE. REACTOR LEVEL WAS MAINTAINED GREATER THAN ZERO INCHES AND NO ECCS INITIATIONS OCCURRED. ALL REQUIRED PLANT SURVEILLANCES REQUIRED FOR A UNIT STARTUP WERE PERFORMED AND A NORMAL PLANT RECOVERY WAS COMMENCED. BOTH TRANSMISSION LINES 0101 AND 0104 WERE RETURNED TO SERVICE BY 0900 ON 3-4-85.

[163] LA SALLE 2 DOCKET 50-374 LER 84-041
RWCU ISOLATES ON DIFFERENTIAL FLOW.
EVENT DATE: 072884 REPORT DATE: 081584 NSSS: GE TYPE: BWR

(NSIC 193506) ON 7-28-84, AT 2206 HRS WITH UNIT 2 AT 0% POWER AND REACTOR PRESSURE 507 PSIG, AN ISOLATION OF RWCU OCCURRED DUE TO HIGH DIFFERENTIAL FLOW ON DIV 1 AND 2. THE HIGH DIFFERENTIAL FLOW WAS DUE TO A RAPID REDUCTION IN REACTOR PRESSURE AND INCREASE IN FEEDWATER FLOW FOLLOWING A PLANNED MANUAL SCRAM ON UNIT 2. THE CAUSE OF THIS OCCURRENCE WAS DUE TO THE DESIGN CHARACTERISTICS OF THE DIFFERENTIAL FLOW LEAK DETECTION SCHEME. THIS LOGIC INVOLVES 3 FLOW LOOPS. ONE 'SEES' INPUT TO THE SYSTEM AND TWO 'SEE' OUTLETS FROM THE SYSTEM. DUE TO THE DIFFERENCES IN WATER TEMPERATURE IN VARIOUS POINTS OF THE SYSTEM, EACH FLOW LOOP IS CALIBRATED FOR A DIFFERENT TEMPERATURE (DENSITY) OF WATER. ALL OF THESE

CALIBRATIONS ARE BASED ON REACTOR WATER BEING AT RATED CONDITIONS UNDER STEADY STATE CONDITIONS. HOWEVER, AT OTHER THAN RATED CONDITIONS, ACTUATION OF THIS TRIP LOGIC CAN OCCUR DUE TO THE INSTRUMENTS 'SEEING' OTHER THAN DESIGN CONDITIONS. THE RWC SYSTEM'S ISOLATION VALVES CLOSED AS REQUIRED AND PLACED THE UNIT IN A SAFE CONDITION. THE ISOLATION WAS RESET WHEN REACTOR PRESSURE AND LEVEL HAD STABILIZED, AND RWC WAS RETURNED TO SERVICE AT 2230 HRS. SIMILAR EVENTS: 373/84-030, 373/84-033, 373/84-040 AND 374/84-029.

[164] LA SALLE 2 DOCKET 50-374 LER 84-073
 REACTOR WATER CLEANUP ISOLATIONS.
 EVENT DATE: 111284 REPORT DATE: 120384 NSSS: GE TYPE: BWR

(NSIC 192608) AT 1340 ON 11-12-84, THE REACTOR WATER CLEANUP SYSTEM (CE) ISOLATED ON HIGH DIFFERENTIAL TEMPERATURE (JM). THE REACTOR BLDG VENTILATION SYSTEM HAD BEEN SHUT DOWN PRIOR TO THE EVENT. THE LACK OF CIRCULATING AIR WAS THE CAUSE OF THE ISOLATION. WHILE ATTEMPTING TO GET THE SYSTEM BACK IN OPERATION, THE SYSTEM ISOLATED TWICE MORE ON DIFFERENTIAL FLOW (JM). THE SYSTEM WAS RESTORED TO SERVICE AT 0025 ON 11-13-84 WITH NO FURTHER DIFFICULTIES. THE SYSTEM ISOLATED ACCORDING TO DESIGN. SAFE PLANT OPERATIONS WERE MAINTAINED AT ALL TIMES.

[165] LA SALLE 2 DOCKET 50-374 LER 84-081
 VACUUM BREAKER CYCLED DUE TO VENTING THE CONTAINMENT.
 EVENT DATE: 112784 REPORT DATE: 122084 NSSS: GE TYPE: BWR
 VENDOR: GPE CONTROLS

(NSIC 192750) ON 11-27-84 AT 1506 HRS THE UNIT 2 VACUUM BREAKER VALVE, 2PC001A, OPENED TO EQUALIZE THE SLIGHT DIFFERENTIAL PRESSURE BETWEEN THE PRIMARY CONTAINMENT AND THE SUPPRESSION POOL. THE DIFFERENTIAL PRESSURE WAS CAUSED BY THE VENTING OF THE PRIMARY CONTAINMENT WITH THE VENT AND PURGE SYSTEM. IN THIS CASE IT WAS NOT READILY APPARENT TO THE OPERATOR PERFORMING THE VENTING THAT THE CONTAINMENT/SUPPRESSION POOL DIFFERENTIAL PRESSURE WAS APPROACHING THE POINT WHERE THE VACUUM BREAKERS WOULD OPEN. THIS IS BECAUSE THERE IS NO INSTRUMENT THAT DIRECTLY INDICATES THE DIFFERENTIAL PRESSURE BETWEEN THE PRIMARY CONTAINMENT AND THE SUPPRESSION POOL; INSTEAD, THE NARROW RANGE CONTAINMENT PRESSURE AND THE SUPPRESSION POOL PRESSURE INSTRUMENTS LOCATED IN THE CONTROL ROOM MUST BE COMPARED. AFTER THE VACUUM BREAKER OPENED, THE SHIFT CONTROL ROOM ENGINEER INSTRUCTED THE UNIT 2 LICENSED OPERATOR TO BEGIN VENTING THE SUPPRESSION POOL PER LOP-VQ-06. THIS ALLOWED THE DIFFERENTIAL PRESSURE TO EQUALIZE THROUGH THE VENT AND PURGE SYSTEM. WHEN POSSIBLE THE SUPPRESSION POOL AND PRIMARY CONTAINMENT SHOULD BE VENTED AT THE SAME TIME TO PREVENT THE VACUUM BREAKERS FROM OPENING. IN THIS CASE IT WAS INADVERTENTLY OVERLOOKED. THE VACUUM BREAKER CLOSED AFTER 5 MINS. THIS CYCLE OF THE VACUUM BREAKER WAS AS CALLED FOR BY THE PLANT DESIGN.

[166] LA SALLE 2 DOCKET 50-374 LER 85-005
 REACTOR BUILDING CLOSED COOLING WATER ISOLATION VALVE TRIPPED CLOSED.
 EVENT DATE: 012185 REPORT DATE: 021385 NSSS: GE TYPE: BWR
 VENDOR: CONTROL DIVISION OF AMERACE

(NSIC 193433) ON 1-21-85, THE RBCCW OUTLET OUTBOARD ISOLATION VALVE 2WR040 CLOSED DUE TO THE PHYSICAL FAILURE OF THE 2B21H-K67X18 RELAY. NO VALID ISOLATION SIGNAL OCCURRED. THE RELAY FAILED BECAUSE ITS COIL WINDINGS SHORT CIRCUITED AND BURNED OUT. VALVE 2WR040 WAS MANUALLY REOPENED TO PROVIDE RBCCW COOLING TO THE REACTOR RECIRCULATING PUMPS. WORK REQUEST L45579 WAS INITIATED TO REPLACE THE FAILED RELAY AND TEST THE NEWLY INSTALLED ONE. PRIOR TO THE COMPLETION OF THE WORK REQUEST, UNIT 2 SHUTDOWN COMMENCED IN ACCORDANCE WITH TECH SPEC 3.6.3. A GSEP UNUSUAL EVENT WAS DECLARED IN ACCORDANCE WITH LEP-1200-1, EAL #14. POWER WAS REDUCED FROM 1100 MWE TO 840 MWE. ON 1-21-85, WORK WAS COMPLETED ON THE INSTALLATION AND TESTING OF RELAY 2B21H-K67X18. VALVE 2WR040 WAS DECLARED

OPERABLE, THE GSEP UNUSUAL EVENT WAS TERMINATED, AND THE UNIT 2 SHUTDOWN WAS HALTED. NO REACTOR RECIRCULATION PUMP DAMAGE RESULTED.

[167] LA SALLE 2 DOCKET 50-374 LER 85-006
HPCS SUCTION VALVE SWAP ON HIGH SUPPRESSION POOL LEVEL.
EVENT DATE: 012285 REPORT DATE: 021385 NSSS: GE TYPE: BWR

(NSIC 193372) ON 1-22-85, AT 0347 WITH UNIT 2 OPERATING AT 85% POWER, THE HPCS PUMP SUCTION VALVE TO THE CONDENSATE STORAGE TANK CLOSED AND THE SUCTION FROM THE SUPPRESSION POOL OPENED. THE CAUSE FOR THE SUCTION VALVE TRANSFER WAS AN ACTUAL HIGH SUPPRESSION POOL WATER LEVEL. THE HPCS SYSTEM IS DESIGNED TO TRANSFER PUMP SUCTION TO THE SUPPRESSION POOL IN THE EVENT OF A HIGH SUPPRESSION POOL WATER LEVEL. SINCE THE SYSTEM PERFORMED ITS DESIGNED FUNCTION, THE CONSEQUENCES OF THIS EVENT WERE MINIMAL. THE SUPPRESSION POOL WATER LEVEL WAS LOWERED AND A NORMAL SUCTION PATH FROM THE CYCLED CONDENSATE STORAGE TANK WAS REESTABLISHED. SIMILAR OCCURRENCES ARE DOCUMENTED IN LER'S 374/84-078, 84-087, 85-001, 373/84-081, 84-087, 84-090, 85-002.

[168] LA SALLE 2 DOCKET 50-374 LER 85-007
REACTOR VESSEL WATER HIGH LEVEL SWITCHES OUT OF TOLERANCE.
EVENT DATE: 020585 REPORT DATE: 030485 NSSS: GE TYPE: BWR
VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 193434) DURING THE PERFORMANCE OF INSTRUMENT SURVEILLANCE PROCEDURE LIS-HP-10, HIGH PRESSURE CORE SPRAY (HPCS) INJECTION VALVE CLOSURE SWITCHES 2B21-N100 A & B WERE FOUND TO BE OUT OF THEIR TOLERANCE RANGES IN THE NON-CONSERVATIVE DIRECTION. THE LIMITING CONDITION FOR OPERATION (56") WAS EXCEEDED IN BOTH CASES. AT THE TIME OF THE EVENT, UNIT 2 WAS OPERATING AT 98% POWER. THE CAUSE FOR LEVEL INDICATING SWITCHES 2B21-N100 A & B BEING OUT OF CALIBRATION APPEARS TO BE INSTRUMENT DRIFT. SINCE BOTH SWITCH SETPOINTS EXCEEDED THE LCO (56"), AUTO-CLOSURE OF THE INJECTION VALVE WOULD HAVE OCCURRED AT A HIGHER LEVEL (APPROX 60"). MANUAL CONTROL OF THE HPCS INJECTION VALVE WAS AVAILABLE, PROVIDING BACKUP TO THE AUTO-CLOSE FEATURE. BOTH SWITCHES WERE IMMEDIATELY RECALIBRATED TO WITHIN TECH SPEC LIMITS. A PLANT MODIFICATION (M-1-2-84-136) HAS BEEN INITIATED TO REPLACE BOTH SWITCHES WITH A DIFFERENT MODEL. SIMILAR EVENTS: 374/84-011 AND 373/85-001.

[169] LA SALLE 2 DOCKET 50-374 LER 85-008
CONTROL ROOM AIR INTAKE AMMONIA DETECTOR ACTUATES.
EVENT DATE: 021385 REPORT DATE: 030685 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: LA SALLE 1 (BWR)
VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193553) AT 1433 ON 2-13-85, THE CONTROL ROOM RECEIVED A 'HIGH CHLORINE/AMMONIA CONCENTRATION' ALARM FOR THE 'B' TRAIN OF THE CONTROL ROOM/AUX ELECTRIC EQUIPMENT ROOM HVAC SYSTEM. ALL RESULTING AUTOMATIC ESF DAMPER ACTUATIONS OCCURRED SATISFACTORILY. AT THE TIME OF THIS EVENT THE 1 'A' VC TRAIN WAS IN OPERATION AND THE 'B' VC TRAIN WAS IDLE. UNIT 1 WAS IN OPERATIONAL CONDITION 1 AT 74% POWER AND UNIT 2 WAS IN OPERATIONAL CONDITION 1 AT 99.5% POWER. THE INSTRUMENT MAINTENANCE PERSONNEL WHO WERE DISPATCHED TO INVESTIGATE THE ALARM DISCOVERED THAT THE CHEMCASSETTE OF THE 'A' AMMONIA DETECTOR FOR THE 'B' VC TRAIN HAD RUN OUT OF TAPE, CAUSING THE ALARM AND DAMPER ACTUATIONS. THE WEEKLY SURVEILLANCE PROCEDURE CALLS FOR THE REPLACEMENT OF THE AMMONIA DETECTORS' CHEMCASSETTES BEFORE THEY RUN OUT OF TAPE. DURING THE MOST RECENT PERFORMANCE OF THIS SURVEILLANCE THE CHEMCASSETTE FOR OXY-VC165A WAS NOT REPLACED BECAUSE A NEW ONE HAD RECENTLY BEEN INSTALLED. THE EXHAUSTED CHEMCASSETTE WAS REPLACED. A REV TO THE SURVEILLANCE PROCEDURE HAS BEEN INITIATED TO EMPHASIZE THE IMPORTANCE OF REPLACING ALL 4 CHEMCASSETTES EACH TIME THE SURVEILLANCE IS PERFORMED.

[170] LA SALLE 2 DOCKET 50-374 LER 85-010
 HYDRAULIC CONTROL UNIT ACCUMULATOR PRESSURE SWITCHES DRIFT.
 EVENT DATE: 021585 REPORT DATE: 031585 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: LA SALLE 1 (BWR)
 VENDOR: BALKSDALE VALVE COMPANY

(NSIC 193562) IT WAS FOUND THAT ON UNITS 1 AND 2 THE HYDRAULIC CONTROL UNIT ACCUMULATOR PRESSURE SWITCHES WERE OUT OF CALIBRATION LOW AT VARIOUS TIMES BETWEEN 2-15-85 AND 3-1-85. ON UNIT 1 180 OUT OF 185 SWITCHES HAD DRIFTED AND ON UNIT 2 164 OUT OF 185 SWITCHES HAD DRIFTED OUT OF CALIBRATION. BOTH UNITS WERE IN THE RUN MODE AT THE TIMES OF THE OCCURRENCES, THEREFORE SCRAM ACTION WAS NOT SIGNIFICANTLY AFFECTED. THE CAUSE OF THE EVENT IS ATTRIBUTED TO SETPOINT DRIFT. THE SETPOINTS ARE DRIFTING TO A LOWER PRESSURE. NO CAUSE FOR THE DRIFTING HAS BEEN DETERMINED AT THIS TIME. CURRENT CORRECTIVE ACTION CONSISTS OF PURSUING A HIGHER INITIAL SETPOINT TO COMPENSATE FOR ANTICIPATED DRIFT.

[171] LACROSSE DOCKET 50-409 LER 84-020
 SPURIOUS CONTAINMENT BUILDING VENTILATION ISOLATION.
 EVENT DATE: 111384 REPORT DATE: 120584 NSSS: AC TYPE: BWR
 VENDOR: TRACER LAB

(NSIC 193510) THE CONTAINMENT BLDG VENTILATION DAMPERS AUTOMATICALLY CLOSED AT 0809 ON 11-13-84, DUE TO A SPURIOUS HIGH ACTIVITY SIGNAL ON THE CB IMMEDIATE PARTICULATE MONITOR. THE MONITOR INDICATION WAS NORMAL. THE MONITOR RATEMETER SELECTOR SWITCH CONTACTS WERE CLEANED. DIRTY AND/OR CORRODED CONTACTS MAY HAVE CAUSED LEAKAGE CURRENT BETWEEN THE RANGES, RESULTING IN THE HIGH ALARM. IN ADDITION, THE MONITOR'S POWER SUPPLY VOLTAGE HAD DECREASED FROM 1400V TO 1200V. THE POWER SUPPLY VOLTAGE WAS ADJUSTED. LER 84-17 ALSO COVERED CB VENTILATION ISOLATION.

[172] LACROSSE DOCKET 50-409 LER 85-002
 CONTAINMENT BUILDING VENTILATION ISOLATIONS DUE TO INCREASED BACKGROUND IN CB MONITOR OCCUR.
 EVENT DATE: 031485 REPORT DATE: 040985 NSSS: AC TYPE: BWR

(NSIC 193638) ON MAR 14 AND 18, 1985, THE CONTAINMENT BLDG (CB) VENTILATION VALVES CLOSED ON A HIGH CB AIR EXHAUST DELAYED PARTICULATE ACTIVITY MONITOR SIGNAL. IN BOTH CASES, THE REASON FOR THE HIGH ACTIVITY SIGNAL WAS INCREASED BACKGROUND RADIATION DUE TO CONTAMINATED MATERIAL IN THE UPPER REACTOR CAVITY DRAIN LINE. THE CB MONITOR IS ADJACENT TO THE UPPER REACTOR CAVITY DRAIN LINE, WHILE THE DELAYED PARTICULATE DETECTOR IS ORIENTED SUCH THAT THERE IS LESS SHIELDING BETWEEN IT AND THE DRAIN LINE THAN FOR THE OTHER DETECTORS. IN BOTH CASES, THE INDICATED ACTIVITY DECREASED BELOW THE SETPOINT WITHIN 3 MIN. PREPARATIONS FOR REFUELING WERE BEING CONDUCTED. ON 3-14, THE UPPER REACTOR CAVITY WAS BEING SPRAYED. AS THE CONTAMINATED PARTICLES PASSED THROUGH THE DRAIN LINE AND/OR DEPOSITED THEMSELVES IN THE LINE, THE BACKGROUND RADIATION AT THE DETECTOR INCREASED AND SO IT INDICATED A HIGHER ACTIVITY. ON MAR 18, FOLLOWING REMOVAL OF THE REACTOR VESSEL HEAD, THE DRAIN LINE WAS FLUSHED WHILE THE UPPER CAVITY WAS BEING FLOODED. THE INDICATED CB DELAYED PARTICULATE ACTIVITY INCREASED, CAUSING A HIGH ACTIVITY ALARM AND CB VENTILATION ISOLATION AS CONTAMINATED MATTER WAS TEMPORARILY DEPOSITED NEAR THE DETECTOR. FURTHER FLUSHING RESULTED IN LOWER BACKGROUND RADIATION LEVELS.

[173] LIMERICK 1 DOCKET 50-352 LER 85-007
 RPS STATIC INVERTER FAILS TWICE.
 EVENT DATE: 011085 REPORT DATE: 020885 NSSS: GE TYPE: BWR
 VENDOR: EXIDE INDUSTRIAL DIV

(NSIC 193468) ON 1-10-85, AT 8:21 AM, WITH UNIT 1 AT LESS THAN 5% POWER, A HALF-SCRAM SIGNAL ON THE 'B' RPS CHANNEL WAS INITIATED. THE RWCU SYSTEM, THE DRYWELL CHILLED WATER SYSTEM, AND REFUEL FLOOR VENTILATION SYSTEM ISOLATED, AND BOTH REACTOR RECIRCULATION PUMPS TRIPPED. AT 8:58 AM, A SIMILAR EVENT OCCURRED. THE EVENTS OCCURRED AS A RESULT OF A TEMPORARY LOSS OF POWER TO THE 1B RPS AND UNINTERRUPTIBLE POWER SYSTEM 120V AC DISTRIBUTION PANEL NO. 1BY160. THE RPS AND NSSSS SYSTEMS PERFORMED AS DESIGNED DURING THE LOSS OF POWER TRANSIENTS. IN EACH EVENT, A FAULTY VOLTAGE REGULATOR CARD IN THE 1B STATIC INVERTER CAUSED AN OVERVOLTAGE CONDITION RESULTING IN THE TRIP OF THE ELECTRICAL SUPPLY BREAKERS TO THE 1BY160 PANEL. THE HALF-SCRAM SIGNALS AND NSSSS ISOLATION SIGNALS WERE RESET. THE FAULTY VOLTAGE REGULATOR CARD WAS REPLACED AFTER THE SECOND HALF-SCRAM. SIMILAR EVENTS 352/84-005 AND 352/84-039.

[174] LIMERICK 1 DOCKET 50-352 LER 85-008
 FAILED FUSE CAUSES ISOLATIONS IN RWCU, INSTRUMENT GAS AND REACTOR ENCLOSURE VENTILATION.
 EVENT DATE: 011285 REPORT DATE: 021185 NSSS: GE TYPE: BWR
 VENDOR: BUSSMANN MFG (DIV OF MCGRAW-EDISON)

(NSIC 193362) ON 1-12-85, WITH UNIT 1 OPERATING AT 3% POWER IN THE STARTUP MODE, A BLOWN FUSE IN THE NUCLEAR SUPPLY SHUTOFF SYSTEM LOGIC RESULTED IN ISOLATION OF THE REACTOR WATER CLEANUP (RWCU) SYSTEM, INSTRUMENT GAS SYSTEM, AND REACTOR ENCLOSURE VENTILATION SYSTEM.

[175] LIMERICK 1 DOCKET 50-352 LER 85-009
 SPURIOUS ISOLATION OF THE HPCI STEAM SUPPLY INBOARD ISOLATION VALVE.
 EVENT DATE: 011285 REPORT DATE: 021185 NSSS: GE TYPE: BWR
 VENDOR: RILEY COMPANY, THE

(NSIC 193469) ON 1-12-85, AT 2:30 PM, WITH UNIT 1 IN THE STARTUP CONDITION AND AT 3.5% POWER, A SPURIOUS ISOLATION OF THE HPCI INBOARD STEAM SUPPLY ISOLATION VALVE, HV-55-1F002, OCCURRED. INVESTIGATION TRACED THE PROBLEM TO THE HPCI EQUIPMENT ROOM STEAM SUPPLY LINE AREA AMBIENT TEMPERATURE SWITCH. THE OUTPUT OF THE TEMPERATURE SWITCH WAS OBSERVED TO BE ERRATIC AND PRODUCED A NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM (NSSSS) DIV 4 ISOLATION SIGNAL. ERRATIC OUTPUT FROM A TEMPERATURE SWITCH, CAUSED BY A POOR CONNECTION WITHIN THE SWITCH (CONNECTION TO A RESISTOR LOCATED ON A MODULE CARD), RESULTED IN THE ISOLATION SIGNAL. THE WIRE WAS PROPERLY RECONNECTED AND HPCI WAS DECLARED OPERABLE AT 11:30 PM.

[176] LIMERICK 1 DOCKET 50-352 LER 85-010
 TWO INADVERTENT ISOLATIONS OF THE RWCU SYSTEM.
 EVENT DATE: 011285 REPORT DATE: 021985 NSSS: GE TYPE: BWR

(NSIC 193527) ON 1-12-85, AT 1430 HRS, DURING SURVEILLANCE TESTING WITH UNIT NO. 1 IN THE STARTUP CONDITION AT 3.5% POWER, THE RWCU INBOARD SUCTION ISOLATION VALVE CLOSED WHEN THE NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM (NSSSS) CIRCUITRY WAS INADVERTENTLY DE-ENERGIZED. THE ISOLATION WAS IMMEDIATELY RESET AND THE RWCU WAS RETURNED TO SERVICE. AT 2043 HRS, DURING SURVEILLANCE TESTING WITH THE UNIT AT 3.6% POWER, THE RWCU INBOARD SUCTION ISOLATION VALVE CLOSED AGAIN WHEN THE NSSSS CIRCUITRY WAS AGAIN DE-ENERGIZED. THE RWCU ISOLATION WAS RESET AND THE SYSTEM RETURNED TO SERVICE WITHIN 1/2 HR. BOTH ISOLATIONS, WHICH OCCURRED DURING SURVEILLANCE TESTING, WERE CAUSED BY FAULTY JUMPER INSTALLATION. JUMPERS MUST BE INSTALLED TO FACILITATE SURVEILLANCE TESTING BECAUSE SURVEILLANCE TESTING REQUIRES DEMONSTRATION THAT THE CONTACT OPENS, AND THE CONTACT CANNOT BE OPENED WITHOUT CAUSING AN ISOLATION OF THE RWCU WITHOUT JUMPERING ACROSS THE SPECIFIC CONTACT.

[177] LIMERICK 1 DOCKET 50-352 LER 85-006
FAILURE TO COMPLY WITH THE PRIMARY CONTAINMENT ISOLATION REQUIREMENTS.
EVENT DATE: 011535 REPORT DATE: 021985 NSSS: GE TYPE: BWR

(NSIC 193526) ON 1-15-85, AT 0920 HRS, WITH UNIT 1 IN THE STARTUP MODE AT 3.6% POWER WHILE PERFORMING ST-6-107-590-1, 'DAILY SURVEILLANCE LOG/OPCONS 1, 2, 3', AN OPERATOR OPENED THE FEEDER BREAKERS SUPPLYING POWER TO THE MOTOR OPERATORS OF THE OUTBOARD SUCTION ISOLATION VALVE AND THE INBOARD SUCTION ISOLATION VALVE OF THE RWCU SYSTEM. BOTH ISOLATION VALVES WERE IN THE OPEN POSITION AT THE TIME THE BREAKERS WERE OPENED. DE-ENERGIZATION OF THE MOTOR OPERATORS TO THESE RWCU ISOLATION VALVES DEFEATED THE ABILITY TO AUTOMATICALLY ISOLATE THE RWCU. DEFEATING THE ABILITY TO AUTOMATICALLY ISOLATE THE RWCU PREVENTS COMPLIANCE WITH THE PRIMARY CONTAINMENT ISOLATION PROVISIONS OF TECH SPEC 3.6.3. THE DE-ENERGIZATION OF THE MOTOR OPERATORS TO THESE VALVES WAS PERFORMED IN ORDER TO AVOID A SPURIOUS RWCU ISOLATION DURING THE RECORDING OF AMBIENT TEMPERATURES WITHIN THE RWCU ROOMS. POWER WAS RESTORED TO THE MOTOR OPERATORS OF THE ISOLATION SUCTION VALVES BY CLOSING THE FEEDER BREAKERS AFTER READING THE TEMPERATURES, AT 0927 HRS THE SAME MORNING.

[178] LIMERICK 1 DOCKET 50-352 LER 85-011
NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM ISOLATIONS DUE TO BLOWN FUSE.
EVENT DATE: 011685 REPORT DATE: 021585 NSSS: GE TYPE: BWR

(NSIC 193470) ON 1-16-85, DURING SURVEILLANCE TESTING ON THE RWCU SYSTEM, A FUSE SUPPLYING POWER TO THE OUTBOARD ISOLATION LOGIC RELAYS IN THE NSSSS BLEW RESULTING IN ISOLATION OF THE REACTOR ENCLOSURE HVAC SYSTEM, THE DRYWELL CHILLED WATER SYSTEM, AND THE INSTRUMENT GAS SYSTEM. AN I&C TECHNICIAN INADVERTENTLY CAUSED AN ELECTRICAL SHORT TO GROUND WHILE INSTALLING A JUMPER WIRE IN ACCORDANCE WITH THE SURVEILLANCE TEST. THE PURPOSE OF THIS JUMPER IS TO PREVENT THE INITIATION OF A RWCU SYSTEM ISOLATION WHILE TESTING THE POSITION OF CONTACTS IN THE ISOLATION LOGIC. ACCESS TO THE CONTACTS TO BE JUMPED IS DIFFICULT AND THEREFORE CONTRIBUTED TO THIS EVENT. THE FUSE WAS REPLACED AND ALL ISOLATED SYSTEMS WERE RETURNED TO SERVICE. SIMILAR EVENT 352/85-010.

[179] LIMERICK 1 DOCKET 50-352 LER 85-013
FAILURE TO PLACE INOPERABLE HPCI DEVICE IN TRIPPED CONDITION.
EVENT DATE: 011785 REPORT DATE: 021985 NSSS: GE TYPE: BWR

(NSIC 193363) ON 1-17-85, WITH UNIT 1 AT 3.5% POWER, THE HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEM STEAM SUPPLY PRESSURE INSTRUMENT, PT-55-1N058F, WAS REMOVED FROM SERVICE FOR TROUBLESHOOTING. THIS DEVICE IS PART OF THE HPCI LOW STEAM SUPPLY PRESSURE ISOLATION LOGIC AND SERVES TO CLOSE THE OUTBOARD HPCI STEAM SUPPLY ISOLATION VALVE. TECH SPECS REQUIRE PLACING THIS INSTRUMENT IN THE TRIPPED CONDITION WITHIN 1 HR AFTER IT IS DECLARED INOPERABLE IF OPERABILITY CANNOT BE RESTORED WITHIN THE 1-HR PERIOD. THE TRANSMITTER WAS NOT PLACED IN THE TRIPPED CONDITION AS REQUIRED. UPON DISCOVERY OF THIS OVERSIGHT, THE HPCI STEAM SUPPLY ISOLATION VALVES WERE PLACED IN THE CLOSED POSITION TO ISOLATE THE HPCI STEAM SUPPLY LINE.

[180] LIMERICK 1 DOCKET 50-352 LER 85-012
REACTOR ENCLOSURE HVAC ISOLATION OCCURS.
EVENT DATE: 011885 REPORT DATE: 021985 NSSS: GE TYPE: BWR

(NSIC 193471) DURING TROUBLESHOOTING OF THE REACTOR ENCLOSURE HVAC DIFFERENTIAL PRESSURE CONTROLS, AN AUTOMATIC ISOLATION OF THE REACTOR ENCLOSURE HVAC SYSTEM OCCURRED. THE UNIT WAS IN THE STARTUP MODE AT LESS THAN 4% POWER WHEN THIS EVENT OCCURRED. APPARENTLY, THE MOMENTARY MISAPPLICATION OF A JUMPER CAUSED A SHORT-CIRCUIT WHICH CAUSED A FUSE TO BLOW. THE FUSE PROVIDES POWER TO

INSTRUMENTS WHICH PROVIDE INPUTS TO THE REACTOR ENCLOSURE HVAC ISOLATION SYSTEM (AN ESP). IN ADDITION TO THE APPROPRIATE DAMPER ACTUATIONS, BOTH THE STANDBY GAS TREATMENT SYSTEM AND REACTOR ENCLOSURE ISOLATION SYSTEM STARTED, AS DESIGNED.

[181] LIMERICK 1 DOCKET 50-352 LER 85-014
 INOPERABLE SCRAM DISCHARGE VOLUME LEVEL SWITCH.
 EVENT DATE: 011885 REPORT DATE: 021585 NSSS: GE TYPE: BWR

(NSIC 193585) ON 1-18-85, WITH UNIT 1 AT 3.5% POWER IN STARTUP, SURVEILLANCE TESTING OF THE RPS SCRAM DISCHARGE VOLUME HIGH WATER LEVEL SWITCH RESULTED IN THE TRIP CHANNEL BEING INOPERABLE FOR GREATER THAN THE 2 HR LIMIT ALLOWED FOR SURVEILLANCE TESTING PURPOSES BY TABLE 3.3.1-1 OF THE TECH SPECS. TECH SPEC 3.3.1.A REQUIRES THAT, WITH THE NUMBER OF CHANNELS OPERABLE LESS THAN REQUIRED BY TABLE 3.3.1-1, THE INOPERABLE CHANNEL BE PLACED IN THE TRIPPED CONDITION WITHIN 1 HR. THEREFORE, IF THE SURVEILLANCE TEST CANNOT BE SUCCESSFULLY COMPLETED WITHIN 2 HRS FROM THE START OF THE TEST, THE AFFECTED TRIP CHANNEL MUST BE PLACED IN THE TRIPPED CONDITION WITHIN 1 HR. THE SURVEILLANCE TEST EXCEEDED THE ALLOWABLE TIME AND THE CONTRACTOR INSTRUMENT AND CONTROL TECHNICIAN PERFORMING THE TEST DID NOT SATISFY PROCEDURAL REQUIREMENTS AND NOTIFY SHIFT OPERATIONS THAT THE TIME LIMIT HAD BEEN EXCEEDED. THE AFFECTED TRIP CHANNEL REMAINED IN THE UNTRIPPED CONDITION FOR A TOTAL OF 7 1/2 HRS UNTIL THE SURVEILLANCE TEST WAS COMPLETED AND THE TRIP CHANNEL DECLARED OPERABLE.

[182] LIMERICK 1 DOCKET 50-352 LER 85-015
 SPRINKLER SYSTEMS VALVED OUT OF SERVICE.
 EVENT DATE: 012185 REPORT DATE: 030685 NSSS: GE TYPE: BWR

(NSIC 193584) WITH UNIT 1 IN THE STARTUP MODE AT 3.6% POWER, WHILE PERFORMING AN INSPECTION OF THE FIRE SUPPRESSION SYSTEM, IT WAS DISCOVERED THAT THE SPRINKLER SYSTEM FOR THE CABLE SPREADING ROOM WAS OUT-OF SERVICE. SUBSEQUENTLY, THE SPRINKLER SYSTEM FOR THE CONTROL ENCLOSURE FAN ROOM WAS ALSO FOUND OUT-OF-SERVICE. BOTH SYSTEMS WERE IMMEDIATELY RETURNED TO SERVICE. SINCE BOTH SPRINKLER SYSTEMS WERE OUT-OF-SERVICE WITHOUT A CONTINUOUS FIRE WATCH, THIS EVENT IS A VIOLATION OF TECH SPEC 3.7.6.2. INVESTIGATION OF THE EVENT REVEALED THAT CONTRACTOR PERSONNEL WORKING ON THE BLOCKED PORTION OF THE SYSTEM PERFORMED A MODIFICATION HYDROSTATIC TEST AND CLOSED THE 2 SUPPLY VALVES FOR THESE SYSTEMS WITHOUT PROPERLY NOTIFYING OPERATING PERSONNEL. FOLLOWING COMPLETION OF THE MODIFICATION, OPERATING PERSONNEL CLEARED THE BLOCK WITHOUT PERFORMING ADEQUATE OPERATIONAL VERIFICATION.

[183] LIMERICK 1 DOCKET 50-352 LER 85-016
 ISOLATION OF THE HPCI OUTBOARD STEAM SUPPLY ISOLATION VALVE.
 EVENT DATE: 012285 REPORT DATE: 022185 NSSS: GE TYPE: BWR

(NSIC 193420) ON 1-22-85, WITH UNIT 1 IN THE STARTUP CONDITION AND AT 3.5% POWER, DURING SURVEILLANCE TESTING ON THE HPCI SYSTEM, AN INADVERTENT CLOSURE OF THE HPCI OUTBOARD STEAM SUPPLY ISOLATION VALVE, HV-55-1P003, OCCURRED. I&C TECHNICIANS, WHILE CONNECTING A VOLT METER ACROSS A SET OF CONTACTS IN ACCORDANCE WITH THE SURVEILLANCE TEST, CAUSED AN INADVERTENT SHORT CIRCUIT, ENERGIZING A RELAY WHICH GENERATES AN ISOLATION SIGNAL FOR THE OUTBOARD ISOLATION VALVE. THE ISOLATION SIGNAL WAS RESET AND HPCI WAS RETURNED TO SERVICE.

[184] LIMERICK 1 DOCKET 50-352 LER 85-017
 IMPROPER OPERATION OF THE CONTROL ROOM VENTILATION SYSTEM.
 EVENT DATE: 012485 REPORT DATE: 022285 NSSS: GE TYPE: BWR

(NSIC 193421) ON 1-24-85, WITH UNIT 1 AT 4% POWER, THE MAIN CONTROL ROOM

VENTILATION SYSTEM WAS OPERATED OUTSIDE OF ITS DESIGN BASIS FOR A 2 HR PERIOD. THE CONTROL ROOM VENTILATION SYSTEM INLET AND OUTLET ISOLATION VALVES HAD BEEN BLOCKED IN THE CLOSED POSITION FOR MAINTENANCE. THE CONTROL ROOM TOILET ROOM EXHAUST FAN WAS LEFT IN OPERATION WHICH CAUSED THE CONTROL ROOM ATMOSPHERE TO BE NEGATIVE WITH RESPECT TO THE TURBINE ENCLOSURE. THE CONTROL ROOM IS NORMALLY MAINTAINED POSITIVE WITH RESPECT TO THE TURBINE ENCLOSURE. UPON DISCOVERY OF THE ABNORMAL PRESSURE CONDITION, THE VENTILATION SYSTEM WAS PLACED IN THE RADIATION ISOLATION MODE, WHICH ALLOWED THE CONTROL ROOM TO RETURN TO ITS NORMAL POSITIVE PRESSURE.

[185] LIMERICK 1 DOCKET 50-352 LER 85-019
 INOPERABLE HPCI ROOM DIFFERENTIAL TEMPERATURE SWITCH.
 EVENT DATE: 012985 REPORT DATE: 031185 NSSS: GE TYPE: BWR
 VENDOR: RILEY COMPANY, THE

(NSIC 193556) ON 1-29-85, AT 0930 HRS WITH UNIT 1 OPERATING AT 3.5% POWER IN THE STARTUP MODE, INSTRUMENT AND CONTROL TECHNICIANS, WHILE INVESTIGATING A REPORTED TEMPERATURE SWITCH PROBLEM, DISCOVERED A HPCI ROOM DIFFERENTIAL TEMPERATURE SWITCH, TDTS-55-1N601B, WITH REVERSED THERMOCOUPLE LEADS. THIS SWITCH GENERATES A SIGNAL TO CLOSE THE HPCI TURBINE STEAM SUPPLY OUTBOARD ISOLATION VALVE IN THE EVENT OF A MEASURED HIGH DIFFERENTIAL TEMPERATURE BETWEEN HPCI EQUIPMENT ROOM SUPPLY AND EXHAUST VENTILATION. THE REVERSED LEADS OF THIS SWITCH PRECLUDED ITS ABILITY TO SATISFY THIS FUNCTION. BOTH THE INBOARD AND OUTBOARD HPCI STEAM SUPPLY ISOLATION VALVES WERE IMMEDIATELY MANUALLY CLOSED. TECHNICIANS DISCOVERED THE PROBLEM TO BE UNLABELED REVERSED THERMOCOUPLE WIRES. THE TECHNICIANS LABELED AND CONNECTED THE THERMOCOUPLE WIRE TO THE PROPER TERMINALS, PERFORMED A FUNCTIONAL TEST TO VERIFY OPERABILITY OF THE TEMPERATURE SWITCH, REOPENED THE ISOLATION VALVES, AND RETURNED THE TEMPERATURE SWITCH TO SERVICE ON 1-30-85.

[186] LIMERICK 1 DOCKET 50-352 LER 85-020
 REACTOR ENCLOSURE HVAC SYSTEM ISOLATES.
 EVENT DATE: 013085 REPORT DATE: 030185 NSSS: GE TYPE: BWR

(NSIC 193422) ON 1-30-85, THE REACTOR ENCLOSURE HVAC SYSTEM ISOLATED UPON RECEIVING AN INADVERTENT LOW REACTOR ENCLOSURE DIFFERENTIAL PRESSURE SIGNAL. THE ISOLATION OCCURRED AS A RESULT OF OPENING A CURRENT LOOP IN A REACTOR ENCLOSURE DIFFERENTIAL PRESSURE INSTRUMENT LOOP. THE CURRENT LOOP OPENED WHEN A LEAD WAS LIFTED TO CORRECT A PROBLEM WITH THE EMERGENCY RESPONSE FACILITY DATA SYSTEM. THE LEAD WAS RECONNECTED AND THE REACTOR ENCLOSURE HVAC SYSTEM WAS RETURNED TO NORMAL OPERATION.

[187] LIMERICK 1 DOCKET 50-352 LER 85-022
 APPARENT INOPERABILITY OF THE MSIV-LEAKAGE CONTROL.
 EVENT DATE: 013085 REPORT DATE: 031285 NSSS: GE TYPE: BWR

(NSIC 193567) ON 1-30-85, AT APPROX 5:15 PM, WITH UNIT 1 IN THE STARTUP CONDITION AND AT 3.5% POWER, THE FEED BREAKERS FOR THE BLOWERS AND HEATERS IN THE MSIV-LEAKAGE CONTROL SYSTEM WERE OBSERVED TO BE OPEN DURING AN NRC INSPECTION. TECH SPEC 3.6.1.4 REQUIRES THE MSIV-LCS BE OPERABLE DURING STARTUP CONDITION. WITH THE FEED BREAKERS OPEN, THE OPERABILITY OF THE MSIV-LCS WAS IN QUESTION. THE BREAKERS HAD BEEN LEFT OPEN IN ACCORDANCE WITH SURVEILLANCE TEST ST-6-040-320-1. THE CAUSE OF THIS EVENT WAS THE RESULT OF A DISCREPANCY BETWEEN SYSTEM OPERATING PROCEDURES AND ST-6-040-320-1. UPON IDENTIFICATION, THE BREAKERS WERE CLOSED. ST-6-040-320-1 WAS REVISED TO REQUIRE THE BREAKERS BE PLACED IN THE CLOSED POSITION AT THE COMPLETION OF THE SURVEILLANCE TEST.

[188] LIMERICK 1 DOCKET 50-352 LER 85-021
 INADVERTENT SCRAM WHILE RETURNING JET PUMP HEAD INSTRUMENT TO SERVICE.
 EVENT DATE: 013185 REPORT DATE: 030185 NSSS: GE TYPE: BWR

(NSIC 193423) ON 1-31-85, AT 8:05 PM, WITH UNIT NO. 1 IN THE STARTUP CONDITION AND AT 3.5% POWER, A SPURIOUS FULL SCRAM OCCURRED. THE SCRAM OCCURRED WHEN AN OPERATOR WAS CLEARING A BLOCK AND RETURNING THE JET PUMP DEVELOPED HEAD INSTRUMENT, PDI-42-1R005, TO SERVICE. WHEN THE OPERATOR CRACKED OPEN AN INSTRUMENT ISOLATION VALVE, A PRESSURE DECREASE OCCURRED IN THE INSTRUMENT PROCESS LEG RESULTING IN A PRESSURE DECREASE IN THE PROCESS LEGS OF BOTH REACTOR WATER LEVEL TRANSMITTERS, LT-42-1N080A AND LT-42-1N080B, SINCE THEY BOTH SHARE A COMMON TAP. THE LOW LEVEL SIGNALS FROM TRANSMITTERS LT-42-1N080A AND LT-42-1N080B CAUSED A FULL SCRAM SIGNAL. THE SCRAM SIGNALS WERE RESET BY 8:11 PM.

[189] LIMERICK 1 DOCKET 50-352 LER 85-023
 REACTOR ENCLOSURE HVAC ISOLATION.
 EVENT DATE: 020585 REPORT DATE: 030785 NSSS: GE TYPE: BWR
 VENDOR: AMERICAN STANDARD INDUSTRIES

(NSIC 193568) ON 2-5-85, AT 5:57 AM, WITH UNIT 1 IN COLD SHUTDOWN, AN ESP ACTUATION OCCURRED. THE 'B' REACTOR ENCLOSURE EQUIPMENT COMPARTMENT EXHAUST FAN FAILED, RESULTING IN LOW DIFFERENTIAL PRESSURE BETWEEN THE REACTOR ENCLOSURE AND THE OUTSIDE ENVIRONMENT. FAILURE OF THE 'B' EQUIPMENT COMPARTMENT EXHAUST FAN WAS CAUSED BY A LOOSE PNEUMATIC FITTING TO THE PITCH CONTROLLER ON THE FAN. DUE TO THE LOOSE PNEUMATIC CONNECTION, THE PITCH ON THE EXHAUST FAN BLADES WAS REDUCED TO ZERO, CAUSING LOW FLOW. AS A RESULT, THE REACTOR ENCLOSURE ISOLATION SYSTEM (AN ESP) INITIATED AN HVAC ISOLATION, AND THE STANDBY GAS TREATMENT SYSTEM ACTIVATED AS DESIGNED. HOWEVER, THE REACTOR ENCLOSURE RECIRCULATION SYSTEM WAS BLOCKED OUT-OF-SERVICE FOR MAINTENANCE AT THE TIME OF THE EVENT AND WAS THEREFORE UNABLE TO START IN RESPONSE TO THE HVAC SYSTEM ISOLATION. THE ISOLATION WAS RESET AND THE 'A' REACTOR ENCLOSURE EQUIPMENT COMPARTMENT EXHAUST FAN WAS PLACED IN SERVICE.

[190] LIMERICK 1 DOCKET 50-352 LER 85-024
 FAILURE OF A RPS STATIC INVERTER.
 EVENT DATE: 020885 REPORT DATE: 030885 NSSS: GE TYPE: BWR
 VENDOR: EXIDE INDUSTRIAL DIV

(NSIC 193569) ON 2-8-85, AT 1:45 AM, WITH UNIT 1 IN COLD SHUTDOWN, A SPURIOUS HALF-SCRAM SIGNAL ON THE 'B' RPS CHANNEL OCCURRED ALONG WITH THE OUTBOARD ISOLATION OF VARIOUS NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM SUBSYSTEMS. THE EVENT OCCURRED AS THE RESULT OF A TEMPORARY LOSS OF POWER TO THE 1B RPS AND UNINTERRUPTIBLE POWER SYSTEM 120V AC DISTRIBUTION PANEL NO. 1BY160. THE RPS AND NSSSS SYSTEMS PERFORMED AS DESIGNED DURING THE LOSS OF POWER TRANSIENT. VOLTAGE FLUCTUATIONS FROM A VOLTAGE REGULATOR BOARD IN THE STATIC INVERTER CAUSED AN OVERVOLTAGE CONDITION RESULTING IN THE TRIP OF THE ELECTRICAL SUPPLY BREAKERS TO THE 1BY160 PANEL. THE VOLTAGE FLUCTUATIONS WERE CAUSED BY HIGH AMBIENT TEMPERATURES IN THE STATIC INVERTER CABINET. THE HALF-SCRAM SIGNAL AND NSSSS ISOLATIONS WERE RESET. HOODS AND FANS WERE INSTALLED IN THE TOP OF THE INVERTER CABINETS TO CIRCULATE THE AIR AND REDUCE THE TEMPERATURE IN THE CABINET.

[191] LIMERICK 1 DOCKET 50-352 LER 85-025
 SPURIOUS ISOLATION OF RWCU SYSTEM OUTBOARD SUCTION VALVE.
 EVENT DATE: 021185 REPORT DATE: 031385 NSSS: GE TYPE: BWR

(NSIC 193565) ON 2-11-85 A SPURIOUS ISOLATION OF THE RWCU OCCURRED. THE OUTBOARD ISOLATION VALVE, HV-44-1F004, CLOSED TO ITS ISOLATION POSITION. THE ISOLATION WAS RESET AND THE RWCU SYSTEM WAS RETURNED TO SERVICE. CAUSE WAS NOT DETERMINED.

THERE WERE NO ADVERSE EFFECTS AS A RESULT OF THE RWCU ISOLATION. SIMILAR EVENTS: 352/84-035.

[192] LIMERICK 1 DOCKET 50-352 LER 85-027
SPURIOUS ISOLATION OF THE REACTOR WATER CLEANUP SYSTEM.
EVENT DATE: 022585 REPORT DATE: 032685 NSSS: GE TYPE: BWR

(NSIC 193617) ON 2-25-85 AT 12:43 AM WITH UNIT 1 IN THE STARTUP CONDITION AND AT 2.9% POWER, DURING PERFORMANCE OF THE DAILY SURVEILLANCE LOG, A SPURIOUS ISOLATION OF THE RWCU SYSTEM OCCURRED. THE ISOLATION WAS RESET AND RWCU WAS RETURNED TO SERVICE. THERE WERE NO ADVERSE CONSEQUENCES AS A RESULT OF THIS OCCURRENCE. IT IS BELIEVED THAT A MOMENTARY CHANGE IN STATE OF THE CONTACTS IN THE RWCU ISOLATION LOGIC CAUSED THIS EVENT. TEST EQUIPMENT HAS BEEN INSTALLED TO MONITOR THE STATUS OF THE CONTACTS WITHIN THE ISOLATION LOGIC TO PINPOINT WHICH DEVICE IS RESPONSIBLE FOR GENERATING THE ISOLATION SIGNAL. SIMILAR EVENTS: 352/84-012, 352/84-026, 352/84-034, 352/84-035, 352/84-036 AND 352/85-001.

[193] LIMERICK 1 DOCKET 50-352 LER 85-026
FAILURE OF A RPS STATIC INVERTER.
EVENT DATE: 022885 REPORT DATE: 030885 NSSS: GE TYPE: BWR
VENDOR: EXIDE INDUSTRIAL DIV

(NSIC 193570) ON 2-12-85, AT 7:23 AM, WITH UNIT 1 IN COLD SHUTDOWN, A SPURIOUS HALF-SCRAM SIGNAL ON THE 'A' RPS CHANNEL OCCURRED ALONG WITH THE OUTBOARD ISOLATION OF VARIOUS NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM SUBSYSTEMS. THE EVENT OCCURRED AS THE RESULT OF A TEMPORARY LOSS OF POWER TO THE 1A RPS AND UNINTERRUPTIBLE POWER SYSTEM 120V AC DISTRIBUTION PANEL NO. 1AY160. THE RPS AND NSSS SYSTEMS PERFORMED AS DESIGNED DURING THE LOSS OF POWER TRANSIENT. VOLTAGE FLUCTUATIONS FROM A VOLTAGE REGULATOR BOARD IN THE STATIC INVERTER CAUSED AN OVERVOLTAGE CONDITION RESULTING IN THE TRIP OF THE ELECTRICAL SUPPLY BREAKERS TO THE 1AY160 PANEL. THE VOLTAGE FLUCTUATIONS WERE CAUSED BY HIGH AMBIENT TEMPERATURES IN THE STATIC INVERTER CABINET. THE HALF-SCRAM SIGNAL AND NSSS ISOLATIONS WERE RESET. HOODS AND FANS WERE INSTALLED IN THE TOP OF THE INVERTER CABINETS TO CIRCULATE THE AIR AND REDUCE THE TEMPERATURE IN THE CABINET.

[194] MAINE YANKEE DOCKET 50-309 LER 84-014
THREE FIRE PROTECTION DEFICIENCIES FOUND.
EVENT DATE: 102384 REPORT DATE: 112184 NSSS: CE TYPE: PWR

(NSIC 192422) DURING THE WEEK OF 10-21-84, WHILE AT 100% POWER, MAINE YANKEE IDENTIFIED THREE FIRE PROTECTION DEFICIENCIES ASSOCIATED WITH THE DEGREE OF FIRE PROTECTION REQUIRED BY 10 CFR 50, APPENDIX R. THIS REPORT DOCUMENTS THE DEFICIENCIES IDENTIFIED IN THE DG FIRE AREA BOUNDARY, A MOTOR CONTROL CENTER SUPPRESSION SYSTEM, AND THE BOUNDARIES FOR FIRE AREAS ADJACENT TO CONTAINMENT. MAINE YANKEE ESTABLISHED A CONTINUOUS FIRE WATCH FOR THE DG ROOM BOUNDARIES AND A ROVING FIRE PATROL FOR THE OTHER AREAS FOUND TO BE DEFICIENT. THE DG DOORS WERE REPLACED WITH THREE HR RATED FIRE DOORS AND THE DERATED FIRE AREA BOUNDARIES WILL BE UPGRADED.

[195] MAINE YANKEE DOCKET 50-309 LER 84-016
TWO PLANT TRIPS CAUSED BY FEEDWATER SYSTEM MALFUNCTIONS.
EVENT DATE: 111084 REPORT DATE: 121184 NSSS: CE TYPE: PWR
VENDOR: BALKSDALE VALVE COMPANY
FISCHER & PORTER CO.
HAMMEL DAHL
STATIC-O-RING

(NSIC 193407) ON 11-10 AND 11-84, FEEDWATER CONTROL SYSTEM MALFUNCTIONS CAUSED TWO SIMILAR REACTOR TRIPS. BASED ON EXTENSIVE INVESTIGATION, IT IS BELIEVED THAT THE INITIATING EVENT FOR BOTH TRIPS WAS THE SPURIOUS OPENING OF THE P-2C TURBINE-DRIVEN FEED PUMP RECIRCULATION VALVE. THE SUSPECTED RECIRCULATION VALVE OPENING RESULTED IN A LOW SG LEVEL TO CAUSE THE FIRST TRIP. THE REACTOR TRIP ON THE NEXT DAY DUE TO LOW P-2C SUCTION PRESSURE WAS PROBABLY ALSO CAUSED BY RECIRCULATION VALVE OPENING. A FEED PUMP PRESSURE SWITCH WAS REPLACED AND THE CONDENSATE PUMP PRESSURE SWITCH WAS RECALIBRATED FOLLOWING THE FIRST TRIP. NO SIGNIFICANT PROBLEMS COULD BE FOUND IN THE RECIRCULATION VALVE OR ITS CONTROL AND POSITIONING EQUIPMENT. THE PLANT WAS RESTARTED AFTER THE SECOND TRIP WITH THE TURBINE-DRIVEN FEED PUMP SHUT DOWN AND HAS SUCCESSFULLY OPERATED AT 97% FOR 3 WEEKS USING 2 MOTOR-DRIVEN FEED PUMPS. THE P-2C RECIRCULATION VALVE CONTROL CIRCUITRY HAS BEEN MODIFIED TO INCREASE ITS RELIABILITY. THE PUMP WAS RETURNED TO SERVICE ON 12-8-84, AND THE RECIRCULATION CIRCUITRY APPEARS TO BE OPERATING AS IT SHOULD.

[196] MCGUIRE 1 DOCKET 50-369 LER 85-001
DAILY SURVEILLANCE FOR WASTE GAS STORAGE TANK NOT PERFORMED.
EVENT DATE: 122984 REPORT DATE: 020485 NSSS: WE TYPE: PWR

(NSIC 193370) ON 12-29-84, THE DAILY HEALTH PHYSICS SURVEILLANCE OF THE WASTE GAS DECAY TNAK (WGDT) WAS NOT COMPLETED WITHIN THE 24 HR INTERVAL AS REQUIRED BY TECH SPECS. THE CAUSE OF THE EVENT IS PERSONNEL ERROR. CORRECTIVE ACTIONS WILL EMPHASIZE THE USE OF CHECKLISTS IN THE PERFORMANCE OF ROUTINE DUTIES, AND DOCUMENTATION OF THE PERFORMANCE OF DUTIES WILL BE REVIEWED BY APPROPRIATE SUPERVISION. THE SURVEILLANCES PERFORMED ON THE DAY BEFORE AND THE DAY AFTER THE MISSED SURVEILLANCE SHOW WGDT RADIOACTIVITY LEVELS OF 118 AND 122 CURIES, RESPECTIVELY. IT IS, THEREFORE, HIGHLY IMPROBABLE THAT RADIOACTIVITY LEVELS EXCEEDED THE TECH SPECS LIMIT OF 49,000 CURIES ON 12-29.

[197] MCGUIRE 1 DOCKET 50-369 LER 85-003
SAFETY INJECTION BISTABLE DISABLED TO PREVENT SPURIOUS ACTUATION.
EVENT DATE: 012185 REPORT DATE: 022085 NSSS: WE TYPE: PWR

(NSIC 193426) ON 1-20, FREEZING TEMPERATURES IN THE AREA OF MCGUIRE NUCLEAR STATION CAUSED INSTRUMENT LINES TO FREEZE AND SEND ERRONEOUS SIGNALS TO THE RPS, THUS CREATING A LIKELIHOOD OF A SPURIOUS TRIP. SG 'A' MAIN STEAM LINE PRESSURE TRANSMITTERS BEGAN FAILING LOW AND SENDING ERRONEOUS SIGNALS TO THE LOW PRESSURE STEAM LINE ISOLATION AND SAFETY INJECTION CIRCUITS. DUE TO THE RECORD DEMAND FOR ELECTRICITY BECAUSE OF THE COLD, A COURSE OF ACTION WAS DEVELOPED TO PREVENT AN UNNECESSARY REACTOR TRIP. AT ABOUT 0400 ON 1-21, THE NRC REGIONAL ADMINISTRATOR WAS NOTIFIED OF DUKE'S PLAN TO JUMPER A FAILED CHANNEL OF THE PROCESS CONTROL SYSTEM, IN ORDER TO DISABLE THE OUTPUT TO THE RPS. THE JUMPER WAS INSTALLED, AND ADDITIONAL WEATHERIZATION WAS ADDED TO THE EXTERIOR DOGHOUSE AREA WHERE THE INSTRUMENT FREEZING PROBLEMS WERE OCCURRING. AFTER THE WEATHERIZATION WAS COMPLETE THE TEMPERATURE IN THE DOGHOUSE ROSE ENOUGH TO REMOVE THE POTENTIAL FOR FREEZING, AND AT ABOUT 0700 THE JUMPER WAS REMOVED, AND THE REGIONAL ADMINISTRATOR WAS NOTIFIED THAT THE UNUSUAL SITUATION WAS UNDER CONTROL.

[198] MCGUIRE 1 DOCKET 50-369 LER 85-006
REACTOR TRIP ON APPARENT HIGH NEGATIVE FLUX RATE.
EVENT DATE: 020585 REPORT DATE: 030785 NSSS: WE TYPE: PWR

(NSIC 193623) ON 2-5-85, MCGUIRE UNIT 1 TRIPPED ON A HIGH NEGATIVE FLUX RATE SIGNAL. THE CAUSE OF THE TRIP SIGNAL COULD NOT BE DETERMINED, DUE LARGELY TO THE INOPERABILITY OF THE EVENTS RECORDER AND THE RELATIVELY COARSE DATA-POINT INTERVALS OF THE ALARM TYPER (5 SECS) AND THE TRANSIENT MONITOR (1 SEC). A MEETING WAS HELD TO EVALUATE THE TRIP AND TO ATTEMPT TO IDENTIFY THE CAUSE BEFORE

THE DECISION WAS MADE TO RESTART. SEVERAL OTHER COMPONENT FAILURES WERE DISCOVERED FOLLOWING THE TRIP. DURING INVESTIGATION ACTIVITIES, LOOSE WIRING CONNECTIONS WERE FOUND ON THE 48V DC TERMINALS IN BOTH TRAIN A AND B CABINETS. IT WAS DETERMINED THAT THESE LOOSE WIRES COULD NOT HAVE CAUSED THE TRIP. THE VALVE ACTUATOR ON 1CF-126 WAS FOUND TO BE DAMAGED AFTER IT HAD SUCCESSFULLY CLOSED ON FEEDWATER ISOLATION. ALSO IEMP34 ALARMED FOLLOWING THE TRIP CAUSING BLOWDOWN ISOLATION. THIS WAS ATTRIBUTED TO THE SUSPECTED VERY SMALL PRIMARY TO SECONDARY LEAK IN SG C. FOLLOWING THE REACTOR TRIP, THE AUX FEEDWATER DOGHOUSE HEADER CHECK VALVE FAILED TO CLOSE AS THE TURBINE DRIVEN AUX FEEDWATER PUMP WAS SECURED FROM SERVICE. THIS CHECK VALVE HAS STUCK OPEN ON 2 PREVIOUS OCCASIONS. THESE 2 EVENTS ARE DISCUSSED IN LER 369/85-04.

[199] MCGUIRE 2 DOCKET 50-370 LER 84-034
LOSS OF VITAL INVERTER CAUSES FEEDWATER TRANSIENT AND REACTOR SCRAM.
EVENT DATE: 122184 REPORT DATE: 012285 NSSS: W3 TYPE: PWR

(NSIC 192823) ON 12-21-85, UNIT 2 TRIPPED FROM 100% POWER WHEN PREVENTIVE MAINTENANCE ON UNIT 1 125V AC VITAL I&C POWER RESULTED IN A UNIT 2 INVERTER BEING ERRONEOUSLY REMOVED FROM SERVICE, INSTEAD OF THE ADJACENT UNIT 1 INVERTER. THE RESULTING LOSS OF POWER TO THE ANALOG CONTROLLERS FOR SG LEVEL, FEEDWATER FLOW, AND STEAM FLOW RESULTED IN A FEEDWATER TRANSIENT, WHICH WAS CORRECTED BY SWITCHING TO MANUAL CONTROL AND TRANSFERRING THE CONTROLLERS TO ANOTHER CHANNEL. HOWEVER, THE TRANSFER TO ANOTHER CHANNEL WAS DONE INCOMPLETELY, IN THAT 1 OF 13 CONTROLLER SWITCHES WAS NOT MOVED TO THE ALTERNATE CHANNEL. WHEN CONTROL WAS RETURNED TO THE AUTOMATIC MODE, THE CONTRIBUTION OF THIS INOPERABLE INPUT TO AUTOMATIC CONTROL CAUSED THE LEVEL IN SG C TO FALL TO THE LOW-LOW TRIP SETPOINT. THE CAUSE OF THE EVENT WAS PERSONNEL ERROR BECAUSE AN OPERATOR AND AN INDEPENDENT VERIFIER FAILED TO IDENTIFY PROPERLY THE EQUIPMENT TO BE REMOVED FROM SERVICE. IN ADDITION, THE TRANSFER OF THE SG PROGRAM TO AN ALTERNATE CHANNEL WAS PERFORMED INCORRECTLY. CORRECTIVE ACTION WILL INCLUDE A RE-EMPHASIS WITH OPERATORS ON THE IMPORTANCE OF FOLLOWING PROCEDURES, AND VERIFICATION. ALSO, THE SG LOW-LOW LEVEL TRIP SETPOINT WILL BE LOWERED TO ALLOW OPERATORS MORE TIME TO DIAGNOSE AND COMPENSATE FOR SG LEVEL TRANSIENTS.

[200] MCGUIRE 2 DOCKET 50-370 LER 85-005
UNPLANNED AUTOMATIC START OF DIESEL GENERATOR.
EVENT DATE: 022885 REPORT DATE: 031485 NSSS: WE TYPE: PWR
VENDOR: NORDBERG

(NSIC 193683) DG 2B EXPERIENCED AN INVALID AUTOMATIC START WHEN AN ELECTRICAL STORM APPARENTLY CAUSED A VOLTAGE DIP ON THE TRAIN 'B' ESSENTIAL SWITCHGEAR. UNIT 2 WAS SHUTDOWN FOR REFUELING AT THE TIME. CORRECTIVE ACTIONS WILL CONSIST OF INSTALLATION OF A MODIFICATION TO THE UNDERVOLTAGE RELAYS TO PROVIDE A TIME DELAY TO AID IN SCREENING OUT SPURIOUS START SIGNALS.

[201] MILLSTONE 2 DOCKET 50-336 LER 84-011
REACTOR TRIPS FOLLOWING MSIV CLOSURE.
EVENT DATE: 111584 REPORT DATE: 121484 NSSS: CE TYPE: PWR
VENDOR: ATWOOD & MORRILL CO., INC.
MILLER FLUID POWER CO.

(NSIC 193444) THE PLANT WAS OPERATING AT 100% POWER. AT 0926 OPERATORS NOTICED NUMBER ONE SG MAIN STEAM ISOLATION VALVE HAD MOVED FROM ITS FULLY OPEN POSITION. THIS WAS INDICATED BY DUAL LIGHTS (RED-OPEN AND GREEN-CLOSED) ON THE CONTROL BOARD. AT 0931 THE MSIV INDICATED FULLY SHUT AND SG #1 STEAM PRESSURE WENT HIGH TO 950 PSIA. AS STEAM FLOW FROM THE #1 SG DECREASED TO ZERO, RCS HEAT REMOVAL FROM LOOP #1 DECREASED AND AS A RESULT LOOP #1 TEMPERATURE-COLD VALUES INCREASED. IN ADDITION, RCS AVERAGE TEMPERATURE INCREASED CAUSING INCREASED NEUTRON LEAKAGE

FOLLOWED BY A REACTOR TRIP DUE TO THERMAL MARGIN/LOW PRESSURE. THE MSIV IS A 36-INCH DIAMETER, SWING CHECK VALVE MANUFACTURED BY ATWOOD AND MORRILL. THE AIR OPERATOR CYLINDER IS A MILLER MODEL 74B. THE PLANT RESPONDED NORMALLY TO THE TRIP, ALL SYSTEMS AND PERSONNEL PERFORMED AS EXPECTED. REACTOR TRIP AND POST TRIP ACTIONS WERE PERFORMED IN ACCORDANCE WITH PLANT PROCEDURES. INVESTIGATION HAS REVEALED SEAL DEGRADATION IN THE AIR OPERATOR CYLINDER OF THE CHECK VALVE. THIS CAUSED THE DISC TO MOVE DOWN INTO THE STEAM FLOW STOPPING FLOW. THE AIR OPERATOR CYLINDER AND TEST CYLINDER WERE REPLACED. THE UNAFFECTED MSIV AIR-OPERATED CYLINDER AND TEST CYLINDER WERE ALSO REPLACED. CURRENTLY THE AIR OPERATOR CYLINDER SEALS ARE REPLACED EVERY REFUEL OUTAGE. THE CAUSE OF THE SEAL DEGRADATION IS NOT READILY APPARENT. THE SEALS APPEARED DRY AND BRITTLE.

[202] MILLSTONE 2 DOCKET 50-336 LER 85-001
 ERROR IN SMALL BREAK LOCA SAFETY ANALYSIS.
 EVENT DATE: 012385 REPORT DATE: 022085 NSSS: CE TYPE: PWR

(NSIC 193466) AN INCONSISTENCY WAS FOUND BETWEEN THE TECH SPEC REQUIREMENT ON AXIAL SHAPE INDEX (ASI) AND THE SAFETY ANALYSIS ASSUMPTIONS ON ASI THAT ARE INPUT TO THE MILLSTONE 2 SMALL BREAK LOCA ANALYSIS. THE UNIT 2 SMALL BREAK LOCA ANALYSIS WAS PERFORMED BY COMBUSTION ENGINEERING. THE EVENT WAS DECLARED IMMEDIATELY REPORTABLE BY SITE PROCEDURES AND FALLS UNDER THE 30 DAY REPORTABLE CRITERIA OF 50.73(A)(2) V & VI. THE ASI INCONSISTENCY BETWEEN TECH SPECS AND SAFETY ANALYSIS COULD HAVE ALLOWED PLANT OPERATION IN AN UNANALYZED REGION SHOULD A SMALL BREAK LOCA OCCUR. ADMINISTRATIVE CONTROLS WERE IMMEDIATELY IMPLEMENTED TO PRECLUDE ANY UNANALYZED OPERATION UNTIL FURTHER CORRECTIVE ACTIONS COULD BE IMPLEMENTED. REANALYSIS HAS SHOWN THAT WHEN THE CORRECT ASI INPUTS ARE USED IN THE SMALL BREAK LOCA MODEL, PEAK CLAD TEMPERATURES (PCT) INCREASE FROM 1971 DEGREES F TO 2035 DEGREES F, STILL WITHIN THE 2200 DEGREES F 10CFR50.46 LOCA LIMITS ON PCT.

[203] MONTICELLO DOCKET 50-263 LER 84-025
 INADVERTENT START OF EDG WHILE ISOLATING BUS.
 EVENT DATE: 071584 REPORT DATE: 081484 NSSS: GE TYPE: BWR

(NSIC 193492) WHILE ISOLATING THE #16 BUS FOR RELAY MAINTENANCE, THE #11 EMERGENCY DG STARTED WHEN AN OPERATOR OPENED A BUS POTENTIAL TRANSFORMER DOOR ON THE REAR OF CUBICLE 152-610 RATHER THAN CUBICLE 152-601 AS REQUIRED BY THE PROCEDURE. THE DG STARTED PROPERLY. DG DID NOT LOAD ONTO THE BUS AS THE BUS WAS BEING SUPPLIED BY AN OFF-SITE POWER SOURCE. DG WAS SHUT DOWN. OPERATORS WERE REMINDED TO TAKE CARE IN READING NUMBERS AND POTENTIAL CONSEQUENCES OF INVERTING TWO DIGITS. CAUTION TAG PLACED ON BUS POT DOOR WARNING OF POTENTIAL DG START IF DOOR IS OPENED. A MODIFICATION IS IN PROGRESS TO ELIMINATE DG START FROM OPENING OF SUBJECT BUS XPT DOOR.

[204] MONTICELLO DOCKET 50-263 LER 84-027
 INADVERTENT LOSS OF AUXILIARY RESERVE TRANSFORMER.
 EVENT DATE: 091284 REPORT DATE: 101284 NSSS: GE TYPE: BWR

(NSIC 193493) WHILE PULLING WIRES INTO A SUBSTATION PANEL, A LARGE CABLE JARRED AN ADJACENT PANEL AND TRIPPED THE 345KV BUS DIFFERENTIAL RELAY(S). THIS DEENERGIZED THE SOURCE FOR THE AUX RESERVE TRANSFORMER RESULTING IN THE AUTO-START OF BOTH EMERGENCY DG'S AS DESIGN INTENDED. OFFSITE POWER TO THE PLANT WAS BEING SUPPLIED BY THE RESERVE TRANSFORMER DURING THIS TIME AND LOSS OF VOLTAGE ON THE AUX RESERVE TRANSFORMER HAD NO EFFECT ON PLANT OPERATION. THE DIESELS WERE SUBSEQUENTLY SHUT DOWN. AFTER THE EVENT, SUBSTATION WORKERS WERE REMINDED OF THE SHOCK SENSITIVITY OF DIFFERENTIAL RELAYS. THIS DIESEL START SIGNAL WILL BE ELIMINATED UPON COMPLETION OF THE DIESEL START MODIFICATION CURRENTLY BEING INSTALLED.

[205] MONTICELLO DOCKET 50-263 LER 85-002
 ESF ACTUATION OCCURS DURING DIESEL GENERATOR TESTING.
 EVENT DATE: 011385 REPORT DATE: 021285 NSSS: GE TYPE: BWR

(NSIC 193343) WHILE PERFORMING EMERGENCY DG AUTOMATIC FAST START INITIATION TEST, PROCEDURE INADEQUACY DURING THE DEGRADED AND LOSS OF VOLTAGE RELAY RESTORATION RESULTED IN THE TRANSFER OF 1 ESSENTIAL 4KV BUS TO THE AUX RESERVE TRANSFORMER. THE MOMENTARY LOSS OF VOLTAGE CAUSED A HALF SCRAM, GROUP II ISOLATION, EFT AND STANDBY GAS TREATMENT SYSTEM INITIATIONS AND LOAD SHED OF ALL NON-ESSENTIAL MOTOR CONTROL CENTERS SUPPLIED BY THE ESSENTIAL 4KV BUS. THE EMERGENCY DG'S WERE ISOLATED AT THE TIME OF THE EVENT FOR THIS TEST PROCEDURE AND THEREFORE DID NOT START. ESSENTIAL BUS WAS PROMPTLY RETURNED TO ITS NORMAL SOURCE. THE HALF SCRAM, GROUP II ISOLATION AND STANDBY GAS TREATMENT SYSTEM WERE RESET. THE EFT WAS RETURNED TO ITS NORMAL MODE AND THE LOAD SHED MOTOR CONTROL CENTERS WERE RE-ENERGIZED. THE DEGRADED AND LOSS OF VOLTAGE RESTORATION SECTION OF THE TEST PROCEDURE WILL BE REVISED TO PREVENT A SIMILAR EVENT.

[206] MONTICELLO DOCKET 50-263 LER 85-003
 SPURIOUS TRIP OF HYDROGEN CHLORIDE MONITOR.
 EVENT DATE: 012985 REPORT DATE: 022885 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193396) DURING POWER OPERATION ON 1-29-85, AT 1915, THE EFT SYSTEM (CONTROL ROOM HVAC) AUTOMATICALLY TRANSFERRED TO THE TOXIC CHEMICAL EMERGENCY MODE (ISOLATION OF OUTSIDE AIR INTAKE AND EXHAUST) AS THE RESULT OF A SPURIOUS TRIP OF HYDROGEN CHLORIDE MONITOR AT-9036 (MDA SCIENTIFIC MODEL 7025 FAN). THE MONITOR WAS RESET AND THE SYSTEM RETURNED TO NORMAL OPERATION. INVESTIGATION REVEALED NO APPARENT CAUSE FOR THE SPURIOUS TRIP; SUBSEQUENT OPERATION OF THE MONITOR HAS BEEN SATISFACTORY. THERE HAVE BEEN TWO PREVIOUS SIMILAR OCCURRENCES, LER'S 84-002 AND 84-031.

[207] MONTICELLO DOCKET 50-263 LER 85-004
 FLOW THROUGH RHR INTERTIE LINE WHILE IN RUN MODE CAUSES POWER INCREASE.
 EVENT DATE: 020185 REPORT DATE: 030185 NSSS: GE TYPE: BWR

(NSIC 193344) ON 1-1-85, AT 4:00 CDT FLOW WAS ESTABLISHED IN THE RHR INTERTIE LINE WHILE THE REACTOR WAS IN THE RUN MODE. THIS IS A CONDITION PROHIBITED BY TECH SPEC 3.5.B.7. THE PLANT WAS OPERATING AT 100% POWER WHEN THE EVENT OCCURRED. THE EVENT OCCURRED DURING NORMAL QUARTERLY EXERCISING OF THE RHR SYSTEM VALVES. FLOW WAS ALLOWED THROUGH THE INTERTIE LINE WHEN MO-4085A, A RHR INTERTIE VALVE, WAS CYCLED OPEN. MO-4086, RHR SUCTION INTERTIE VALVE, IS NORMALLY OPEN. OPENING MO-4085A WITH MO-4086 OPEN CREATED A FLOW PATH THROUGH THE INTERTIE PIPING. THE FLOW OF COOLER WATER INTO THE REACTOR RECIRCULATION SYSTEM CAUSED A MOMENTARY INCREASE (10%) IN REACTOR POWER. MO-4085A WAS CYCLED CLOSED AND FLOW THROUGH THE INTERTIE LINE WAS STOPPED. THE EVENT WAS CAUSED BY AN IMPROPER PROCEDURE. THE RHR INTERTIE LINE WAS INSTALLED RECENTLY AND THIS WAS THE FIRST USE OF THE PROCEDURE WITH THE REACTOR AT POWER. THE PROCEDURE HAS BEEN REVISED TO PREVENT A FLOWPATH FROM BEING ESTABLISHED DURING EXERCISING OF THE VALVES. THIS WILL PREVENT A RE-OCCURRENCE OF THIS EVENT.

[208] MONTICELLO DOCKET 50-263 LER 85-005
 TRIP OF HYDROGEN CHLORIDE MONITOR DUE TO TAPE SMUDGE.
 EVENT DATE: 021085 REPORT DATE: 030885 NSSS: GE TYPE: BWR
 VENDOR: M D A SCIENTIFIC, INC.

(NSIC 193397) DURING POWER OPERATION ON 2-10-85 AT 1900, THE EFT SYSTEM (CONTROL ROOM HVAC) AUTOMATICALLY TRANSFERRED TO THE TOXIC CHEMICAL EMERGENCY MODE (ISOLATION OF OUTSIDE AIR INTAKE AND EXHAUST) AS A RESULT OF A FAILURE OF THE

TAPE DRIVE MECHANISM OF CHLORINE MONITOR AT 9046B (MDA SCIENTIFIC MODEL 7040 PAN). CAUSE OF THE FAILURE WAS MECHANICAL JAMMING OF THE MECHANISM, CAUSING THE DETECTOR TAPE TO DISCOLOR AND RESULTING IN A MONITOR TRIP. THE DRIVE MECHANISM WAS REPAIRED BY ADJUSTING THE CASSETTE DRIVE MAGNETS, AND THE EFT SYSTEM RETURNED TO NORMAL OPERATION. TO PREVENT A RECURRENCE OF THIS EVENT, A PERIODIC CHECK OF THE ALIGNMENT OF THE CASSETTE DRIVE MAGNETS WILL BE PERFORMED. IN ADDITION, WE HAVE INITIATED A PROJECT TO REPLACE THESE MONITORS WITH MORE RELIABLE EQUIPMENT.

[209] NINE MILE POINT 1 DOCKET 50-220 LER 85-001
AUTOMATIC INITIATION OF REACTOR BUILDING EMERGENCY VENTILATION SYSTEM.
EVENT DATE: 012385 REPORT DATE: 022285 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 193536) DURING NORMAL OPERATION ON 1-23-85, THE FIRST OF THREE AUTO INITIATIONS OF THE REACTOR BLDG EMERGENCY VENTILATION SYSTEM OCCURRED (OTHER INITIATIONS OCCURRED ON 1-24-85 AND 2-7-85). THE THREE INITIATIONS WERE A RESULT OF AN OFF-NORMAL SPIKING OF NO. 11 REACTOR BLDG VENTILATION DUCT RADIATION MONITOR. IN EACH CASE A WORK REQUEST WAS ISSUED TO TROUBLESHOOT THE PROBLEM AND RECALIBRATE THE UNIT AFTER CORRECTIONS WERE MADE. AFTER INITIALLY TIGHTENING, AND THEN REWIRING THE SENSOR CONVERTER CABLE CONNECTORS, THE SENSOR CONVERTER UNIT WAS REPLACED AND SOURCE CALIBRATED FOLLOWING THE THIRD EMERGENCY VENTILATION INITIATION. PROBLEMS WITH NO. 11 REACTOR BLDG VENTILATION DUCT RADIATION MONITOR HAVE BEEN RESOLVED AND THE UNIT IS OPERATING PROPERLY.

[210] NINE MILE POINT 1 DOCKET 50-220 LER 85-002
INOPERABLE DAMPER AFFECTED AUX CONTROL ROOM HALON SYSTEM.
EVENT DATE: 021485 REPORT DATE: 031485 NSSS: GE TYPE: BWR

(NSIC 193516) WHILE PERFORMING A ROUTINE SURVEILLANCE TEST, FIRE DAMPERS IN THE AUX CONTROL ROOM VENTILATION SYSTEM WERE FOUND INOPERABLE RENDERING THE HALON FIRE SUPPRESSION SYSTEM INOPERABLE IN THE EVENT OF AN AUX CONTROL ROOM FIRE. IMMEDIATE ACTION REQUIRED BY TECH SPECS WAS NOT TAKEN AND SUBSEQUENT REPAIRS TO THE DAMPERS WERE COMPLETED AFTER THE 14 DAY TECH SPEC LIMIT.

[211] NINE MILE POINT 1 DOCKET 50-220 LER 85-003
REACTOR SCRAMS WHILE PERFORMING SURVEILLANCE TEST.
EVENT DATE: 030485 REPORT DATE: 040485 NSSS: GE TYPE: BWR

(NSIC 193591) ON 3-14-85, I&C TECHNICIANS WERE PERFORMING SURVEILLANCE PROCEDURE N1-ISP-ATWS. LEVEL TRANSMITTER LT-36-21A WAS VALVED OUT OF SERVICE AND CONNECTIONS WERE MADE PER PROCEDURAL REQUIREMENTS. INITIAL READINGS INDICATED A GROSS VOLTAGE ERROR. TO ELIMINATE THIS ERROR, TECHNICIANS INVOLVED BEGAN PURGING AIR FROM THE TRANSMITTER, MANIFOLD ASSEMBLY, AND ASSOCIATED TUBING. WHILE MANIPULATING VALVES TO PURGE AIR FROM THE SYSTEM AN INADVERTENT, MOMENTARY, WATER HAMMER WAS INTRODUCED INTO THE TRANSMITTER'S LOW-SIDE. THE WATER HAMMER ALSO APPEARED ON THE REFERENCE HEADER, AND WAS TRANSMITTED TO ALL DEVICES CONNECTED TO THIS HEADER. TWO EXTREMELY SENSITIVE PIECES OF INSTRUMENTATION WHICH MONITOR REACTOR LEVEL AND PROVIDE RPS TRIPS FOR REACTOR LOW-LEVEL SCRAM AND TURBINE TRIP ARE CONNECTED TO THIS HEADER. THESE ARE TRANSMITTERS 36-03A AND 36-03B. THIS WATER-HAMMER AMOUNTING TO A ONE POUND SURGE WAS SUFFICIENT TO INITIATE THE LOW LEVEL CHANNEL 11 AND CHANNEL 12 SAFETY SYSTEMS WHICH RESULTED IN A FULL SCRAM. PROCEDURE N1-ISP-ATWS HAS BEEN REVISED TO CAUTION TECHNICIANS TO THE EFFECT OF VALVING ERRORS ON OTHER TRANSMITTERS ON THE SENSING LINES.

[212] NINE MILE POINT 1 DOCKET 50-220 LER 85-004
 HPCI INITIATION DUE TO HIGH REACTOR WATER LEVEL.
 EVENT DATE: 030485 REPORT DATE: 040485 NSSS: GE TYPE: BWR

(NSIC 193592) WHILE UNIT 1 WAS SHUTDOWN AND THE MODE SWITCH WAS IN THE REFUEL POSITION, THE REACTOR WATER LEVEL WAS ALLOWED TO DRIFT HIGH CAUSING A TURBINE TRIP SIGNAL AND SUBSEQUENT HPCI INITIATION. THE CAUSE WAS OPERATOR ERROR. LEVEL CONTROL WAS THEN ADJUSTED AND REACTOR WATER LEVEL RETURNED TO NORMAL.

[213] NORTH ANNA 1 DOCKET 50-338 LER 84-012
 POSITIVE MODERATOR TEMPERATURE COEFFICIENT.
 EVENT DATE: 092584 REPORT DATE: 100484 NSSS: WE TYPE: PWR

(NSIC 193654) ON 9-25-84, NORTH ANNA POWER STATION, UNIT 1, FUEL CYCLE 5'S MODERATOR TEMPERATURE COEFFICIENT WAS DETERMINED TO BE MORE POSITIVE THAN 0 DELTA K K/F. A POSITIVE MTC WAS EXPECTED. THE NEW FUEL LOADING HAS A HIGH POTENTIAL BURNUP OF 16000 MWD/MTU. THIS HIGH BURNUP REQUIRES A HIGH INITIAL CRITICAL BORON CONCENTRATION WHICH PRODUCES A SLIGHTLY POSITIVE MTC WITH ALL RODS OUT AT ZERO POWER. INTERIM CONTROL ROD WITHDRAWAL LIMITS HAVE BEEN IMPLEMENTED TO PREVENT OPERATING WITH A POSITIVE MTC. A CORE BURNUP OF 600 MWD/MTU IS EXPECTED TO BE NECESSARY TO RESTORE THE MTC TO WITHIN ITS LIMIT FOR ALL RODS WITHDRAWN CONDITION. THIS EVENT IS REPORTABLE PURSUANT TO TECH SPEC 6.9.2 (SPECIAL REPORTS).

[214] OCONEE 1 DOCKET 50-269 LER 85-001
 FAILURE OF ENGINEERED SAFEGUARDS POWER SUPPLY.
 EVENT DATE: 011185 REPORT DATE: 021185 NSSS: BW TYPE: PWR
 VENDOR: BAILEY METER COMPANY

(NSIC 193667) OCONEE 1 WAS OPERATING AT 100% POWER ON 1-11-85 AT 0920 HRS, WHEN A POWER SUPPLY IN 1 OF THE ENGINEERED SAFEGUARDS PROTECTION SYSTEM CABINETS WAS LOST DUE TO A FAILED COMPONENT IN ITS CIRCUITRY. BECAUSE THE AFFECTED POWER SUPPLY SERVED PORTIONS OF SUBSYSTEMS IN ANOTHER CABINET, 1 OF 2 TRAINS OF ES SYSTEMS (HPI, LPI, RBS, AND RBCU) WAS RENDERED INOPERABLE. THE AVAILABILITY OF ONLY 1 ES TRAIN PLACED THE UNIT UNDER A LCO PURSUANT TO TECH SPEC 3.5.1; ACCORDINGLY, UNIT 1 BEGAN POWER REDUCTION. SHORTLY THEREAFTER, THE PROBLEM WAS DIAGNOSED, AND REPAIR WAS COMPLETED. THE UNIT WAS SUBSEQUENTLY RETURNED TO FULL POWER BY 1106 HRS. FURTHER CORRECTIVE ACTION WILL CONSIST OF OBTAINING THE REQUIRED NUMBER OF REPLACEMENT COMPONENTS, OF THE TYPE WHICH FAILED, AND INSTALLING THEM INTO OTHER SIMILAR POWER SUPPLIES DURING UPCOMING SCHEDULED OUTAGES. THIS SHOULD REDUCE THE LIKELIHOOD OF A REOCCURRENCE OF THIS EVENT IN THE FUTURE.

[215] OCONEE 1 DOCKET 50-269 LER 85-003
 MISCALCULATION CAUSED ESPAS HPI SYSTEM ACTUATION SETPOINT MALADJUSTMENT.
 EVENT DATE: 022885 REPORT DATE: 032585 NSSS: BW TYPE: PWR
 OTHER UNITS INVOLVED: OCONEE 2 (PWR)
 OCONEE 3 (PWR)

(NSIC 193550) IT WAS DETERMINED THAT THE OCONEE UNITS' ESPAS SETPOINT FOR THE INITIATION OF HIGH PRESSURE INJECTION SHOULD BE ADJUSTED FROM 1550 PSIG TO 1600 PSIG. THE CHANGE TO 1600 PSIG WAS BASED ON B&W'S REANALYSIS OF SMALL BREAK LOCA TRANSIENTS, WHICH INDICATED THAT THE RCS MIGHT NOT DEPRESSURIZE TO THE EXTENT PREVIOUSLY CALCULATED. THE MOTIVATION FOR THE REVISED ANALYSIS ARISES FROM LESSONS LEARNED AS A RESULT OF THE ACCIDENT AT TMI, AND OTHER INVESTIGATIONS PERFORMED IN RESPONSE TO NUREG-0737. CHANGES IN THE SETPOINT FOR ALL THE LOW RCS PRESSURE BISTABLES, AT ALL THREE OCONEE UNITS, WERE INCORPORATED ON 2-22-85, AND ALL AFFECTED DOCUMENTATION WAS REVISED ACCORDINGLY.

[216] OYSTER CREEK DOCKET 50-219 LER 84-028
 TWO ELECTROMATIC RELIEF VALVES FAIL TO OPEN.
 EVENT DATE: 110484 REPORT DATE: 121184 NSSS: GE TYPE: BWR
 VENDOR: DRESSER INDUSTRIES, INC.

(NSIC 192730) DURING START-UP SURVEILLANCE TESTING, 2 OF 5 ELECTROMATIC RELIEF VALVES ASSOCIATED WITH THE AUTOMATIC DEPRESSURIZATION SYSTEM FAILED TO OPERATE AS DESIGNED. INVESTIGATION AS TO THE CAUSE OF THE FAILURE REVEALED THAT A LEAK PATH EXISTED AROUND A THREADED RETAINER WHICH PREVENTED THE VALVE FROM PORTING ITS LOWER PRESSURE CHAMBER CAUSING THE VALVE TO REMAIN CLOSED. MAINTENANCE PROCEDURES WERE REVISED TO PROVIDE FOR SEAL WELDING OF THE RETAINER. ADDITIONALLY, VALVES WILL BE BENCH TESTED AT 200 PSIG PRIOR TO INSTALLATION TO PROVIDE ADDITIONAL ASSURANCE OF OPERABILITY.

[217] OYSTER CREEK DOCKET 50-219 LER 84-031
 FAILURE OF MAIN STEAM DRAIN VALVES TO OPERATE.
 EVENT DATE: 120584 REPORT DATE: 010385 NSSS: GE TYPE: BWR

(NSIC 193489) DURING PERFORMANCE OF THE MSIV CLOSURE AND IN-SERVICE TEST, MAIN STEAM DRAIN VALVES V-1-106, V-1-107 AND V-1-110 FAILED TO OPERATE WHEN GIVEN APPROPRIATE SIGNALS. THE VALVES WERE OPERATED ONE AT A TIME AND WERE ISOLATED PRIOR TO OPERATING THE NEXT VALVE. ALL VALVES FAILED IN THE PARTIALLY OPEN POSITION. THE OTHER REMAINING MAIN STEAM DRAIN VALVE, V-1-111, WAS OPERABLE AND PASSED THE IST. ELECTRICIANS WERE NOTIFIED AND PERFORMED IMMEDIATE MAINTENANCE. VALVES V-1-106 AND V-1-107 WERE CLOSED BY BYPASSING THE CONTROL CIRCUITRY. V-1-110 WAS CLOSED MANUALLY. ALL VALVES WERE DEACTIVATED AND SECURED IN THEIR ISOLATION POSITION AS REQUIRED BY THE TECH SPECS. THE CAUSE OF OCCURRENCE INDICATES THAT THE TORQUE SWITCHES HAD OPENED PREVENTING OPERATION OF THE VALVES.

[218] OYSTER CREEK DOCKET 50-219 LER 85-004
 VIOLATION OF APLHGR LIMIT.
 EVENT DATE: 010285 REPORT DATE: 030485 NSSS: GE TYPE: BWR

(NSIC 193551) THE POWER SHAPE MONITORING SYSTEM IS A NEW CORE MONITORING SYSTEM WHICH IS BEING USED FOR THE FIRST TIME AT OYSTER CREEK FOR TECH SPEC THERMAL LIMITS COMPLIANCE. DURING THE PERIOD OF 1-2 TO 1-30-85, THE OYSTER CREEK CORE WAS HIGHLY BOTTOM PEAKED DURING HIGH POWER/FLOW OPERATION FOR THE FIRST TIME IN THE CURRENT CYCLE. DURING THIS PERIOD NO MEASURED LPRM OR TRAVERSING INCORE PROBE DATA FEEDBACK ADJUSTMENTS WERE MADE TO THE MODEL. AS A RESULT, PSMS POWER DISTRIBUTION AND THERMAL LIMITS CALCULATIONS WERE INADEQUATELY MONITORING CORE CONDITIONS DUE TO THE FLUX PEAKING, WHICH WAS OUTSIDE THE RANGE OF CALIBRATION OF THE MODEL. THE BOTTOM PEAKS VIOLATED AXIAL POWER LINEAR HEAT GENERATION RATE (APLHGR) LIMITS. APLHGR VIOLATIONS WENT UNDETECTED UNTIL SUCH TIME WHEN PSMS MODEL PERFORMANCE WAS ADJUSTED TO BE WITHIN THE ESTABLISHED ACCEPTANCE CRITERIA. IMMEDIATE ACTION WAS THEN TAKEN TO REDUCE APLHGR BELOW THE TECH SPEC LIMIT.

[219] OYSTER CREEK DOCKET 50-219 LER 85-003
 DESIGN DEFICIENCY IN CORE SPRAY PUMP LOGIC.
 EVENT DATE: 012985 REPORT DATE: 022785 NSSS: GE TYPE: BWR

(NSIC 193548) ON 1-29-85, A DESIGN DEFICIENCY WAS DISCOVERED IN THE CORE SPRAY SYSTEM BOOSTER PUMP FAILURE LOGIC. DISCHARGE PRESSURE OF THE BOOSTER PUMPS IS UTILIZED TO DETECT A BOOSTER PUMP FAILURE WHICH WILL TRIP THE FAILED PUMP AND PROVIDE A START SIGNAL TO THE BACKUP BOOSTER PUMP. TWO EVENTS WERE IDENTIFIED WHICH CAN CAUSE THIS INSTRUMENTATION TO MISINTERPRET CORE SPRAY SYSTEM STATUS AND RESULT IN THE SYSTEM NOT PERFORMING ACCORDING TO ITS ORIGINAL DESIGN INTENT. THE CAUSE OF THIS OCCURRENCE IS A DEFICIENCY IN THE ORIGINAL PLANT DESIGN. CORRECTIVE ACTION CONSISTED OF PERFORMING A MODIFICATION TO REPLACE THE PRESSURE

SWITCHES ON THE BOOSTER PUMP DISCHARGE WITH DIFFERENTIAL PRESSURE SWITCHES. THE DIFFERENTIAL PRESSURE SWITCHES WILL SENSE DIFFERENTIAL PRESSURE ACROSS THE BOOSTER PUMP. THIS MODIFICATION WILL ALLOW THE PUMP FAILURE LOGIC TO PERFORM AS ORIGINALLY DESIGNED UNDER ALL POSTULATED CONDITIONS.

[220] OYSTER CREEK DOCKET 50-219 LER 85-002
TWO INOPERABLE RWCU CONTAINMENT ISOLATION VALVES.
EVENT DATE: 020285 REPORT DATE: 030185 NSSS: GE TYPE: BWR
VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 193549) ON 2-2-85, TWO CONTAINMENT ISOLATION VALVES IN A SINGLE PENETRATION WERE INOPERABLE. DURING A PLANNED SHUTDOWN, A RWCU SYSTEM ISOLATION VALVE WAS REQUIRED TO BE TAKEN OFF ITS BACKSEAT. AN ELECTRICIAN WAS DISPATCHED TO THE MOTOR CONTROL CENTER SUPPLYING THE VALVE TO ENGAGE THE CLOSING CONTACTOR. TO PREVENT FULL CLOSURE OF THE VALVE DUE TO A SEAL-IN CLOSING SIGNAL, THE ELECTRICIAN MANUALLY TRIPPED THE BREAKER. THE BREAKER TRIP CAUSED THE CLEANUP RECIRCULATION PUMP TO TRIP, WHICH IN TURN CAUSED A CLEANUP SYSTEM ISOLATION ON LOW FLOW. A SECOND ISOLATION VALVE FAILED TO FULLY CLOSE ON THE SYSTEM ISOLATION SIGNAL, RESULTING IN 2 INOPERABLE ISOLATION VALVES IN A SINGLE PENETRATION. WHEN THE SECOND ISOLATION VALVE FAILED TO CLOSE, THE BREAKER FOR V-16-1 WAS RE-CLOSED AND THE VALVE TRAVELLED TO THE FULL CLOSED POSITION. VALVE V-16-1 WAS LEFT SECURED IN THE CLOSED POSITION AND VALVE V-16-61 WAS SECURED CLOSED WITHIN 4 HRS IN ACCORDANCE WITH TECH SPECS.

[221] OYSTER CREEK DOCKET 50-219 LER 85-005
SIX PIPE BREAK SENSORS FOR THE ISOLATION CONDENSER FAIL.
EVENT DATE: 021085 REPORT DATE: 030885 NSSS: GE TYPE: BWR
VENDOR: ITT-BARTON

(NSIC 193515) DURING ROUTINE SURVEILLANCE TESTING, PIPE BREAK SENSORS IB05A1, IB05B1, IB11A1, IB11A2, IB11B1 AND IB11B2 FOR BOTH ISOLATION CONDENSERS STEAM AND CONDENSATE LINES, TRIPPED AT VALUES GREATER THAN SPECIFIED IN THE TECH SPECS, TABLE 3.1.1. SENSORS IB05A1, IB05B1, IB11A2, IB11B1 AND IB11B2 WERE RESET TO TRIP WITHIN DESIRED SET POINT LIMITS. THE CAUSE FOR FAILURE IS INSTRUMENT DRIFT. SENSOR IB11A1 HAD A DEFECTIVE SWITCH ACTUATING CAM; THE DEFECTIVE CAM WAS REPLACED AND THE SENSOR WAS SET TO TRIP WITHIN LIMITS.

[222] PALO VERDE 1 DOCKET 50-528 LER 85-001
INADVERTENT CONTROL ROOM ESSENTIAL VENTILATION ACTUATION.
EVENT DATE: 011385 REPORT DATE: 021285 NSSS: CE TYPE: PWR

(NSIC 193382) AN INADVERTENT ACTUATION OF THE CONTROL ROOM ESSENTIAL FILTRATION SIGNAL (CREPAS) OCCURRED DURING ROUTINE SURVEILLANCE TESTING. THE SURVEILLANCE PROCEDURE CALLED FOR THE OPERATOR TO RESET A CONTAINMENT PURGE ISOLATION ACTUATION SIGNAL (CPIAS) WHICH WAS ACTUATED AS PART OF THE SURVEILLANCE. HOWEVER, THE SURVEILLANCE PROCEDURE DID NOT PROVIDE SPECIFIC INFO REGARDING SIGNAL RESETTNG. THE OPERATOR PRESSED THE WRONG PUSH BUTTON AND ACTUATION OF CREPAS OCCURRED. ALL COMPONENTS ASSOCIATED WITH THE CREPAS FUNCTIONED PROPERLY. THE CPIAS AND CREPAS CIRCUITRY WAS FUNCTIONALLY TESTED AND THE SURVEILLANCE PROCEDURE WAS REVISED TO PROVIDE SPECIFIC INSTRUCTION ON RESETTNG ACTION SIGNALS.

[223] PALO VERDE 1 DOCKET 50-528 LER 85-002
LOSS OF INDICATION ON SPRAY POND PUMP BREAKER.
EVENT DATE: 011385 REPORT DATE: 021285 NSSS: CE TYPE: PWR

(NSIC 193383) UPON THE INADVERTENT START OF ESSENTIAL SPRAY POND PUMP SPA-P01 DUE TO A CONTROL ROOM ESSENTIAL FILTRATION ACTUATION SIGNAL (CREPAS) AND THEN

SUBSEQUENT SHUTDOWN, THE OPERATOR NOTICED THAT NO BREAKER OPEN INDICATION (GREEN LIGHT) OCCURRED. THE OPERATOR INSPECTED THE FUSE AND FOUND IT OPEN. THE FUSE WAS REPLACED AND IMMEDIATELY OPENED AGAIN. PLANT ELECTRICIANS WERE CALLED TO INVESTIGATE THE PROBLEM. A 7/16" WASHER WAS FOUND LODGED BETWEEN THE POSITIVE AND NEGATIVE LEADS OF THE 752X COIL. THIS WASHER HAD APPARENTLY BEEN LEFT ON THE COIL DURING CONSTRUCTION AND WAS HIDDEN BY THE COIL'S SEISMIC SHIELDING. NORMAL EQUIPMENT VIBRATION CAUSED THE WASHER TO FALL BETWEEN THE TWO LEADS AND SHORT THEM OUT. LER 85-001 CONTAINS ADDITIONAL INFORMATION.

[224] PALO VERDE 1 DOCKET 50-528 LER 85-003
AUTOMATIC ACTUATION OF CONTROL ROOM ESSENTIAL FILTRATION UNIT.
EVENT DATE: 011985 REPORT DATE: 021585 NSSS: CE TYPE: PWR
VENDOR: NUCLEAR ENTERPRISES, INC.

(NSIC 193384) ON 1-19-85 PALO VERDE UNIT 1 WAS IN MODE 6. SMOKE EXHAUST FAN ON THE 140' LEVEL OF THE CONTROL BLDG WAS RUNNING DUE TO WELDING IN THE AREA WHEN THE CONTROL ROOM ESSENTIAL FILTRATION UNIT WAS AUTOMATICALLY OPERATED BY A SPURIOUS ALARM/ACTUATION FROM THE CONTROL ROOM VENTILATION PROCESS RADIATION MONITOR. THE CONTROL ROOM OPERATOR TRIPPED BOTH ESSENTIAL FILTRATION UNITS DUE TO WELDING IN PROGRESS ON THE 140' ELEVATION OF THE CONTROL BLDG. THE CONTROL ROOM ESSENTIAL FILTRATION UNIT IS ACTUATED FROM THE BALANCE OF PLANT ESP'S ACTUATION SYSTEM WHICH RECEIVES A SIGNAL FROM THE CONTROL ROOM VENTILATION RADIATION MONITORING UNIT. THE SIGNAL WILL OFFRATE FROM EITHER A HIGH RADIATION SIGNAL OR AN EQUIPMENT FAILURE SIGNAL. THE HIGH RADIATION INDICATED 2.56E-06 WITH A SET POINT OF 1.80E-06. THE DURATION OF THE ALARM WAS LESS THAN 18 SECONDS. TROUBLESHOOTING REVEALED A DEFECTIVE CPU BOARD IN THE RADIATION MONITORING UNIT'S REMOTE INDICATING CONTROLLER THE BOARD WAS REPLACED WITH 1 FROM SPARES. THIS RADIATION MONITOR HAS NOT GENERATED ANY HIGH RADIATION ALARM/ACTIONS SINCE REWORK WAS COMPLETED ON 1-22-85 TO 2-5-85.

[225] PALO VERDE 1 DOCKET 50-528 LER 85-006
LOSS OF OFFSITE POWER DUE TO INADVERTENT TRIPPING OF CIRCUIT BREAKER.
EVENT DATE: 013185 REPORT DATE: 030185 NSSS: CE TYPE: PWR

(NSIC 193647) AT 0940, THE S05 BUS FEEDER BREAKER FROM STARTUP TRANSFORMER X03, 1E-NAN-S05B, TRIPPED WHILE TAGGING OUT CONTROL CIRCUIT FUSES IN THE BREAKER CUBICLE. AT THE TIME, THE UNIT WAS IN MODE 5 WITH THE REACTOR COOLANT LOOPS PARTIALLY DRAINED AND THE 'B' SHUTDOWN COOLING LOOP IN SERVICE. TRIPPING OF THE CIRCUIT BREAKER CAUSED A LOSS OF POWER TO THE TRAIN 'A' CLASS 1E BUS. THE 'A' DG STARTED AND ENERGIZED THE TRAIN 'A' CLASS 1E BUS. THE S05 BUS WAS RE-ENERGIZED AND PHASED TO THE CLASS 1E BUS, AND THE DG WAS SHUT DOWN. INVESTIGATION SHOWED THAT NO PROTECTIVE RELAYS HAD TRIPPED. IT WAS DETERMINED THAT THE OPERATOR HAD ACCIDENTALLY HIT THE BREAKER CONTROL SWITCH ON THE CUBICLE DOOR WHEN CLOSING IT. AS A RESULT OF THIS INCIDENT, MEMBERS OF THE OPERATING CREW HAVE BEEN CAUTIONED TO EXERCISE CARE IN THE PERFORMANCE OF THEIR DUTIES.

[226] PALO VERDE 1 DOCKET 50-528 LER 85-011
CONTROL ROOM ESSENTIAL FILTRATION SYSTEM ACTUATES.
EVENT DATE: 020685 REPORT DATE: 030885 NSSS: CE TYPE: PWR

(NSIC 193648) AUTOMATIC ACTUATION OF THE CONTROL ROOM ESSENTIAL FILTRATION ACTUATION SIGNAL OCCURRED DUE TO A SPURIOUS HIGH RADIATION ALARM ON THE RADIATION MONITORING UNIT. ALL ATTENDANT EQUIPMENT ACTUATED SATISFACTORILY. SPURIOUS ACTUATION WAS VERIFIED BY SAMPLING. THE ROOT CAUSE AND FINAL CORRECTIVE ACTION REGARDING THIS EVENT ARE STILL UNDER INVESTIGATION AND WILL BE ADDRESSED IN A SUPPLEMENT TO THIS REPORT. DURING INVESTIGATION IT WAS IDENTIFIED THAT THE RADIATION ALARM SETPOINT WAS GREATER THAN ALLOWED BY THE TECH SPECS. THE

SETPOINT THAT WAS IN EFFECT WAS THE DEFAULT VALUE WHICH IS STORED IN THE RADIATION MONITOR'S MICROCOMPUTER SOFTWARE. SIMILAR EVENT: 528/85-003.

[227] PEACH BOTTOM 3 DOCKET 50-278 LER 85-004
HPCI TURBINE EXHAUST LINE INNER RUPTURE DISC FAILURE.
EVENT DATE: 012685 REPORT DATE: 022585 NSSS: GE TYPE: BWR
VENDOR: CONTINENTAL BOILER

(NSIC 193399) WHILE AT POWER DURING SURVEILLANCE TESTING, THE HPCI TURBINE EXHAUST RUPTURE DIAPHRAGM ALARM ANNUNCIATED FOLLOWING STARTUP OF THE UNIT 3 HPCI TURBINE. INSPECTION REVEALED THAT THE INNER RUPTURE DISC, PSD3-23-6, HAD FAILED. INVESTIGATION FOLLOWING THIS EVENT INDICATED THE INNER RUPTURE DISC TO BE FATIGUED FROM CYCLIC STRESS CAUSED BY ALTERNATING PRESSURE AND VACUUM WITHIN THE EXHAUST LINE. THIS CONDITION EXISTS ON QUICK STARTS OF THE HPCI SYSTEM WHEN THE PIPING IS COLD. ON COLD QUICK STARTS, THE VACUUM HAS BEEN OBSERVED TO BE 10 INCHES OF MERCURY. THIS MOMENTARY VACUUM CAUSES THE INNER RUPTURE DISK TO FLEX INWARD, WHICH IT IS NOT DESIGNED TO DO. EXAMINATION OF RUPTURE DISKS THAT FAILED PREVIOUSLY HAVE SHOWN EVIDENCE OF FLEXING. THIS FLEXING CAUSES THE DISK TO WEAKEN AND SUBSEQUENTLY FAIL. THE HPCI TURBINE WAS INTENTIONALLY REMOVED FROM SERVICE TO REPLACE THE INNER RUPTURE DISC. THE SYSTEMS REQUIRED BY TECH SPEC 4.5.C.2 (RCIC, ADS, LPCI, AND CORE SPRAY) WERE VERIFIED TO BE OPERABLE. THE RUPTURE DISC WAS REPLACED AND HPCI WAS DECLARED OPERABLE FOLLOWING SURVEILLANCE TEST VERIFICATION. SIMILAR EVENTS: 278/83-015, 278/82-023, 278/84-001, 278/84-013, 278/84-015, AND 278/84-016.

[228] PEACH BOTTOM 3 DOCKET 50-278 LER 85-005
LOCAL LEAK RATE EXCEEDS ALLOWABLE LIMIT.
EVENT DATE: 012985 REPORT DATE: 022885 NSSS: GE TYPE: BWR

(NSIC 193400) ON 1-29-85, THE CONTAINMENT LEAKAGE TEST PROGRAM IDENTIFIED THAT THE TOTAL COMBINED LEAKAGE OF THE TYPE B AND C TESTS EXCEEDED THE ALLOWABLE LEAK RATE LIMIT. SEVERAL VALVES TESTED HAD EXCESSIVE LEAKAGE RATES WHICH CONTRIBUTED TO THE COMBINED LEAKAGE TOTAL. UNIT 3 WAS REMOVED FROM POWER OPERATION FOR A MAINTENANCE OUTAGE ON 2-1-85. ON THIS DATE, ADDITIONAL TESTING IDENTIFIED 3 MSIV'S WITH EXCESSIVE LEAKAGE RATES. ALL VALVES WITH EXCESSIVE LEAKAGE RATES WERE REPAIRED AND RETESTED PRIOR TO RETURNING UNIT 3 TO POWER OPERATION. THE EXCESSIVE LEAKAGE RATES OF THE RHR TORUS COOLING VALVES AND THE MSIV HAVE BEEN ATTRIBUTED TO NORMAL VALVE DEGRADATION.

[229] PEACH BOTTOM 3 DOCKET 50-278 LER 85-002
MODE SWITCH MISPOSITIONED DURING MSIV REPAIRS.
EVENT DATE: 022085 REPORT DATE: 032185 NSSS: GE TYPE: BWR

(NSIC 193668) ON 2-20-85, WITH UNIT 3 SHUTDOWN AND THE REACTOR MODE SWITCH IN THE REFUEL POSITION, THE AUTOMATIC START CAPABILITY OF THE RHR AND CORE SPRAY SYSTEMS WAS DEFEATED TO PERMIT REPAIRS TO THE INBOARD MSIV'S. TECH SPEC 3.5.F.3 ALLOWS EMERGENCY CORE COOLING SYSTEM INOPERABILITY IF THE REACTOR MODE SWITCH IS IN THE SHUTDOWN POSITION. THE CAUSE OF THE EVENT WAS FAILURE OF A LICENSED REACTOR OPERATOR TO ASSURE CORRECT POSITION OF THE REACTOR MODE SWITCH AS REQUIRED BY PROCEDURE. THE ERROR WAS DISCOVERED WITHIN APPROX 4 HRS.

[230] PEACH BOTTOM 3 DOCKET 50-278 LER 85-006
IMPROPER LIMITORQUE OPERATOR DISCOVERED ON RCIC INBOARD STEAM ISOLATION VALVE.
EVENT DATE: 022085 REPORT DATE: 032285 NSSS: GE TYPE: BWR
VENDOR: LIMITORQUE CORP.

(NSIC 193669) WITH UNIT 3 SHUTDOWN, MAINTENANCE PERSONNEL INVESTIGATING THE

FASTER THAN NORMAL STROKE TIME OF THE RCIC INBOARD STEAM ISOLATION VALVE FOUND THAT THE VALVE WAS FITTED WITH THE INCORRECT LIMITORQUE OPERATOR. THE MANUFACTURER INDICATED THAT THE VALVE OPERATOR WOULD ISOLATE THE VALVE PROVIDED THAT DIFFERENTIAL PRESSURES DID NOT EXCEED 150 PSID. THIS EVENT WAS CAUSED BY PERSONNEL ERROR ON 6-3-84 WHEN THE VALVE OPERATOR WAS REPLACED. THE NAME PLATE DATA FROM THE ORIGINAL VALVE OPERATOR WAS MISREAD AND AS A RESULT, AN INCORRECT VALVE OPERATOR WAS INSTALLED. OF 72 ADDITIONAL SAFETY-RELATED VALVES INSPECTED, NO OTHER VALVES WERE FOUND WITH UNSATISFACTORY OPERATORS. THE VALVE WAS FITTED WITH THE CORRECT OPERATOR PRIOR TO RETURNING THE UNIT TO POWER OPERATION.

[231] PEACH BOTTOM 3 DOCKET 50-278 LER 85-007
 MAINTENANCE ERROR CAUSED LOW CONDENSER VACUUM AND REACTOR SCRAM.
 EVENT DATE: 030185 REPORT DATE: 040185 NSSS: GE TYPE: BWR
 VENDOR: CROSBY VALVE

(NSIC 193670) ON 3-1-85, DURING STARTUP AT 1203 HRS, THE REACTOR SCRAMMED FROM MAIN CONDENSER LOW VACUUM. FOLLOWING THE SCRAM, REACTOR WATER LEVEL DECREASED TO MINUS 13 INCHES INITIATING A GROUP II AND III ISOLATION. FEEDWATER FLOW RESTORED REACTOR WATER LEVEL BEFORE ANY CSCS SYSTEM ACTUATED. PRIOR TO THE SCRAM, BOTH UNIT 3 RECOMBINER MECHANICAL COMPRESSORS WERE BEING USED TO MAINTAIN CONDENSER VACUUM. AT 1130 HRS THE SAME DAY, 1 OF THE 2 RECOMBINER MECHANICAL COMPRESSORS WAS TAKEN OUT OF SERVICE BECAUSE OF LOW OIL PRESSURE. THE REMAINING COMPRESSOR COULD NOT OFFSET THE LEAKAGE AND THE CONDENSER BEGAN TO LOSE VACUUM. THE 'A' MECHANICAL COMPRESSOR WAS RETURNED TO SERVICE AT 1140 HRS FOLLOWING AN OIL CHANGE, BUT THE CONDENSER CONTINUED TO LOSE VACUUM, ULTIMATELY RESULTING IN THE SCRAM. DURING A VACUUM LEAK SEARCH PERFORMED IN ACCORDANCE WITH SYSTEMS PROCEDURE S.7.1.I, A LEAK-OFF PLUG WAS DISCOVERED TO BE MISSING ON THE A2 FEEDWATER HEATER SHELL SIDE RELIEF VALVE.

[232] PILGRIM 1 DOCKET 50-293 LER 85-002
 SURVEILLANCE PROCEDURES FOR MSIV AND TURBINE STOP VALVE CLOSURE ALARMS ARE INADEQUATE.
 EVENT DATE: 012885 REPORT DATE: 022885 NSSS: GE TYPE: BWR

(NSIC 193402) ON 1-28-85 THE IMPLEMENTING PROCEDURES FOR 2 SURVEILLANCE TESTS, REQUIRED BY THE TECH SPEC, WERE DETERMINED TO BE INADEQUATE. THE TECH SPEC SURVEILLANCES REQUIRE A FUNCTIONAL TEST OF THE MSIV AND TURBINE STOP VALVE RPS INSTRUMENT CHANNELS AND VALVE CLOSURE ALARMS. THE PROBLEM WAS THAT THE TECH SPEC IMPLEMENTING PROCEDURES DID NOT TEST THE CLOSURE ALARM FUNCTION. THE ALARMS PROVIDE INDICATION ONLY IN THE CONTROL ROOM. CAUSE WAS DETERMINED TO BE A MANAGEMENT DEFICIENCY WHICH ALLOWED INADEQUATE TECH SPEC IMPLEMENTING PROCEDURES. CORRECTIVE ACTION WAS TO REVISE EXISTING PROCEDURES BY ADDING PROVISIONS FOR FUNCTIONAL TESTING OF THE SUBJECT ALARMS. SIMILAR EVENT: 293/83-057.

[233] PILGRIM 1 DOCKET 50-293 LER 85-003
 OIL LEAK CAUSES RECIRCULATION PUMP MOTOR BEARING FAILURE.
 EVENT DATE: 021085 REPORT DATE: 031185 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193547) WHILE DECREASING POWER FOR PLANNED MSIV MAINTENANCE AND INVESTIGATION OF A HI/LOW OIL LEVEL ALARM ON THE 'A' RECIRC PUMP, THE 'A' RECIRC PUMP TRIPPED AT 0043 HRS. ON 2-10-85, A REACTOR SHUTDOWN WAS COMPLETED IN ACCORDANCE WITH THE TECH SPECS. CAUSE WAS DUE TO AN OIL LEAK IN THE RECIRC PUMP MOTOR WHICH RESULTED IN UPPER SLEEVE AND THRUST BEARING DAMAGE. CORRECTIVE ACTION WAS TO REPAIR THE OIL LEAK AND REPLACE THE DAMAGED COMPONENTS. THE OIL LEAK WAS AT THE OIL PACKING GLAND SURROUNDING THE COOLING WATER INLET LINE THAT PENETRATES THE 'A' RECIRC PUMP MOTOR HOUSING. THE PUMP MOTOR IS A GE CO., MODEL

NO. 5K26367BGI, 4.160KV UNIT. THE 'A' RECIRC PUMP MOTOR WAS SUCCESSFULLY TESTED AND RETURNED TO SERVICE ON 2-14-85.

[234] PILGRIM 1 DOCKET 50-293 LER 85-005
 ROD BLOCK MONITOR NOT TESTED.
 EVENT DATE: 022185 REPORT DATE: 032285 NSSS: GE TYPE: BWR

(NSIC 193671) ON 2-21-85, THE ROD BLOCK MONITOR FUNCTIONAL AND CALIBRATION SURVEILLANCE TESTS REQUIRED BY TECH SPEC WERE IDENTIFIED AS HAVING EXCEEDED THE REQUIRED TEST INTERVAL. CAUSE WAS DUE TO NON-LICENSED, UTILITY PERSONNEL ERROR WHICH WAS INFLUENCED BY A MISINTERPRETATION OF SURVEILLANCE REPORT INFORMATION AND COMPLEXITY OF STARTING UP FROM A 13-MONTH REFUELING AND RECIRCULATION PIPE REPLACEMENT OUTAGE. CORRECTIVE ACTION WAS TO PERFORM THE TESTS AND COUNSEL PERSONNEL. SIMILAR EVENT: 293/85-003.

[235] POINT BEACH 2 DOCKET 50-301 LER 84-007
 IMPROPER SWITCHING OF BUS FEEDER BREAKERS.
 EVENT DATE: 110884 REPORT DATE: 120784 NSSS: WE TYPE: PWR

(NSIC 193651) DURING A REFUELING SHUTDOWN ON 11-8-84, WHILE PERFORMING 4160V BREAKER AUX SWITCH WIRING INSPECTION, THE NORMAL FEEDER BREAKER FOR DISTRIBUTION BUS 2A03 WAS OPENED PRIOR TO PROVIDING AN ALTERNATE POWER SUPPLY FOR BUS 2A03. A LICENSED OPERATOR ATTEMPTED TO SUPPLY ALTERNATE POWER TO 2A03 FROM BUS 1A03 BY SHUTTING BUS TIE BREAKER 1A52-40. BREAKER 1A52-40 DID NOT SHUT, HOWEVER, DUE TO INTERLOCKS WHICH PREVENT ITS SHUTTING FROM THE CONTROL ROOM IF BOTH 1A03 AND 2A03 ARE ENERGIZED. ANOTHER LICENSED OPERATOR OPENED THE BUS FEEDER BREAKER 2A52-45 BEFORE HE REALIZED THAT 1A52-40 DID NOT ACTUALLY SHUT. THIS RESULTED IN A LOSS OF POWER TO BUSES 2A03 AND 2A05. THE LOSS OF VOLTAGE ON 2A05 RESULTED IN THE ACTUATION OF EMERGENCY DG G01. THE OPERATORS MADE SEVERAL ERRORS. IT WAS NOT INITIALLY REALIZED THAT THE BREAKER COULD ONLY BE SHUT LOCALLY IF BOTH BUSES 1A03 AND 2A03 WERE ENERGIZED. ALSO, OPERATORS FAILED TO PROPERLY VERIFY THAT THE BREAKER WAS SHUT PRIOR TO TRIPPING FEEDER BREAKER 2A52-45. THIS EVENT IS SIMILAR TO LER 84-005 FOR DOCKET NO. 50-301.

[236] PRAIRIE ISLAND 1 DOCKET 50-282 LER 85-003
 ONE COMPONENT COOLING HEAT EXCHANGER IN EACH UNIT MADE INOPERABLE.
 EVENT DATE: 010785 REPORT DATE: 020685 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: PRAIRIE ISLAND 2 (PWR)

(NSIC 193401) ON 1-7-85, UNIT 1 AT 74% POWER AND UNIT 2 WAS AT 100% POWER. DURING RESTORATION AFTER PREVENTIVE MAINTENANCE OF UNIT 2'S NO. 22 COMPONENT COOLING HEAT EXCHANGER, IT WAS DISCOVERED THAT THE COOLING WATER OUTLET VALVE CL-40-2 FOR UNIT 1'S NO. 12 COMPONENT COOLING HEAT EXCHANGER HAD BEEN CLOSED INSTEAD OF THE UNIT 2 VALVE 2CL-40-2. THIS MEANS THAT ONE COMPONENT COOLING HEAT EXCHANGER IN EACH UNIT WAS INOPERABLE FOR SEVERAL HOURS, A CONDITION ALLOWED BY TECH SPECS. THE VALVE WAS OPENED UPON DISCOVERY. CAUSE OF THE EVENT WAS HUMAN ERROR; THE VALVE NUMBER WAS MISREAD.

[237] PRAIRIE ISLAND 1 DOCKET 50-282 LER 85-002
 ONE MAIN STEAM SAFETY VALVE SETPOINT FOUND OUT OF SPEC.
 EVENT DATE: 011285 REPORT DATE: 021185 NSSS: WE TYPE: PWR

(NSIC 193351) ON 1-12, UNIT 1 WAS SHUTDOWN FOR REFUELING. DURING A SURVEILLANCE TEST, ONE OF THE TEN MAIN STEAM SAFETY VALVES FAILED TO OPEN AT ITS SETPOINT. CAUSE HAS NOT YET BEEN DETERMINED SINCE REPAIRS HAVE NOT BEEN MADE. THE VALVE WILL BE MADE OPERABLE BEFORE RESTART AND A SUPPLEMENTAL REPORT WILL BE MADE.

[238] PRAIRIE ISLAND 1 DOCKET 50-282 LER 85-004
 INADVERTENT ACTUATION OF DIESEL GENERATOR AND ITS COOLING PUMP.
 EVENT DATE: 011885 REPORT DATE: 021585 NSSS: WE TYPE: PWR

(NSIC 193281) ON 1-18, UNIT 1 WAS IN REFUELING SHUTDOWN; THE SCHEDULED 10 YR INSPECTION, MANY PLANT MODIFICATIONS AND MAINTENANCE ACTIVITIES WERE IN PROGRESS. DURING MAINTENANCE IN AN INSTRUMENT CONTROL RACK AND ON REACTOR TRIP BREAKERS, CONDITIONS WERE SATISFIED THAT PRODUCED A SPURIOUS SAFETY INJECTION SIGNAL ON ONE TRAIN. SAFEGUARDS EQUIPMENT FUNCTIONED AS EXPECTED FOR THE PLANT CONDITION; THE MAJOR EQUIPMENT AFFECTED WERE NO. 12 DIESEL COOLING WATER PUMP AND D1 DG, WHICH STARTED. THIS TYPE OF EVENT WAS POSTULATED WHEN PLANNING THE WORK, BUT THE ADMINISTRATIVE CONTROLS INSTITUTED TO PREVENT THE EVENT WERE NOT ADEQUATE. IMMEDIATE CORRECTIVE ACTION WAS ESTABLISHMENT OF FURTHER CONTROLS TO PREVENT RECURRENCE DURING THIS SHUTDOWN. FURTHER CORRECTIVE ACTIONS DESIGNED TO PREVENT RECURRENCE IN THE LONG TERM ARE BEING FORMULATED.

[239] PRAIRIE ISLAND 1 DOCKET 50-282 LER 85-006
 BOTH DIESEL GENERATORS STARTED UPON LOSS OF NO. 10 TRANSFORMER.
 EVENT DATE: 020685 REPORT DATE: 030885 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: PRAIRIE ISLAND 2 (PWR)
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 193540) AT 2105 ON 2-6-85, WITH UNIT 1 AT REFUELING SHUTDOWN AND UNIT 2 AT 100% STEADY STATE POWER, RESTORATION OF THE 1R TRANSFORMER WAS IN PROGRESS. AS PART OF THAT RESTORATION, 161KV CIRCUIT BREAKER 6H2 WAS OPENED IN THE SWITCHYARD. GROUND DISTANCE RELAY 21GT1 OPERATED DURING THE TRANSIENT GENERATED BY THE DE-ENERGIZATION OF THE 161KV BUS COUPLING CAPACITOR POTENTIAL DEVICE. AN INTERMITTENT BAD CONNECTION WITHIN THE RELAY, GAVE A MOMENTARY FALSE OUTPUT, CAUSING THE #10 TRANSFORMER LOCKOUT PROTECTION TO OPERATE. FOLLOWING LOCKOUT OF THE #10 TRANSFORMER, VOLTAGE RESTORATION INITIATED ON 4.16KV BUSES 15, 16, AND 26. BOTH DG'S D1 AND D2 AND BOTH DIESEL COOLING WATER PUMPS STARTED AUTOMATICALLY. DG D1 RESTORED VOLTAGE TO BUSES 15 AND 26. TRANSFORMER 2R REMAINED AS THE SUPPLY TO BUS 25 AND BUS TIE 16-8 CLOSED TO SUPPLY BUS 16 FROM BUS 25. LOAD REJECTION AND THEN RESTORATION OCCURRED ON BUSES 26 AND 15 IN ANTICIPATION OF DIESEL LOADING. COMPONENT COOLING PUMPS 21 AND 11 TRIPPED AND 22 AND 12 AUTOMATICALLY STARTED. RHR PUMP 12 REMAINED IN OPERATION, SUPPLIED FROM BUS 16 FOR DECAY HEAT REMOVAL. BOTH OF THE POWER SOURCES COULD HAVE ADEQUATELY SUPPORTED SAFE SHUTDOWN LOADS ON THE 4.16 KV SAFEGUARDS BUSES.

[240] QUAD CITIES 1 DOCKET 50-254 LER 84-012
 LOSS OF STANDBY GAS TREATMENT SYSTEM HEATERS.
 EVENT DATE: 080284 REPORT DATE: 080684 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: QUAD CITIES 2 (BWR)

(NSIC 193490) AT 8:45 AM, ON 8-2-84, THE REACTOR BLDG VENT SYSTEM ISOLATED. IN THE MOMENTS THAT FOLLOWED, THE 'B' STANDBY GAS TREATMENT SYSTEM TRAIN AUTO-STARTED, ITS HEATER TRIPPED, AND WHEN THE 'A' TRAIN WAS STARTED, ITS HEATER TRIPPED. WITH BOTH SGBTS TRAINS INOPERABLE, THE 36 HR CLOCK WAS STARTED FOR THIS LCO AS STATED IN TECH SPEC 3.7.B.1.B, AND A GENERAL STATION EMERGENCY PLAN UNUSUAL EVENT WAS DECLARED. THE CAUSE OF THIS DEVIATION WAS AN INCORRECT ELECTRICAL WIRING DRAWING DATING BACK TO THE TIME OF INITIAL PLANT CONSTRUCTION. AS A TEMPORARY ACTION FOR A DIFFERENT CONCERN, JUMPERS WERE INSTALLED AROUND CONTACTS OF THE TEMPERATURE SWITCHES WHICH TRIP THE SGBTS TRAIN HEATERS ON HIGH TEMPERATURE. THE PROPER TERMINAL DESIGNATIONS WERE FILLED IN ON THE JUMPER SHEETS, BUT DUE TO AN INCORRECT ELECTRICAL PRINT THE JUMPERS WERE INSTALLED ON THE WRONG TERMINALS. THIS RESULTED IN A SHORT CIRCUIT PATH ON THE SECONDARY SIDE OF THE CONTROL TRANSFORMER IN EACH TRAIN'S HEATER LOGIC CIRCUIT. UNIT 1 WAS SHUTDOWN FOR A REFUELING OUTAGE AND UNIT 2 WAS IN THE RUN MODE AT 100% CORE

THERMAL POWER. THIS EVENT IS BEING REPORTED AS REQUIRED BY FEDERAL REGULATION 10 CFR 50.73(A)(2)(V)(C).

[241] QUAD CITIES 1 DOCKET 50-254 LER 85-001
HPCI TURBINE COULD NOT BE RESET.
EVENT DATE: 020585 REPORT DATE: 022885 NSSS: GE TYPE: BWR
VENDOR: BARKSDALE COMPANY

(NSIC 193392) ON 2-5-85, UNIT 1 WAS OPERATING AT 93% THERMAL POWER. AT 0045 HRS, DURING THE PERFORMANCE OF THE HPCI PUMP OPERABILITY TEST, QOS 2300-2, THE HPCI TURBINE COULD NOT BE RESET FROM THE CONTROL ROOM. HPCI WAS DECLARED INOPERABLE. AT 0238 HRS A GENERATING STATION EMERGENCY PLAN (GSEP) UNUSUAL EVENT WAS DECLARED WHEN THE DECISION WAS MADE TO SHUTDOWN. THE CAUSE OF THIS EVENT WAS THE FAILURE OF THE HPCI TURBINE TRIP AND RESET SOLENOID VALVES OF THE HPCI STOP VALVE. THE SOLENOID VALVES FAILED BECAUSE OF A BROKEN TERMINATION POINT THROUGH WHICH POWER IS FED TO THE VALVE'S SOLENOIDS. IT IS BELIEVED THAT THE TERMINATION POINT BROKE BECAUSE OF MECHANICAL FAILURE; THE WIRES CONNECTED TO THE TERMINAL POINT WERE POORLY SECURED TO THE SOLENOID HOUSING AND THE VIBRATION ASSOCIATED WITH HPCI OPERATION EVENTUALLY LED TO THE FAILURE OF THE TERMINATION POINT. THE TURBINE RESET AND TRIP SOLENOID VALVES ARE MANUFACTURED BY BARKSDALE, CATALOG NO. 178250HC2D4, AND 178250H02D4. THE CAUSE OF THE FAILURE WAS CORRECTED AND THE GSEP UNUSUAL EVENT WAS TERMINATED AT 1703 HRS ON 2-5-85.

[242] QUAD CITIES 1 DOCKET 50-254 LER 85-005
FUEL POOL MONITORS SPIKED HIGH.
EVENT DATE: 030785 REPORT DATE: 040285 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 193602) ON 3-6-85, UNIT 1 REACTOR BLDG VENTILATION SYSTEM WAS OUT OF SERVICE FOR REPAIRS, AND THE SGTS WAS OPERATING. AT 9:05 AM THE 1A FUEL POOL RADIATION MONITOR FAILED DOWNSCALE. THE CAUSE OF THE DOWNSCALE COULD NOT BE DETERMINED AND THE MONITOR WAS RETURNED TO OPERATION. ON 3-7-85, AT 12:18 AM, THE 1B FUEL POOL RADIATION MONITOR SPIKED HIGH, ISOLATING THE REACTOR BLDG VENTILATION AND STARTING THE SGTS. SUBSEQUENT TO THIS EVENT, THE 1A FUEL POOL RADIATION MONITOR SPIKED HIGH 12 TIMES. NO ABNORMAL RADIATION LEVELS WERE OBSERVED BY THE RADIATION PROTECTION PERSONNEL, AND TECH SPEC LIMITS WERE MET AT ALL TIMES. THE PROBABLE CAUSE OF THESE FAILURES IS SURMISED TO BE ELECTRICAL 'NOISE' INTERFERENCE. A MODIFICATION WAS ISSUED TO INSTALL A 50 MICROFARAD CAPACITOR IN PARALLEL WITH THE MONITOR AMPLIFIER FEEDBACK RESISTOR TO INCREASE THE SIGNAL RESPONSE'S TIME CONSTANT. THIS INSTALLATION WAS COMPLETED ON UNIT 1 ON 3-15-85.

[243] QUAD CITIES 2 DOCKET 50-265 LER 84-014
HPCI ISOLATES WHEN AREA TEMPERATURE SWITCHES TRIP.
EVENT DATE: 091984 REPORT DATE: 012985 NSSS: GE TYPE: BWR
VENDOR: LIMITORQUE CORP.

(NSIC 193442) ON 9-19-84, UNIT TWO WAS OPERATING AT 99% THERMAL POWER. AT 11:20 AM A HPCI ISOLATION OCCURRED WHILE THE SYSTEM WAS BEING RUN AT LOW SPEED DURING TURBINE WARMING. THIS WAS CAUSED BY A SMALL INTERMITTENT LEAK FROM A STEAM SEAL ON THE HPCI TURBINE. THE HPCI ISOLATION WAS RESET AT 11:45 AM. HOWEVER, WHEN RESET, VALVE MO 2-2301-4 FAILED TO OPEN FROM THE CONTROL ROOM. THIS RENDERED HPCI INOPERABLE. SINCE THE LOW PRESSURE COOLANT INJECTION MODE OF THE RHR SYSTEM WAS ALSO INOPERABLE FOR PREVENTATIVE MAINTENANCE, THE DECISION WAS MADE TO SHUT DOWN UNIT TWO. THIS SHUTDOWN WAS NEVER INITIATED HOWEVER, BECAUSE ELECTRICAL MAINTENANCE PERSONNEL GOT VALVE 2-2301-4 OPEN AT 12:10 PM, ONLY 5 MINS AFTER DECIDING TO SHUTDOWN, AND PRIOR TO INITIATING A LOAD DROP. BECAUSE OF THE SHORT TIME DURATION OF THE EVENT, THE SAFETY IMPACT OF THIS OCCURRENCE WAS MINIMAL.

[244] QUAD CITIES 2 DOCKET 50-265 LER 85-003
 REACTOR SCRAM CAUSED BY THE LOSS OF CONDENSER VACUUM.
 EVENT DATE: 011685 REPORT DATE: 021385 NSSS: GE TYPE: BWR

(NSIC 193537) ON 1-16-85, UNIT 2 WAS OPERATING AT APPROX 100% CORE THERMAL POWER. AT 6:28 AM A REACTOR SCRAM OCCURRED DUE TO LOW CONDENSER VACUUM. THE MAIN STEAM ISOLATION VALVES ALSO CLOSED CAUSING THE REACTOR PRESSURE TO INCREASE. A SECOND REACTOR SCRAM OCCURRED AT 6:47 AM DUE TO HIGH REACTOR PRESSURE. THE HPCI WAS MANUALLY PUT ON TO HELP CONTROL REACTOR PRESSURE. AT 6:52 AM THE 'A' AND 'B' RECIRCULATION MOTOR-GENERATOR SETS TRIPPED AND A HIGH CONTAINMENT PRESSURE SIGNAL INITIATED THE UNIT 2'S EMERGENCY DG, THE RHR PUMPS, AND THE CORE SPRAY PUMPS. ONLY THE HPCI ACTUALLY INJECTED WATER INTO THE REACTOR VESSEL AS A RESULT OF THIS HIGH CONTAINMENT PRESSURE SIGNAL. THE LOSS OF VACUUM WAS CAUSED BY THE FAILURE OF THE RUBBER EXPANSION JOINT CONNECTING THE CONDENSER AND THE TURBINE CASING. THE EXPANSION JOINT WAS REPLACED. NO SAFETY LIMITS WERE EXCEEDED AND ALL SAFETY SYSTEMS FUNCTIONED AS DESIGNED; THEREFORE, THE SAFETY IMPLICATIONS OF THIS EVENT WERE MINIMAL.

[245] QUAD CITIES 2 DOCKET 50-265 LER 85-001
 REACTOR SCRAMS DUE TO TURBINE CONTROL VALVE FAST CLOSURE.
 EVENT DATE: 012585 REPORT DATE: 022285 NSSS: GE TYPE: BWR
 VENDOR: GEN ELEC CO (STEAM TURB/ENGRD PROD)

(NSIC 193448) ON 1-25-85, AT 1:29 AM, UNIT 2 WAS AT AN ELECTRICAL LOAD OF 647 MWE AND THE WEEKLY TURBINE-GENERATOR TEST, QOS 5600-4, WAS IN PROGRESS. IN THIS TEST, EACH OF THE 4 CONTROL VALVES IS CYCLED ONE AT A TIME TO VERIFY THE OPERABILITY OF THE CONTROL VALVES IN THE FAST-CLOSE MODE. CONTROL VALVES #1 - #3 OPERATED PROPERLY, BUT WHEN CONTROL VALVE #4 WAS TESTED THE VALVE IMMEDIATELY FAST-CLOSED. THE RESULTING PRESSURE SPIKE COLLAPSED THE VOIDS IN THE REACTOR VESSEL AND A TRIP OF THE RPS WAS RECEIVED DUE TO HIGH NEUTRON FLUX. IT HAS BEEN DETERMINED THAT A BUSHING OF THE ACTUATING ROD FOR THE #4 CONTROL VALVE SWITCH BOX HAD WORN THROUGH, CAUSING THE ROD TO FALL TO THE POSITION THAT ACTUATED THE FAST-CLOSURE SWITCH WHEN THE VALVE WAS TESTED. THE RPS FUNCTIONED AS DESIGNED. THEREFORE, THE SAFETY IMPACT OF THIS OCCURRENCE WAS MINIMAL.

[246] QUAD CITIES 2 DOCKET 50-265 LER 85-002
 HPCI MOTOR GEAR UNIT AND INJECTION VALVE FAILURES.
 EVENT DATE: 012985 REPORT DATE: 021985 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.
 LIMITORQUE CORP.

(NSIC 193449) ON 1-29-85, UNIT 2 WAS OPERATING AT 100% THERMAL POWER. AT 2300 HRS IT WAS DISCOVERED THAT THE HPCI SYSTEM'S MOTOR GEAR UNIT (MGU) FAILED TO STAY AT ITS HIGH SPEED STOP. HPCI WAS DECLARED INOPERABLE AND THE REQUIRED TECH SPECS SURVEILLANCES WERE INITIATED. A JUMPER WAS PLACED ON THE HPCI'S MGU. HPCI WAS THEN DECLARED OPERABLE AND HPCI OPERABILITY TESTS WERE PERFORMED. DURING THESE OPERABILITY TESTS, HPCI INJECTION VALVE, MO 2-2301-8, WOULD NOT OPEN WHEN IT WAS GIVEN AN OPEN SIGNAL FROM THE CONTROL ROOM. HPCI WAS DECLARED INOPERABLE AGAIN. AT 0300 HRS A GENERATING STATION EMERGENCY PROCEDURE (GSEP) UNUSUAL EVENT WAS DECLARED WHEN THE DECISION WAS MADE TO SHUTDOWN. THE CAUSE OF THE HPCI MGU'S FAILURE AND THE MO 2-2301-8'S FAILURE WERE CORRECTED AND THE GSEP UNUSUAL EVENT WAS TERMINATED AT 1530 HRS ON 1-30-85.

[247] QUAD CITIES 2 DOCKET 50-265 LER 85-004
 FAILURE OF UNIT 2 HPCI ROOM COOLER FAN MOTOR.
 EVENT DATE: 020885 REPORT DATE: 030485 NSSS: GE TYPE: BWR
 VENDOR: BUFFALO FORGE COMPANY
 GENERAL ELECTRIC CO.

(NSIC 193398) ON 2-8-85, UNIT 2 WAS OPERATING AT 96% OF RATED THERMAL POWER. AT 2:50 PM THE HIGH PRESSURE COOLANT INJECTION ROOM COOLER'S FAN TRIPPED WHILE A ROUTINE HPCI SURVEILLANCE WAS BEING PERFORMED. IT WAS DISCOVERED THAT THE FAN'S MOTOR FAILED BECAUSE OF GROUNDED MOTOR WINDINGS. AT THE CURRENT TIME, IT APPEARS THAT THE GROUNDING OF THE FAN MOTOR WAS CAUSED BY THE SEIZURE OF THE BEARINGS IN THE FAN MOTOR. THE HPCI ROOM COOLER FAN'S MOTOR WAS SUPPLIED BY GE, PART NUMBER 5K182AL 2215A. HPCI WAS THEN DECLARED INOPERABLE AND THE SURVEILLANCES REQUIRED BY THE TECH SPECS WERE INITIATED. THE GROUNDED FAN MOTOR WAS REPLACED, AND HPCI WAS RETURNED TO SERVICE AT 6AM ON 2-9-85.

[248] QUAD CITIES 2 DOCKET 50-265 LER 85-005
LIMIT SWITCH FAILURE CAUSES MSIV TO GO FULL CLOSED.
EVENT DATE: 021985 REPORT DATE: 031385 NSSS: GE TYPE: BWR
VENDOR: NAMCO CONTROLS

(NSIC 193605) ON 2-19-85, AT 0024 HRS, WHILE PERFORMING THE BIWEEKLY MSIV OPERABILITY SURVEILLANCE, THE 203-2B OUTBOARD MSIV WENT TO THE FULLY CLOSED POSITION INSTEAD OF STOPPING AT THE 10% CLOSURE LIMIT. THE RESULTING PRESSURE SPIKE CAUSED A TRIP OF THE REACTOR PROTECTION SYSTEM, WHICH IN TURN WAS FOLLOWED BY A FULL REACTOR SCRAM. THE RPS FUNCTIONED AS DESIGNED TO MINIMIZE THE SAFETY CONSEQUENCES OF THIS EVENT. A FAILED LIMIT SWITCH ON THIS MSIV WAS THE CAUSE OF THIS OCCURRENCE. THESE SWITCHES HAVE FAILED IN THE PAST. THE SWITCHES ARE CONSTRUCTED WITH A SLIDING PLASTIC MECHANISM THAT BINDS THE SWITCH DUE TO WARPING CAUSED BY ELEVATED AMBIENT TEMPERATURES. THE FAILED SWITCH WAS A NAMCO MODEL EA 740 LIMIT SWITCH. THE FAILED LIMIT SWITCH WAS REPLACED AND THE MSIV 203-2B WAS TESTED SATISFACTORILY.

[249] RANCHO SECO DOCKET 50-312 LER 84-020
STEAM GENERATOR TUBE LEAK.
EVENT DATE: 070384 REPORT DATE: 080384 NSSS: BW TYPE: PWR
VENDOR: BABCOCK & WILCOX POWER GENERATION

(NSIC 193496) ON 7-3-84, RANCHO SECO NUCLEAR GENERATING STATION UNIT #1 EXPERIENCED A TUBE LEAK IN THE 'B' ONCE THROUGH SG INITIALLY ON THE ORDER OF 0.4 GPM AT C700 AND INCREASING TO A CALCULATED 1.37 GPM AS THE PLANT REDUCED POWER FOR SHUTDOWN. AN UNUSUAL EVENT WAS DECLARED AT 1120 HRS AND TERMINATED AT 1435 HRS. THE MAIN GENERATOR WAS TAKEN OFF LINE AT 1147 AND THE REACTOR WAS IN HOT SHUTDOWN AT 1403. DURING THE COOLDOWN, AN UNPLANNED TRIP OCCURRED WHILE THE REACTOR WAS SUBCRITICAL WITH SAFETY RODS IN A FULL OUT, OR 'COCKED' POSITION. THE LEAKING TUBE WAS IDENTIFIED AS A LANE TUBE, IN ROW 75, TUBE 6. A THROUGH-WALL DEFECT WAS FOUND AT THE 15TH TUBE SUPPORT PLATE. EXPLOSIVE PLUGS WERE USED ON TOP AND BOTTOM WITH A STABILIZER BAR INSTALLED AT THE TOP.

[250] RANCHO SECO DOCKET 50-312 LER 85-001
LOSS OF CONTAINMENT INTEGRITY VIA OPEN VALVES.
EVENT DATE: 011685 REPORT DATE: 022585 NSSS: BW TYPE: PWR

(NSIC 193580) ON 1-24-85 IT WAS REPORTED VIA AN OCCURRENCE DESCRIPTION REPORT, AN INTERNAL REPORTING SYSTEM CONTROLLED BY AP.22, THAT OPERATIONS PERSONNEL FOUND THE HYDROGEN MONITOR SYSTEM CONTAINMENT ISOLATION VALVES (HV-70041, HV-70042, HV-70045, AND HV-70046) WERE OPEN. THIS CONDITION RESULTS IN A POTENTIAL FOR THE CONTAINMENT NOT BEING PROPERLY ISOLATED UNDER CERTAIN CONDITIONS. IT IS BELIEVED THAT THESE VALVES WERE EITHER LEFT OPEN AFTER A PASS SAMPLE OR WERE OPENED BY MISTAKE AND NOT SUBSEQUENTLY RE-CLOSED. THE CORRECTIVE ACTIONS LISTED BELOW SHOULD PRECLUDE EITHER SCENARIO FROM RECURRING. SURVEILLANCE PROCEDURE SP 205.07 TESTS THE VALVES ON A 3 MONTH INTERVAL AND WAS LAST PERFORMED ON 1-9-85. SINCE THE VALVES WERE LOGGED CLOSED ON 1-16-84 THIS CONDITION IS BELIEVED TO HAVE EXISTED NO LONGER THAN 7 DAYS (BETWEEN 1/9 AND 1/16). THE 1 INCH LINES

CONTAINING THESE VALVES ARE CONNECTED TO THE POST ACCIDENT SAMPLING SYSTEM SAMPLE PANEL AND FORM A LOOP FROM THE CONTAINMENT TO THE PASS AND THEN BACK TO THE CONTAINMENT, HENCE, EVEN WITH THESE VALVES OPEN THERE EXISTS A BARRIER TO THE RELEASE OF RADIOACTIVITY. THE LINES OUTSIDE OF THE CONTAINMENT BEYOND THESE VALVES ARE NOT CLASS I; THEREFORE, THE VALVES ARE ADMINISTRATIVELY REQUIRED TO BE CLOSED DURING OPERATION TO ENSURE CONTAINMENT ISOLATION DURING A SEISMIC EVENT. THE VALVES WERE CLOSED UPON DETECTION OF THE DISCREPANCY. THERE WAS NO RELEASE OF RADIOACTIVITY.

[251] RANCHO SECO DOCKET 50-312 LER 85-002
UNRESTRAINED HEAVY LOAD IN REACTOR BUILDING.
EVENT DATE: 012885 REPORT DATE: 022785 NSSS: BW TYPE: PWR

(NSIC 193582) ON 1-28-85 IT WAS REPORTED VIA AN INTERNAL OCCURRENCE DESCRIPTION REPORT THAT HEAVY SELF-POWERED NEUTRON DETECTOR DISPOSAL EQUIPMENT WAS STORED IMPROPERLY AT THE 60' LEVEL OF THE REACTOR BLDG. THIS CONDITION RESULTED FROM PERSONNEL FAILURE TO ADHERE TO PROCEDURE M.30 (INCORE MONITOR HANDLING AND DISPOSAL). SUBSEQUENT ENGINEERING ANALYSIS DETERMINED THE UNRESTRAINED SPND LOAD TO BE SEISMICALLY UNSTABLE AND CAPABLE OF IMPACTING A REACTOR BLDG OVERHEAD STRAY HEADER DURING A SEISMIC EVENT. ON 1-30-85, THE PLANT REVIEW COMMITTEE DETERMINED THE UNRESTRAINED LOAD TO PRESENT A POTENTIAL SAFETY PROBLEM. RELOCATION AND RESTRAINING OF THE LOAD WAS ACCOMPLISHED DURING POWER OPERATION ON THE SAME DAY. AS CORRECTIVE MEASURES TO PRECLUDE SIMILAR OCCURRENCES, THE DISTRICT WILL TAKE THE FOLLOWING ACTIONS: 1) TRAINING WILL BE STRENGTHENED BY REQUIRING THAT DOCUMENTED TRAINING BE PROVIDED TO THE APPROPRIATE PERSONNEL PRIOR TO EACH OUTAGE THAT REQUIRES USE OF THE POLAR CRANE; 2) THE REACTOR BLDG CLOSEOUT PROCEDURE WILL BE REVISED TO BETTER DEFINE THE PROPER STORAGE LOCATIONS AND RESTRAINING WILL BE REVISED TO BETTER DEFINE THE PROPER STORAGE LOCATIONS AND RESTRAINING REQUIREMENTS OF SPECIFIC HEAVY LOADS. THE COMMITTED ACTIONS WILL BE COMPLETED PRIOR TO THE STARTUP OF FUEL CYCLE 7.

[252] RANCHO SECO DOCKET 50-312 LER 85-003
INCORRECT BORON CONCENTRATION DURING REFUELING.
EVENT DATE: 020585 REPORT DATE: 030585 NSSS: BW TYPE: PWR

(NSIC 193581) ON 2-5-85 IT WAS REPORTED VIA AN INTERNAL OCCURRENCE DESCRIPTION REPORT THAT THE TECH SPEC LIMIT FOR BORON CONCENTRATION DURING REACTOR VESSEL HEAD REMOVAL AND FUEL LOADING/UNLOADING WAS INCORRECT. THIS DISCREPANCY WAS CAUSED BY THE FUEL SUPPLIER BASING THE CYCLE 6 REFUELING BORON CONCENTRATION OF A K-EFF OF .99 RATHER THAN THE SPECIFIED K-EFF OF .95, AND RESULTED IN A TECH SPEC LIMIT OF 1850 PPM VERSUS THE CORRECT VALUE OF 1936 PPM. THIS CONDITION HAS EXISTED SINCE THE BEGINNING OF FUEL CYCLE 6 (JUN 17, 1983). NO IMMEDIATE CORRECTIVE ACTION WAS REQUIRED BECAUSE THE REACTOR VESSEL HEAD WILL NOT BE REMOVED FOR THE REMAINDER OF CYCLE 6. THE BORON CONCENTRATIONS WERE REVIEWED FOR THE CYCLE 6 PERIOD DURING WHICH THE REACTOR VESSEL HEAD WAS REMOVED. 3 INCIDENTS OF THE CORRECTED BORON CONCENTRATION LIMIT BEING VIOLATED WERE DETECTED. IN ALL CASES, ENGINEERING REVIEW DETERMINED THE REACTOR TO HAVE BEEN SUBCRITICAL BY A SUBSTANTIAL MARGIN. AS A CORRECTIVE MEASURE TO PRECLUDE FURTHER OCCURRENCES, THE DISTRICT WILL REQUIRE THE FUEL SUPPLIER TO PROVIDE BETTER CONTROL OVER RELOAD CALCULATIONS BY DESTROYING ALL NON-CONTROLLED VENDOR COPIES OF RANCHO SECO TECH SPECS. THE DISTRICT WILL REQUIRE THE VENDOR TO AUDIT HIS PROGRAM AND WILL REVIEW THE RESULTS OF THIS AUDIT TO ENSURE THAT THIS REQUIREMENT IS MET.

[253] RANCHO SECO DOCKET 50-312 LER 85-004
FIRE DAMPERS NOT INSTALLED.
EVENT DATE: 021185 REPORT DATE: 031185 NSSS: BW TYPE: PWR

(NSIC 193583) ON 2-11-85 IT WAS REPORTED VIA AN INTERNAL OCCURRENCE DESCRIPTION

REPORT THAT SEVERAL FIRE DAMPERS WHICH WERE INCLUDED IN OUR 8-1-77 FIRE HAZARDS ANALYSIS SUBMITTAL TO THE NRC HAD NOT BEEN INSTALLED. AMENDMENT 19 TO THE FACILITY OPERATING LICENSE WAS WRITTEN BASED ON THIS ANALYSIS. THE IMPLEMENTATION DATE FOR THE FIRE DAMPERS OF CONCERN WAS THE END OF THE 1979 REFUELING OUTAGE. THUS, THE DISTRICT HAS FAILED TO IMPLEMENT THESE PROVISIONS OF AMENDMENT 19. PREVIOUSLY, THE AREAS FOR WHICH THE FIRE DAMPERS WERE NOT INSTALLED HAD BEEN DESIGNATED, FOR OTHER REASONS, AS FIRE WATCH AREAS REQUIRING HOURLY SURVEILLANCE; THEREFORE, NO IMMEDIATE CORRECTIVE ACTION WAS REQUIRED. SPECIFIC CORRECTIVE ACTIONS THAT WILL BE TAKEN TO ADDRESS THE FIRE PROTECTION CONCERN ARE: 1) PROVISION FOR MAKING THE FHA A 'LIVING' DOCUMENT UNDERGOING PERIODIC REVIEWS AND UPDATES; 2) THE IMPROVEMENT OF A DESIGN CONTROL BY INCLUDING A COGNIZANT FIRE PROTECTION ENGINEER IN THE REVIEW CYCLE; 3) INSTALLATION OF FIRE DAMPERS CONSISTENT WITH THE FHA. ALL COMMITTED ACTIONS WILL BE COMPLETED PRIOR TO 12-2-85. THE FIRE WATCH ESTABLISHED IN THE AFFECTED AREAS WILL BE MAINTAINED UNTIL ITEM 3 HAS BEEN COMPLETED. ADDITIONALLY, THE DISTRICT HAS DEVELOPED AN INTEGRATED COMPUTERIZED COORDINATED COMMITMENT LOG SYSTEM TO FACILITATE THE LOGGING AND TRACKING OF COMMITMENTS.

[254] ROBINSON 2 DOCKET 50-261 LER 84-012
 LOW TEMPERATURE OVER PRESSURE PROTECTION (LTOPP) REMOVED FROM SERVICE.
 EVENT DATE: 121584 REPORT DATE: 012285 NSSS: WE TYPE: PWR

(NSIC 193491) ON 12-15-84, THE PLANT WAS LESS THAN 350 PSIG WITH A BUBBLE IN THE PRESSURIZER. FOR THIS PLANT CONDITION THE LTOPP SYSTEM IS REQUIRED OPERABLE. THE 'A' LTOPP ACCUMULATOR RELIEF VALVE OPP-12 WAS REMOVED FROM SERVICE FOR MAINTENANCE. BOTH THE AIR AND N2 TO THE RESPECTIVE PORV'S WERE ISOLATED WHICH WAS THOUGHT TO BE PCV-456. UPON RETURNING THE PORV TO OPERABLE STATUS, IT WAS DISCOVERED THAT THE LTOPP SYSTEM DRAWING, OPERATING WORK PROCEDURES, AND OPERATING PROCEDURES WERE IN ERROR. A SYSTEM WALKDOWN SHOWED THAT THE 'A' ACCUMULATOR SUPPLIED PCV-455C AND 'B' ACCUMULATOR SUPPLIED PCV-456. BOTH PORV'S WERE INOPERABLE FOR 1 HR WHILE 'A' ACCUMULATOR, WHICH SUPPLIES PCV-455C, WAS OUT OF SERVICE AND WHILE THE BLOCK VALVE FOR PCV-456 WAS SHUT.

[255] ROBINSON 2 DOCKET 50-261 LER 85-001
 DIESEL FIRE PUMP BATTERIES NOT TESTED IN TIME.
 EVENT DATE: 010485 REPORT DATE: 020485 NSSS: WE TYPE: PWR

(NSIC 193519) ON 1-4-85, IT WAS IDENTIFIED THAT THE WEEKLY SURVEILLANCE TEST CONDUCTED ON THE DIESEL FIRE PUMP BATTERIES DESCRIBED IN TECH SPEC, 4.14.6.2.A, WAS NOT COMPLETED WITHIN THE ALLOWED INTERVAL. THE TEST WAS SCHEDULED TO BE RUN ON 12-31-84. IT WAS RUN TWO DAYS LATER ON 1-2-85, WHICH IS BEYOND THE PLUS OR MINUS 25% ALLOWED BY TECH SPEC. THE ERROR WAS CAUSED BY A MISUNDERSTANDING BY THE TECHNICIAN OF THE RESCHEDULED SURVEILLANCE DUE DATE. FOR CORRECTIVE ACTION THE TECHNICIANS HAVE BEEN PROPERLY NOTIFIED OF THE CHANGE IN THE SURVEILLANCE SCHEDULE.

[256] ROBINSON 2 DOCKET 50-261 LER 85-002
 POTENTIAL FAILURE OF THE MAIN STEAM ISOLATION VALVES TO CLOSE.
 EVENT DATE: 010585 REPORT DATE: 020685 NSSS: WE TYPE: PWR
 VENDOR: SCHUTTE AND KOERING COMPANY

(NSIC 193394) THE PLANT WAS SHUT DOWN IN PREPARATION TO START UP FOLLOWING AN EXTENDED SG REPLACEMENT OUTAGE. ON 1-5-85, A DESIGN DEFICIENCY WITH THE MSIV WAS IDENTIFIED. A SINGLE FAILURE OF A RELAY IN THE MSIV SAFEGUARDS LOGIC COULD RESULT IN THE FAILURE OF MSIV'S TO CLOSE DURING A SAFEGUARDS MSIV CLOSING SIGNAL. THE MSIV'S HAVE BEEN MODIFIED TO CORRECT THIS SITUATION. THE CAUSE WAS THE APPARENT LACK OF UNDERSTANDING OF VALVE OPERATION DURING THE ORIGINAL DESIGN.

THIS PROBLEM WAS IDENTIFIED DURING DISCUSSIONS WITH ANOTHER UTILITY WHICH HAD REPORTED A PROBLEM WITH THEIR MSIV'S TO THE NRC.

[257] ROBINSON 2 DOCKET 50-261 LER 85-003
 REACTOR TRIPS DUE TO VOLTAGE SPIKE ON INSTRUMENT BUS.
 EVENT DATE: 010885 REPORT DATE: 020785 NSSS: WE TYPE: PWR

(NSIC 193395) ON 1-8-85, AT 1054 HRS, A REACTOR STARTUP WAS IN PROGRESS. A VENDOR'S TECHNICAL REPRESENTATIVE WAS TROUBLESHOOTING THE DIGITAL METAL IMPACT MONITORING SYSTEM WHEN HE ACCIDENTLY INTRODUCED A LOW VOLTAGE SPIKE ON INSTRUMENT BUSES 4 AND 9. THIS INSTRUMENT SPIKE MOMENTARILY CLEARED THE 'GREATER THAN 10% TURBINE LOAD' PERMISSIVE P-7. THIS PERMISSIVE ALLOWS THE TURBINE TO BE TRIPPED AT LESS THAN 10% TURBINE LOAD WITHOUT TRIPPING THE REACTOR. WITH THE TURBINE SHUT DOWN AND A TURBINE TRIP SIGNAL PRESENT, A MOMENTARY CLEARING OF PERMISSIVE P-7 CAUSED A REACTOR TRIP. THE LOW VOLTAGE SPIKE WAS CAUSED BY GROUNDING THE DMIMS THROUGH AN OSCILLOSCOPE TO A PLANT ELECTRICAL RECEPTACLE. A PLANT I&C TECHNICIAN WAS PRESENT AT THE TIME OF THE INCIDENT. THE TECHNICIAN HAD NOT CHECKED THE VENDOR'S EQUIPMENT PRIOR TO ITS USE. CORRECTIVE ACTION WAS TO REMOVE THE DMIMS FROM THE VITAL BUS TEMPORARILY WHILE REPAIRS AND INVESTIGATIONS INTO THE CAUSE OF THE SPIKE WERE COMPLETE. THE I&C TECHNICIAN WAS DIRECTED TO TAKE A MORE ACTIVE ROLE IN CONTROLLING THE SERVICEMAN'S ACTIVITIES AND VERIFYING PROPER PRACTICES. THIS LER WILL BE REVIEWED BY I&C TECHNICIANS BY 2-28-85.

[258] ROBINSON 2 DOCKET 50-261 LER 85-005
 LEVEL CONTROL CIRCUITRY FAILURE CAUSES HIGH LEVEL IN 'A' STEAM GENERATOR.
 EVENT DATE: 010985 REPORT DATE: 020885 NSSS: WE TYPE: PWR

(NSIC 193237) ON 1-9-85, THE REACTOR WAS CRITICAL, AND THE TURBINE WAS ON LINE INCREASING LOAD. AT 0402 HRS, A REACTOR TRIP OCCURRED AT 14% POWER DUE TO A TURBINE TRIP FROM A HIGH LEVEL IN 'A' SG. IT APPEARS THAT ERRATIC OPERATION OF 'A' SG LEVEL CONTROL CIRCUITRY AT LOW POWER LEVELS CAUSED 'A' FEEDWATER REGULATING VALVE TO OPEN FURTHER THAN DESIRED. THIS CAUSED 'A' SG LEVEL TO EXCEED THE HIGH LEVEL SETPOINT WHICH TRIPPED THE TURBINE AND THUS THE REACTOR. THE CAUSE OF THE ERRATIC OPERATION OF 'A' SG LEVEL CONTROL AT LOW POWER LEVELS HAS NOT BEEN IDENTIFIED. TROUBLESHOOTING WILL CONTINUE SHOULD ERRATIC OPERATION RECUR DURING SUBSEQUENT STARTUPS. A SUPPLEMENTAL REPORT WILL BE FILED WHEN A CAUSE IS FOUND AND CORRECTIVE ACTIONS ARE DETERMINED.

[259] SALEM 1 DOCKET 50-272 LER 85-001
 APW PUMP CIRCUITRY DOES NOT MEET SINGLE FAILURE CRITERIA.
 EVENT DATE: 020585 REPORT DATE: 030785 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: SALEM 2 (PWR)

(NSIC 193606) ON 2-5-85, AS A RESULT OF AN ONGOING REVIEW OF IMPLEMENTED DESIGN CHANGES, IT WAS DISCOVERED THAT THE LOW SUCTION PRESSURE TRIP CIRCUITS FOR THE APW PUMPS IN BOTH UNIT 1 AND 2 DO NOT MEET THE SINGLE FAILURE CRITERIA AS SPECIFIED BY 10CFR50, APPENDIX A. THE LOW SUCTION PRESSURE TRIP CIRCUITS, WHICH ARE 'ARMED' ONLY WHEN SEVERE STORM CONDITIONS ARE FORECAST FOR THE AREA, WERE DISABLED TO PRECLUDE THE POSSIBILITY OF A SINGLE FAILURE AFFECTING THE OPERABILITY OF ALL APW PUMPS. A SAFETY EVALUATION WHICH WAS PERFORMED AND DISCUSSED WITH THE NRC PRIOR TO THE INSTALLATION OF THE CIRCUITS CONCLUDED THAT THERE ARE ADEQUATE ALARMS AND INDICATION AVAILABLE TO THE OPERATOR TO INDICATE THE IMPENDING LOSS OF SUCTION DUE TO DECREASING LEVEL IN THE APW STORAGE TANKS. THESE CIRCUITS WERE ONLY ADDED TO FURTHER ENHANCE THE OVERALL DESIGN OF THE APW SYSTEM, AND THE DISABLING OF THIS TRIP FEATURE POSES NO SAFETY CONCERN WITH CONTINUED PLANT OPERATION. THIS DESIGN ERROR OCCURRED AS THE RESULT OF AN IMPROPER INTERFACE BETWEEN CONTROL GRADE AND SAFETY RELATED EQUIPMENT. THE CIRCUITS WILL BE RE-DESIGNED, AND THE APW PUMP LOW SUCTION PRESSURE TRIP FEATURES

WILL BE REINSTATED. THE SCOPE OF THE DESIGN CHANGE REVIEW IS BEING EXPANDED TO INCLUDE THE DESIGN CHANGE REVIEW PROCESS, AND TO CONFIRM THE ISOLATED NATURE OF THIS TYPE OF DESIGN ERROR.

[260] SALEM 1 DOCKET 50-272 LER 85-002
CONTAINMENT PRESSURE RELIEF OPERATIONS NOT IN ACCORDANCE WITH TECH SPEC REQUIREMENTS.
EVENT DATE: 021385 REPORT DATE: 031585 NSSS: WE TYPE: PWR

(NSIC 193607) ON 2-14-85, IT WAS DISCOVERED BY THE SHIFT SUPERVISOR THAT 2 CONTAINMENT PRESSURE RELIEF OPERATIONS, WHICH WERE PERFORMED ON 2-13-85, WERE NOT IN ACCORDANCE WITH TECH SPEC REQUIREMENTS OR WITH APPROVED PROCEDURES. ALTHOUGH THE PLANT VENT IODINE RADIATION MONITOR WAS SUBSTITUTED FOR THE INOPERABLE CONTAINMENT IODINE RADIATION MONITOR AS AUTHORIZED BY TECH SPECS, THE CHANNEL SETPOINTS WERE NOT REDUCED. THIS TECHNICALLY RENDERED THE CONTAINMENT VENTILATION ISOLATION SYSTEM INOPERABLE, DUE TO THE FACT THAT THE SETPOINT AT WHICH AN ISOLATION SIGNAL FROM 1R41B WOULD HAVE INITIATED CONTAINMENT VENTILATION ISOLATION WAS NOT CONSISTENT WITH TECH SPEC REQUIREMENT, OR WITH THE ASSUMPTIONS USED IN THE FSAR. THE EVENT WAS CAUSED BY PERSONNEL ERROR; SPECIFICALLY, THE FAILURE TO FOLLOW PROCEDURES AS WRITTEN. BOTH PRESSURE RELIEF OPERATIONS WERE CONTINUOUSLY MONITORED TO ENSURE THAT THE RELEASE RATES WERE WITHIN SPEC; HOWEVER, THE EVENT IS REPORTABLE IN ACCORDANCE WITH 10CFR50.73(A)(2)(I)(B). THE EVENT WAS DISCUSSED WITH THE OPERATING SHIFT INVOLVED, AND THE RESPONSIBLE PERSONNEL WERE DEALT WITH INDIVIDUALLY ACCORDING TO THE DISCIPLINARY PROCESS. IN ADDITION, A DISCUSSION OF THIS EVENT WILL BE INCLUDED IN THE OPERATOR REQUALIFICATION PROGRAM.

[261] SALEM 1 DOCKET 50-272 LER 85-003
TURBINE STOP VALVE POSITION SWITCH TO SSPS INOPERABLE.
EVENT DATE: 021485 REPORT DATE: 031585 NSSS: WE TYPE: PWR

(NSIC 193608) ON 2-14-85, WHILE PERFORMING WEEKLY TURBINE VALVE TESTING, IT WAS DISCOVERED THAT NO. 12 TURBINE STOP VALVE INSTRUMENT CHANNEL WAS POSSIBLY INOPERABLE. TECH SPECS REQUIRE AN INOPERABLE CHANNEL TO BE PLACED IN A TRIPPED CONDITION OR, IF THE ACTION CANNOT BE COMPLIED WITH, A UNIT SHUTDOWN IS REQUIRED TO BE INITIATED WITHIN 1 HR. THE OPERATING SHIFT PLANNED TO INITIATE A UNIT SHUTDOWN IF INVESTIGATION REVEALED THAT THE CHANNEL WAS ACTUALLY INOPERABLE. IT WAS SUBSEQUENTLY DISCOVERED THAT ONE OF THE TWO CLOSED LIMIT SWITCHES ON VALVE 12MS28 WAS MALFUNCTIONING, RESULTING IN A STOP VALVE CLOSED SIGNAL BEING SENT TO ONLY 1 TRAIN OF THE SSPS. BY THE TIME THE OPERATING SHIFT WAS INFORMED OF THE ACTUAL CONDITION OF THE CHANNEL AND ITS AFFECT ON THE SSPS, THE INOPERABLE CHANNEL HAD BEEN REPAIRED AND RESTORED TO AN OPERABLE STATUS; CONSEQUENTLY, THE 1 HR TIME LIMIT FOR INITIATION OF THE SHUTDOWN WAS EXCEEDED. AS A RESULT OF THIS EVENT, OPERATORS WERE DIRECTED TO TAKE A MORE CONSERVATIVE APPROACH AND IMMEDIATELY DECLARE A RPS INSTRUMENT CHANNEL INOPERABLE IF THERE IS ANY QUESTION AT ALL REGARDING ITS OPERABILITY. THIS POLICY IS BEING REINFORCED WITH PROCEDURAL CHANGES AND WITH THE IMPLEMENTATION OF A NEW TECH SPEC INTERPRETATION GUIDE.

[262] SALEM 2 DOCKET 50-311 LER 85-001
DIESEL GENERATOR COOLING WATER VALVE FAILS.
EVENT DATE: 012885 REPORT DATE: 022785 NSSS: WE TYPE: PWR
VENDOR: ALCO ENGINE DIVISION, WHITE IND.
MASONELAN INTERNATIONAL, INC.

(NSIC 193674) THIS REPORT REQUIRED BY TECH SPEC 4.8.1.1.4, DESCRIBES A VALID TEST FAILURE OF 2A DG WHICH OCCURRED ON 1-28-85. DURING AN OPERATIONAL RETEST, FOLLOWING COMPLETION OF REPAIRS TO 21SW39 (2A DG SERVICE WATER CONTROL VALVE),

THE DG TRIPPED AS THE RESULT OF A HIGH JACKET WATER TEMPERATURE SIGNAL. IT WAS DISCOVERED THAT 21SW39 VALVE ACTUATOR HAD BEEN INSTALLED INCORRECTLY, RESULTING IN THE VALVE CLOSING WHEN THE DIESEL STARTED. 21SW39 HAS BEEN REPAIRED BY SITE CONTRACTOR PERSONNEL UTILIZING MAINTENANCE PROCEDURE M14A. THE EVENT WAS CAUSED BY THE FAILURE TO REASSEMBLE THE VALVE IN ACCORDANCE WITH INSTRUCTIONS CONTAINED IN THE VENDOR MANUAL, AS SPECIFIED BY M14A. 21SW39 WAS DISASSEMBLED, INSPECTED AND REASSEMBLED BY THE MAINTENANCE DEPARTMENT. 2A DG WAS RESTORED TO OPERATION ON 1-30-85, FOLLOWING A SATISFACTORY RETEST. STEPS HAVE BEEN TAKEN TO ENSURE BETTER COORDINATION OF SITE CONTRACTOR WORK ACTIVITIES RELATED TO THE PERFORMANCE OF MAINTENANCE DEPARTMENT WORK. IN ADDITION, M14A IS BEING REVISED TO INCLUDE A SECTION SPECIFICALLY ADDRESSING WORK ON BALL VALVES. THE REVISED PROCEDURE, WHEN USED IN CONJUNCTION WITH THE APPROPRIATE VENDOR MANUAL WILL ENSURE PROPER INSTALLATION OF THE VALVE ACTUATORS.

[263] SAN ONOFRE 1 DOCKET 50-206 LER 85-003
 MISSED IN-SERVICE INSPECTION TEST ON SALTWATER COOLING PUMP.
 EVENT DATE: 013185 REPORT DATE: 022285 NSSS: WE TYPE: PWR

(NSIC 193340) ON 1-11-85, AN ACCELERATED 2-WEEK SALTWATER COOLING PUMP (EII COMPONENT CODE P) (SWCP) IN-SERVICE INSPECTION TESTING (IST) WAS PERFORMED. BASED ON THE SURVEILLANCE RESULTS, THE ACCELERATED 2-WEEK SURVEILLANCE WAS AGAIN REQUIRED TO BE PERFORMED. ON 1-31-85, WITH UNIT 1 IN MODE 1 AT 95% POWER, IT WAS DETERMINED THAT THE 2-WEEK IST INTERVAL FOR SWCP G-13B SCHEDULED FOR 1-25-85 HAD NOT BEEN PERFORMED, AND THE 25% EXTENSION INTERVAL ALLOWED BY TECH SPEC 4.0.2 HAD EXPIRED ON 1-28-85. UPON IDENTIFICATION OF THE DELINQUENT SURVEILLANCE, OPERABILITY TESTING OF THE OTHER SWCP G-13A AND THE AUX SWCP G-13C WERE INITIATED AND COMPLETED SATISFACTORILY WITHIN 1 HR, AS REQUIRED BY TECH SPEC 3.3.1.A.(1).H. IST ON THE SWCP G-13B WAS INITIATED AND COMPLETED SATISFACTORILY, CONFIRMING OPERABILITY OF THE PUMP DURING THIS PERIOD. THE CAUSE OF THE EVENT WAS INADEQUATE SURVEILLANCE SCHEDULE TRACKING SYSTEM THAT PERMITTED A SINGLE PERSONNEL ERROR TO RESULT IN A MISSED IST. TO PREVENT RECURRENCE, AN ENHANCED REVIEW OF THE IST STATUS LOGS BY THE COGNIZANT ENGINEERING SUPERVISOR AND THE IST COORDINATOR ARE NOW CONDUCTED. SINCE THE SALTWATER COOLING PUMPS WERE OPERABLE, THERE ARE NO REASONABLE OR CREDIBLE CIRCUMSTANCES UNDER WHICH THIS CONDITION WOULD HAVE BEEN MORE SEVERE.

[264] SAN ONOFRE 1 DOCKET 50-206 LER 85-005
 TEMPORARY SEISMIC RATING REDUCTION OF THE INTAKE STRUCTURE.
 EVENT DATE: 021285 REPORT DATE: 031285 NSSS: WE TYPE: PWR

(NSIC 193661) ON 2-12-85, WITH UNIT 1 IN MODE 3, THE SEISMIC CAPABILITIES OF A PORTION OF THE INTAKE STRUCTURE WERE REDUCED BY THE INSTALLATION OF A TEMPORARY STOP GATE AND PARTIAL DEWATERING. THIS WAS DONE IN ORDER TO REMOVE A CIRCULATING WATER PUMP FOR REQUIRED MAINTENANCE. ON 3-2-85, WITH UNIT 1 IN MODE 1 AT 66.5% POWER, IN ORDER TO REINSTALL THE CIRCULATING WATER PUMP, THE STOP GATE WAS INSTALLED AND THE SAME PORTION OF THE INTAKE STRUCTURE WAS DEWATERED. THIS, AGAIN REDUCED THE SEISMIC CAPABILITIES OF A PORTION OF THE INTAKE STRUCTURE. BOTH DEWATERING PERIODS WERE LESS THAN 72 HRS IN DURATION AND NO TECH SPEC ACTION STATEMENTS WERE EXCEEDED. DURING THE DEWATERING PERIODS ONLY THE PORTION OF THE INTAKE STRUCTURE WHICH WAS DEWATERED WAS REDUCED IN SEISMIC CAPABILITY AND ADEQUATE REDUNDANT SYSTEMS WERE OPERABLE AND QUALIFIED TO MEET ALL REQUIRED SAFETY FUNCTIONS. THERE ARE NO REASONABLE OR CREDIBLE CIRCUMSTANCES UNDER WHICH THIS CONDITION WOULD HAVE BEEN MORE SEVERE.

[265] SAN ONOFRE 1 DOCKET 50-206 LER 85-006
 CONTAINMENT ESCAPE HATCH INTERLOCK MALFUNCTIONS.
 EVENT DATE: 021385 REPORT DATE: 031885 NSSS: WE TYPE: PWR
 VENDOR: CHICAGO BRIDGE AND IRON COMPANY

(NSIC 193590) ON 2-13 AT 0812, WITH UNIT 1 IN MODE 3, IN PREPARATION FOR MAINTENANCE, A SECURITY OFFICER REMOVED THE LOCK FROM THE EMERGENCY ACCESS ESCAPE HATCH. HOWEVER, IN THE COURSE OF REMOVING THE LOCK, HE ALSO MANIPULATED THE EH OPERATING MECHANISM SUCH THAT BOTH THE INNER AND OUTER DOORS WERE OPENED SIMULTANEOUSLY. THIS MANIPULATION OF PLANT EQUIPMENT WAS NOT INCLUDED IN, OR REQUIRED BY, HIS INSTRUCTIONS TO REMOVE THE LOCK AND WAS CONTRARY TO EXPLICIT TRAINING PROVIDED ALL PLANT PERSONNEL PERMITTED UNESCORTED ACCESS TO THE PROTECTED AREA. BOTH THE NORMAL AND EMERGENCY ACCESSSES TO CONTAINMENT INCLUDE MECHANICAL INTERLOCK DEVICES DESIGNED TO PREVENT SIMULTANEOUS OPENING OF THE DOORS. THE EH INTERLOCK FAILED DURING THE UNAUTHORIZED MANIPULATION DUE TO A KEY, WHICH SECURES ONE OF THE INTERLOCK CAMS TO ITS SHAFT, BECOMING DISPLACED, SUCH THAT THE CAM DID NOT PERFORM ITS INTERLOCK FUNCTION, BECAUSE THE SET SCREW HOLDING THE KEY IN PLACE WAS NOT SUFFICIENTLY TIGHTENED DURING THE LAST MAINTENANCE, OR IT LOOSENED SUBSEQUENTLY. CONTAINMENT INTEGRITY WAS NOT MAINTAINED AS REQUIRED BY TECH SPEC 3.6.1 FOR APPROX 21.5 HRS ON 2-13-14. THE SAFETY SIGNIFICANCE EVALUATION CONCLUDES THAT THE REACTOR WOULD NOT HAVE RETURNED TO CRITICALITY AND THAT THE DOSE AT THE EAB WOULD HAVE BEEN BELOW THE DOSE CRITERIA FOR DECLARATION OF AN UNUSUAL EVENT.

[266] SAN ONOPRE 2 DOCKET 50-361 LER 84-006
 MULTIPLE SPURIOUS TOXIC GAS ISOLATION SYSTEM ACTUATIONS.
 EVENT DATE: 010384 REPORT DATE: 022884 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOPRE 3 (PWR)

(NSIC 192551) ON 2-3-84, AT 0008, 0030 AND 0220, SPURIOUS TOXIC GAS ISOLATION SYSTEM (TGIS) ACTUATIONS OCCURRED. SUBSEQUENT TO THIS DATE ADDITIONAL SPURIOUS ACTUATIONS OCCURRED ON 2-4, 5, 7, 8, 11, 14, 17, 20, 23, 26 AND 27. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) ACTUATED ON EACH TGIS AS REQUIRED. THESE EVENTS WERE REPORTED PURSUANT TO 10 CFR 50.72(B)(2)(II) AND ARE REPORTED HEREIN PURSUANT TO 10 CFR 50.73(A)(2)(IV). DURING THE INVESTIGATION ASSOCIATED WITH THE PREPARATION OF THIS REPORT, IT WAS DETERMINED THAT 11 SPURIOUS TGIS ACTUATIONS HAD OCCURRED BETWEEN 1-1 AND 1-29, 1984, WHICH WERE NOT REPORTED PURSUANT TO 10 CFR 50.72(B)(2)(II). THIS RESULTED IN A TOTAL OF 30 OCCURRENCES. THE CAUSE OF THE SPURIOUS ACTUATIONS IS THAT THE TGIS SETPOINT, REQUIRED BY THE TECH SPECS, IS SET AT THE THRESHOLD LEVEL OF DETECTION RESULTING IN FREQUENT SPURIOUS ACTUATIONS. ON EACH OCCASION, THE ACTUATION WAS VERIFIED TO BE SPURIOUS AND THE TGIS WAS RESET. AS LONG TERM CORRECTIVE ACTION, A TECH SPEC AMENDMENT IS BEING PREPARED TO RAISE THE TGIS SETPOINT REQUIREMENT. IN ADDITION, A REQUEST FOR EXEMPTION FROM REPORTING INVALID ACTUATIONS UNDER 10 CFR 50.72 AND 10 CFR 50.73 IS BEING CONSIDERED.

[267] SAN ONOPRE 2 DOCKET 50-361 LER 84-061
 SPURIOUS ACTUATION OF CONTAINMENT PURGE ISOLATION SYSTEM.
 EVENT DATE: 102284 REPORT DATE: 111484 NSSS: CE TYPE: PWR

(NSIC 193655) ON 10-22-84, AT 0515 AND AGAIN AT 0555, WITH UNIT 2 IN MODE 4 AND A CONTAINMENT MINIPURGE IN PROGRESS, THE TRAIN 'A' CONTAINMENT PURGE ISOLATION SYSTEM WAS SPURIOUSLY ACTUATED FROM INDUCED ELECTRICAL NOISE SPIKES ON CONTAINMENT AREA RADIATION MONITOR 2RT-7856. ALL TRAIN A CPIS ACTUATED VALVES FUNCTIONED PROPERLY TO ISOLATE THE PURGE. AFTER EACH ACTUATION THE ACTUAL CONTAINMENT RADIATION LEVELS WERE VERIFIED TO BE BELOW THE CPIS ACTUATION SETPOINT AND CPIS TRAIN 'A' AND 2RT-7856 WERE RESET AND THE CONTAINMENT MINIPURGE WAS REINITIATED. AT 1120 ON 11-7-84 AND AT 0414 ON 11-8-84, WITH UNIT 2 IN MODE 6 AND A MAIN CONTAINMENT PURGE IN PROGRESS, THE TRAIN 'A' CPIS WAS AGAIN SPURIOUSLY ACTUATED FROM INDUCED NOISE SPIKES ON 2RT-7856. ALL TRAIN 'A' CPIS ACTUATED VALVES FUNCTIONED AS DESIGNED TO ISOLATE THE PURGE. AFTER EACH ACTUATION, THE RADIATION LIMITS WERE VERIFIED TO BE BELOW THE CPIS SETPOINTS. CPIS TRAIN 'A' AND 2RT-7856 WERE RESET AND THE PURGE REINITIATED. THE ACTUAL CAUSE OF THE INDUCED NOISE IS UNDER INVESTIGATION AS REPORTED PREVIOUSLY IN LER

84-002 REV 1, LER 84-004 AND LER 84-049 DOCKET NO. 50-361. THE RESULTS OF THIS INVESTIGATION WILL BE SUBMITTED IN A REV TO LER 84-002.

[268] SAN ONOFRE 2 DOCKET 50-361 LER 85-001
 MISSED FIRE WATCH OF COMMON ELECTRICAL TUNNEL.
 EVENT DATE: 010385 REPORT DATE: 013085 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 193552) ON 1-3-85, WITH UNIT 2 DEFUELED AND UNIT 3 IN MODE 1, ROUTINE 1 HR ROVING FIRE WATCHES WERE BEING CONDUCTED IN THE UNITS 2/3 ELECTRICAL TUNNEL IN ACCORDANCE WITH TECH SPEC 3.7.9 ACTION STATMENT 'A' BECAUSE OF A PLANNED INOPERABLE FIRE BARRIER. AT 1408, THE FIRE WATCH CONTACTED SECURITY PRIOR TO ENTERING THE UNITS 2/3 ELECTRICAL TUNNEL. HOWEVER, DUE TO A PLANNED OUTAGE OF THE SECURITY COMPUTER, SECURITY OFFICERS DID NOT RESPOND PROPERLY TO ALLOW ENTRY INTO THE UNITS 2/3 ELECTRICAL TUNNEL UNTIL 1505. THE CAUSE OF THE EVENT WAS INADEQUATE PRIOR PLANNING OF A SECURITY COMPUTER OUTAGE, AND A FAILURE OF PERSONNEL TO IMPLEMENT A REVISED ACCESS ROUTING OF THE FIREWATCH. TO PREVENT RECURRENCE, ACTION HAS BEEN TAKEN TO AUTHORIZE FIREWATCHES TO ENTER RESTRICTED AREAS DURING CONTINGENCIES WHEN SECURITY OFFICERS ARE NOT AVAILABLE. IN ADDITION, APPROPRIATE DISCIPLINARY ACTION WILL BE TAKEN WITH THE SECURITY OFFICERS WHO DID NOT RESPOND PROPERLY. THIS IS CONSIDERED TO BE AN ISOLATED EVENT. THERE ARE NO REASONABLE OR CREDIBLE CIRCUMSTANCES UNDER WHICH THIS EVENT WOULD HAVE BEEN MORE SEVERE.

[269] SAN ONOFRE 2 DOCKET 50-361 LER 85-002
 TOXIC GAS ISOLATION SYSTEM ACTUATION FROM LOSS OF INSTRUMENT AIR.
 EVENT DATE: 010485 REPORT DATE: 013085 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 193364) ON 1-4-85, AT 0842, WITH UNIT 2 DEFUELED AND UNIT 3 IN MODE 1 AT 100% POWER, A TOXIC GAS ISOLATION SYSTEM (TGIS) TRAIN 'A' (EIIIS SYSTEM CODE JF) ACTUATION OCCURRED, FOLLOWED BY AN ACTUATION OF TGIS TRAIN 'B' AT 0846. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) (EIIIS SYSTEM CODE VI) ACTUATED AS REQUIRED. THE TGIS ACTUATION WAS CAUSED BY A BUTANE CHANNEL 'FLAME OUT' DUE TO THE LOSS OF INSTRUMENT AIR TO THE TGIS CABINET. THE INSTRUMENT AIR LINE WAS ACCIDENTALLY CRACKED WHEN STRUCK BY A SECTION OF CABLE TRAY BEING CARRIED BY A CONSTRUCTION WORKER. CONSTRUCTION WORKERS HAVE BEEN INSTRUCTED TO USE CAUTION WHEN HANDLING MATERIALS. THE INSTRUMENT AIR LINE WAS REPAIRED AND BOTH TGIS CHANNELS WERE RESET. THIS ACCIDENT IS CONSIDERED AN ISOLATED CASE AND NO FURTHER CORRECTIVE ACTION IS PLANNED.

[270] SAN ONOFRE 2 DOCKET 50-361 LER 85-003
 SPURIOUS TOXIC GAS ISOLATION SYSTEM ACTUATIONS.
 EVENT DATE: 011085 REPORT DATE: 020785 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 193365) ON 1-10-85 AT 2319, WITH UNIT 2 DEFUELED AND UNIT 3 AT 100%, AND ON 2-2-85 AT 1928 WITH UNIT 2 IN MODE 6 AND UNIT 3 IN MODE 5, SPURIOUS TOXIC GAS ISOLATION SYSTEM (TGIS) TRAIN 'B' ACTUATIONS OCCURRED. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) ACTUATED AS REQUIRED. THE ACTUATION WAS VERIFIED TO BE SPURIOUS BY CONFIRMING THAT THE METER INDICATIONS ON THE TGIS PANEL WERE LESS THAN THEIR RESPECTIVE SETPOINTS, AND TGIS WAS RESET. SEE ALSO LERS 84-006, 012, 021, 026, 032, 037, 042, 052, 055 AND 065 (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. IMPLEMENTATION OF CORRECTIVE ACTIONS HAS REDUCED THE NUMBER OF SPURIOUS TGIS ACTUATIONS FROM AN AVERAGE OF THIRTY PER

QUARTER TO 8 IN THE LAST QUARTER OF 1984. A TECH SPEC AMENDMENT HAS BEEN ISSUED TO ALLOW MORE APPROPRIATE SETPOINTS TO BE IMPLEMENTED. THIS SHOULD FURTHER REDUCE THE NUMBER OF SPURIOUS ACTUATIONS.

[271] SAN ONOFRE 2 DOCKET 50-361 LER 85-008
NORTH GAS STRIPPER DRAIN VALVES LEAK.
EVENT DATE: 011785 REPORT DATE: 021585 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)
VENDOR: GRINNELL CORP.

(NSIC 193424) ON 1-17-85, AT 0503, WITH UNIT 2 DEFUELED AND UNIT 3 IN MODE 1 AT 100% POWER, WHILE PLACING THE NORTH GAS STRIPPER IN SERVICE, A HIGH RADIATION ALARM WAS RECEIVED ON PLANT VENT STACK MONITOR 2/3-7808C. IN ACCORDANCE WITH TECH SPEC 3.11.2.1, STEPS WERE TAKEN TO TERMINATE THE RELEASE AND THE RELEASE WAS SECURED AT APPROX 0700. OUR EVALUATION OF THE SITE BOUNDARY CONCENTRATIONS, INDICATES A MAX CONCENTRATION, WHEN AVERAGED OVER 1 HR, OF 4.42 MPC. THIS RELEASE WOULD RESULT IN A DOSE TO A PERSON, AT THE SITE BOUNDARY, OF 0.07 MREM. A TOTAL OF APPROX 306 CI (NOBLE GAS) WAS RELEASED. THE CAUSE OF THE RELEASE WAS LEAKING DRAIN VALVES ON THE NORTH GAS STRIPPER PREHEATER AND REGENERATIVE HEAT EXCHANGER MANIFOLD. MAINTENANCE ORDERS HAVE BEEN ISSUED TO REPAIR THESE VALVES. THE VALVES WILL BE REPAIRED AND TESTED PRIOR TO RETURNING THE NORTH GAS STRIPPER TO SERVICE. SIMILAR EVENTS REPORTED IN LER 361/84-054.

[272] SAN ONOFRE 2 DOCKET 50-361 LER 85-011
ISOLATION OF PORTION OF FIRE WATER SYSTEM.
EVENT DATE: 012485 REPORT DATE: 012985 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 193473) AT 2030, WITH UNIT 2 IN MODE 6 AND UNIT 3 IN MODE 1 AT 100% POWER, ISOLATION VALVES WERE CLOSED TO PERFORM MAINTENANCE ON THE EAST SIDE OF THE FIRE WATER SYSTEM LOOP. DUE TO PERSONNEL ERROR, IT WAS NOT RECOGNIZED THAT ISOLATION VALVES HAD PREVIOUSLY BEEN CLOSED ON THE WEST SIDE OF THE LOOP TO PERFORM MAINTENANCE. THEREFORE, THE UNIT 3 AND COMMON 2/3 FIRE SPRAY/SPRINKLER AND HOSE STATIONS WERE NOT PRESSURIZED BY THE LOOP FROM THE TIME THE EAST SIDE LOOP ISOLATION VALVES WERE CLOSED UNTIL THE CONDITION WAS CORRECTED AT 1925 ON 1-24-85. HOWEVER, THE SEISMICALLY QUALIFIED BACKUP FIRE WATER SUPPLY AND PUMPING SYSTEM REMAINED AVAILABLE THROUGHOUT THE PERIOD. DEDICATED, ONSITE FIRE RESPONSE PERSONNEL, AND PROCEDURES FOR THE USE OF THE BACKUP SYSTEM, WERE IN PLACE TO PRESSURIZE THE FIRE SPRAY/SPRINKLER AND HOSE STATIONS, AND THE WEST SIDE LOOP ISOLATION VALVES COULD HAVE BEEN OPENED IF NEEDED. CORRECTIVE ACTIONS TO PREVENT RECURRENCE INCLUDE: A REVIEW OF THE PROCESS INVOLVED IN THE VALVE CLOSURES WITH PERSONNEL, INCLUDING DISCIPLINARY ACTION; A FORMALIZED PERIODIC REVIEW BY MANAGEMENT OF EQUIPMENT OUTAGES; IMPROVING COMMUNICATION INTERFACES BETWEEN THE OPERATIONS AND FIRE PROTECTION DEVISIONS; DEVELOPMENT OF COMPUTER-ASSISTED PLANT STATUS TRACKING SYSTEM; AND A DESIGN CHANGE TO PROVIDE ADDITIONAL FIRE WATER SYSTEM LOOP PRESSURE INDICATION IN THE CONTROL ROOM.

[273] SAN ONOFRE 2 DOCKET 50-361 LER 85-014
SPURIOUS CONTROL ROOM ISOLATION SYSTEM ACTUATIONS.
EVENT DATE: 012985 REPORT DATE: 021385 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 193366) ON 1-28-85, AT 1535, WITH UNIT 2 IN MODE 6 AND UNIT 3 IN MODE 3, THE CONTROL ROOM ISOLATION SYSTEM (CRIS) (EIIIS SYSTEM CODE VA) TRAIN 'B' WAS SPURIOUSLY ACTUATED BY A NOISE SPIKE ON CONTROL ROOM RADIATION MONITOR 2/3 RI-7825 (EIIIS COMPONENT CODE RIT). THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) (EIIIS SYSTEM CODE VI) ACTUATED AS REQUIRED. A CHECK OF THE REDUNDANT INSTRUMENTATION VERIFIED THE ACTUATION TO BE SPURIOUS. THE MONITOR WAS THEN

RESET AND CREACUS WAS SECURED. THE CAUSE OF THE ACTUATION WAS APPARENTLY AN ELECTRICAL NOISE SPIKE AND AS PREVIOUSLY REPORTED IN LER'S 84-022, 84-023, 84-038, 84-047, 84-073, AND 85-005 (DOCKET NO. 50-361), THE CAUSE IS UNDER INVESTIGATION. OUR PRELIMINARY INVESTIGATION HAS BEEN COMPLETED, AND WE ARE CURRENTLY PERFORMING A DETAILED STUDY OF THE PLANT GROUND SYSTEM, WITH TESTING SCHEDULED TO BEGIN IN MAR 1985. COMPLETION OF THE GROUND SYSTEM STUDY IS SCHEDULED FOR 11-1-85, AND UPON DETERMINATION OF CORRECTIVE ACTION, WE WILL SUBMIT A REV TO LER 84-023.

[274] SAN ONOFRE 2 DOCKET 50-361 LER 85-013
 SPURIOUS CONTROL ROOM ISOLATION SYSTEM ACTUATION.
 EVENT DATE: 013085 REPORT DATE: 022585 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)
 VENDOR: NUCLEAR MEASUREMENTS CORP.

(NSIC 193618) ON 1-30-85 AT 0420 WITH UNIT 2 IN MODE 6 AND UNIT 3 IN MODE 5, THE CONTROL ROOM ISOLATION SYSTEM TRAIN 'B' WAS SPURIOUSLY ACTUATED BY AN INSTRUMENT FAILURE ON CONTROL ROOM RADIATION MONITOR 2/3RE-7825B. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM ACTUATED AS REQUIRED. THE MONITOR WAS THEN RESET AND CREACUS WAS SECURED AT 0430. THE ACTUATION RESULTED FROM THE BACKGROUND RADIATION LEVELS DROPPING BELOW THE INSTRUMENT FAILURE SETPOINT. MAINTENANCE ORDER 85012789 WAS GENERATED TO RECALIBRATE 2/3RE-7825B2 TO CHANGE THE CAMS ON THE INTERNAL CHECK SOURCE SUCH THAT THE BACKGROUND AT 2/3RE-7825B2 WOULD NOT DECREASE BELOW THE FAILURE SETPOINT. THE INSTRUMENT HAS BEEN RECALIBRATED AND RETURNED TO SERVICE. SPURIOUS CRIS ACTUATIONS HAVE BEEN PREVIOUSLY REPORTED IN LER'S 84-022, 84-023, 84-038, 84-047, 84-073, 85-005 AND 85-014.

[275] SAN ONOFRE 2 DOCKET 50-361 LER 85-016
 FUEL HANDLING ISOLATION SYSTEM ACTUATES.
 EVENT DATE: 013185 REPORT DATE: 030485 NSSS: CE TYPE: PWR

(NSIC 193619) ON 1-31-85 AT 1658 WITH UNIT 2 IN MODE 6, THE FUEL HANDLING ISOLATION SYSTEM TRAIN 'B' ACTUATED DUE TO AN 'INSTRUMENT FAILURE' OF FUEL HANDLING AREA VENT RADIATION INDICATOR 2RI-7823. ALL FHS TRAIN 'B' COMPONENTS FUNCTIONED PROPERLY. NO WORK WAS IN PROGRESS IN THE AREA AND NO RELEASE WAS MADE. THE FHS WAS RESET AT 1720 AND ALL COMPONENTS RETURNED TO NORMAL. THE ASSISTANT CONTROL OPERATOR INVESTIGATED THE 'INSTRUMENT FAILURE' AND FOUND THAT THE HIGH VOLTAGE POWER SUPPLY WAS LOST WHEN THE 'HV' PUSHBUTTON ON THE RADIATION MONITOR WAS RELEASED FROM ITS DEPRESSED POSITION, RESULTING IN THE FHS ACTUATION. IT WAS NOT POSSIBLE TO DETERMINE THE CAUSE OF THE PUSHBUTTON RELEASE. NO PERSONNEL WERE PRESENT IN THE AREA. THE 'INSTRUMENT FAILURE' CLEARED WHEN THE HIGH VOLTAGE POWER SUPPLY WAS RESTORED TO 2RI-7823. BECAUSE THIS WAS A UNIQUE EVENT AND THE SYSTEM IMMEDIATELY ALARMS AND FAILS TO A SAFE, CONSERVATIVE CONDITION, NO FURTHER CORRECTIVE ACTIONS ARE PLANNED.

[276] SAN ONOFRE 2 DOCKET 50-361 LER 85-020
 TOXIC GAS ISOLATION SYSTEM HYDROCARBON ANALYZER FLAME-OUT.
 EVENT DATE: 021085 REPORT DATE: 030585 NSSS: CE TYPE: PWR
 OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 193620) ON 2-10-85 WITH UNITS 2 AND 3 IN MODE 5, A FITTING IN THE HYDROCARBON ANALYZER OF THE TGIS TRAIN 'B' LOCATED BETWEEN PRESSURE SWITCH 2/3PSL9782B AND ITS ASSOCIATED ISOLATION VALVE FAILED, WHICH ALLOWED HYDROGEN PRESSURE TO DECREASE TO APPROX 1000 PSI. THIS RESULTED IN A HYDROCARBON ANALYZER FLAME-OUT, AN INSTRUMENT FAILURE ACTUATION SIGNAL, AND AN ACTUATION OF TRAIN 'B' TGIS AT 1919. THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM ACTUATED AS REQUIRED. AT 1940 THE HYDROGEN LEAK WAS DISCOVERED IN THE AREA OF THE TGIS PANEL AND THE HYDROGEN TO TGIS TRAIN 'A' AND 'B' WAS ISOLATED. THE FITTING WAS

REPAIRED AND THE TGIS WAS RETURNED TO SERVICE ON 2-11-85, AT 0025. SINCE THIS IS THE FIRST FITTING FAILURE OF THIS TYPE THIS IS CONSIDERED TO BE AN ISOLATED EVENT. NO FURTHER CORRECTIVE ACTION IS PLANNED.

[277] SAN ONOPRE 3 DOCKET 50-362 LER 84-038
DOSE EQUIVALENT IODINE LIMITS EXCEEDED.
EVENT DATE: 092284 REPORT DATE: 101784 NSSS: CE TYPE: PWR

(NSIC 193587) PURSUANT TO LCO 3.4.7, ACTION STATEMENT 'D' OF APPENDIX A, TECH SPECS TO FACILITY OPERATING LICENSE NPF-15 FOR SAN ONOPRE UNIT 3, THIS SUBMITTAL PROVIDES THE REQUIRED 30-DAY WRITTEN LER FOR AN OCCURRENCE INVOLVING THE RCS SPECIFIC ACTIVITY. ON 9-22-84, AT 0207, UNIT 3 POWER REDUCTION FROM 100% POWER WAS INITIATED IN ORDER TO PERFORM SCHEDULED SURVEILLANCES AND MISCELLANEOUS MAINTENANCE ITEMS REQUIRING REDUCED POWER. FOLLOWING THE REDUCTION TO 65% POWER, AT 0840, ANALYSIS OF A RCS SAMPLE INDICATED THAT RCS SPECIFIC ACTIVITY EXCEEDED 1.0 MICROCURIE/GRAM DOSE EQUIVALENT I-131. RCS SPECIFIC ACTIVITY WAS REDUCED TO LESS THAN 1.0 MICROCURIE/GRAM DOSE EQUIVALENT I-131. RCS SPECIFIC ACTIVITY WAS REDUCED TO LESS THAN 1.0 MICROCURIE/GRAM DE I-131 BY PURIFICATION FLOW AT 2025 ON 9-23-84. THE EVENT WAS AN INDICATION OF IODINE SPIKING. EFFORTS WILL CONTINUE TO MONITOR AND EVALUATE PRIMARY COOLANT ACTIVITY. NO FURTHER CORRECTIVE ACTION IS PLANNED.

[278] SAN ONOPRE 3 DOCKET 50-362 LER 85-005
FIVE CONTAINMENT PURGE ISOLATIONS OCCUR.
EVENT DATE: 013185 REPORT DATE: 030485 NSSS: CE TYPE: PWR
VENDOR: NUCLEAR MEASUREMENTS CORP.

(NSIC 193621) ON 1-31-85 AT 0729, WITH UNIT 3 IN MODE 5 AND NO CONTAINMENT PURGES IN PROGRESS, THE TRAIN 'B' CPIS SPURIOUSLY ACTUATED AS A RESULT OF INSTRUMENT INTERMITTENT FAILURE ON CONTAINMENT AREA RADIATION MONITOR 3RI-7857. SUBSEQUENT ACTUATIONS OCCURRED ON 1-31-85 AT 0918, 2-1-85 AT 0005, 0540 AND 0553 WITH CONTAINMENT MAIN PURGES IN PROGRESS. AFTER EACH ACTUATION, 3RI-7857 WAS VERIFIED TO BE READING ABOVE ITS FAIL SETPOINT. THIS MONITOR NORMALLY OPERATES BETWEEN THE LOW FAIL AND HIGH RADIATION SETPOINTS. SYSTEM TROUBLESHOOTING COULD NOT DETERMINE THE FAILURE MECHANISM, THEREFORE CPIS WAS RESET. DUE TO THE FREQUENCY OF THE ACTUATIONS, 3RI-7857 WAS TAKEN OUT OF SERVICE AT 0603 ON 2-1-85 FOR FURTHER INVESTIGATION. THE CAUSE OF THE INSTRUMENT FAILURES WAS DETERMINED TO BE DUE TO THE FAILURE OF 3RT-7857'S KEYLOCK FUNCTION SWITCH WHICH RESULTED IN AN OPEN CIRCUIT AND THE SUBSEQUENT FAILURES. THE FAULTY SWITCH WAS REPLACED ON 2-18-85 AND THE MONITOR WAS RETURNED TO SERVICE ON 2-25-85 AT 2035. THIS WAS THE FIRST FAILURE OF THIS TYPE, THEREFORE NO FURTHER CORRECTIVE ACTION IS PLANNED AT THIS TIME.

[279] SAN ONOPRE 3 DOCKET 50-362 LER 84-044
DELINQUENT SURVEILLANCE OF THE REACTOR PROTECTIVE SYSTEM.
EVENT DATE: 032085 REPORT DATE: 043085 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: SAN ONOPRE 2 (PWR)

(NSIC 193588) ON 3-20-85, IT WAS DETERMINED THAT INSTRUMENT AND TEST PROCEDURE 8023-II-3.1, 'PLANT PROTECTION SYSTEM RESPONSE TIME TEST FOR CHANNEL A,' DID NOT REQUIRE TESTING OF CEAC PENALTY FACTORS AS REQUIRED BY TECH SPEC TABLE 3.3-2, ITEM 9(C) AND 10(G). THIS PROCEDURE WAS USED FOR RESPONSE TIME TESTING OF CHANNEL A OF THE UNIT 2 AND 3 RPS IN 10-83 AND 2-84, RESPECTIVELY. THE UNIT 2 AND 3 CEAC PENALTY FACTORS WERE INITIALLY RESPONSE TIME TESTED IN JAN AND OCT OF 1982, RESPECTIVELY. THE SLOWEST RESPONSE TIME RECORDED AT THAT TIME WAS 0.148 SECS. UPON DISCOVERY OF THE DEFICIENT PROCEDURE, THE CEAC PENALTY FACTORS IN UNIT 2 AND 3 WERE AGAIN RESPONSE TIME TESTED AND FOUND TO BE LESS THAN THE TECH SPEC REQUIRED RESPONSE TIME OF 0.53 SECS. THE SLOWEST RESPONSE TIME WAS 0.160

SECS. FOR THIS REASON, IT IS CONCLUDED THAT THE CRAC PENALTY FACTOR RESPONSE TIMES WERE IN COMPLIANCE DURING THIS PERIOD, AND THERE WAS NO SAFETY SIGNIFICANCE TO THE CONDITION. APPROPRIATE PROCEDURES WILL BE REVISED TO INCLUDE THIS REQUIREMENT. THIS OMISSION WAS CAUSED BY INADEQUATE REVIEW OF THE INITIAL PROCEDURE. THIS IS CONSIDERED AN ISOLATED OCCURRENCE.

[280] SEQUOYAH 1 DOCKET 50-327 LER 85-005
 POTENTIAL FAILURE OF DIESEL GENERATOR COOLING WATER SYSTEM.
 EVENT DATE: 011585 REPORT DATE: 021385 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 193524) A DESIGN REVIEW HAS REVEALED THAT, DURING A SEISMIC EVENT, ESSENTIAL RAW COOLING WATER PIPING DOWNSTREAM OF THE DG COOLERS COULD HAVE FAILED. THIS FAILURE WOULD NOT HAVE AFFECTED COOLING FOR THE DG BUT MAY HAVE RESULTED IN LOCALIZED FLOODING WITH POTENTIAL DG FAILURE. THE PIPE SUPPORTS HAVE BEEN MODIFIED TO ENSURE SEISMIC QUALIFICATION. SINCE THERE WAS NO SEISMIC EVENT, THE SUBJECT PIPING RETAINED ITS INTEGRITY AND PERFORMED ITS INTENDED FUNCTION.

[281] SEQUOYAH 1 DOCKET 50-327 LER 85-004
 FIRE DOORS NOT TESTED, DEFICIENCIES FOUND.
 EVENT DATE: 011685 REPORT DATE: 021585 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 193523) DURING A REVIEW BY MAINTENANCE OF THEIR SURVEILLANCE INSTRUCTIONS, IT WAS DISCOVERED THAT SI-261, 'VISUAL INSPECTION OF FIRE DOORS,' HAD NOT BEEN PERFORMED WITHIN THE TECH SPEC TIME LIMITS. UPON DISCOVERY, 1-16-85, THE SI WAS PERFORMED AND 54 DEFICIENCIES WERE FOUND. 37 DEFICIENCIES HAVE BEEN CORRECTED, AND 17 ARE STILL OUTSTANDING. THE OUTSTANDING DEFICIENCIES WILL BE COMPLETED AS SOON AS NEEDED MATERIAL IS RECEIVED. THIS REPORT IS REQUIRED PER 10CFR50.73(A)(2)(I) AND SPECIAL REPORT REQUIREMENTS OF TECH SPEC 3.7.12. PREVIOUS OCCURRENCES 327/85-001 AND 327/85-003.

[282] SEQUOYAH 1 DOCKET 50-327 LER 85-008
 FAILURE TO COMPLY WITH ONE-HOUR FIRE WATCH.
 EVENT DATE: 012085 REPORT DATE: 021585 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)

(NSIC 193525) ON FIVE SEPARATE OCCASIONS, AN HOURLY FIRE WATCH WAS NOT PERFORMED WITHIN 1 HR. ALL FIRE WATCHES WERE IMMEDIATELY REESTABLISHED OR COMPLETED UPON DETECTION OF THE MISSED FIRE WATCH. THIS CONDITION IS REPORTABLE PER 10CFR50.73(A)(2)(I) AND THE SPECIAL REPORT REQUIREMENTS OF TECH SPEC 3.7.12. PREVIOUS EVENTS 327/84-075.

[283] SEQUOYAH 1 DOCKET 50-327 LER 85-009
 INOPERABILITY OF ROD POSITION INDICATION (RPI) SYSTEM.
 EVENT DATE: 012885 REPORT DATE: 022685 NSSS: WE TYPE: PWR

(NSIC 193361) ALL ROD POSITION INDICATION SIMULTANEOUSLY LOWERED APPROX 20 STEPS RESULTING IN MISALIGNMENT FROM THE STEP COUNTER OF GREATER THAN 12 STEPS ALLOWED BY TECH SPECS. ALL POWER PARAMETERS REMAINED UNCHANGED INDICATING FALSE ROD POSITION INDICATION READINGS. ALL ROD POSITION INDICATORS GRADUALLY RETURNED TO NORMAL IN 9 MINS. IT WAS DETERMINED THAT THE ONLY FAILURE WHICH COULD CAUSE ALL OF THE RPI'S TO FAIL WOULD BE AN INTERRUPTION OR REDUCTION IN 120V AC POWER. AFTER IT WAS DETERMINED THAT NO BREAKER SWITCHING HAD OCCURRED, A CHECK WAS MADE OF THE SOLATRON LINE VOLTAGE REGULATOR IN THE CABLE SPREADING ROOM. THIS CHECK REVEALED SMALL (2-3 INCH DIAMETER) PUDDLES OF WATER BENEATH THE SOLATRON. THE

MOST LIKELY SEQUENCE OF EVENTS WAS WETTING OF THE SOLATRON INDUCTION CIRCUITRY RESULTING IN VOLTAGE REDUCTION. AS THE MOISTURE DISSIPATED DUE TO THE HEAT GENERATED BY THE UNIT, THE NORMAL VOLTAGE WAS REESTABLISHED, AND THE RPI'S GRADUALLY RETURNED TO NORMAL. NO DAMAGE TO THE SOLATRON WAS NOTED. THE ACTUAL MEANS OF WATER ENTERING THE SOLATRON COULD NOT BE DETERMINED.

[284] SEQUOYAH 1 DOCKET 50-327 LER 85-007
EMERGENCY GAS TREATMENT SYSTEM INOPERABLE.
EVENT DATE: 013185 REPORT DATE: 030185 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: SEQUOYAH 2 (PWR)
VENDOR: BRUCE GM DIESEL, INC.
BUSSMANN MFG (DIV OF MCGRAW-EDISON)

(NSIC 193464) ON 1-31-85, AT 1155 CST, WHILE ATTEMPTING TO STROKE TIME AN ESSENTIAL RAW COOLING WATER VALVE BY STARTING THE B-B EMERGENCY GAS TREATMENT SYSTEM ROOM COOLER, THE ROOM COOLER WOULD NOT START DUE TO A BLOWN CONTROL FUSE. THIS MADE TRAIN 'B' EGTS INOPERABLE WITH BACKUP POWER (DG 2A-A) TO TRAIN 'A' INOPERABLE DUE TO SURVEILLANCE TESTING. THIS CONDITION REQUIRED ENTRY INTO LCO 3.0.3 AND IS REPORTABLE PER 10 CFR 50.73 (A)(2)(I).

[285] SEQUOYAH 1 DOCKET 50-327 LER 85-010
CONTAINMENT VENTILATION ISOLATION OCCURS.
EVENT DATE: 020185 REPORT DATE: 030285 NSSS: WE TYPE: PWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 193416) ON 2-1-85, A CONTAINMENT VENTILATION ISOLATION OCCURRED ON THE TRAIN 'B' VALVES ONLY. IT WAS FOUND THAT A POWER SUPPLY TO A CONTAINMENT PURGE AIR EXHAUST MONITOR HAD FAILED CAUSING THE ISOLATION. A FAILURE OF THE GENERAL ATOMIC MODEL RP-23 POWER SUPPLY OUTPUT VOLTAGE WILL INITIATE A HIGH RADIATION (FAIL-SAFE) SIGNAL AND CAUSE THE ISOLATION OF THE MONITOR'S ASSOCIATED VALVES. THE POWER SUPPLY WAS REPLACED AND THE CONTAINMENT VENTILATION ISOLATION RESET.

[286] SEQUOYAH 2 DOCKET 50-328 LER 84-020
INADVERTENT SAFETY INJECTION OCCURS.
EVENT DATE: 121684 REPORT DATE: 011585 NSSS: WZ TYPE: PWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 193502) AT 0826 CST ON 12-16-84, SEQUOYAH UNIT 2 EXPERIENCED AN INADVERTENT 'A' TRAIN SAFETY INJECTION AND A REACTOR TRIP. THIS EVENT OCCURRED WITH UNIT 2 IN MODE 3 (1870 PSIG, 545 DEGREES F). THIS IS A SPECIAL REPORT FILED IN ACCORDANCE WITH TECH SPEC LCO 3.5.2 ACTION B. PRESSURIZER SAFETY VALVE 2-PCV-68-563 WAS DETERMINED TO BE LEAKING, AND OPERATIONS PERSONNEL BEGAN REDUCING THE RCS PRESSURE IN AN ATTEMPT TO RESEAT THE VALVE. LOOPS 1 AND 2 SG'S REACHED LOW LEVEL SETPOINTS RESULTING IN AN AUTOMATIC INCREASE OF FEEDWATER. THE LOOP 2 MAIN FEEDWATER REGULATOR BYPASS VALVE FULLY OPENED, AND THIS RAPID ADDITION OF COLD WATER TO THE SG RESULTED IN SHRINK OF THE PRESSURIZER LEVEL AND CONSEQUENTLY INITIATED A RAPID DECREASE OF RCS PRESSURE. THE LOW PRESSURIZER PRESSURE SAFETY INJECTION SIGNAL IS MANUALLY BLOCKED DURING NORMAL STARTUPS AND SHUTDOWNS TO PREVENT UNNECESSARY SAFETY INJECTIONS. THE BLOCK IS AUTOMATICALLY REMOVED WHEN RCS PRESSURE INCREASES ABOVE 1970 PSIG. ALTHOUGH BOTH SI PERMISSIVE LIGHTS WERE STILL LIT, THE UNIT OPERATOR BECAME CONCERNED, SINCE RCS PRESSURE HAD BEEN NEAR 1970 PSIG EARLIER, THAT ONE TRAIN OF THE SI MAY HAVE RESET. THE OPERATOR TURNED BOTH HANDSWITCHES TO THE BLOCK POSITION AND THEN SLOWLY RETURNED THEM TO THEIR NEUTRAL POSITION. AT THIS TIME, AN 'A' TRAIN SI AND REACTOR TRIP OCCURRED.

[287] SEQUOYAH 2 DOCKET 50-328 LER 85-005
 DEBRIS LEFT INSIDE CONTAINMENT.
 EVENT DATE: 021285 REPORT DATE: 031485 NSSS: WE TYPE: PWR

(NSIC 193614) ON 2-12-85, AT 0118 CST, A ROUTINE INSPECTION OF THE UNIT 2 UPPER CONTAINMENT RESULTED IN THE DISCOVERY OF LOOSE EQUIPMENT AND DEBRIS. THIS MATERIAL INCLUDED 3 BAGS OF ICE AND A DROP LIGHT FOUND INSIDE OF THE ICE CONDENSER UPPER PLENUM ON THE LEDGE BETWEEN THE END WALL DOOR AND INTERMEDIATE DECK DOORS. ALSO FOUND ON THE GRATING JUST OUTSIDE OF THE END WALL DOOR WERE 2 BAGS OF FOAM INSULATION, SMALL HAND TOOLS (PLIERS, SCREWDRIVER, AND WRENCH), A FLASHLIGHT, 2 JARS OF GLUE, 3 PAIRS OF COLD WEATHER CLOTHING, 2 STRIPS OF METAL, PAPER, AND TAPE. ADMINISTRATIVE INSTRUCTION 8 REQUIRES THAT PERSONNEL INSPECT THEIR WORK AREA AND THE PATH TO AND FROM THE WORK AREA TO ENSURE THAT NO DEBRIS IS LEFT BEHIND WHEN EXITING CONTAINMENT. THE EMPLOYEES INVOLVED BELIEVED THAT MATERIAL AND EQUIPMENT WAS NOT CONSIDERED TO BE DEBRIS AND COULD BE LEFT INSIDE CONTAINMENT UNTIL COMPLETION OF THE MAINTENANCE ACTIVITY. THIS MATERIAL WAS REMOVED BY 0212 CST, HOWEVER, SUBSEQUENT REVIEW INDICATED THAT SOME OF THE MATERIAL HAD BEEN INSIDE OF THE UPPER COMPARTMENT FOR MORE THAN 5 DAYS. THIS CONDITION IS REPORTABLE IN ACCORDANCE WITH 10CFR50.73(A)(2)(I)(B).

[288] SHOREHAM DOCKET 50-322 LER 85-003
 SUSPENDED FIRE WATCHES.
 EVENT DATE: 010485 REPORT DATE: 020485 NSSS: GE TYPE: PWR

(NSIC 193358) THIS REPORT IS PURSUANT TO SPECIAL REPORT REQUIREMENT OF TECH SPEC 6.9.2. ON 12-22-84 AND 7 OTHER DAYS FOLLOWING THIS DATE, HOURLY FIRE WATCH PATROLS WERE SUSPENDED FOR TIME PERIODS LONGER THAN WHAT WAS AGREED TO IN SNRC 1122. THESE SUSPENDED FIRE PATROLS WERE DUE TO AN INCONSISTENCY, WHICH WAS NOT RECOGNIZED, BETWEEN THE APPROVED STARTUP PROCEDURE FOR FUEL LOADING AND THE FIRE WATCH COMMITMENT SET FORTH IN SNRC 1122. WHEN THE DISCREPANCY WAS DISCOVERED THE STARTUP PROCEDURE WAS CHANGED.

[289] SHOREHAM DOCKET 50-322 LER 85-006
 PERSONNEL ERROR CAUSES FALSE RPV LOW WATER LEVEL SIGNALS.
 EVENT DATE: 020485 REPORT DATE: 030685 NSSS: GE TYPE: BWR

(NSIC 193410) ON 2-4-85 AT 1034 A I&C TECHNICIAN VALING IN THE REACTOR PRESSURE TRANSMITTER FOR THE REMOTE SHUTDOWN PANEL CAUSED A TRANSIENT IN THE REFERENCE LEG OF THE INSTRUMENT. SINCE THE REFERENCE LEG IS COMMON TO MANY OF THE REACTOR VESSEL INSTRUMENTS, THE TRANSIENT CAUSED NUMEROUS REACTOR LEVEL INSTRUMENTS TO SENSE A MOMENTARY FALSE LOW LEVEL. THIS FALSE SIGNAL INITIATED THE 'A' CORE SPRAY SYSTEM, THE 'A' RHR SYSTEM, THE 'A' CONTROL ROOM ATMOSPHERE CONTROL SYSTEM/REACTOR BLDG STANDBY VENTILATION SYSTEM. TWO OF THE EMERGENCY DG'S RECEIVED A START SIGNAL AND STARTED. ALSO 1/2 OF A NSSS ISOLATION OCCURRED ALONG WITH A CRD PUMP TRIP. THE WATCH ENGINEER VERIFIED THAT THE SIGNAL WAS FALSE AND PREVENTED INJECTION TO THE VESSEL BY SECURING BOTH THE CORE SPRAY AND RHR PUMPS. AFTER RESETTNG THE INITIATION SIGNAL THE EMERGENCY DG'S WERE SECURED AND THE PLANT RESTORED TO NORMAL. AT THE TIME OF THE EVENT THE PLANT WAS SHUTDOWN WITH ALL RODS INSERTED IN THE CORE. REACTOR PRESSURE WAS 320 PSIG WITH BOTH RECIRCULATION PUMPS RUNNING TO HEAT UP THE REACTOR VESSEL. ALL WORK ON REACTOR PRESSURE INSTRUMENTATION WAS SUSPENDED UNTIL THE INCIDENT WAS REVIEWED BY PLANT MANAGEMENT, AND THE I&C TECHNICIANS CAUTIONED ABOUT VALVE MANIPULATIONS ON THE RPV REFERENCE LEG. THE NRC WAS NOTIFIED OF THE EVENT PER 10CFR50.72 AT 1110.

[290] SHOREHAM DOCKET 50-322 LER 85-007
 FIRE WATCH PERFORMED LATE.
 EVENT DATE: 020485 REPORT DATE: 030685 NSSS: GE TYPE: BWR

(NSIC 193411) ON 2-4-85 HOURLY FIREWATCHES REQUIRED BY TECH SPEC SECTION 3.3.7.9, AND SECTION 3.7.8 WERE NOT COMPLETED WITHIN THE HOURLY BASIS ON SEVERAL OCCASIONS IN THE CONTROL BLDG. THE FIREWATCH PATROLS WERE COMPLETED BUT NOT WITHIN THE PROPER TIME FRAMES. THE WATCHES WERE MISSED FOR SEVERAL REASONS INCLUDING THE FACT THAT THE CONTROL ROOM OPERATORS WERE ASSIGNED TO PERFORM THE FIREWATCHES CONCURRENTLY WITH THEIR CONTROL ROOM DUTIES AS THEY OCCUPY THE CONTROL ROOM ON A CONTINUOUS BASIS. WHEN THIS WAS DISCOVERED DURING A MANAGEMENT REVIEW OF THE FIREWATCH LOG, THE WATCHES WERE RE-ASSIGNED TO PERSONNEL WITH NO OTHER CONCURRENT DUTIES. ALL FIREWATCHES WERE INSTRUCTED TO PROMPTLY NOTIFY THE WATCH ENGINEER WHENEVER THEY COULD NOT COMPLETE A FIREWATCH IN THE PRESCRIBED TIMEFRAME. THE FIREWATCH PATROL INTERVAL FOR THE CONTROL STRUCTURE WAS ALSO REDUCED TO 30 MINS SO THAT UNANTICIPATED DELAYS ON A FIREWATCH PATROL WOULD NOT RESULT IN A VIOLATION OF THE HOUR REQUIREMENT.

[291] SHOREHAM DOCKET 50-322 LER 85-010
SHUTDOWN COOLING LOST.
EVENT DATE: 031085 REPORT DATE: 040485 NSSS: GE TYPE: BWR

(NSIC 193612) ON 3-10-85 AT 0350, AN INADVERTENT ISOLATION OF THE SHUTDOWN COOLING SYSTEM (RHR) OCCURRED WHILE PRESSURIZING THE REACTOR VESSEL IN PREPARATION FOR BACKFLUSHING THE CONTROL ROD DRIVES TO ALLEVIATE SUSPECTED PLUGGING OF THE COOLING WATER ORIFICES. THE PLANT WAS IN OPERATIONAL CONDITION 4, A CONDITION NOT REQUIRING THE CONTAINMENT ISOLATION SYSTEM TO BE OPERATIONAL. PER AN APPROVED STATION PROCEDURE, THE REACTOR VESSEL WATER LEVEL WAS ESTABLISHED ABOVE THE VESSEL FLANGE AND VESSEL HEATUP WAS PERFORMED UTILIZING THE RHR SYSTEM OPERATING IN THE SHUTDOWN COOLING MODE. SUBSEQUENT TO ACHIEVING A VESSEL TEMPERATURE OF 160F TO 180F, REACTOR VESSEL PRESSURIZATION COMMENCED UTILIZING THE CONTROL ROD DRIVE SYSTEM. AT 88 TO 90 PSIG, AS INDICATED ON THE REACTOR VESSEL PRESSURE INDICATOR, THE SHUTDOWN COOLING SYSTEM INBOARD ISOLATION VALVE AUTOMATICALLY SHUT AND RHR PUMPS E11 P014B AND D TRIPPED. THE AUTOMATIC ISOLATION OCCURRED AS A RESULT OF EXCEEDING THE SHUTDOWN COOLING SYSTEM HIGH SUCTION PRESSURE SETPOINT. OPERATIONS PERSONNEL MANUALLY SHUT THE OUTBOARD SHUTDOWN COOLING SYSTEM ISOLATION VALVE AND SECURED THE SHUTDOWN COOLING LINEUP. A MAINTENANCE WORK REQUEST WAS IMMEDIATELY ISSUED TO INVESTIGATE THE CAUSE OF THE ISOLATION AND PREPARATIONS WERE BEGUN TO START THE REACTOR RECIRCULATION SYSTEM TO MAINTAIN THE REACTOR VESSEL TEMPERATURE.

[292] ST. LUCIE 2 DOCKET 50-389 LER 84-009
INADVERTENT CONTAINMENT ISOLATION SIGNAL ACTUATION.
EVENT DATE: 110484 REPORT DATE: 120484 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: ST. LUCIE 1 (PWR)
VENDOR: GENERAL ATOMIC CO.

(NSIC 193589) ON 11-4-84, WHILE A SCHEDULED REFUELING OUTAGE WAS IN PROGRESS, A PERIODIC CALIBRATION AND TESTING OF THE CONTAINMENT RADIATION MONITORING CHANNELS WAS BEING PERFORMED. 2 OUT OF 4 RADIATION MONITOR CHANNELS IN TRIP WILL CAUSE A CONTAINMENT ISOLATION SIGNAL ACTUATION OF THE ESP'S. CHANNEL 'C' WAS BEING TESTED AND WAS IN THE TRIPPED CONDITION FROM A HIGH RADIATION TEST SIGNAL. THE CONTROL ROOM OPERATOR WAS CONTACTED BY THE I&C TEST ENGINEER AND WAS REQUESTED TO RESET THE TRIP CONDITION ON CHANNEL 'C'. IMMEDIATELY UPON ARRIVAL AT THE RADIATION MONITORING CONTROL BOARD, THE OPERATOR NOTICED A MOMENTARY 'SPIKE' ON CHANNEL 'A' (SATISFYING THE 2 OUT OF 4 LOGIC) AND SUBSEQUENT SAFEGUARDS CIS ACTUATION. ALL EQUIPMENT ACTUATED ON A CIS FUNCTIONED PROPERLY, (I.E., UNIT 1 - UNIT 2 CONTROL ROOM RECIRCULATION, CONTAINMENT VALVE ISOLATION, AND DG AUTO START.) INVESTIGATION REVEALED NO MALFUNCTIONED EQUIPMENT IN CHANNEL 'A'. NO DEFINITE CAUSE WAS IDENTIFIED AS PRODUCING THE 'SPIKE'. HOWEVER, WELDING WAS IN PROGRESS IN THE AREA OF THE RADIATION MONITORING EQUIPMENT AND COULD HAVE CAUSED THE 'SPIKE'.

[293] SUMMER 1 DOCKET 50-395 LER 84-032
 VOLUME BOOSTER FOR FEEDWATER CONTROL VALVE FAILS.
 EVENT DATE: 072984 REPORT DATE: 082884 NSSS: WE TYPE: PWR
 VENDOR: FISHER CONTROLS CO.

(NSIC 193656) ON 7-29-84, AT 0459 HRS, DURING A REACTOR STARTUP, THE REACTOR TRIPPED FROM 60% POWER DUE TO LO-LO SG LEVEL IN 'B' SG. THE LO-LO LEVEL WAS DUE TO THE ERRATIC OPERATION OF MAIN FEEDWATER CONTROL VALVE IFV-488-FW. THE ERRATIC OPERATION OF THE VALVE WAS ATTRIBUTED TO THE DEADBAND ADJUSTMENT ON THE CONTROL VALVE'S VOLUME BOOSTER. THE PLANT RESPONDED AS EXPECTED DURING THE TRANSIENT. A POST TRIP REVIEW WAS SATISFACTORILY CONDUCTED AND PLANS WERE MADE FOR A REACTOR RESTART. FINAL CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE WAS TO ADJUST THE VOLUME BOOSTER SO THAT IT DOES NOT FUNCTION EXCEPT DURING LARGE SIGNAL DEMANDS.

[294] SUMMER 1 DOCKET 50-395 LER 84-046
 INADVERTENT ACTUATION OF ESF LOAD SEQUENCER.
 EVENT DATE: 110684 REPORT DATE: 120384 NSSS: WE TYPE: PWR

(NSIC 193657) AT 1750 HRS ON 11-6-84, AN ESF ACTUATION OCCURRED DUE TO PERSONNEL ERROR. DURING RESTORATION OF ELECTRICAL LEADS FOLLOWING SURVEILLANCE TESTING, A MOMENTARY SHORT CIRCUIT SIMULATED AN UNDERVOLTAGE CONDITION ON BUS 1DA AND ACTUATED THE ESF LOAD SEQUENCER. THE ACTUATION TRIPPED THE NORMAL AND EMERGENCY BUS SUPPLY BREAKERS WHICH DE-ENERGIZED BUS 1DA. THERE WERE NO ADVERSE CONSEQUENCES RESULTING FROM THIS EVENT. FURTHER ESF ACTION WAS DISABLED BECAUSE THE EMERGENCY DG ASSOCIATED WITH THIS BUS HAD PREVIOUSLY BEEN RED TAGGED OUT OF SERVICE FOR MAINTENANCE. IN ADDITION, BUS 1DB WAS AVAILABLE TO SUPPLY THE REQUIRED LOADS WITH THE PLANT IN MODE 6. THE SHIFT SUPERVISOR RESTORED POWER TO BUS 1DA AT 1757 HRS AFTER DETERMINING THE CAUSE OF THE ACTUATION. TO PREVENT A POTENTIAL RECURRENCE, THE LICENSEE HAS REVIEWED THE DETAILS OF THIS EVENT WITH ELECTRICAL AND INSTRUMENT PERSONNEL. THIS ACTION WAS COMPLETED ON 11-14-84.

[295] SUMMER 1 DOCKET 50-395 LER 84-048
 UNMONITORED LIQUID RELEASE.
 EVENT DATE: 121784 REPORT DATE: 011485 NSSS: WE TYPE: PWR

(NSIC 193508) ON 12-17-84, WITH THE PLANT IN MODE 3, THE LICENSEE MADE AN UNMONITORED LIQUID RELEASE. THE CAUSE OF THIS EVENT WAS DUE TO AN IMPROPER VALVE LINE-UP. THERE WERE NO ADVERSE CONSEQUENCES DUE TO THIS EVENT. ACTIVITY THAT WAS INDICATED ON THE LIQUID RADWASTE EFFLUENT LINE MONITOR WAS DUE TO ENTRAPPED FLUID FROM A PREVIOUS RELEASE WHICH HAD BEEN MONITORED. THE OPERATIONS PROCEDURE FOR LIQUID RADWASTE DISCHARGE IS BEING REVISED TO CLARIFY VALVE AND SWITCH ALIGNMENT. A COPY OF THIS REPORT WILL BE PLACED IN THE OPERATION'S REQUIRED READING BOOK AND SHIFT SUPERVISORS WILL REVIEW THIS EVENT WITH ALL SHIFT PERSONNEL. THIS ACTION WILL BE COMPLETED BY 3-1-85.

[296] SUMMER 1 DOCKET 50-395 LER 85-001
 ROD CONTROL SYSTEM FAILURE.
 EVENT DATE: 021685 REPORT DATE: 031885 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC COMPANY (ELEV. DIV)

(NSIC 193630) ON 2-16 AND 27, 1985, THE REACTOR WAS SHUT DOWN IN ACCORDANCE WITH ACTION STATEMENT A OF TECH SPEC 3.1.3, 'MOVEABLE CONTROL ASSEMBLIES,' DUE TO FAILURE OF THE ROD CONTROL SYSTEM. THE FAILURE ON 2-16 WAS ATTRIBUTED TO A LOW OUTPUT FROM A PULSER OSCILLATOR CIRCUIT, AND THE FAILURE ON 2-27 WAS DUE TO AN ERRATIC OUTPUT OF THE SUPERVISORY BUFFER MEMORY CIRCUITRY. THE PULSER OSCILLATOR CIRCUIT WAS CALIBRATED, AND A NEW SUPERVISORY BUFFER MEMORY CARD WAS INSTALLED. THERE WERE NO ADVERSE CONSEQUENCES DUE TO THIS EVENT. THE UNIT WAS MANUALLY TRIPPED AFTER REDUCING REACTOR POWER. ALL SAFETY SYSTEMS FUNCTIONED AS

DESIGNED WITH THE EXCEPTION OF 1 FEEDWATER ISOLATION VALVE. AFTER CLOSURE, FWIV-1611A CYCLED OPEN 1/2 INCH. THE LICENSEE BELIEVES THE CYCLING IS DUE TO AN INTERNAL HYDRAULIC LEAK. REPAIRS TO THE VALVE WILL BE MADE DURING THE NEXT OUTAGE OF SUFFICIENT DURATION, DEPENDING ON THE AVAILABILITY OF SPARE PARTS. IN THE INTERIM, A NON-PERMANENT MODIFICATION HAS BEEN INSTALLED TO INSURE FEEDWATER ISOLATION.

[297] SUMMER 1 DOCKET 50-395 LER 85-002
GASEOUS EFFLUENT SURVEILLANCE MISSED.
EVENT DATE: 022185 REPORT DATE: 032085 NSSS: WE TYPE: PWR

(NSIC 193631) ON 2-21-85, THE LICENSEE IDENTIFIED A FAILURE TO PERFORM TECH SPEC SURVEILLANCE REQUIREMENT 4.11.2.1.2 (TABLE 4.11-2 ITEM C) WITHIN 24 HRS OF A PLANT STARTUP THAT OCCURRED ON 2-18-85. THE MISSED SURVEILLANCE IS ATTRIBUTED TO PERSONNEL ERROR SINCE COUNT ROOM PERSONNEL DID NOT OBTAIN AND ANALYZE A GRAB SAMPLE OF THE MAIN PLANT VENT WHEN PROPERLY NOTIFIED OF THE REQUIREMENT BY THE CONTROL ROOM. LER 83-125 REPORTED A SIMILAR OCCURRENCE ON 10-21-83. THE MAIN PLANT VENT EXHAUST SYSTEM RADIATION MONITOR RECORDER STRIP CHART WAS REVIEWED AND INDICATED NO SIGNIFICANT INCREASE IN ACTIVITY DURING THE PERIOD. AN ANALYSIS PERFORMED ON THE CHARCOAL AND PARTICULATE FILTERS, WHICH WERE CHANGED OUT AT 0723 HRS ON 2-19-85, SHOWED NO ACTIVITY. IN ORDER TO REDUCE THE POTENTIAL FOR RECURRENCE, THE LICENSEE HAS ESTABLISHED ADDITIONAL ADMINISTRATIVE CONTROLS TO ENSURE COMPLIANCE WITH THE SUBJECT TECH SPEC. THESE ADMINISTRATIVE CONTROLS INCLUDE VERIFICATION BY THE ONCOMING HEALTH PHYSICS SHIFT OF COMPLIANCE WITH THESE SAMPLING REQUIREMENTS.

[298] SUMMER 1 DOCKET 50-395 LER 85-003
REACTOR TRIP DURING STARTUP ON HIGH FLUX RATE.
EVENT DATE: 022885 REPORT DATE: 032785 NSSS: WE TYPE: PWR

(NSIC 193632) ON 2-28-85 AT 1330 HRS DURING A REACTOR STARTUP, A REACTOR TRIP OCCURRED ON THE HIGH FLUX POSITIVE RATE TRIP. THE PLANT RESPONDED AS EXPECTED TO THE RPS ACTUATION. THE EVENT WAS ATTRIBUTED TO 2 CAUSES. FIRST THE LICENSED OPERATOR CONDUCTING THE STARTUP FAILED TO ADHERE TO APPLICABLE PROCEDURES IN THAT CRITICALITY WAS NOT ANTICIPATED AT ALL TIMES DURING CONTROL ROD WITHDRAWAL AND AN AWARENESS OF PLANT CONDITIONS WAS NOT MAINTAINED AT ALL TIMES. THE SECOND CAUSE WHICH CONTRIBUTED TO THE EVENT WAS A LACK OF ADEQUATE GUIDANCE IN PROCEDURES USED TO CALCULATE ESTIMATED CRITICAL CONDITIONS AND REFERENCE CRITICAL DATA. THE CONSEQUENCES OF THIS EVENT ARE WELL BOUNDED BY THE SAFETY ANALYSIS FOR AN UNCONTROLLED ROD WITHDRAWAL ACCIDENT. THE POWER TRANSIENT WAS TERMINATED AT 6% POWER BY THE POSITIVE RATE TRIP. NO ADVERSE CONSEQUENCES WERE IDENTIFIED UPON COMPLETION OF THE REVIEW OF THIS EVENT. ACTIONS TAKEN BY THE LICENSEE TO PREVENT RECURRENCE INCLUDE FORMAL COUNSELING OF THE LICENSED OPERATOR FOR FAILURE TO MAINTAIN AN AWARENESS OF PLANT CONDITIONS DURING THE REACTOR STARTUP. PROCEDURES USED FOR THE CALCULATION OF ECCS WILL BE REVISED TO PROVIDE IMPROVED GUIDANCE FOR DATA USAGE AND LIMITATIONS FOR DETERMINATION OF CORE CONDITIONS FOR REACTOR STARTUPS.

[299] SURRY 1 DOCKET 50-280 LER 84-025
EXPOSURE OF EMPLOYEE HAVING AN IMPROPERLY COMPLETED FORM NRC-4.
EVENT DATE: 102984 REPORT DATE: 112884 NSSS: WE TYPE: PWR

(NSIC 193494) ON 10-29-84, IT WAS DETERMINED THAT A CONTRACT EMPLOYEE RECEIVED GREATER THAN 1.250 REM DURING THE THIRD QUARTER OF 1984 WITHOUT HAVING A PROPERLY COMPLETED FORM NRC-4, OCCUPATIONAL EXTERNAL RADIATION EXPOSURE HISTORY, ON FILE AS REQUIRED BY 10CFR20.101(B)(3). THIS EVENT IS REPORTABLE PURSUANT TO 10CFR20.405(A)(1)(I). THE MAX PERMISSIBLE QUARTERLY WHOLE BODY EXPOSURE LIMIT OF 3.0 REM AS SPECIFIED IN 10CFR20.101(B)(1) AND THE PERMISSIBLE ACCUMULATED DOSE OF

5 (N-18) REM AS SPECIFIED IN 10CFR20.101(B)(2) WERE NOT EXCEEDED. THIS EVENT WAS CAUSED BY FAILURE TO THOROUGHLY REVIEW EXPOSURE HISTORY DATA UTILIZED IN PREPARATION OF THE FORM NRC-4. THE SURRY NUCLEAR TRAINING DEPARTMENT HAS BEEN INSTRUCTED TO EMPHASIZE THE IMPORTANCE OF DISCLOSING ALL INFORMATION REQUESTED BY FORM NRC-4 TO PREVENT A SIMILAR EVENT FROM OCCURRING.

[300]	SURRY 1	DOCKET 50-280	LER 85-004
REACTOR TRIP DUE TO STEAM DUMP LEAKAGE.			
EVENT DATE: 012785		REPORT DATE: 022185	NSSS: WE
VENDOR: BLAW-KNOX COMPANY		TYPE: PWR	

(NSIC 193349) ON 1-27-85, UNIT 1 WAS CRITICAL WITH REACTOR POWER STABLE AT 5% FOLLOWING A REACTOR TRIP ON 1-26-85 (SEE LER-85-003-00). THE STEAM DUMP VALVES WERE ISOLATED EARLIER BECAUSE OF KNOWN BUT NOT SPECIFICALLY IDENTIFIED OR QUANTIFIED LEAKAGE. AS THE DUMPS WERE UNISOLATED, THE RESULTING LEAKAGE LED TO A PRIMARY SYSTEM TEMPERATURE DECREASE WHICH CAUSED REACTOR POWER TO INCREASE. AS POWER NEARED 10%, IT WAS DECIDED TO LATCH THE TURBINE TO PREVENT A TRIP. APPROX 2 MINS AFTER THE TURBINE WAS LATCHED, THE 4 TURBINE STOP VALVES CLOSED RESULTING IN A REACTOR TRIP AT 0748 HRS. ONE FACTOR CONTRIBUTING TO THE TRIP WAS NOT SUFFICIENTLY CONSIDERING THE EFFECT OF THE STEAM LEAKAGE ON PLANT PARAMETERS. ANOTHER CONTRIBUTOR TO THE EVENT WAS THAT ONLY ONE ELECTRO HYDRAULIC (EH) PUMP WAS AVAILABLE AND RUNNING WHEN THE TURBINE WAS LATCHED AND IT DID NOT SATISFY THE EH DEMANDS DURING THE LATCHING OPERATION. THE STEAM DUMP LEAKAGE WAS IDENTIFIED AND ISOLATED. THE HUMAN PERFORMANCE EVALUATION SYSTEM COORDINATOR IS INVESTIGATING THIS EVENT AND WILL PROVIDE FEEDBACK TO THE OPERATING STAFF TO IMPROVE HUMAN PERFORMANCE IN SIMILAR CIRCUMSTANCES.

[01] SURRY 1 DOCKET 50-280 LER 85-006
REACTOR TRIP DUE TO AN INADVERTENT ANTI-MOTERING TURBINE TRIP.
EVENT DATE: 012885 REPORT DATE: 022185 NSSS: WM TYPE: PWR

(NSIC 191350) ON 1-28-85, DURING A UNIT 1 STARTUP, A REACTOR TRIP OCCURRED DUE TO A DIFFERENTIAL PRESSURE ANTI-MOTURING TURBINE TRIP. PLANT PARAMETERS DID NOT INDICATE THAT A GENERATOR MOTURING CONDITION EXISTED. THE TRIP OCCURRED BECAUSE THE EXHAUST PRESSURE SENSING LINE ROOT VALVE IN THE ANTI-MOTURING INSTRUMENTATION WAS ISOLATED. IT IS BELIEVED THAT THIS VALVE, WHILE SHUT, DEVELOPED A SMALL LEAK DURING A PREVIOUS PERIOD OF POWER OPERATION, ALLOWING THE SENSING LINE TO BECOME PRESSURIZED. THE LINE REMAINED SUFFICIENTLY PRESSURIZED DURING THE SHUTDOWN PERIOD TO CAUSE THE ANTI-MOTURING DELTA P SETPOINT TO BE EXCEEDED AS THE TURBINE WAS BEING LOADED. STATION DRAWINGS AND VALVE LINE UP CHECKLISTS FOR THE MAIN STEAM SYSTEM WILL BE CHANGED TO REFLECT THE CORRECT POSITION AND FUNCTION OF THE VALVES.

[302] SURRY 2 DOCKET 50-281 LER 85-002
CHARGING PUMPS' INTERMEDIATE SEAL COOLERS IMPROPERLY ALIGNED.
EVENT DATE: 021585 REPORT DATE: 031485 NSSS: WE TYPE: PWR

(NSIC 193543) ON 2-15-85, WITH THE UNIT AT 100% POWER, OPERATIONS PERSONNEL PERFORMING A SYSTEM WALKDOWN DISCOVERED THAT COOLING WATER TO THE CHARGING PUMP INTERMEDIATE SEAL COOLERS WERE IMPROPERLY ALIGNED. (SERVICE WATER WAS ISOLATED TO COOLER 2-SW-E-1A AND COMPONENT COOLING WATER WAS ISOLATED TO COOLER 2-SW-E-1B). THE CAUSE OF THIS EVENT WAS PERSONNEL ERROR. IT IS BELIEVED THAT THE MISALIGNMENT OCCURRED WHEN OPERATORS ATTEMPTED TO SHIFT THE COOLERS WITHOUT USING THE APPROVED OPERATING PROCEDURE. UPON DISCOVERY OF THIS EVENT, OPERATORS PLACED THE PROPER INTERMEDIATE SEAL COOLER IN SERVICE. PERSONNEL WERE REINSTRUCTED; THE IMPORTANCE OF USING APPROVED PROCEDURES WAS EMPHASIZED. SIMILAR EVENTS: 281/83-052 AND 281/84-001.

[303] SUSQUEHANNA 1 DOCKET 50-387 LER 84-048
 IMPROPER NITROGEN DRYWELL INERTING DAMAGES ISOLATION VALVES.
 EVENT DATE: 122484 REPORT DATE: 012585 NSSS: GE TYPE: BWR
 VENDOR: PRATT, HENRY COMPANY

(NSIC 193507) AT 2027, A VENDOR'S NITROGEN TANKER BEGAN PUMPING NITROGEN INTO THE PLANT PIPING WITHOUT CLEARANCE FOR THE CONTROL ROOM DUE TO THE MISUNDERSTANDING OF THE AUX SYSTEM OPERATOR'S INSTRUCTIONS. THE NITROGEN TANKER WAS BROUGHT ON-SITE TO INERT THE UNIT 1 DRYWELL BY DECREASING THE OXYGEN CONTENT. SUBSEQUENT INVESTIGATION REVEALED THE UNAUTHORIZED DISCHARGE OF NITROGEN CAUSED VALVE SEATS IN THE NITROGEN PURGE LINE TO LEAK EXCESSIVELY. THE UNIT 1 REACTOR COMMENCED SHUTDOWN ON 12-24-84 AT 1100 IN ACCORDANCE WITH TECH SPEC 3.6.1.1 WHICH REQUIRES A SHUTDOWN DUE TO LOSS OF PRIMARY CONTAINMENT. VALVES WERE DISASSEMBLED, REPAIRED, AND LOCAL LEAK RATE TESTS WERE PERFORMED WITH SATISFACTORY RESULTS. UNIT 1 WAS RESTARTED.

[304] SUSQUEHANNA 1 DOCKET 50-387 LER 85-003
 REACTOR SCRAM CAUSED BY ICE IN ISOPHASE BUS DUCTS.
 EVENT DATE: 012485 REPORT DATE: 022265 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO.

(NSIC 193575) ON 1-24-85, WITH THE REACTOR AT 82% POWER, THE UNIT SCRAMMED ON A MAIN TURBINE CONTROL VALVE FAST CLOSURE SIGNAL RESULTING FROM A MAIN GENERATOR LOCKOUT. THROUGHOUT THE TRANSIENT, THE UNIT FUNCTIONED AS DESIGNED. NO EMERGENCY CORE COOLING SYSTEMS ACTUATED AND NO SYSTEM ISOLATIONS OCCURRED. THE MAIN TURBINE TRIP WHICH RESULTED IN THE REACTOR SCRAM WAS CAUSED BY A MAIN GENERATOR PRIMARY LOCKOUT. THE LOCKOUT RELAY WAS TRIGGERED BY THE GENERATOR NEUTRAL OVERVOLTAGE RELAY. THE OVERVOLTAGE RELAY'S CALIBRATION WAS CHECKED AND FOUND SATISFACTORY. FURTHER INVESTIGATION FOUND ICE FORMATIONS IN THE MAIN GENERATOR'S 'A' AND 'C' ISOPHASE BUS DUCTS AT THE LOW POINT IN THE DUCTS WHERE THEY MAKE 90 DEGREE TURNS TO CONNECT TO THE UNIT'S AUX TRANSFORMER. THE ICE HAD FORMED A BRIDGE BETWEEN THE BUSES THEMSELVES AND THE DUCTS. REMOVAL OF THE ICE WAS ACCOMPLISHED ON 1-25-85. MAIN GENERATOR DOBLE TESTS AS WELL AS DOBLE TESTING LOOKING BACK AT THE TRANSFORMERS THROUGH THE ISOPHASE BUSES HAD ACCEPTABLE RESULTS. A DRAINAGE HOLE WAS DRILLED IN EACH ISOPHASE BUS DUCT INSPECTION COVER AS AN INTERIM ACTION TO PREVENT RECURRENCE. PREVENTIVE MAINTENANCE ACTIVITIES WHICH WILL BE PERFORMED DURING REFUELING OUTAGES WILL BE REVIEWED TO ASSURE THE CLEANLINESS AND INTEGRITY OF THE NEUTRAL GROUNDING SYSTEM AND ISOPHASE BUS DUCTS.

[305] SUSQUEHANNA 1 DOCKET 50-387 LER 85-004
 TWO DIESEL GENERATORS INOPERABLE.
 EVENT DATE: 012985 REPORT DATE: 030185 NSSS: GE TYPE: BWR
 OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)

(NSIC 193528) THE D DG WAS OUT OF SERVICE FOR AN 18 MONTH MAINTENANCE INSPECTION. TECH SPECS REQUIRE THE REMAINING DIESELS TO BE STARTED EVERY 8 HRS. AT 0114 ON 1-29-85, THE B DG TRIPPED AFTER 8 MINS OF OPERATION. A CONNECTING ROD HIGH TEMPERATURE ALARM WAS NOTED AT TIME OF TRIP. THE B DG WAS RESTARTED AT 0121 AND THE B DIESEL AGAIN TRIPPED. AN INVESTIGATION REVEALED THE CAUSE OF THE DIESEL TRIP TO BE THE ACTUATION OF THE CONNECTING ROD BEARING HIGH TEMPERATURE DETECTOR VENT VALVE. THIS ACTUATION WAS CAUSED BY THE SPURIOUS OPERATION OF THE VENT VALVE AND WAS NOT DUE TO A HIGH CONNECTING ROD TEMPERATURE CONDITION. THIS DIESEL TRIP FUNCTION IS BYPASSED IN THE EMERGENCY MODE AND WOULD NOT HAVE PREVENTED THE DIESEL FROM PERFORMING ITS INTENDED EMERGENCY FUNCTION. A LIMITING CONDITION OF OPERATION WAS TAKEN AT 0123. THE CONNECTING ROD BEARING HIGH TEMPERATURE DETECTOR VENT VALVE WAS RESET AND THE B DIESEL WAS SUCCESSFULLY STARTED AT 0241. THE DIESEL WAS DECLARED OPERABLE AT 0354. SPURIOUS ACTUATION OF THE VENT VALVE HAS BEEN A RECURRING PROBLEM AND MAINTENANCE PERSONNEL WILL PERFORM SOME

ADDITIONAL INSPECTIONS IN AN UPCOMING DIESEL OUTAGE. WITH 2 DIESELS OUT OF SERVICE, THIS EVENT IS REPORTABLE IN ACCORDANCE WITH 10CFR50.73(A)(2)(V).

[306] SUSQUEHANNA 1 DOCKET 50-387 LER 85-001
SGTS START ON REFUEL FLOOR HIGH RADIATION SIGNAL.
EVENT DATE: 021385 REPORT DATE: 031585 NSSS: GE TYPE: BWR

(NSIC 193563) ON 2-13-85, WITH THE UNIT SHUTDOWN FOR ITS FIRST REFUELING OUTAGE, ACTIONS COMMENCED TO REMOVE THE STEAM DRYER FROM THE REACTOR VESSEL. THE MAINTENANCE PROCEDURE USED TO MOVE THE DRYER INCLUDES STEPS FOR THE INSTALLATION OF JUMPERS IN THE REFUEL FLOOR WALL DUCT TRIP UNITS. THIS WOULD FORESTALL A ZONE III VENTILATION ISOLATION AND CONCOMITANT START OF THE SGTS AND CREOASS UNDER CIRCUMSTANCES WHERE IT IS KNOWN THAT CONDITIONS OTHER THAN AIRBORNE RADIATION WOULD CAUSE THE ISOLATION OR SYSTEMS TO START. WHEN THE STEAM DRYER MOVE WAS COMPLETE, THE JUMPERS WERE REMOVED PER THE MAINTENANCE PROCEDURE. WITHIN 2 MINS, ZONE III HAD ISOLATED ON A HIGH RADIATION SIGNAL AND THE SGTS AND CREOASS STARTED. THE JUMPERS WERE REPLACED AND ALL SYSTEMS RESTORED TO NORMAL STATUS. STATION PARTICULATE, IODINE AND NOBLE GAS MONITOR DATA SHOWED NO ABNORMAL RELEASE RATES FOR THE DAY. ACTIONS TO PREVENT RECURRENCE OF THE ZONE III ISOLATION AND SGTS AND CREOASS STARTS ARE STILL BEING INVESTIGATED AND WILL BE PROVIDED IN AN UPDATE TO THIS LER.

[307] SUSQUEHANNA 1 DOCKET 50-387 LER 85-005
VERIFICATION OF TIME CONSTANT NOT INCLUDED IN APRM SURVEILLANCE TEST PROCEDURE.
EVENT DATE: 021385 REPORT DATE: 031585 NSSS: GE TYPE: BWR

(NSIC 193566) ON 2-13-85, IT WAS DETERMINED THAT VERIFICATION OF THE 6 PLUS OR MINUS 1 SEC SIMULATED THERMAL POWER TIME CONSTANT WAS INADVERTENTLY OMITTED FROM THE ROUTINE SURVEILLANCE TESTING FOR THE AVERAGE POWER RANGE MONITORS (APRM). TECH SPEC SURVEILLANCE REQUIREMENT TABLE 4.3.1.1-1 REQUIRES AN 18-MONTH VERIFICATION OF THE TIME CONSTANT IN FOOTNOTE (H). THE TIME CONSTANT WAS INITIALLY VERIFIED CORRECT PER PRE-OPERATIONAL TEST DATA COMPLETED 3-31-82. TESTING COMPLETED ON 2-17-85 DETERMINED THAT THE TIME CONSTANT IN EACH OF THE 5 APRM CHANNELS IS STILL WITHIN THE 6 PLUS OR MINUS 1 SEC LIMIT. THE EXISTING SURVEILLANCE TESTING CONFIRMS THE EXISTENCE OF THE TIME CONSTANT BUT DOES NOT VERIFY ITS DURATION. THE SEMI-ANNUAL SURVEILLANCE TEST WHICH CALIBRATES THE APRM CHANNELS INCLUDES A NOTE WHICH DIRECTS THAT '... ADJUSTMENTS SHOULD BE MADE VERY SLOWLY TO ALLOW FOR THE 6 SEC TIME CONSTANT...', WHICH WOULD CONSTITUTE A QUALITATIVE CHECK OF THE TIME CONSTANT. QUANTITATIVE VERIFICATION WILL BE PROVIDED BY THE REGULARLY SCHEDULED 18-MON TIME RESPONSE TEST OF THE APRM'S. THE UNIT 2 APRM TIME CONSTANT WAS INITIALLY VERIFIED CORRECT BY PRE-OPERATIONAL TEST DATA COMPLETED 11-15-83. FUTURE VERIFICATION WILL BE PROVIDED BY THE REGULARLY SCHEDULED 18-MON TIME RESPONSE TEST OF THE UNIT 2 APRM'S.

[308] SUSQUEHANNA 1 DOCKET 50-387 LER 85-006
MONTHLY COMPOSITE SAMPLE ANALYSES NOT COMPLETED DUE TO LOW SAMPLE VOLUME.
EVENT DATE: 021385 REPORT DATE: 031585 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: SUSQUEHANNA 2 (BWR)

(NSIC 193571) THE SENIOR CHEMIST IDENTIFIED THAT THE ANALYSES OF THE COMPOSITE SAMPLE OF LIQUID RADWASTE RELEASED DURING 12-84, WERE NOT COMPLETED AS REQUIRED BY TECH SPEC TABLE 4.11.1.1-1. IT WAS DETERMINED THAT THE DECEMBER ALIQUOTS HAD BEEN ADDED TO THE WRONG MONTHLY COMPOSITE CONTAINER. PROCEDURE CHANGES WILL BE MADE TO PREVENT RECURRENCE OF THIS EVENT. PRE-RELEASE ISOTOPIC ANALYSES OF THE 3 DISCHARGES MADE IN DEC SHOWED NO IDENTIFIABLE GAMMA ACTIVITY. AS A CONSERVATIVE MEASURE, DOSE CALCULATIONS FOR DECEMBER WILL USE THE NOVEMBER TRITIUM AND GROSS ALPHA RESULTS AS ESTIMATES.

[309] SUSQUEHANNA 1 DOCKET 50-387 LER 85-007
 DEENERGIZED INSTRUMENT BUS CAUSES RWCU ISOLATION.
 EVENT DATE: 021685 REPORT DATE: 031985 NSSS: GE TYPE: BWR

(NSIC 193627) ON 2-16-85, WITH THE UNIT SHUT DOWN FOR ITS FIRST REFUELING OUTAGE, THE BREAKER SUPPLYING AN INSTRUMENT BUS WAS OPENED BY A PERSON OR PERSONS UNKNOWN. AN OPERATOR WAS DISPATCHED TO THE AREA AND COULD NOT DETERMINE WHO AND HOW THE BREAKER WAS OPENED. THE BREAKER'S POSITION WAS OPEN, NOT TRIPPED. THE BREAKER WAS THEN CLOSED BY THE OPERATOR. ONE OF THE EFFECTS OF THE BREAKER BEING OPENED WAS THAT THE RWCU SYSTEM ISOLATED ON A FALSE NON-REGENERATIVE HEAT EXCHANGER HIGH OUTLET TEMPERATURE SIGNAL CAUSED BY THE LOSS OF POWER TO THE TEMPERATURE SENSOR'S TRIP CIRCUITRY. DURING RESTORATION OF THE RWCU SYSTEM, THE RWCU PUMP SUCTION CONTAINMENT INBOARD AND OUTBOARD ISOLATION VALVES CLOSED ON A HIGH DIFFERENTIAL FLOW SIGNAL. THE AFFECTED VALVES ARE CONSIDERED PART OF THE PRIMARY CONTAINMENT ISOLATION SYSTEM, AN ESF. ONE WK LATER, ANOTHER RWCU ISOLATION OCCURRED ON THE HIGH DIFFERENTIAL FLOW SIGNAL WHEN 1 OF THE 2 FILTER DEMINERALIZERS WAS REMOVED FROM ITS PRECOAT CYCLE TO START A BACKWASH CYCLE. THE APPROPRIATE SYSTEM OPERATING PROCEDURE WAS BEING FOLLOWED DURING EACH OCCURRENCE. TO PREVENT RECURRENCE OF THESE EVENTS, NUCLEAR LICENSED OPERATORS WILL RECEIVE ADDITIONAL TRAINING IN RWCU SYSTEM OPERATION. ADDITIONALLY, COMMENTS TO THE SYSTEM'S OPERATING PROCEDURES WILL BE SOLICITED DURING THE TRAINING AND INCORPORATED AS NECESSARY.

[310] SUSQUEHANNA 2 DOCKET 50-388 LER 85-001
 HPCI STEAM LINE STOP VALVE FAILS TO CLOSE.
 EVENT DATE: 011285 REPORT DATE: 020885 NSSS: GE TYPE: BWR
 VENDOR: SCHUTTE AND KOERING COMPANY

(NSIC 193479) DURING A SCHEDULED HOT FUNCTIONAL TEST (HF-252-011), WHICH WAS PART OF THE UNIT 2 POWER ASCENSION PROGRAM, THE HPCI TURBINE FAILED TO TRIP. OPERATORS ATTEMPTED TO TRIP THE HPCI TURBINE PER THE TEST PROCEDURE BY DEPRESSING THE HPCI TURBINE TRIP PUSHBUTTON. A TURBINE TRIP DUE TO STOP VALVE (FV-25612) CLOSURE WAS EXPECTED, WHEN NO TRIP OCCURRED, THE TURBINE WAS STOPPED BY CLOSING THE STEAM SUPPLY VALVE (E41-HV-2F001). INVESTIGATION REVEALED THE HYDRAULICALLY OPERATED STOP VALVE ACTUATOR SHAFT WAS BROKEN AT THE COUPLING TO THE VALVE SHAFT. THE CAUSE FOR THE STOP VALVE REMAINING OPEN AND RESULTING ACTUATOR FAILURE WAS DUE TO A VALVE POSITION SENSOR BRACKET WORKING ITS WAY LOOSE AND ROTATING AROUND THE STOP VALVE COUPLING ON WHICH IT WAS MOUNTED. THE BRACKET WEDGED ITSELF BETWEEN THE ACTUATOR HOUSING AND THE SHAFT COUPLING. THE ACTUATOR SHAFT WAS REPLACED. THE HPCI SYSTEM WAS DECLARED OPERABLE AT 2130 ON 1-13-85. THE VALVE POSITION SENSOR BRACKET WHICH HAD BEEN USED DURING TESTING WAS REMOVED AT THE COMPLETION OF THE HOT FUNCTIONAL TESTING.

[311] SUSQUEHANNA 2 DOCKET 50-388 LER 85-002
 PERSONNEL ERROR TRIPS RPS MOTOR GENERATOR.
 EVENT DATE: 011285 REPORT DATE: 020885 NSSS: GE TYPE: BWR

(NSIC 193480) ON 1-12-85, WHILE COMPLETING A MODIFICATION TO THE 'B' RPS ALTERNATE SOURCE TRANSFORMER, A NON-LICENSED, NON-UTILITY ELECTRICIAN CAUSED THE RPS MOTOR GENERATOR (M-G) SET TO TRIP WHEN HIS WRENCH SLIPPED AND CAME IN CONTACT WITH AN ENERGIZED CONDUCTOR. THIS RESULTED IN THE START OF THE SGTS AND CREOASS, WHICH ARE ESF'S. ALSO, THE RWCU PUMP SUCTION INBOARD AND OUTBOARD ISOLATION VALVES SHUT. THESE VALVES ARE PART OF THE PRIMARY CONTAINMENT ISOLATION SYSTEM, ANOTHER ESF. THE ELECTRICIAN FAILED TO USE PROPER PROTECTIVE EQUIPMENT, DID NOT ISOLATE THE EQUIPMENT BEING WORKED UPON, AND DID NOT INSULATE THE TOOLS BEING USED. THE CRAFT ELECTRICIANS RECEIVED A BRIEFING ABOUT THE EVENT. WORK ON THE SYSTEM MODIFICATION WAS SUCCESSFULLY COMPLETED ON 1-14-85.

[312] SUSQUEHANNA 2 DOCKET 50-388 LER 85-004
 RWCU ISOLATES ON HEAT EXCHANGER HIGH OUTLET TEMPERATURE.
 EVENT DATE: 011485 REPORT DATE: 021285 NSSS: GE TYPE: BWR
 VENDOR: BARKSDALE CONTROLS DIV

(NSIC 193482) THE RWCU HAD BEEN EXPERIENCING ISOLATIONS DUE TO NON-REGENERATIVE HEAT EXCHANGER HIGH OUTLET TEMPERATURE. ON 1-14-85, IN AN EFFORT TO PREVENT ANOTHER RWCU ISOLATION, OPERATIONS PERSONNEL THROTTLED OPENED THE RWCU FILTER DEMINERALIZER BYPASS VALVE. THIS RESULTED IN CLOSURE OF THE RWCU INBOARD AND OUTBOARD ISOLATION VALVES ON A HIGH SYSTEM FLOW SIGNAL. THESE VALVES ARE PART OF THE PRIMARY CONTAINMENT ISOLATION SYSTEM, WHICH IS AN ESP. THE RWCU ISOLATIONS HAD BEEN OCCURRING AS PART OF A SEQUENCE OF EVENTS TRIGGERED BY THE TRIP OF THE RBCW SYSTEM. THE RBCW TRIPS WERE TRACED TO A LOOSE CONNECTION IN AN RBCW FLOW SWITCH. THE CONNECTION WAS TIGHTENED. THERE HAVE BEEN NO RECURRENCES. NO FURTHER ACTION IS REQUIRED.

[313] SUSQUEHANNA 2 DOCKET 50-388 LER 85-003
 REACTOR SCRAMS DUE TO HIGH TURBINE BEARING VIBRATION.
 EVENT DATE: 011985 REPORT DATE: 021985 NSSS: GE TYPE: BWR

(NSIC 193481) ON 1-19-85, AT 1655, THE UNIT 2 REACTOR SCRAMMED ON TURBINE CONTROL VALVE FAST CLOSURE WHICH WAS A RESULT OF A MAIN TURBINE TRIP ON HIGH VIBRATION. NO EMERGENCY CORE COOLING SYSTEM ACTUATIONS ON PRIMARY CONTAINMENT ISOLATION OCCURRED, AND NONE WERE REQUIRED. THROUGHOUT THE TRANSIENT ALL SAFETY SYSTEMS PERFORMED AS DESIGNED, AND THE UNIT RESPONDED AS PREDICTED. SURVEILLANCE SO-293-001, WEEKLY TURBINE OVERSPEED PROTECTION SYSTEM VALVE CYCLING TEST, WAS BEING PERFORMED IN CONJUNCTION WITH HOT FUNCTIONAL TEST HF-293-068, WHICH REQUIRED TURBINE CONTROL VALVE TESTING TO BE DONE AT 100% POWER. DURING THE PERFORMANCE OF THE TEST THE #1 CONTROL VALVE WAS CLOSED. APPROX 20 SECS AFTER THE VALVE CLOSED, THE MAIN TURBINE TRIPPED. THE REACTOR SCRAM WAS THE DIRECT RESULT OF THE MAIN TURBINE TRIPPING ON HIGH VIBRATION DURING TURBINE CONTROL VALVE TESTING. DURING THE TEST OF THE #1 VALVE, VIBRATION ON THE #1 AND #2 BEARINGS INCREASED SIGNIFICANTLY. REBALANCING SHOULD REDUCE THE RISK OF SUBSEQUENT TURBINE TRIPS. THE UNIT WAS RESTARTED AT 0523 ON 1-20-85.

[314] SUSQUEHANNA 2 DOCKET 50-388 LER 85-005
 VACUUM BREAKER SURVEILLANCE TEST COMPLETED LATE.
 EVENT DATE: 011985 REPORT DATE: 021585 NSSS: GE TYPE: BWR

(NSIC 193374) ON 1-19-85, FOLLOWING A REACTOR SCRAM DUE TO TURBINE HIGH VIBRATION (SEE LER 85-003), WHICH RESULTED IN SAFETY-RELIEF VALVE ACTUATIONS, THE REQUIRED SUPPRESSION CHAMBER-DRYWELL VACUUM BREAKER SURVEILLANCE TEST WAS COMPLETED AFTER THE TIME LIMIT OF TECH SPEC SURVEILLANCE REQUIREMENT 4.6.4.B.1 HAD EXPIRED. THE PROCEDURE WHICH DETAILS OPERATIONS PERSONNEL ACTIONS FOLLOWING A REACTOR SCRAM WILL BE REVISED TO INCLUDE THE REQUIREMENT TO PERFORM THE SURVEILLANCE TEST WITHIN 2 HRS OF AN SRV ACTUATION. ADDITIONALLY, THE EVENT WILL BE REVIEWED WITH ALL LICENSED OPERATORS.

[315] SUSQUEHANNA 2 DOCKET 50-388 LER 85-006
 RHR SHUTDOWN COOLING ISOLATED.
 EVENT DATE: 012985 REPORT DATE: 022885 NSSS: GE TYPE: BWR
 VENDOR: BARTON INDUSTRIES

(NSIC 193529) ON 1-29-85, WITH THE UNIT IN HOT SHUTDOWN, THE RHR SYSTEM SHUTDOWN COOLING SUCTION INBOARD ISOLATION VALVE CLOSED UNEXPECTEDLY. THIS VALVE IS PART OF THE PRIMARY CONTAINMENT ISOLATION SYSTEM, WHICH IS AN ESP. THE CALIBRATION OF THE PRESSURE SWITCH, WHICH PROVIDES A REACTOR VESSEL HIGH PRESSURE PERMISSIVE SIGNAL TO THE VALVE, WAS CHECKED. THE SWITCH'S 'AS FOUND' SETPOINT, WHILE LOW,

WAS WITHIN THE 'AS FOUND' TOLERANCE BAND. THE SWITCH WAS RECALIBRATED NEVERTHELESS, AND SHUTDOWN COOLING WAS ESTABLISHED. THE SWITCH MAY BE REPLACED PENDING AN EVALUATION OF THE SYSTEM OPERATING RESTRICTIONS IMPOSED BY THE USE OF THIS TYPE OF SWITCH IN THIS APPLICATION. ADDITIONALLY, THIS EVENT WILL BE REVIEWED BY ALL LICENSED OPERATORS.

[316] SUSQUEHANNA 2 DOCKET 50-388 LER 85-009
 REACTOR WATER LEVEL SWITCHES OUT OF CALIBRATION.
 EVENT DATE: 021285 REPORT DATE: 031585 NSSS: GE TYPE: BWR
 VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 193629) ON 2-12-85, DURING THE PERFORMANCE OF A SCHEDULED SURVEILLANCE, THE SETPOINTS FOR 3 REACTOR WATER LEVEL SWITCHES WERE FOUND TO BE OUTSIDE THE ACCEPTANCE CRITERIA. TWO OF THE SWITCHES ACTUATE THE REACTOR AUTO-SCRAM TRIP LOGIC CHANNELS 'A2' AND 'B2' IN THE RPS ON LOW REACTOR VESSEL WATER LEVEL. THE FACT THAT THE SETPOINTS FOR THE SWITCHES WERE OUTSIDE OF THE ACCEPTANCE CRITERIA HAS BEEN ATTRIBUTED TO INSTRUMENT DRIFT. THE INSTRUMENTS WERE RECALIBRATED WITHIN FINAL TOLERANCE IN ACCORDANCE WITH THE SURVEILLANCE PROCEDURE AND NO ABNORMALITIES WERE NOTED.

[317] SUSQUEHANNA 2 DOCKET 50-388 LER 85-008
 LOSS OF POWER TO HPCI AND CORE SPRAY CONTROL LOGIC.
 EVENT DATE: 021685 REPORT DATE: 031485 NSSS: GE TYPE: BWR
 VENDOR: AMP SPECIAL INDUSTRIES

(NSIC 193628) ON 2-16-85 AT 2345 THE HPCI TURBINE TRIP AND LOGIC POWER LOSS INDICATOR AND B LOOP CORE SPRAY LOGIC POWER LOSS INDICATOR WERE RECEIVED IN THE CONTROL ROOM. INVESTIGATION REVEALED A BROKEN LUG ON THE NEGATIVE TERMINAL AT 125V DC PANEL 2D624 BREAKER 01 WHICH FEEDS THE LOGIC FOR HPCI AND B LOOP CORE SPRAY. MODIFICATION WORK WAS IN PROGRESS IN THE PANEL WHEN THE LOSS OF LOGIC POWER OCCURRED. LCO'S FOR OPERATION WERE DECLARED IN ACCORDANCE WITH TECH SPEC 3.5.1 AND 3.0.3. THE BROKEN LUG WAS REPLACED, POWER WAS RESTORED AND THE LCO'S WERE CLEARED AT 0225 ON 2-17-85.

[318] SUSQUEHANNA 2 DOCKET 50-388 LER 85-010
 CIRCUIT BREAKER FAILURE CAUSES UNPLANNED ESP ACTUATION.
 EVENT DATE: 022385 REPORT DATE: 032585 NSSS: GE TYPE: BWR
 VENDOR: GENERAL ELECTRIC CO (SAN JOSE MOTOR PLANT)

(NSIC 193687) ON 2-23-85, AT 1203, OPERATIONS PERSONNEL RECEIVED INDICATION OF A HALF SCRAM ON THE 'B1/B2' CHANNELS OF THE RPS HALF ISOLATION ON THE 'B' AND 'D' MSIV LOGIC, AN AUTO START OF THE 'B' STANDBY GAS TREATMENT SYSTEM, ISOLATION OF RWC SYSTEM, CLOSURE OF THE CONTAINMENT ISOLATION VALVES FOR THE HYDROGEN-OXYGEN ANALYZERS AND CONTAINMENT RADIATION MONITORS, AND ISOLATION OF COOLING WATER TO THE REACTOR RECIRCULATION PUMPS. INVESTIGATION DETERMINED THAT CIRCUIT BREAKER CB8B IN 2Y201B, RPS POWER DISTRIBUTION PANEL, HAD TRIPPED. THE BREAKER WAS RESET AND THE AFFECTED SYSTEM RESTORED. AT 1301 AND 1324 THE SAME SEQUENCE OF EVENTS OCCURRED. CIRCUIT BREAKER CB8B ON 2Y201B WAS REPLACED BY WORK AUTHORIZATION V50185 AND THE UNIT WAS RESTORED TO ITS NORMAL LINE UP.

[319] THREE MILE ISLAND 2 DOCKET 50-320 LER 85-002
 FAILURE OF INCORE THERMOCOUPLE.
 EVENT DATE: 011485 REPORT DATE: 020585 NSSS: BW TYPE: PWR
 VENDOR: BELFAB, INC.

(NSIC 193675) AT 0100 ON 1-14-85, INCORE THERMOCOUPLE E-4 WAS DECLARED INOPERABLE DUE TO ERRATIC BEHAVIOR. THE THERMOCOUPLE IS BEING CHECKED TO ENSURE THAT THE

FAILURE CAUSE IS NOT A COMPONENT THAT IS ACCESSIBLE FOR REPAIRS. NO FURTHER ACTION IS CONSIDERED APPLICABLE. THE PRECISE REASON(S) FOR THE FAILURE/ERRATIC BEHAVIOR OF INCORE THERMOCOUPLE E-4 IS (ARE) NOT KNOWN AND MAY NOT BE POSSIBLE TO DETERMINE GIVEN THE CONDITION OF THE TMI-2 CORE RELATIVE TO INCORE INSTRUMENTATION. AT THE TIME OF THE OCCURRENCE, THE UNIT 2 FACILITY WAS IN A LONG-TERM COLD SHUTDOWN STATE. THE REACTOR DECAY HEAT WAS BEING REMOVED VIA LOSS TO AMBIENT. THROUGHOUT THE EVENT THERE WAS NO EFFECT ON THE RCS OR THE CORE. 15 LER'S HAVE BEEN SUBMITTED CONCERNING THERMOCOUPLE FAILURES. INCLUDED WITH THIS SUBMITTAL ARE LER'S 80-13, 80-41, 80-50, 80-53, 81-05, 81-13, 82-15, 83-10, 83-27, 83-32, 83-50, 84-01, 84-16, AND 84-21. 27 OF 52 INCORE THERMOCOUPLES ARE CURRENTLY REPORTED AS OUT OF SERVICE (B-7, D-14, E-4, E-11, F-3, F-8, F-12, G-5, G-11, H-5, H-9, K-11, K-12, L-11, L-13, M-3, M-7, M-9, N-4, N-8, N-9, O-5, O-6, O-10, AND O-12). THE E-4 THERMOCOUPLE WAS TYPE K (CHROMIUM/ALUMEL), MODEL NO. DAAE-76-7R-1B-1T-1C, MANUFACTURED BY BEL FAN, INC., AND SUPPLIED BY BABCOCK AND WILCOX.

[320] TURKEY POINT 3 DOCKET 50-250 LER 85-007
FIRE PROTECTION SYSTEM FLOWPATH VALVE SURVEILLANCE NOT PERFORMED.
EVENT DATE: 022185 REPORT DATE: 032585 NSSS: WE TYPE: PWR

(NSIC 191600) THE TURKEY POINT TECH SPECS REQUIRE A MONTHLY POSITION VERIFICATION AND AN ANNUAL CYCLING OF EACH VALVE IN THE FLOWPATH OF THE FIRE PROTECTION WATER SYSTEM TO DEMONSTRATE THE OPERABILITY OF THE FLOWPATH. AS THE RESULT OF A PROGRAMMATIC TECH SPEC OPERABILITY REVIEW, AN EVALUATION OF TECH SPEC 3.14.2 AND 4.15.2 FOR FIRE PROTECTION SYSTEMS CONCLUDED THAT PLANT PROCEDURES DID NOT INCLUDE ALL FLOWPATH VALVES WHICH SHOULD BE PERIODICALLY VISUALLY VERIFIED FOR POSITION AND FUNCTIONALLY CYCLED. PRIOR TO THE RECENT TECH SPEC OPERABILITY REVIEW, PLANT PROCEDURES WERE WRITTEN TO ADDRESS THE OPERABILITY OF POST INDICATOR VALVES AND ROOT VALVES, YARD FIRE HYDRANTS, FIRE HOSE CABINETS, AND SPRAY AND/OR SPRINKLER VALVES. THIS WAS CONSIDERED SATISFACTORY TO MEET THE FIRE PROTECTION SYSTEM OPERABILITY REQUIREMENTS OF APPLICABLE PLANT TECH SPECS, WHEN THESE WERE DEVELOPED IN 1981. SINCE 1981, VARIOUS APPENDIX R MODIFICATIONS HAVE BEEN MADE TO THE FIRE PROTECTION WATER SYSTEM WHICH HAS CHANGED THE CONFIGURATION OF THE SYSTEM FLOWPATH AND ADDED NEW VALVES. APPENDIX R REQUIREMENTS AND MODIFICATIONS HAVE PLACED A GREATER EMPHASIS ON THE IMPORTANCE OF FIRE PROTECTION SYSTEMS TO PLANT SAFETY. AS A RESULT, TO ENHANCE THE DEMONSTRATION OF THE OPERABILITY OF THE FIRE PROTECTION SYSTEM, THE RECENT TECH SPEC OPERABILITY REVIEW WAS PERFORMED FROM A MORE CONSERVATIVE STANDPOINT.

[321] TURKEY POINT 4 DOCKET 50-251 LER 85-001
CONTAINMENT VENTILATION ISOLATION VALVE FAILURE.
EVENT DATE: 010285 REPORT DATE: 020185 NSSS: WE TYPE: PWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 193518) ON 1-2-85 AT 1:06 AM, CONTAINMENT ISOLATION VALVE SV-2819 FAILED TO CLOSE UPON RECEIVING A CONTAINMENT VENTILATION ISOLATION SIGNAL DURING TESTING OF CONTAINMENT PROCESS RADIATION MONITORS R-11 AND R-12 AS PER OPERATING PROCEDURE 0204.2. THE VALVE WAS CLOSED IMMEDIATELY BY MANUALLY TRIPPING LOCKOUT RELAY QR50 IN THE CONTROL ROOM. SV-2819 IS A CONTAINMENT ISOLATION VALVE FOR THE INSTRUMENT AIR BLEED LINE AND IS LOCATED OUTSIDE CONTAINMENT. CONTAINMENT ISOLATION FOR THIS LINE IS ALSO PROVIDED BY SV-2826, LOCATED INSIDE CONTAINMENT, WHICH DID CLOSE ON THE CONTAINMENT VENTILATION ISOLATION SIGNAL. THERE WAS NO DETECTABLE RELEASE OF RADIOACTIVE GASES FROM CONTAINMENT AS A RESULT OF THIS INCIDENT. SIMILAR LERS: 251-84-020 AND 250-84-031. A SET OF CONTACTS IN LOCKOUT RELAY QR50 FOR CONTAINMENT VENTILATION ISOLATION DID NOT CONSISTENTLY MAKE CONTACT DUE TO OXIDATION AND DIRT BUILDUP ON THE SURFACES FROM EXTENDED USE. THIS PREVENTED THE ISOLATION SIGNAL FROM REACHING SV-2819. THE CONTACTS OF THE LOCKOUT RELAY IN QR50 WERE REPLACED AND SV-2819 WAS CYCLED SUCCESSFULLY. AN UNUSUAL EVENT WAS DECLARED IN ACCORDANCE WITH THE TURKEY POINT EMERGENCY PLAN. THE REQUIRED STATE

OFFICIALS WERE NOTIFIED AT 1:15 AM, AND THE NRC WAS NOTIFIED VIA THE ENS AT 1:20 AM, PURSUANT TO 10CFR50.72(A)(3). THE UNUSUAL EVENT ENDED IMMEDIATELY WHEN THE VALVE WAS MANUALLY CLOSED.

[322] TURKEY POINT 4 DOCKET 50-251 LER 85-003
 REACTOR TRIPS ON LOW STEAM GENERATOR LEVEL.
 EVENT DATE: 020685 REPORT DATE: 030885 NSSS: WE TYPE: PWR

(NSIC 193342) ON 2-6-85, WHILE UNIT 4 WAS AT 27% POWER, A REACTOR TRIP OCCURRED. A NORMAL REACTOR START-UP WAS BEING PERFORMED WITH THE SG LEVEL CONTROLS IN AUTOMATIC. THE REACTOR TRIP OCCURRED WHEN THE REACTOR PROTECTION LOGIC OF STEAM FLOW GREATER THAN FEED FLOW COINCIDENT WITH SG LOW LEVEL ON THE 'A' SG WAS MADE UP. ALL EQUIPMENT FUNCTIONED AS DESIGNED UPON INITIATION OF THE ESF ACTUATION SIGNAL GENERATED IN THE RPS. DURING THE REACTOR STARTUP, LICENSED OPERATORS EXPERIENCED DIFFICULTIES MAINTAINING SG LEVEL ON THE 'A' SG. WHILE ATTEMPTING TO STABILIZE THE LEVEL, THE STEAM FLOW/FEED FLOW MISMATCH ALARMED AND A SUDDEN DECREASE IN SG LEVEL COMPLETED THE REACTOR TRIP LOGIC AND A REACTOR TRIP OCCURRED. CORRECTIVE ACTION: 1) STABILIZE THE UNIT AT HOT SHUTDOWN CONDITIONS, 2) I&C CHECKED THE SETPOINTS AND CALIBRATION OF THE SG LEVEL, FEEDWATER FLOW, AND STEAM FLOW TRANSMITTERS. THE LEVEL, FEEDWATER FLOW, AND STEAM FLOW SETPOINTS WERE WITHIN LIMITS. THE FEEDWATER FLOW REGULATING VALVES WERE INSPECTED AND FOUND TO BE OPERATING SATISFACTORILY, 3) TEMPORARY RECORDERS WERE USED TO MONITOR 'A' SG LEVEL CHANNELS I AND II, 'A' SG FEEDWATER AND STEAM FLOW CHANNELS III, AND 'A' SG FEEDWATER FLOW REGULATING VALVE DURING THE FOLLOWING UNIT 4 STARTUP TO DETECT ANY RECURRENCE OF INITIATING PROBLEMS. SIMILAR LERS 251-84-17; 250-84-07; 250-84-06, 250-84-05, AND 250-84-01.

[323] TURKEY POINT 4 DOCKET 50-251 LER 85-005
 SPURIOUS SAFETY INJECTION OCCURS.
 EVENT DATE: 020785 REPORT DATE: 031185 NSSS: WE TYPE: PWR
 VENDOR: RUSSMANN MFG (DIV OF MCGRAW-EDISON)

(NSIC 193542) ON 2-7-85, AT 6:52 AM, 12 MINS AFTER A UNIT 4 REACTOR TRIP, A SPURIOUS SAFETY INJECTION SIGNAL WAS GENERATED IN THE ESF'S SYSTEM WITH NO RESULTANT SAFETY INJECTION FLOW DELIVERED TO THE RCS. THE INITIATION OF THE AUTOMATIC SAFETY INJECTION SIGNAL RESULTED FROM THE COINCIDENT ESF'S LOGIC OF 'HIGH STEAM GENERATOR FLOW' COMBINED WITH AN ACTUAL 'LOW AVERAGE REACTOR COOLANT TEMPERATURE (T-AVG)'. FOLLOWING THE SAFETY INJECTION INITIATION, THE EMERGENCY OPERATING PROCEDURE EP 20000 WAS FOLLOWED FOR IMMEDIATE ACTIONS AND DIAGNOSTICS. THE SAFETY INJECTION ACTUATION SYSTEM WAS RESET AT 6:56 AM, AND CHARGING FLOW WAS RE-ESTABLISHED. UNIT 4 WAS STABILIZED IN A HOT SHUTDOWN CONDITION FOR FURTHER INVESTIGATION AND CORRECTIVE MEASURES. ALL EQUIPMENT ACTUATED BY THE ESF'S ACTUATION SIGNALS FUNCTIONED AS DESIGNED. A SIGNIFICANT EVENT NOTIFICATION WAS MADE TO THE NRCOC VIA ENS PURSUANT TO 10CFR50.72 AS A RESULT OF THE SAFETY INJECTION INITIATION. SIMILAR LERS: 250-84-002. REFER TO LER 251-85-004 FOR A REPORT OF THE REACTOR TRIP. AN INVESTIGATION BY PLANT PERSONNEL INTO THE CAUSE OF THE SPURIOUS SAFETY INJECTION INITIATION REVEALED THAT A BLOWN FUSE ON FLOW COMPARATOR FC-485 OF SG 'B' COINCIDENT WITH A TRANSIENT ELECTRICAL SPIKE OF INDETERMINATE ORIGIN IN THE CIRCUITRY OF THE FLOW COMPARATOR FC-475 FOR SG 'A' COMBINED WITH AN ACTUAL LOW T-AVG WAS THE UNDERLYING CAUSE OF THIS EVENT.

[324] TURKEY POINT 4 DOCKET 50-251 LER 85-007
 CONTAINMENT SPRAY PUMP POWER SUPPLY BREAKER INOPERABLE.
 EVENT DATE: 021885 REPORT DATE: 032085 NSSS: WE TYPE: PWR

(NSIC 193601) ON 2-18-85, THE 4A CONTAINMENT SPRAY PUMP POWER SUPPLY BREAKER WAS FOUND TO BE INOPERABLE. THE 4A CSP 480V POWER SUPPLY BREAKER CLOSING SPRINGS WERE FOUND DISCHARGED AND THE CLOSING SPRING CHARGING MOTOR WAS TURNED OFF.

THEREFORE, THE PUMP POWER SUPPLY BREAKER WOULD NOT HAVE CLOSED IN RESPONSE TO A PUMP START SIGNAL. THIS RENDERED THE PUMP INOPERABLE FOR A PERIOD OF TIME THAT EXCEEDED THE TECH SPEC LCO. AT THE TIME OF THIS EVENT, THE 4B CSP AND THE EMERGENCY CONTAINMENT COOLING SYSTEM WERE FULLY OPERATIONAL. SIGNIFICANT EVENT NOTIFICATION WAS MADE TO THE NRCOC VIA ENS PURSUANT TO 10CFR50.36(C)(2). SIMILAR LERS 251/83-017 AND 251/83-014. INVESTIGATIONS HAVE DISCOVERED THAT THE LAST OPERABILITY TEST OF THE 4A CSP OCCURRED ON 2-6-85. IT IS BELIEVED THAT THE CLOSING SPRING CHARGING MOTOR WAS OFF DURING THIS TEST RESULTING IN THE CLOSING SPRINGS BEING DISCHARGED. ONE POSSIBLE REASON FOR THE CHARGING MOTOR BEING OFF WAS THAT AFTER AN IN-PLANT CLEARANCE ORDER FOR THE POWER SUPPLY BREAKER WAS RELEASED ON 2-3-85, THE SWITCH FOR THE CHARGING MOTOR HAD BEEN INADVERTENTLY LEFT IN THE OFF POSITION. ANOTHER POSSIBLE REASON COULD BE THAT THE SWITCH WAS ACCIDENTALLY BUMPED TO OFF BY CONSTRUCTION WORKERS SOMETIME BEFORE THE 4A CSP OPERABILITY TEST ON 2-6-85.

[325] VERMONT YANKEE DOCKET 50-271 LER 85-002
LPCI SURVEILLANCE TEST MISSED.
EVENT DATE: 012885 REPORT DATE: 022685 NSSS: GE TYPE: BWR

(NSIC 193450) ON 1-28-85 THE PLANT WAS AT 100% POWER DURING NORMAL OPERATION. UPON REVIEW OF THE MASTER SURVEILLANCE LIST, IT WAS FOUND THAT A QUARTERLY CALIBRATION OF LPCI LOW REACTOR PRESSURE #3 CHANNEL WAS NOT PERFORMED DURING THE WEEK OF 10-25-84 AS REQUIRED BY TECH SPEC TABLE 4.2.1. SYSTEM OPERABILITY WAS SUBSEQUENTLY VERIFIED WHEN THE INSTRUMENTATION WAS FUNCTIONALLY TESTED AND CALIBRATED ON 1-23-85. THE CALIBRATION WAS MISSED BECAUSE THE PRESSURE SWITCH WAS REPLACED DURING THE LAST REFUELING OUTAGE WITH ANALOG INSTRUMENTATION THAT NORMALLY REQUIRES CALIBRATION ONLY ONCE PER OPERATING CYCLE. THE QUARTERLY CALIBRATION WAS CHANGED TO ONCE PER OPERATING CYCLE IN THE SURVEILLANCE LIST BASED ON THE ANTICIPATED TECH SPEC AMENDMENT.

[326] VERMONT YANKEE DOCKET 50-271 LER 85-004
CORE SPRAY TEST SWITCH FAILURE CAUSES SCRAM.
EVENT DATE: 020685 REPORT DATE: 030885 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 193546) ON 2-6-85 THE PLANT WAS AT 100% POWER DURING NORMAL OPERATION. TECHNICIANS WERE PERFORMING THE CORE SPRAY LOGIC TEST. DRYWELL HIGH PRESSURE AND REACTOR LOW WATER LEVEL WAS BEING SIMULATED ON THE CORE SPRAY B SUBSYSTEM. AT APPROX 1104 EST THE BACKUP GENERATOR LOCKOUT RELAY 86/GB ENERGIZED CAUSING A TURBINE GENERATOR TRIP AND SUBSEQUENT REACTOR SCRAM. THE CAUSE OF THIS EVENT IS ATTRIBUTED TO CORROSION ON THE CONTACTS OF A GE CR 2940 CONTROL SWITCH. THE CONTROL SWITCH IS PART OF A CIRCUIT USED TO BLOCK THE CORE SPRAY TRIP LOGIC DURING TESTING. THE SWITCH WAS REPLACED, AND THE CORE SPRAY SYSTEM TESTED SATISFACTORILY. THIS EVENT IS BELIEVED TO BE AN ISOLATED INCIDENT, HOWEVER, THE CONTACT RESISTANCE AND VOLTAGE MEASUREMENTS ARE BEING PERFORMED ON GE CR 2940 CONTROL SWITCHES USED IN SIMILAR APPLICATIONS. THERE HAVE BEEN NO SIMILAR INCIDENTS REPORTED TO THE COMMISSION. ALL SYSTEMS PERFORMED THEIR INTENDED FUNCTION TO TRIP THE TURBINE AND SCRAM THE REACTOR.

[327] WATERFORD 3 DOCKET 50-382 LER 85-001
FIRE WATCH NOT POSTED.
EVENT DATE: 011585 REPORT DATE: 021485 NSSS: CE TYPE: PWR

(NSIC 193477) AT 2356 HRS WATERFORD 3 STEAM ELECTRIC STATION WAS IN MODE 5 WHEN FIRE PROTECTION SPRINKLER FPM-26 IN THE REACTOR AUX BLDG (ELEVATION +46) VENTILATION EQUIPMENT ROOM WAS ISOLATED TO FACILITATE TROUBLESHOOTING OF ALARMING FIRE DETECTION ELEMENTS AS DEFINED IN CONDITION IDENTIFICATION WORK AUTHORIZATION NUMBER 14293. A FIRE APPLIANCE IMPAIRMENT (NUMBER 85-013) WAS DECLARED; HOWEVER,

A CONTINUOUS FIRE WATCH WITH BACKUP FIRE SUPPRESSION EQUIPMENT WAS NOT ESTABLISHED WITHIN 1 HR AS REQUIRED BY TECH SPEC 3.7.10.2. AN IMMEDIATE NOTIFICATION WAS MADE TO THE COMMISSION PURSUANT TO 10CFR50.36(C)(2).

[328] WATERFORD 3 DOCKET 50-382 LER 85-002
FOUR SPURIOUS ACTUATIONS OF CONTROL ROOM AIR INTAKE RADIATION MONITOR.
EVENT DATE: 011785 REPORT DATE: 021885 NSSS: CM TYPE: PWR
VENDOR: GENERAL ATOMIC CO.

(NSIC 193478) ON 1-17-85 WATERFORD 3 STEAM ELECTRIC STATION WAS IN MODE 5 WHEN THE FIRST OF 4 AUTOMATIC ACTUATIONS OF THE ESF'S PORTION OF THE CONTROL ROOM VENTILATION SYSTEM OCCURRED. 3 OF THE 4 ACTUATIONS WERE DUE TO ELECTRICAL SPIKES AND/OR SPURIOUS ACTUATIONS OF THE CONTROL ROOM VENTILATION INPUT INSTRUMENTATION, AND THE OTHER ACTUATION WAS DUE TO A PORTABLE LIGHT ILLUMINATING THE SCINTILLATION DETECTOR OF THE CONTROL ROOM OUTSIDE AIR INTAKE RADIATION MONITOR. AFTER EACH ACTUATION THE SIGNALS QUICKLY CLEARED, AND THE SYSTEM WAS PLACED IN NORMAL OPERATION FOR 3 OF THE 4 ACTUATIONS. EACH EVENT WAS REPORTED TO THE COMMISSION PURSUANT TO 10CFR50.72(B)(2)(II).

[329] WATERFORD 3 DOCKET 50-382 LER 85-003
PARTIAL ENGINEERED SAFETY FEATURES ACTUATION.
EVENT DATE: 011785 REPORT DATE: 021885 NSSS: CM TYPE: PWR

(NSIC 193373) ON 1-17-85 WATERFORD 3 STEAM ELECTRIC STATION WAS IN MODE 5 WHEN MAINTENANCE PERSONNEL, WHILE TROUBLESHOOTING A GROUND IN THE ESF ACTUATION SIGNAL RELAY CABINET B, INADVERTENTLY SHORTED 2 LEADS TOGETHER CAUSING A MOMENTARY LOSS OF RELAY CONTROL POWER TO THE ACTUATION RELAYS. THIS RESULTED IN THE CYCLING OF THE ESF ACTUATION SIGNAL RELAYS CAUSING BOTH THE OPERATING LOW PRESSURE SAFETY INJECTION PUMP B AND ELECTRICAL BUS 3B-32 TO TRIP. BOTH THE LOW PRESSURE SAFETY INJECTION PUMP AND THE 3B-32 BUS WERE QUICKLY RESTORED TO SERVICE. THIS EVENT WAS REPORTED TO THE COMMISSION PURSUANT TO 10CFR50.72(B)(2)(II).

[330] WATERFORD 3 DOCKET 50-382 LER 85-004
INADVERTENT REACTOR TRIP OCCURS.
EVENT DATE: 020985 REPORT DATE: 030885 NSSS: CM TYPE: PWR

(NSIC 193626) ON 2-9-85 WATERFORD 3 STEAM ELECTRIC STATION WAS IN MODE 3 WHEN AN INADVERTENT REACTOR TRIP OCCURRED WHILE PLANT PERSONNEL WERE INSTALLING HEAT SHRINK ON THE LOGARITHMIC POWER LEVEL NUCLEAR INSTRUMENTATION. THIS EVENT WAS REPORTED TO THE COMMISSION PURSUANT TO 10CFR50.72(B)(2)(II).

[331] WPPSS 2 DOCKET 50-397 LER 84-071
MAINTENANCE ERROR SHORTS RPS BUS BREAKER.
EVENT DATE: 071684 REPORT DATE: 072684 NSSS: GE TYPE: BWR

(NSIC 193509) WHILE PERFORMING MAINTENANCE TO REPLACE DIODES IN THE RECIRCULATION SYSTEM CONTROLS (P611C), ELECTRICIANS INADVERTENTLY SHORTED A WRENCH ACROSS THE RPS BUS 'B' POWER SUPPLY BREAKER. AS A RESULT, RPS BUS B TRIPPED CAUSING A HALF SCRAM AND DEENERGIZING RC-2 ISOLATION RELAYS WHICH RESULTED IN A HALF BOP-FAE ISOLATION (INBOARD). THIS ISOLATION IS A RESULT OF AN INITIATION OF AN ESF SYSTEM. A PROTECTIVE COVER WILL BE INSTALLED TO PROTECT THE EXPOSED RPS AC CONTROL POWER BUS IN P-611C. THIS MODIFICATION WILL BE COMPLETED BY 8-20-84.

[332] WPPSS 2 DOCKET 50-397 LER 85-004
 LATE PERFORMANCE OF FIRE PUMP BATTERY SURVEILLANCE.
 EVENT DATE: 011685 REPORT DATE: 020685 NSSS: GE TYPE: BWR
 VENDOR: EXIDE INDUSTRIAL DIV

(NSIC 193375) ON 12-26-84 IT WAS DISCOVERED THAT A WEEKLY SURVEILLANCE OF THE FIRE PUMP BATTERIES HAD NOT BEEN COMPLETED WITHIN THE SCHEDULED MAINTENANCE SYSTEM REQUIRED TIME LIMIT. THE SURVEILLANCE, WHICH INVOLVED FIRE PUMP BATTERY SPECIFIC GRAVITY READINGS, WAS IMMEDIATELY PERFORMED AND FOUND TO BE IN SPECIFICATION. FURTHER EVALUATION, ON 1-16-85, DETERMINED THIS EVENT TO BE REPORTABLE AS THE SURVEILLANCE WAS PERFORMED 7 HRS BEYOND THE TECH SPEC MAXIMUM ALLOWED TIME PERIOD AND THE BATTERIES WERE NOT DECLARED INOPERABLE. THE CAUSE WAS PERSONNEL ERROR. SIMILAR EVENT: 397/84-111.

[333] WPPSS 2 DOCKET 50-397 LER 85-005
 INADVERTENT RPS ACTUATION DURING SURVEILLANCE TESTING.
 EVENT DATE: 011785 REPORT DATE: 021585 NSSS: GE TYPE: BWR

(NSIC 193435) ON 1-17-85, DURING SURVEILLANCE TESTING PRIOR TO A REACTOR STARTUP, THE INCORRECT APRM CHANNEL WAS INADVERTENTLY PLACED IN 'STANDBY'. UPON REALIZING THAT A MISTAKE HAD BEEN MADE, THIS CHANNEL WAS RETURNED TO OPERATION AND THE CORRECT APRM CHANNEL PLACED IN 'STANDBY' PRIOR TO RESETTING THE DIV II HALF SCRAM SIGNAL. THIS RESULTED IN A RPS ACTUATION.

[334] WPPSS 2 DOCKET 50-397 LER 85-006
 REACTOR SCRAM DUE TO LOSS OF 'A' RPS BUS COINCIDENT WITH 1/2 SCRAM ALREADY PRESENT ON 'B' BUS.
 EVENT DATE: 011785 REPORT DATE: 021185 NSSS: GE TYPE: BWR

(NSIC 193436) ON 1-17-85 AN EQUIPMENT OPERATOR WAS RACKING IN 480V BREAKER ROA-FN-1A ON SWITCHGEAR SL-73. WHILE DOING SO IT APPEARED THAT THE TRIPPING BAR WAS EXTENDED FURTHER THAN NORMAL. TO VERIFY THIS, HE OPENED THE DOOR TO THE BREAKER BELOW (FEEDER BREAKER TO 480 V MOTOR CONTROL CENTER MC-7A) SO AS TO COMPARE THE TWO BREAKER CONFIGURATIONS. IN THE PROCESS OF THE CHECK THE TRIPPING BAR FOR THE MC-7A BREAKER WAS INADVERTENTLY MOVED SLIGHTLY INWARD, THEREBY CAUSING THE BREAKER TO TRIP. THE MC-7A TRIP CAUSED THE A RPS MOTOR-GENERATOR SET TO LOSE POWER AND DEENERGIZE ITS RESPECTIVE BUS. ALTHOUGH THE TRIP OF MC-7A WAS NOT IN ITSELF CAPABLE OF GENERATING A FULL SCRAM, A PLANT TRIP OCCURRED BECAUSE A COINCIDENT TRIP CONDITION EXISTED ON THE OPPOSITE RPS CHANNEL DUE TO A BLOWN FUSE ON THE APRM 'D' POWER SUPPLY. THE BLOWN FUSE WAS THE RESULT OF MAINTENANCE ACTIVITIES ASSOCIATED WITH APRM 'D' AND WAS IN THE PROCESS OF BEING REPLACED WHEN THE SCRAM OCCURRED.

[335] WPPSS 2 DOCKET 50-397 LER 85-009
 ISOLATION OF REACTOR WATER CLEANUP ON HIGH FLOW.
 EVENT DATE: 011985 REPORT DATE: 021585 NSSS: GE TYPE: BWR

(NSIC 193437) DURING REACTOR PLANT HEATUP, THE RWCU SYSTEM WAS LINED UP TO LET DOWN TO THE MAIN CONDENSER. LET DOWN FLOW IN EXCESS OF THE GUIDELINES ESTABLISHED BY PLANT PROCEDURES WAS ESTABLISHED WHICH CAUSED RWCU DELTA FLOW TO EXCEED THE TRIP POINT OF 58.5 GPM. LET DOWN FLOW WAS NOT REDUCED AFTER RECEIVING THE HIGH DELTA FLOW ALARM, AND THE 45 SEC. TIME DELAY WAS EXCEEDED, WHICH ACTUATED AN NSSS ISOLATION SIGNAL, RESULTING IN CLOSURE OF VALVES RWCU-V-1 AND RWCU-V-4. SEE LER NOS: 84-035; 84-072-01; 84-072-0; 84-072-03; 84-097; 84-101 AND 84-119 FOR DOCKET 50-397.

[336] WPPSS 2 DOCKET 50-397 LER 85-010
 REACTOR WATER CLEANUP SYSTEM ISOLATES ON HIGH FLOW.
 EVENT DATE: 012785 REPORT DATE: 022685 NSSS: GE TYPE: BWR

(NSIC 193530) THIS ISOLATION WAS REPORTED TO THE NRC AT 0358 HRS ON 1-27-85. DURING REACTOR PLANT HEATUP, THE RWC SYSTEM WAS LINED UP TO BLOWDOWN TO THE MAIN CONDENSER. BLOWDOWN FLOW IN EXCESS OF THE GUIDELINES ESTABLISHED BY PLANT PROCEDURES WAS ESTABLISHED WHICH CAUSED RWC DELTA FLOW TO EXCEED THE TRIP POINT OF 58.5 GPM. BLOWDOWN FLOW WAS NOT REDUCED AFTER RECEIVING THE HIGH DELTA FLOW ALARM, DUE TO OTHER DEMANDS ON THE OPERATOR DURING THE PLANT STARTUP, AND THE 45 SEC. TIME DELAY WAS EXCEEDED, WHICH ACTUATED AN NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM (NSSS) ISOLATION SIGNAL, RESULTING IN CLOSURE OF RWC-V-1 AND RWC-V-4. OPERATORS VERIFIED THAT NO ACTUAL LEAK EXISTED, THE ISOLATION SIGNALS FOR RWC-V-1 AND RWC-V-4 WERE RESET AND THE RWC SYSTEM WAS RETURNED TO SERVICE, WITH REDUCED BLOWDOWN FLOW. SIMILAR LERS: 84-035, 84-072-01, 84-072-02, 84-072-03, 84-097, 84-101, 84-119 AND 85-009.

[337] WPPSS 2 DOCKET 50-397 LER 85-011
 TWO 3/4 INCH PRESSURE BOUNDARY DRAIN PIPES LEAK.
 EVENT DATE: 020385 REPORT DATE: 022885 NSSS: GE TYPE: BWR

(NSIC 193531) ON 2-3-85, DURING A ROUTINE INSPECTION, TWO 3/4 INCH LINES WERE FOUND TO HAVE LEAKAGE. THESE DRAIN LINES FORMED PART OF THE PRIMARY SYSTEM PRESSURE BOUNDARY. THE REACTOR WAS SHUTDOWN AND THE LINES WERE REPAIRED PER ASME REQUIREMENTS AND RETURNED TO SERVICE. THE FAILURE MECHANISM FOR THESE LINES HAS BEEN DETERMINED TO BE HIGH CYCLE FATIGUE. VISUAL EXAMINATION SHOWED THAT THE FAILURES OCCURRED IN THE 3/4 INCH PIPE ADJACENT TO THE SOCKOLET AND INDICATED FATIGUE WAS A FACTOR. ELECTRON MICROSCOPY HAS BEEN PERFORMED TO CONFIRM FAILURE MECHANISM AND HAS CHARACTERIZED THE FATIGUE AS HIGH CYCLE. PIPE DISPLACEMENT DATA FROM POWER ASCENSION TESTING IS BEING REVIEWED TO DETERMINE IF FREQUENCIES CORRESPONDING TO HIGH CYCLE FATIGUE WERE EVIDENT. BASED UPON THESE EVALUATIONS, THE NEED FOR SURFACE EXAMINATIONS OF ADDITIONAL DRAIN LINES AND THE NECESSITY FOR ADDITION OF SUPPORTS TO THE DRAIN LINES WHICH FAILED WILL BE DETERMINED.

[338] WPPSS 2 DOCKET 50-397 LER 85-012
 ISOLATION OF REACTOR WATER CLEANUP.
 EVENT DATE: 021285 REPORT DATE: 030885 NSSS: GE TYPE: BWR

(NSIC 193532) DURING PLANT OPERATION, WITH THE REACTOR BLDG VENTILATION SYSTEM SECURED FOR MAINTENANCE, A RWC ISOLATION OCCURRED, DUE TO A RWC PIPE ROUTING AREA HIGH TEMPERATURE TRIP. ISOLATION OF RWC IS AN ESF ACTUATION. THE REACTOR BLDG VENTILATION SYSTEM WAS SECURED TO ALLOW REPAIR OF STEAM LEAKS ON VENTILATION HEATING COILS. OPERATORS WERE AWARE THAT HIGHER THAN NORMAL REACTOR BLDG AREA TEMPERATURES WOULD BE EXPERIENCED WITH THE VENTILATION SYSTEM SECURED, BUT AREA TEMPERATURE MONITORING FREQUENCY WAS NOT INCREASED. INSTRUCTIONS WILL BE ADDED TO BOTH THE REACTOR BLDG HEATING AND VENTILATION SYSTEM OPERATING PROCEDURE AND THE REACTOR BLDG VENTILATION FAILURE PROCEDURE TO STRESS THE NEED FOR MORE FREQUENT MONITORING OF RWC AREA TEMPERATURES TO PREVENT AUTO ISOLATION WHEN VENTILATION IS SECURED. THIS ISOLATION WAS REPORTED TO THE NRC AT 1400 HRS ON 2-12-85. SIMILAR EVENT 397/84-033.

[339] WPPSS 2 DOCKET 50-397 LER 85-015
 INCORRECT FIRE DETECTOR INSTALLATION.
 EVENT DATE: 021385 REPORT DATE: 031485 NSSS: GE TYPE: BWR

(NSIC 193634) DURING THE IMPLEMENTATION OF A PLANT MODIFICATION, THE FIRE DETECTION INSTRUMENT FOR THE RHR VALVE ROOM WAS ERRONEOUSLY REMOVED. A MAINTENANCE WORK REQUEST DIRECTING A CHANGE IN LOCATION FOR FIRE PROTECTION

DETECTOR NUMBER 16/14 WAS IMPLEMENTED. THE CRAFTSMEN PERFORMING THE WORK REMOVED AND RELOCATED FP DETECTOR 16/12 IN ERROR. THUS FROM 9-9-84 UNTIL 2-13-85, WHEN THIS CONDITION WAS DISCOVERED, THE RHR VALVE ROOM HAD NO INSTALLED FIRE DETECTION INSTRUMENT AND WAS NOT MONITORED BY A FIRE WATCH PATROL. THIS DOES NOT MEET PLANT TECH SPEC REQUIREMENTS.

[340] WPPSS 2 DOCKET 50-397 LER 85-016
INSTRUMENT TESTING ERROR CAUSES REACTOR SCRAM.
EVENT DATE: 021385 REPORT DATE: 031485 NSSS: GE TYPE: BWR

(NSIC 193635) ON 2-13-84, DURING PERFORMANCE OF A ROUTINE SURVEILLANCE TEST OF THE REACTOR FEEDWATER TURBINE TRIP ON HIGH REACTOR PRESSURE VESSEL LEVEL INSTRUMENT, THE DIFFERENTIAL PRESSURE TRANSMITTER WHICH INITIATES THIS SIGNAL WAS INCORRECTLY RETURNED TO SERVICE. THIS CAUSED A RPS TRIP AND RESULTED IN A REACTOR SCRAM. THE TECHNICIANS PERFORMING THIS SURVEILLANCE TEST WERE UNABLE TO PERFORM THE TEST AS SPECIFIED BY PROCEDURAL STEPS (LATER DETERMINED TO BE DUE TO INADEQUATE VENTING OF TEST HOSES) AND DECIDED TO RETURN THE INSTRUMENT TO SERVICE AND SEEK ASSISTANCE. WHILE RETURNING THE INSTRUMENT TO SERVICE, THE HIGH SIDE BLOCK VALVE WAS OPENED WITH THE EQUALIZING VALVE NOT FULLY SHUT. THIS RESULTED IN A PRESSURE TRANSIENT ON THE REFERENCE AND VARIABLE LEGS OF VARIOUS DP TRANSMITTERS. THIS PRESSURE TRANSIENT INITIATED A REACTOR SCRAM SIGNAL AND A HPCS INJECTION SIGNAL EVEN THOUGH ACTUAL RPV LEVEL WAS APPROX +35" (A NORMAL VALUE). THE HPCS DG ALSO STARTED, ATTAINED RATED VOLTAGE AND REMAINED IN STANDBY. THE INSTRUMENTS INITIATING THESE SIGNALS (REACTOR SCRAM, HPCS DG START AND HPCS INJECTION) SHARE COMMON REFERENCE SENSING POINTS WITH THE INSTRUMENT BEING TESTED.

[341] WPPSS 2 DOCKET 50-397 LER 85-013
RPS ACTUATION DURING SURVEILLANCE TESTING.
EVENT DATE: 021485 REPORT DATE: 030885 NSSS: GE TYPE: BWR

(NSIC 193533) DURING PERFORMANCE OF AVERAGE POWER RANGE MONITORING APRM SURVEILLANCE TESTING, A FULL RPS ACTUATION OCCURRED WHEN PLANT TECHNICIANS FAILED TO PROPERLY RESET A HALF SCRAM CONDITION PRIOR TO PROCEEDING WITH THE SURVEILLANCE TESTING. THE REACTOR WAS SHUTDOWN AT THE TIME OF THIS OCCURRENCE AND THIS SURVEILLANCE WAS PART OF THE TESTING REQUIRED FOR STARTUP. SIMILAR EVENTS 397/84-131 AND 397/85-005.

[342] WPPSS 2 DOCKET 50-397 LER 85-014
TURBINE CONTROL TROUBLESHOOTING CAUSES REACTOR SCRAM.
EVENT DATE: 021485 REPORT DATE: 031485 NSSS: GE TYPE: BWR

(NSIC 193633) DURING A PLANT STARTUP ON 2-14-85, WHILE INVESTIGATING A FAILURE OF THE MAIN TURBINE TO 'LATCH', IT WAS FOUND THAT THE MAIN TURBINE MECHANICAL TRIP DEVICE LINKAGE WAS BINDING IN THE 'TRIP' CONDITION. IN ORDER TO ENSURE THAT THE LOW VACUUM TRIP DEVICE WOULD ACTUALLY TRIP THE TURBINE, AND TO POSSIBLY RECREATE THE STUCK LINKAGE CONDITION, TECHNICAL STAFF DIRECTION WAS GIVEN TO REDUCE VACUUM TO THE TRIP DEVICE BY OPENING THE VACUUM TRIP TEST VALVE. EVEN THOUGH AN OPERATING PROCEDURE DISCUSSED THIS SITUATION IT WAS NOT RECOGNIZED AT THE TIME THAT THIS WOULD RESULT IN AUTOMATICALLY SWITCHING THE BYPASS VALVE CONTROL TO THE MANUAL MODE. A REACTOR SCRAM OCCURRED DUE TO THE PRESSURE WHICH RESULTED FROM THE TURBINE CONTROL SYSTEM CLOSING THE BPV'S AND SWITCHING CONTROL TO 'BPV MANUAL'. THE BPV RESPONSE WAS A NORMAL RESULT OF THE LOW VACUUM INPUT SIGNAL WHICH WAS CREATED BY OPENING THE TEST VALVE.

[343] WPPSS 2 DOCKET 50-397 LER 85-017
 LEAK DETECTION INITIATION RWCU SYSTEM ISOLATION.
 EVENT DATE: 021485 REPORT DATE: 030885 NSSS: GE TYPE: BWR
 VENDOR: PANALARM COMPANY

(NSIC 193534) ON 2-14-85, A TEMPERATURE MONITOR IN THE LEAK DETECTION SYSTEM COVERING THE RWCU PUMP ROOM #1 SPURIOUSLY ACTUATED A DELTA TEMPERATURE HIGH ALARM. THIS INITIATED A SIGNAL TO AUTOMATICALLY CLOSE THE RWCU OUTBOARD CONTAINMENT ISOLATION VALVE. SIMILAR EVENT - 397/84-033.

[344] WPPSS 2 DOCKET 50-397 LER 85-019
 RHR ROOM TEMPERATURE MONITORING DEFICIENCY.
 EVENT DATE: 021685 REPORT DATE: 031485 NSSS: GE TYPE: BWR

(NSIC 193637) A RECENT AUDIT OF AN OPERATIONS SURVEILLANCE PROCEDURE PERFORMED EACH SHIFT REVEALED AN ERROR REGARDING TRANSFER OF INFORMATION FROM A PROCEDURE DEVIATION TO THE CORRECT PROCEDURE STEP. THE PLANT PROCEDURE DEVIATION IDENTIFIED THE REQUIREMENT TO MONITOR RHR PUMP ROOM AREA TEMPERATURE 'AT ALL TIMES'. TECH SPEC 3/4.7.8 APPLICABILITY INCLUDES THE REQUIREMENT TO MONITOR THESE AREA TEMPERATURES WHENEVER EQUIPMENT WITHIN THAT SPECIFIED AREA IS REQUIRED TO BE OPERABLE. ON 2-16-85, TEMPERATURE MONITORING OF THE RHR PUMP ROOM AREAS WAS NOT ACCOMPLISHED IN ACCORDANCE WITH PLANT TECH SPECS. SIMILAR EVENT 397/84-126.

[345] WPPSS 2 DOCKET 50-397 LER 85-018
 CONTAINMENT OVERTEMPERATURE CONDITION.
 EVENT DATE: 022485 REPORT DATE: 031485 NSSS: GE TYPE: BWR

(NSIC 193636) ON 2-24-85, CMS-TI-51 READINGS EXCEEDED THE TECH SPEC 3/4.7.8 LIMIT. THE PLANT WAS OPERATING AT 100% POWER AND CIRCULATING WATER SYSTEM COOLING TOWERS WERE ALTERNATELY BEING TAKEN OUT OF SERVICE FOR ELECTRICAL REPAIRS. THIS CAUSED HIGHER PLANT SERVICE WATER TEMPERATURES AND RESULTED IN HIGHER REACTOR CLOSED COOLING SYSTEM WATER TEMPERATURES. THUS, WHEN RCC WATER TEMPERATURE INCREASED DUE TO RISING OUTSIDE AIR TEMPERATURES AND COOLING TOWER MAINTENANCE, DRYWELL TEMPERATURE (AS MONITORED BY CMS-TI-51) ROSE TO 150 F. THE MAX TEMPERATURE RECORDED WAS 156 F AND AT 2200 HRS ON 2-24-85. THIS LOCALIZED OVERTEMPERATURE CONDITION WAS IN AN AREA ABOVE THE SACRIFICIAL SHIELD WALL WHICH CONTAINS A LIMITED NUMBER OF SAFETY-RELATED COMPONENTS. SIMILAR EVENTS: LER 84-034.

[346] ZION 1 DOCKET 50-295 LER 84-029
 UNIT 1 'B' STEAM GENERATOR TUBE LEAK.
 EVENT DATE: 091084 REPORT DATE: 101084 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 193495) ON 9-10-84, THE RADIATION PROTECTION DEPARTMENT REPORTED ZION 1 'B' SG PRIMARY TO SECONDARY TUBE LEAKAGE OF APPROX 1050 GALS PER DAY, WHICH IS IN EXCESS OF THE TECH SPEC 3.3.3.E LIMIT OF 500 GPD. AS REQUIRED IN THIS SECTION THE UNIT WAS BROUGHT TO COLD SHUTDOWN WITHIN 36 HRS. UPON ACCESS TO THE SG, TUBE NUMBER ROW 25 COLUMN 40 WAS IDENTIFIED AS LEAKING. AFTER A 100 PSIG HYDROSTATIC TEST NO OTHER LEAKAGE WAS IDENTIFIED. A REVIEW OF 1983 EDDY CURRENT INSPECTION DATA REVEALED SEVERAL NEAR THRUWALL INDICATIONS, IN THE INLET TUBE SHEET AREA, WERE MISSED BY THE DATA EVALUATION IN 1983. AS A RESULT OF THIS FINDING ALL UNIT 1 1983 EDDY CURRENT DATA WAS REEVALUATED AND IN ACCORDANCE WITH TECH SPEC 4.3.1.B.3.C.1 1220 TUBES WERE EDDY CURRENT TESTED. ALL GREATER THAN OR EQUAL TO 40% THRUWALL INDICATION IDENTIFIED IN BOTH OF THE ABOVE OPERATIONS WERE PLUGGED.

[247] ZION 1 DOCKET 50-295 LER 85-003
 DIESEL GENERATOR LUBE OIL PUMP FAILS.
 EVENT DATE: 011585 REPORT DATE: 021485 NSSS: WE TYPE: PWR
 OTHER UNITS INVOLVED: ZION 2 (PWR)
 VENDOR: COOPER-BESSEMER CO.

(NSIC 193404) ON 1-15-85 'O' DG TRIPPED AT FULL LOAD. THE ROOT CAUSE OF THE FAILURE WAS A BROKEN SHAFT IN THE ENGINE DRIVEN LUBE OIL PUMP. THE SHAFT FAILED DUE TO A MISALIGNMENT CONDITION. THE PUMP WAS REPLACED ALONG WITH THE LUBE OIL PRESSURE REGULATING VALVE. THE ENGINE WAS TESTED SUCCESSFULLY. P/DG001/3-2R, 'DG MAJOR OVERHAUL INSPECTION CHECKLIST', WILL BE REVISED TO INCLUDE VERIFYING ALIGNMENT OF THE ENGINE DRIVEN LUBE OIL PUMP AND REPLACING ALL TEMPERATURE FUSE RODS. A NEW PROCEDURE WILL BE WRITTEN, FOR FIRST OUT ANNUNCIATOR MAINTENANCE, TO INCREASE ITS RELIABILITY. BECAUSE 1B DG WAS OUT OF SERVICE FOR MAINTENANCE AT THE TIME, A GSEP UNUSUAL EVENT WAS DECLARED FOLLOWING THE FAILURE OF 'O' DG. APPROX 44 HRS LATER, DG 1B WAS RETURNED TO SERVICE AND THE GSEP WAS TERMINATED.

[348] ZION 1 DOCKET 50-295 LER 85-002
 MODE 3 OPERATION WITH TWO INOPERABLE DIESEL GENERATORS.
 EVENT DATE: 011985 REPORT DATE: 021585 NSSS: WE TYPE: PWR
 VENDOR: COOPER-BESSEMER CO.

(NSIC 193403) ON 1-19-85 'O' DG WAS OUT OF SERVICE. 1A DG WAS STARTED AND LOADED AT 1611 HRS PER PT-11, DG OPERABILITY TEST. AT 1723 HRS 1A DG WAS SHUT DOWN AT THE OPERATOR'S REQUEST DUE TO A SMALL FUEL OIL LEAK. A GSEP UNUSUAL EVENT WAS DECLARED. INITIAL INVESTIGATION REVEALED A HOLE IN A FUEL OIL SUPPLY LINE ON THE GENERATOR END OF THE ENGINE, CAUSED BY THE LINE RUBBING AGAINST AN ANGLE IRON SUPPORT. THE STEEL TUBING WAS REPLACED AND THE GENERATOR WAS CLEANED. AT 2237 HRS 1A DG WAS STARTED AND LOADED PER PT-11. AT 2350 HRS PT-11 WAS COMPLETED AND 1A DG WAS DECLARED OPERABLE. THE GSEP UNUSUAL EVENT WAS TERMINATED. ALL DG FUEL LINES WERE INSPECTED. THE MAINTENANCE YEARLY SURVEILLANCE WILL BE REVISED TO INCLUDE INSPECT OF LINES.

[349] ZION 1 DOCKET 50-295 LER 85-001
 FAILURE OF CONTAINMENT RADIATION MONITOR.
 EVENT DATE: 012085 REPORT DATE: 021985 NSSS: WE TYPE: PWR
 VENDOR: EBERLINE INSTRUMENT CORP.

(NSIC 193353) DURING A ROUTINE PARTICULATE/IODINE FILTER CHANGE ON THE CONTAINMENT SPING RADIATION MONITOR 1RIA-PR40 AT 1600 HRS ON 1-20-85, RAD/CHEM PERSONNEL WERE UNABLE TO RESTART THE SPING SAMPLE PUMP. INSPECTION OF THE SPING MONITOR ALSO SHOWED THAT THE MOISTURE TRAP AIR FILTER JARS AND THE TYGON TUBING LEADING FROM THE PUMP DISCHARGE TO THE SAMPLE RETURN PIPING WERE DISCONNECTED. THE JARS AND TUBING WERE REPLACED AND THE PUMP WAS RESET. THE PUMP WAS RESTARTED BUT IT TRIPPED SHORTLY THEREAFTER DUE TO BACK PRESSURE. SUBSEQUENT ATTEMPTS TO ESTABLISH SAMPLE FLOW WERE UNSUCCESSFUL. THE MONITOR WAS DECLARED OUT OF SERVICE AND SHIFTLY GRAB SAMPLING PER TECH SPEC 3.14.1.C WAS INITIATED. THE UNIT WAS IN HOT SHUTDOWN AND NO RELEASE WAS IN PROGRESS AT THE TIME OF THE INCIDENT. ALTHOUGH THE LOSS OF THE MOISTURE TRAP JAR RENDERED THE NORMALLY CLOSED CONTAINMENT AIR SAMPLING LOOP OPEN, THE TECH STAFF DETERMINED THAT NO LOSS OF CONTAINMENT INTEGRITY OCCURRED. IN THE EVENT OF A SAFEGUARDS ACTUATION, NORMALLY OPEN VALVES PR24 A AND B WOULD AUTOMATICALLY CLOSE, ISOLATING CONTAINMENT.

[350] ZION 1 DOCKET 50-295 LER 85-005
 REACTOR TRIP DUE TO OPERATOR ERROR CAUSED BY COMPUTER FAILURE.
 EVENT DATE: 012185 REPORT DATE: 022085 NSSS: WE TYPE: PWR
 VENDOR: WESTINGHOUSE ELEC CORP.-NUCLEAR ENERGY SYS

(NSIC 193522) WHILE PERFORMING SUMP VALVE STROKE TEST, 1MOV-SI8812 A&B FAILED TO RE-OPEN AFTER BEING STROKED CLOSED. THIS OCCURRED AT 0455 ON 1/24/85, WITH UNIT 1 AT 67% POWER. THE FAILURE CAUSED THE LOSS OF THE SUCTION FLOWPATH FROM THE REFUELING WATER STORAGE TANK TO THE RHR PUMPS. THE VALVES RE-OPENED AFTER SEVERAL ATTEMPTS, AND THE FLOWPATH WAS RESTORED AFTER APPROX 2 MINS. MAINTENANCE ON THESE VALVES HAS NOT YET BEEN COMPLETED. THEREFORE, THE ROOT CAUSE OF THIS FAILURE IS STILL UNKNOWN. A SUPPLEMENTAL REPORT WILL PROVIDE FURTHER INFO. A PROCEDURE CHANGE WAS MADE TO TEST THESE VALVES AT COLD SHUTDOWN, WHEN THEIR OPERATION WOULD NOT AFFECT PLANT SAFETY.

(NSIC 193354) ON 2-7-85 A LOAD HEAVIER THAN THAT ALLOWED BY THE FACILITY OPERATING LICENSE WAS MOVED OVER SPENT FUEL IN THE SPENT FUEL POOL. DURING PREPARATIONS FOR REMOVING A RCP MOTOR FROM THE UNIT 1 CONTAINMENT A SECTION OF THE RCP MOTOR TRANSPORTER STRUCTURE WAS MOVED OVER SPENT FUEL IN THE SPENT FUEL POOL DUE TO INADEQUATE TRAINING OF THE CRANE OPERATOR AND HIS SUPERVISOR IN THE CONTROL OF HEAVY LOADS AND INADEQUATE CONTROL ON THE USE OF THE INTERLOCK BYPASS FEATURES ON THE CRANE. THE MOVEMENT OF THE HEAVY LOAD WAS COMPLETED WITHOUT INCIDENT. ALL MECHANICAL MAINTENANCE MECHANICS AND FOREMAN WERE TRAINED OR RETRAINED WITHIN 24 HRS OF THE EVENT AND POSITIVE CONTROLS HAVE BEEN IMPLEMENTED ON USE OF THE CRANE.

(NSIC 193652) CENTRIFUGAL CHARGING PUMP LEVEL CONTROL VALVE 2LCV-VC121 SUDDENLY EXHIBITED A 10 GPM PACKING LEAK RESULTING IN ELEVATED RADIATION LEVELS ON

RADIATION MONITOR R-14 AND IN THE 2B CHARGING PUMP ROOM. A GSEP UNUSUAL EVENT WAS DECLARED PER EMERGENCY ACTION LEVEL 17 AT 3:25 ON 11-12-84. THE LEAK WAS ISOLATED AND STEADY STATE CONDITIONS PREVAILED FOLLOWING INITIATION OF EXCESS LETDOWN AND MAINTENANCE SEAL INJECTION. THE GSEP WAS TERMINATED AT 1:28 AFTER STABILIZATION. ON 9-24-94, A SIMILAR PACKING LEAK ON THE SAME VALVE OCCURRED. INVESTIGATION REVEALED THAT REPLACEMENT OF THE PACKING WAS PERFORMED USING AN INADEQUATE PROCEDURE WHICH ALLOWED REPACKING WITH PREFORMED GRAFOIL RINGS EXCLUSIVELY WITHOUT A HARD RING PACKING TO ACT AS A RETAINER ON THE GRAFOIL. OPERATION OF THE 2LCV-VC121 VALVE WITH THE PACKING IN THIS CONFIGURATION COULD AND DID RESULT IN THE SUBSEQUENT FAILURE SEEN ON 11-12-84. A PROCEDURE CHANGE WAS IMPLEMENTED. MECHANICAL MAINTENANCE WAS CALLED OUT FOR REPAIRS AND A CHEMIST WAS CALLED TO QUANTIFY THE RELEASE.

[354] ZION 2 DOCKET 50-304 LER 84-030
 AUTO INITIATION OF ISOLATION VALVE SEAL WATER VALVES.
 EVENT DATE: 121084 REPORT DATE: 010985 NSSS: WE TYPE: PWR
 VENDOR: REES INSTRUMENTS LTD.

(NSIC 193653) DURING PERIODIC SAFEGUARDS TESTING, MAINTENANCE PERSONNEL WERE REPLACING A TEST SWITCH FOR A PORTION OF CONTAINMENT ISOLATION PHASE 'A' CIRCUITRY ON TRAIN 'A'. WHILE REPLACING THE SWITCH, 2 LEADS WERE ACCIDENTLY SHORTED TOGETHER. THIS BACKFED THROUGH OTHER TEST SWITCHES AND OPENED ALL 5 TRAIN 'A' ISOLATION VALVE SEAL WATER VALVES (2FCV-IW09, 11, 13, 15 AND 17). CONTROL ROOM RECEIVED ANNUNCIATORS FOR ISOLATION VALVE SEAL WATER STORAGE TANK LOW LEVEL AND LOW NITROGEN SUPPLY PRESSURE. AN EQUIPMENT OPERATOR WAS DISPATCHED TO THE TANK AND FOUND PRESSURE AND LEVEL NORMAL AND THE PRIMARY WATER MAKE UP VALVE PARTIALLY OPEN. CONTAINMENT ISOLATION PHASE A ANNUNCIATOR WAS IN BEFORE SWITCH REPLACEMENT BEGAN DUE TO PREVIOUS TESTING. AFTER MAINTENANCE PERSONNEL FINISHED REPLACING THE TEST SWITCH, PHASE A CONTAINMENT ISOLATION WAS RESET AND THE ISOLATION VALVE SEAL WATER VALVES WERE RECLOSED.

[355] ZION 2 DOCKET 50-304 LER 85-001
 DIESEL GENERATOR TRIPS DURING TEST.
 EVENT DATE: 011585 REPORT DATE: 021485 NSSS: WE TYPE: PWR
 VENDOR: COOPER-BESSEMER CO.

(NSIC 193405) ON 1-15-85 WHILE TESTING 2B DG FOR AN 'O' DG OUT OF SERVICE, 2B DG ACCELERATED TO RATED SPEED AND VOLTAGE, THEN TRIPPED. INVESTIGATIONS TO THIS DATE HAVE NOT DETERMINED THE CAUSE OF THE ENGINE TRIP. 2B DG WAS RETURNED TO SERVICE AND PROVEN OPERABLE. THIS FAILURE IS BELIEVED TO HAVE BEEN CAUSED BY A SPURIOUS RELAY ACTUATION WHICH RESULTED IN AN 'INCOMPLETE SEQUENCE' DC TRIP AFTER REACHING PROPER SPEED. THIS IS THE FIRST KNOWN FAILURE OF THIS TYPE AND THE EXACT CAUSE IS UNKNOWN. THIS 2B DG FAILURE INVESTIGATION IS BEING TRACKED BY STATION COMMITMENT #11120.

[356] ZION 2 DOCKET 50-304 LER 85-002
 DIESEL GENERATOR LUBE OIL LEAKS.
 EVENT DATE: 021585 REPORT DATE: 031585 NSSS: WE TYPE: PWR
 VENDOR: COOPER-BESSEMER CO.

(NSIC 193672) ON 2-15-85, WITH THE '2A' DG OUT OF SERVICE, 'O' DG WAS STARTED PER PT-11, 'DG LOADING TEST', AND WAS SHUTDOWN DUE TO A LUBE OIL LEAK. A GSEP UNUSUAL EVENT WAS DECLARED FOR HAVING 2 OF 3 DG'S INOPERATIVE. ALL NECESSARY NOTIFICATIONS WERE MADE. THE LEAK WAS TRACED TO A CRACKED LENGTH OF TUBING THAT SUPPLIES LUBE OIL TO THE STARTING AIR DISTRIBUTOR FROM THE TURBOCHARGER LUBE OIL MANIFOLD. THE TUBING WAS REPLACED, 'O' DG WAS SUCCESSFULLY TESTED, AND THE GSEP UNUSUAL EVENT WAS TERMINATED. ALL COPPER TUBING WILL BE REPLACED UPON INSTALLATION OF MODIFICATION M22-1/2-82-24.

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BIBLIOGRAPHIC DATA SHEET

NUREG/CR-2000, Vol. 4, No. 5
ORNL/NSIC-200

SEE INSTRUCTIONS ON THE REVERSE

2. TITLE AND SUBTITLE

Licensee Event Report (LER) Compilation

3. LEAVE BLANK

4. DATE REPORT COMPLETED

MONTH

YEAR

June

1985

5. DATE REPORT ISSUED

MONTH

YEAR

July

1985

5. AUTHOR(S)

7. PERFORMING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code)

Oak Ridge National Laboratory
Nuclear Operations Analysis Center
Oak Ridge, TN 37831

8. PROJECT/TASK/WORK UNIT NUMBER

9. FIN OR GRANT NUMBER

FIN A9135

10. SPONSORING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code)

Office for Analysis and Evaluation of
Operational Data
U.S. Nuclear Regulatory Commission
Washington, DC 20555

11a. TYPE OF REPORT

Monthly Report

b. PERIOD COVERED (Inclusive Dates)

June 1985

12. SUPPLEMENTARY NOTES

13. ABSTRACT (200 words or less)

This monthly report contains Licensee Event Report (LER) operational information that was processed into the LER data file of the Nuclear Safety Information Center (NSIC) during the one month period identified on the cover of the document. The LERs, from which this information is derived, are submitted to the Nuclear Regulatory Commission (NRC) by nuclear power plant licensees in accordance with federal regulations. Procedures for LER reporting for revisions to those events occurring prior to 1984 are described in NRC Regulatory Guide 1.16 and NUREG-1061, *Instructions for Preparation of Data Entry Sheets for Licensee Event Reports*. For those events occurring on and after January 1, 1984, LERs are being submitted in accordance with the revised rule contained in Title 10 Part 50.73 of the Code of Federal Regulations (10 CFR 50.73 - Licensee Event Report System) which was published in the Federal Register (Vol. 48, No. 144) on July 26, 1983. NUREG-1022, *Licensee Event Report System - Description of Systems and Guidelines for Reporting*, provides supporting guidance and information on the revised LER rule. The LER summaries in this report are arranged alphabetically by facility name and then chronologically by event date for each facility. Component, system, keyword, and component vendor indexes follow the summaries. Vendors are those identified by the utility when the LER form is initiated; the keywords for the component, system, and general keyword indexes are assigned by the computer using correlation tables from the Sequence Coding and Search System.

14. DOCUMENT ANALYSIS - a. KEYWORDS/DESCRIPTORS

licensee event report (LER)

15. AVAILABILITY STATEMENT

Unlimited

16. SECURITY CLASSIFICATION

(This page)
Unclassified

(This report)
Unclassified

17. NUMBER OF PAGES

18. PRICE

6. IDENTIFIERS/OPEN ENDED TERMS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

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