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Licensee Event Report (LER) Compilation

For month of December 1984

Oak Ridge National Laboratory

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

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Abstract

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

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

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[1] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 84-019
MANUAL REACTOR TRIP FOLLOWING TRANSFER OF INVERTER.
EVENT DATE: 072084 REPORT DATE: 082084 NSSS: CE TYPE: PWR

(NSIC 191218) ON 7-20-84, AT 0118 HRS A MANUAL REACTOR TRIP WAS INITIATED FROM 100% FULL POWER FOLLOWING A SPURIOUS HALF-LEG TRIP (1 OF 2 PATHS) CAUSED BY SWITCHING OF INVERTER 2Y11 SUPPLYING POWER TO CORE PROTECTION CALCULATOR (CPC) CHANNEL A, CONTROL ELEMENT ASSEMBLY CALCULATOR (CEAC) #1, ENGINEERED SAFETY FEATURES AND PLANT PROTECTION SYSTEM CABINETS, AND THE A3 TRIP MATRICES FOR HALF OF THE CONTROL ELEMENT DRIVE MECHANISM BREAKERS. AT 0100 HRS AN OPERATOR, DISPATCHED TO RESET AN INVERTER ALARM, INADVERTENTLY PRESSED THE 'ALTERNATE SOURCE TO LOAD' BUTTON INSTEAD OF THE 'RESET' BUTTON. REALIZING HIS MISTAKE, HE PRESSED THE 'INVERTER TO LOAD' BUTTON TO RETURN THE INVERTER TO THE NORMAL CONFIGURATION. WHEN THE INVERTER WAS SWITCHED BACK TO NORMAL, AN ELECTRICAL TRANSIENT APPARENTLY OCCURRED. THIS RESULTED IN TRIPPING OF 4 CEDM BREAKERS AND ALL PPS CHANNEL A TRIP PARAMETERS. BASED ON THE DEGRADED PLANT INDICATIONS AND THE BELIEF THAT AN AUTOMATIC TRIP WAS IMMINENT, A CONTROL ROOM OPERATOR TRIPPED THE REACTOR MANUALLY. REACTOR TRIP RECOVERY PROCEEDED WITH NO UNUSUAL DIFFICULTIES, AND NO SIGNIFICANT POST-TRIP ANOMALIES WERE NOTED. INVERTER 2Y11 WAS SUBSEQUENTLY INSPECTED AND OPERATED WITH NO INVERTER OUTPUT DEGRADATION DURING TESTING.

[2] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 84-020
REACTOR TRIP ON HIGH STEAM GENERATOR LEVEL.
EVENT DATE: 072684 REPORT DATE: 082984 NSSS: CE TYPE: PWR

(NSIC 191401) ON 7-26-84 AT 1139 HRS WHILE IN MODE 4, AN AUTOMATIC REACTOR TRIP OCCURRED DUE TO A HIGH LEVEL IN 'B' STEAM GENERATOR (2E24B). HEATUP WAS IN PROGRESS WITH THE SG'S BEING MAINTAINED BETWEEN 80% AND 85% AND WITH RCS TEMPERATURE AT 278 F AND RCS PRESSURE AT 358 PSIA. THE MSIV'S WERE OPENED FOR A VALVE STROKE SURVEILLANCE. THERE WAS APPROX A 30 PSI DIFFERENTIAL PRESSURE ACROSS THE MSIV'S AT THIS TIME. THE MOMENTARY SG PRESSURE DECREASE RESULTED IN A SWELL IN THE SG LEVELS. 2E24B LEVEL INCREASED ENOUGH TO REACH THE HIGH SG LEVEL TRIP SETPOINT THEREBY ACTUATING A REACTOR TRIP. THE REACTOR WAS NOT CRITICAL AT THE TIME OF THE TRIP. NO OPERATIONAL DIFFICULTIES OR ANOMALIES WERE NOTED. TO PREVENT RECURRENCE, PLANT OPERATING PROCEDURES WILL BE REVISED TO INCLUDE A CAUTION REGARDING SG LEVEL CONTROL TO ACCOMMODATE SWELL WHEN OPENING MSIV'S DURING STARTUP.

[3] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 84-025
CPC CHANNEL D RTD CALIBRATION AND RESPONSE TIME DEGRADATION.
EVENT DATE: 072784 REPORT DATE: 091084 NSSS: CE TYPE: PWR
VENDOR: WEED INSTRUMENT COMPANY, INC.

(NSIC 191220) ON 8-9-84, WHILE IN MODE 1 AT 100% FULL POWER, IT WAS DISCOVERED THAT INCORRECT DATA WAS USED TO CALIBRATE RESISTANCE TEMPERATURE DETECTOR (RTD) 2TE-4711-4 WHICH PROVIDES COLD LEG TEMPERATURE INPUT TO CHANNEL D CORE PROTECTION CALCULATOR (CPC). DURING AN OUTAGE THAT BEGAN ON 7-20-84, 2TE-4711-4 WAS REPLACED TO PROVIDE IMPROVED RESPONSE TIME. THE REPLACEMENT RTD HAD BEEN PREVIOUSLY RETURNED TO THE MANUFACTURER FOR MODIFICATION OF THE LEAD WIRES. THE MANUFACTURER CHOSE TO REPLACE THE RTD RATHER THAN MODIFY THE EXISTING ELEMENT, BUT THE SAME SERIAL NUMBER WAS RE-USED. WHEN THE RTD WAS INSTALLED, DATA FOR THE ORIGINAL RTD WAS USED FOR CALIBRATION. ALSO AT THIS TIME RESPONSE TIME TESTING WAS PERFORMED. TEST RESULTS RECEIVED ON 7-27-84 INDICATED AN ACCEPTABLE RESPONSE TIME OF 5.28 SEC. ON 8-9-84 THE CALIBRATION ERROR WAS DISCOVERED AND 2TE-4711-4 WAS RECALIBRATED USING THE CORRECT CONSTANTS. SUBSEQUENT RESPONSE TIME TESTING RESULTS RECEIVED ON 8-28-84 INDICATED THAT THE RESPONSE TIME HAD DEGRADED TO 12.76 SEC. EACH PROBLEM COULD HAVE RESULTED IN NONCONSERVATIVE, LARGER THAN ALLOWABLE UNCERTAINTY IN CPC CHANNEL D CALCULATIONS. A COUPLANT COMPOUND WAS

USED IN THE THERMOWELL FOR 2TE-4711-4 AND ACCEPTABLE RTD RESPONSE TIMES WERE ACHIEVED.

[4] ARKANSAS NUCLEAR 2 DOCKET 50-368 LER 84-021
REACTOR TRIP CAUSED BY HIGH STEAM GENERATOR LEVEL.
EVENT DATE: 072884 REPORT DATE: 082984 NSSS: CE TYPE: PWR

(NSIC 191219) ON 7-28-84, AT 0013 HRS WHILE IN MODE 2 AT 5% FULL POWER, AN AUTOMATIC REACTOR TRIP OCCURRED DUE TO A HIGH LEVEL ON THE 'B' SG (2E24B). FEEDWATER CONTROL WAS IN MANUAL AND PREPARATIONS WERE BEING MADE TO SYNCHRONIZE THE TURBINE TO THE GRID. MAIN FEEDWATER FLOW HAD BEEN INCREASED IN RESPONSE TO DECREASING STEAM GENERATOR LEVEL. THIS RESULTED IN A RAPID INCREASE IN STEAM GENERATOR LEVELS SUCH THAT, BEFORE THE LEVEL INCREASE COULD BE TURNED, 2E24B REACHED THE HIGH LEVEL TRIP SETPOINT. AUTOMATIC FEEDWATER CONTROL AT LOW POWER LEVELS IS NOT FEASIBLE WITH THE FEEDWATER CONTROL SYSTEM, AND MANUAL CONTROL IS DIFFICULT AT LOW POWER DUE TO THE COARSE CONTROLS PROVIDED. NO PROBLEMS WERE EXPERIENCED AS A RESULT OF THE TRIP, AND NO POST-TRIP ANOMALIES WERE NOTED. SIMILAR TO LERS (50-368) 84-004, 84-008, 84-011, 84-014 AND 84-020.

[5] ARNOLD DOCKET 50-331 LER 84-029
STANDBY LIQUID CONTROL SYSTEM MISALIGNMENT.
EVENT DATE: 071884 REPORT DATE: 081784 NSSS: GE TYPE: BWR

(NSIC 191215) WHILE IN NORMAL FULL POWER OPERATION, IMPROPER MANIPULATION OF THE COMMON SUCTION VALVE FROM THE STANDBY LIQUID CONTROL SYSTEM (SBLC) TANK TO 2 SBLC PUMPS RESULTED IN SBLC BEING ISOLATED FOR NEARLY 5 HRS. THE MANUAL VALVE, WHICH HAD BEEN ERRONEOUSLY UNLOCKED AND CYCLED BY A CHEMISTRY TECHNICIAN WHILE PERFORMING A PORTION OF A SURVEILLANCE TEST, WAS OBSERVED TO BE IN THE INCORRECT POSITION BY LICENSED OPERATORS WHILE WALKING BY THE SBLC. THE VALVE WAS IMMEDIATELY RESTORED TO FULL OPEN AND THE SBLC LINEUP VERIFIED. BECAUSE OF THE SHORT DURATION OF THE VALVE MISPOSITIONING, ALL TECH SPEC ACTION STATEMENTS WERE COMPLIED WITH. ADDITIONAL CORRECTIVE ACTIONS ARE DETAILED IN THE TEXT. CALCULATIONS AND A REVIEW OF OPERATIONS PROCEDURES PERFORMED AFTER THE EVENT INDICATE REASONABLE OPERATOR ACTION WOULD HAVE RESTORED SYSTEM OPERATION FOLLOWING MANUAL INITIATION AND FULFILLED SBLC DESIGN BASIS REACTOR COOLANT SYSTEM BORON CONCENTRATION IN THE SPECIFIED TIME. AS THE REACTOR PROTECTION SYSTEM (RPS) WAS FULLY OPERABLE THROUGHOUT AND FOLLOWING THE EVENT, MANUAL INITIATION OF SBLC WOULD NOT HAVE BEEN REQUIRED. THE SAFE OPERATION OF THE PLANT WAS NOT COMPROMISED.

[6] BROWNS FERRY 1 DOCKET 50-259 LER 84-022 REV 2
UPDATE ON DESIGN OVERSIGHT ON LOAD SHED LOGIC AND SINGLE FAILURE CRITERIA.
EVENT DATE: 051284 REPORT DATE: 080884 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: BROWNS FERRY 2 (BWR)
BROWNS FERRY 3 (BWR)

(NSIC 191198) AN IE BULLETIN 79-01B INVESTIGATION DETERMINED THAT A SINGLE FAILURE OR A LOSS OF COOLANT ACCIDENT AND A LOSS OF OFFSITE POWER, COULD CAUSE EQUIPMENT NECESSARY FOR ELECTRICAL BOARD ROOM COOLING TO BE LOST. THE CAUSE OF THIS CONDITION IS A DESIGN OVERSIGHT. SINGLE FAILURE OF A DISTRIBUTION BOARD COULD CAUSE THE LOSS OF REDUNDANT COOLING EQUIPMENT IN SOME ELECTRICAL BOARD ROOMS. DURING A LOSS OF COOLANT ACCIDENT IN CONJUNCTION WITH LOSS OF OFFSITE POWER, NORMAL VENTILATION FOR ELECTRICAL BOARD ROOMS IS LOAD SHED WITH NO PROVISIONS FOR MANUAL RESTART. AS INTERIM CORRECTIVE MEASURES, OPERATING INSTRUCTIONS HAVE BEEN REVISED TO ALLOW FOR RESTARTING THE NECESSARY EQUIPMENT WITHIN 1 HR BY USING ELECTRICAL JUMPERS AND/OR MECHANICALLY PROVIDING AN EXHAUST AIR DUCT OPENING. LONG-TERM CORRECTIVE ACTION IS UNDER EVALUATION AND PROPOSED CHANGES WILL BE ADDRESSED IN A FOLLOW-UP REPORT BY JANUARY 1, 1985.

[7] BROWNS FERRY 3 DOCKET 50-296 LER 84-006 REV 2
UPDATE ON JET PUMP INSTRUMENT NOZZLE CRACKING.
EVENT DATE: 051784 REPORT DATE: 081784 NSSS: GE TYPE: BWR
VENDOR: ISHIKAWAJIMA HARIMA INC. (IHI-JAPAN)

(NSIC 191209) BASED ON INFO RECEIVED FROM A NRC PUBLICATION "INSIDE NRC" THE TVA INSPECTED 10 ADDITIONAL WELDS ON THE JET PUMP INSTRUMENT NOZZLES FOR UNIT 3. OF THESE, 2 WELDS WERE DETERMINED TO NEED REPAIR. THESE WELDS WILL BE REPAIRED BY THE WELD OVERLAY PROCEDURE TO BE COMPLETED PRIOR TO UNIT STARTUP. THESE TWO 4" REDUCER "SAFE-END" WELDS HAD AXIAL INDICATIONS UP TO 82% THROUGH WALL IN THE BASE METAL. ONE OF THE "SAFE ENDS" HAS 2 INDICATIONS VISIBLE FROM THE OUTSIDE. THESE 2 WELDS ARE SUSPECTED TO BE A PRODUCT OF INTERGRANULAR STRESS CORROSION CRACKING DUE TO THE "SAFE ENDS" BEING MODERATELY SENSITIZED. INSPECTIONS WERE PERFORMED ON UNIT 1 AND NO INDICATIONS WERE FOUND. UNIT 2 WILL BE EXAMINED TO THE SAME EXTENT AS UNITS 1 AND 3. THIS EVENT IS DEEMED PART 21 REPORTABLE. THE JET PUMP INSTRUMENT NOZZLES WERE FURNISHED BY ISHIKAWAJIMA-HARIMA HEAVY INDUSTRY CO., LTD. TVA HAS AN INSPECTION PLAN WHICH IS CARRIED OUT DURING REFUELING OUTAGES FOR IDENTIFYING DEFECTIVE WELDS. THESE ADDITIONAL WELDS WILL BE EXAMINED IN UPCOMING REFUELING OUTAGES. PREVIOUS SIMILAR EVENTS ARE BFRO-50-259/83-23; 260/82-40; AND 296/79-19.

[8] BRUNSWICK 1 DOCKET 50-325 LER 83-001 REV 1
UPDATE ON THROUGH-WALL PIN HOLE CRACK IN WELDS ON RECIRC PIPING.
EVENT DATE: 012683 REPORT DATE: 082184 NSSS: GE TYPE: BWR
VENDOR: ASSOCIATED PIPING & ENGINEERING CORP.

(NSIC 191185) DURING UNIT REFUELING OPERATIONS, WHILE PERFORMING TESTING REQUIRED BY IE BULLETIN 82-03, VISUAL EXAMINATIONS DONE RESPECTIVELY ON JAN 26 AND 27, 1983, REVEALED SINGLE THROUGH-WALL PINHOLE CRACKS IN THE HEAT AFFECTED ZONES ON THE PIPE SIDES OF WELD B32-RECIRC-12-BR-H-4, LOCATED DOWNSTREAM OF THE B LOOP DISCHARGE VALVE F031B AND WELD B32-RECIRC-12-AR-E-2, LOCATED DOWNSTREAM OF THE A LOOP DISCHARGE VALVE F031A. TECH SPEC 6.9.1.8C. BOTH PINHOLE CRACKS ARE ATTRIBUTED TO IGSCC. THESE CRACKS WERE REPAIRED USING ACCEPTABLE WELD OVERLAY TECHNIQUES. ADDITIONAL INFORMATION ASSOCIATED WITH THIS EVENT AND A SIMILAR ONE REPORTED IN LER 1-83-4 IS ADDRESSED IN CAROLINA POWER AND LIGHT COMPANY'S RESPONSE TO IE BULLETIN 82-03.

[9] BRUNSWICK 1 DOCKET 50-325 LER 84-014
REACTOR SCRAM RESULTING FROM FALSE RECIRCULATION LOOP FLOW SIGNALS.
EVENT DATE: 080184 REPORT DATE: 083184 NSSS: GE TYPE: BWR
VENDOR: ASEO VALVE

(NSIC 191214) ON 8-1-84, AT 1417, A UNIT 1 AUTOMATIC REACTOR SCRAM OCCURRED DUE TO A REACTOR AVERAGE POWER RANGE MONITOR UPSCALE TRIP INITIATION OF THE REACTOR PROTECTION SYSTEM. THE UPSCALE TRIP RESULTED FROM ERRONEOUS SIGNALS OF DECREASING FLOW SPIKES, OCCURRING SIMULTANEOUSLY IN BOTH REACTOR RECIRCULATION SYSTEM LOOPS. AT THE TIME UNIT 1 WAS AT 94.6% POWER WITH A PLANNED INCREASE TO RATED POWER. IN ADDITION, THE UNIT HIGH PRESSURE COOLANT INJECTION SYSTEM WAS OUT OF SERVICE PENDING PERIODIC TESTING. DURING THE SCRAM RECOVERY, REACTOR LEVEL, WITH THE LOWEST RECORDED VALUE OF 142.8", WAS CONTROLLED BY THE REACTOR CORE ISOLATION COOLING SYSTEM. A GROUP 1 ISOLATION OCCURRED. REACTOR PRESSURE, WHICH PEAKED AT 997 PSIG, WAS CONTROLLED BY MANUAL OPENING OF REACTOR SAFETY-RELIEF VALVES 1-B21-F013A, E, J, AND B. FOLLOWING THE GROUP 1 ISOLATION, MAIN STEAM LINE ISOLATION VALVE 1-B21-F022A DID NOT CLOSE AUTOMATICALLY OR MANUALLY. THE SUBJECT ERRONEOUS FLOW SPIKE SIGNALS WERE INDUCED INTO THE UNIT RECIRCULATION LOOP FLOW INSTRUMENTS DUE TO ELECTRONIC KEYING OF 2-WAY RADIOS IN USE DURING PERIODIC TESTING IN THE VICINITY OF THE LOOP FLOW INSTRUMENTATION RACKS IN THE UNIT REACTOR BLDG. BY 9-14-84, VARIOUS TYPES OF PLANT COMMUNICATION RADIOS WILL BE ELECTRONICALLY KEYED IN THE VICINITY OF UNIT 2 INSTRUMENT RACKS TO

DETERMINE IF CONTROL ROOM INSTRUMENTATION IS ADVERSELY AFFECTED. UNIT 2 IS CURRENTLY SHUT DOWN FOR A PLANNED MAINTENANCE OUTAGE.

[10] CALLAWAY 1 DOCKET 50-483 LER 84-027
INADVERTENT LOSS OF POWER TO RADIATION MONITORS.
EVENT DATE: 081384 REPORT DATE: 091184 NSSS: WE TYPE: PWR

(NSIC 191433) THIS REPORT INVOLVES TWO INCIDENTS OF PERSONNEL INADVERTENTLY REMOVING POWER FROM RADIATION MONITORS RESULTING IN ENGINEERED SAFETY FEATURE (ESF) ACTUATIONS. THE FIRST INCIDENT OCCURRED ON 8/13/84 AT APPROXIMATELY 1640 CDT. INSTRUMENTATION AND CONTROL (I&C) TECHNICIANS WERE IN THE PROCESS OF PERFORMING A FUNCTIONAL CHECK ON RADIATION MONITOR GT-RT-31. THIS REQUIRES THAT GT-RT-31 BE BYPASSED AT THE ESF CABINETS PRIOR TO REMOVING POWER FROM THE RADIATION MONITOR SKID. LOCATED PAPALLEL TO GT-RT-31 IS RADIATION MONITOR GT-RT-33. THE I&C TECHNICIANS HAD PLACED THE CHANNEL FOR GT-RT-31 IN BYPASS AS REQUIRED, HOWEVER, THEY INADVERTENTLY REMOVED POWER FROM GT-RT-33 INSTEAD. THIS RESULTED IN A CONTROL ROOM VENTILATION ISOLATION SIGNAL (CRVIS) AND A CONTAINMENT PURGE ISOLATION SIGNAL (CPIS). THE SECOND INCIDENT OCCURRED ON 8/17/84 AT APPROXIMATELY 1525 CDT. MAINTENANCE SUPPORT PERSONNEL WERE UPGRADING WIRING IN THE 480 VAC NG01B BUS. WHILE THE PERSONNEL WERE REINSTALLING THE PANEL COVER TO NG01B THEY INADVERTENTLY HIT AND OPENED THE BREAKER PROVIDING POWER TO RADIATION MONITOR GG-RT-27. THIS LOSS OF POWER TO GG-RT-27 RESULTED IN A FUEL BUILDING ISOLATION SIGNAL (FBIS) AND A CRVIS. NO RADIATION ABOVE NORMAL BACKGROUND WAS PRESENT.

[11] CALLAWAY 1 DOCKET 50-483 LER 84-028
INADVERTENT SAFETY INJECTION ON PRESSURIZER LOW PRESSURE SIGNAL.
EVENT DATE: 081384 REPORT DATE: 091184 NSSS: WE TYPE: PWR

(NSIC 191434) DURING PERFORMANCE OF A TECH SPEC CHANNEL CALIBRATION, AN INADVERTNET SAFETY INJECTION OCCURRED. AN UNUSUAL EVENT WAS DECLARED DUE TO UNPLANNED INITIATION OF EMERGENCY CORE COOLING SYSTEMS (ECCS) WITH DISCHARGE TO THE CORE. THE ECCS ACTUATED AS DESIGNED, AND THE PLANT WAS RESTORED TO A NORMAL CONFIGURATION IN ACCORDANCE WITH OPERATING PROCEDURES. THIS EVENT WAS INITIATED WHEN AN INSTRUMENT AND CONTROLS TECHNICIAN PLACED A REACTOR COOLANT SYSTEM (RCS) PRESSURE CHANNEL IN TEST DURING PERFORMANCE OF THE SURVEILLANCE PROCEDURE. HOWEVER, ONE OF THE REDUNDANT PRESSURE LOOPS WAS FAILED IN THE TRIPPED CONDITION DUE TO INCORRECT DESIGN STRAPPING OF THE ASSOCIATED BISTABLE. THIS TRIP WENT UNDETECTED AS THE ASSOCIATED LAMP ON THE PARTIAL TRIP STATUS PANEL HAD FAILED AND THE INITIAL SURVEILLANCE TEST FOR THIS LOOP HAD NOT YET BEEN PERFORMED AT THE TIME OF THIS EVENT. THUS, WHEN THE LOOP BEING CALIBRATED WAS PLACED IN TEST, COINCIDENCE LOGIC WAS COMPLETED AND A PRESSURIZER LOW PRESSURE SIGNAL ACTUATED THE SAFETY INJECTION. THE FAILED LAMP HAS BEEN REPLACED AND A DESIGN CHANGE IMPLEMENTED TO CORRECT THE FALSE BISTABLE OUTPUT. A STEP IS BEING ADDED TO APPLICABLE I&C SURVEILLANCE PROCEDURES TO REQUIRE A LAMP TEST ON THE PARTIAL TRIP STATUS PANEL PRIOR TO PUTTING THE INSTRUMENT CHANNEL INTO THE TEST MODE.

[12] CALLAWAY 1 DOCKET 50-483 LER 84-032
INADVERTENT ENGINEERED SAFETY FEATURES ACTUATION.
EVENT DATE: 082084 REPORT DATE: 091984 NSSS: WE TYPE: PWR

(NSIC 191435) AT 0246 CDT ON 8/20/84, THE FOLLOWING ENGINEERED SAFETY FEATURES (ESF) WERE ACTUATED WHILE THE PLANT WAS IN MODE 4: CONTROL ROOM VENTILATION ISOLATION ACTUATION, CONTAINMENT PURGE ISOLATION ACTUATION, AND FUEL BUILDING VENTILATION ISOLATION ACTUATION. UPON INVESTIGATION IT WAS DETERMINED THAT A 15V DC POWER SUPPLY IN AN ESFAS CABINET HAD FAILED. THIS POWER SUPPLY PROVIDES POWER TO ESFAS CABINET CHANNEL 1 LOGIC CIRCUITS AND ITS FAILURE RESULTED IN A FAIL SAFE ACTUATION OF THE ENGINEERED SAFETY FEATURES MENTIONED ABOVE. THE DEFECTIVE POWER

SUPPLY WAS REPLACED AND THE ESFAS TRAIN WAS RETURNED TO NORMAL AT 1020. THE CAUSE OF THE POWER SUPPLY FAILURE IS UNKNOWN. NO PREVIOUS FAILURES OF THIS POWER SUPPLY HAVE BEEN RECORDED; THEREFORE THIS INCIDENT IS CONSIDERED AN ISOLATED CASE. THERE WAS NO DAMAGE TO PLANT EQUIPMENT OR RELEASE OF RADIOACTIVITY AS A RESULT OF THIS INCIDENT.

[13] CALVERT CLIFFS 1 DOCKET 50-317 LER 83-068
SILVER CONCENTRATION IN OYSTERS EXCEEDS LIMIT.
EVENT DATE: 103183 REPORT DATE: 121983 NSSS: CE TYPE: PWR

(NSIC 191545) BIOACCUMULATION. OYSTER SAMPLES COLLECTED DURING OCT 1983 FROM THE CAMP CANOY LOCATION AND ANALYZED FOR ETS TABLE 3.2-1, SHOWED AG-110M TO BE 170 PLUS OR MINUS 8PCI/KG (WET). BACKGROUND SAMPLES DURING THIS PERIOD SHOWED AG-110M TO BE LESS THAN OR EQUAL TO 9.0 PCI/KG (WET) (TECH SPEC 5.6.2.B). THESE CONCENTRATIONS CALCULATE TO SMALL FRACTIONS OF THE DOSES ALLOWED BY 40 CFR PART 190, AND ARE CONSIDERED OF NO RISK. SIMILAR EVENT: 50-317-83-82/4T. THE HIGHER THAN BACKGROUND ACTIVITY WAS CAUSED BY THE NATURAL TENDENCY OF OYSTERS TO BIOCONCENTRATE ENVIRONMENTAL SILVER. ALL RELEASES IN 1982 AND 1983 HAVE BEEN WITHIN THE ALLOWABLE LIMITS IN THE ENV TECH SPEC.

[14] CALVERT CLIFFS 1 DOCKET 50-317 LER 84-007
INADVERTENT INITIATION OF ENGINEERED SAFETY FEATURES ACTUATION SYSTEM.
EVENT DATE: 072484 REPORT DATE: 082384 NSSS: CE TYPE: PWR

(NSIC 191211) DURING MONTHLY SURVEILLANCE TESTING OF THE ENGINEERED SAFETY FEATURES ACTUATION SYSTEM, POWER WAS LOST ON A 4160 V EMERGENCY BUS WHEN THE OPERATOR PERFORMING THE TEST INADVERTENTLY DEPRESSED THE TEST BUTTON ON UNDERVOLTAGE LOGIC MODULE UV B-1 WHEN THE TEST PROCEDURE CALLED FOR DEPRESSING THE TEST BUTTON ON UNDERVOLTAGE LOGIC MODULE UV B-4. ACTUATION OF UNDERVOLTAGE LOGIC MODULE UV B-1 CAUSED THE NORMAL FEEDER BREAKER TO THE 4160 V EMERGENCY BUS TO TRIP OPEN AND LEFT THE BUS DEENERGIZED. THE ERROR WAS QUICKLY RECOGNIZED AND THE 4160 V EMERGENCY BUS WAS REENERGIZED WITHIN TWO MINS. TO PREVENT RECURRENCE OF THIS INCIDENT THE LABELING OF THE UNDERVOLTAGE LOGIC MODULES WILL BE IMPROVED AND ALL LICENSED OPERATORS WILL BE APPRISED OF THE EVENT.

[15] CALVERT CLIFFS 2 DOCKET 50-318 LER 83-065 REV 1
UPDATE ON REED POSITION TRANSMITTERS FAIL.
EVENT DATE: 120283 REPORT DATE: 081384 NSSS: CE TYPE: PWR
VENDOR: ELECTRO-MECHANICS

(NSIC 191184) DURING NORMAL OPERATIONS ON 12/02/83 AND 12/10/83, ERRATIC METRASCOPE INDICATION FOR CEAS 57 AND 4 AND METRASCOPE ASSOCIATED ALARMS IDENTIFIED FAILED REED SWITCH POSITION TRANSMITTER (RSPT) STACKS. THE AFFECTED STACKS WERE DECLARED INOPERABLE (TECH SPEC 3.1.3.3) AND BOTH CEAS WERE VERIFIED IN THE FULL OUT POSITION. THE PULSE COUNTING POSITION INDICATION AND THE UPPER ELECTRICAL LIMIT 'FULL OUT' INDICATION SYSTEMS FOR THE AFFECTED CEAS REMAINED OPERABLE. SIMILAR EVENTS: 50-317/83-36. THE CAUSE OF THIS EVENT WAS THE FAILURE OF REED STACK POSITION TRANSMITTERS (RSPT), (ELECTRO-MECHANICS, PART #N9027, REV. 1) FOR CEAS 57 AND 4. THE RSPTS WERE REPLACED. REPAIRS WERE MADE TO THE FAILED RSPTS BY THE VENDOR FOLLOWING THEIR ROOT CAUSE INSPECTION.

[16] CATAWBA 1 DOCKET 50-413 LER 84-005
FAILURE TO VERIFY CONTAINMENT INTEGRITY.
EVENT DATE: 071784 REPORT DATE: 083084 NSSS: WE TYPE: PWR

(NSIC 191428) ON 7-31-84, IT WAS DISCOVERED THAT CONTAINMENT INTEGRITY HAD NOT BEEN COMPLETELY VERIFIED FOLLOWING THE PERFORMANCE OF PERIODIC TEST

PT/1/A/4200/02F, REFUELING CONTAINMENT INTEGRITY VERIFICATION ON 7-17-84. THE TEST WAS BEING PERFORMED TO SATISFY THE SURVEILLANCE REQUIREMENT THAT CONTAINMENT INTEGRITY BE VERIFIED 72 HRS PRIOR TO ANY CORE ALTERATIONS. THE CLOSED POSITION OF VALVE 1VY-21 (CONTAINMENT HYDROGEN PURGE INLET BLOWER TEST VENT) WAS NOT VERIFIED DUE TO A PROCEDURE DISCREPANCY IN WHICH THE VALVE LOCATION WAS STATED AS BEING OUTSIDE CONTAINMENT RATHER THAN INSIDE. WHILE PERFORMING THE PERIODIC TEST, THE LOCATION DISCREPANCY WAS NOTED AND A PROCEDURE CHANGE WAS SUBMITTED CONCERNING THE LOCATION OF 1VY-21. THE PROCEDURE CHANGE WAS APPROVED AND IMPLEMENTED. THE ACTIVITIES ASSOCIATED WITH THIS INCIDENT DEALT DIRECTLY WITH THE INITIAL FUEL LOADING OF UNIT 1. FUEL LOADING (AND MODE 6) BEGAN ON 7-19-84 AT 0536 HRS. THIS INCIDENT IS CLASSIFIED AS AN ADMINISTRATIVE/PROCEDURAL ERROR. IT IS REPORTABLE PURSUANT TO 10 CFR 50.73, SECTION (2)(I)(B). THE INCIDENT VIOLATES TECH SPEC SECTION 3/4.9.4, IN WHICH CONTAINMENT INTEGRITY IS TO BE VERIFIED 72 HRS PRIOR TO THE START OF AND AT LEAST ONCE PER 7 DAYS DURING CORE ALTERATIONS.

[17] CATAWBA 1 DOCKET 50-413 LER 84-006
IMPROPER BORON SAMPLING AS REQUIRED BY THE OPERATING LICENSE.
EVENT DATE: 080684 REPORT DATE: 090584 NSSS: WE TYPE: PWR

(NSIC 191429) TO SATISFY LICENSE CONDITION 11 SPECIFIED IN THE CATAWBA FACILITY OPERATING LICENSE NPF-24, BORON CONCENTRATION OF THE REACTOR COOLANT (NC) SYSTEM IS REQUIRED TO BE MONITORED HOURLY WHILE IN MODES 3, 4, AND 5. ON AUG 6, 1984, BORON SAMPLES WERE TAKEN AND ANALYZED FROM THE NONOPERATIONAL TRAIN B OF THE RESIDUAL HEAT REMOVAL (ND) SYSTEM. SAMPLING FROM THE NONOPERATIONAL TRAIN OF ND DID NOT PROVIDE A REPRESENTATIVE SAMPLE OF BORON CONCENTRATION OF THE REACTOR COOLANT. THE PRIMARY SAMPLING SYSTEM WAS BEING USED TO OBTAIN SAMPLES FROM THE ND SYSTEM. THE CAUSE OF THE INCIDENT IS CLASSIFIED AS A PERSONNEL ERROR. THE TECHNICIAN PERFORMING THE SAMPLING DID NOT INFORM OPERATIONS PRIOR TO CHANGING THE PRIMARY SAMPLING VALVE LINEUP, AS REQUIRED BY OPERATING PROCEDURES OP/O/A/6200/11, OPERATING PROCEDURE FOR THE PRIMARY SAMPLING SYSTEM. UNIT 1 WAS IN MODE 5 FOLLOWING INITIAL FUEL LOAD AT THE TIME OF THE INCIDENT. IMMEDIATE CORRECTIVE ACTION WAS REALIGNMENT OF THE SAMPLING VALVES BY THE TECHNICIAN IN ORDER TO OBTAIN A SAMPLE OF ND TRAIN A. THIS REPORT IS BEING FILED PURSUANT TO PARAGRAPH 2.F OF FACILITY OPERATING LICENSE NPF-24.

[18] DRESDEN 2 DOCKET 50-237 LER 84-016
FLOOR DRAIN SURGE TANK OVERFLOWS TO GROUND.
EVENT DATE: 080384 REPORT DATE: 083084 NSSS: GE TYPE: BWR

(NSIC 191194) WITH A HIGH WATER INVENTORY, THE RADWASTE OPERATOR WAS FORCED TO MOVE WATER TO THE FLOOR DRAIN SURGE TANK, WHICH WAS ALREADY NEAR CAPACITY. THIS TRANSFER RESULTED IN A SPILL OF 2420 GALLONS OF CONTAMINATED WATER FROM THE FLOOR DRAIN SURGE TANK ROOM SUMP TO GROUND. SURVEYS SHOWED NO OFFSITE RELEASE OF CONTAMINATION, AND A MAXIMUM COBALT 60 CONCENTRATION OF 3.6 X 10(3) UCI/ML IN THE STORM SEWER. SAFETY SIGNIFICANCE IS CONSIDERED MINIMAL BECAUSE NO CONTAMINATION WAS RELEASED OFFSITE. THE LAST OCCURRENCE OF THIS TYPE WAS REPORTED BY R.O. 77-12 ON DOCKET 50-237. WHEN THE OPERATOR WAS NOTIFIED OF THE SPILL, FURTHER WATER TRANSFERS WERE PREVENTED BY STOPPING THE WASTE NEUTRALIZER PUMPS, AND CLOSING THE 'B' WASTE NEUTRALIZER AND FLOOR DRAIN SURGE TANK DISCHARGE VALVES. A NUMBER OF CORRECTIVE ACTIONS HAVE BEEN TAKEN OR ARE PLANNED, THE PRIMARY OF THESE BEING TO PREVENT OPERATORS FROM FILLING THE FLOOR DRAIN SURGE TANK ABOVE 90% (INITIALLY PER A CAUTION CARD TO BE FOLLOWED BY A PROCEDURE CHANGE) AND THE INITIATION OF WORK REQUESTS TO REPAIR THE FLOOR DRAIN SURGE TANK AND SUMP LEVEL INSTRUMENTATION. THE 90% LEVEL LIMIT WAS MADE AS AN INITIAL CONSERVATIVE ACTION AND WILL REMAIN IN EFFECT UNTIL PROBLEMS WITH THE TANK'S RECIRCULATION LINE HAVE BEEN CORRECTED.

[19] FARLEY 1 DOCKET 50-348 LER 84-019
UNSEALED INTERIOR OF A CONDUIT IN A FIRE BARRIER PENETRATION.
EVENT DATE: 021784 REPORT DATE: 091484 NSSS: WE TYPE: PWR
OTHER UNITS INVOLVED: FARLEY 2 (PWR)

(NSIC 191385) AT 0555 ON 8-15-84, DURING A ROUTINE CONTROL ROOM INSPECTION, A THREE INCH CONDUIT CONTAINING SEVEN CABLES IN A FIRE BARRIER PENETRATION WAS FOUND NOT TO BE SEALED INTERNALLY. THE PENETRATION WAS DECLARED INOPERABLE AND A FIRE WATCH WAS ESTABLISHED. THE CONDUIT WAS INTERNALLY SEALED ON AUGUST 15, 1984. SINCE THE CONTROL ROOM HAD BEEN MANNED CONTINUOUSLY, FIRE WATCH SURVEILLANCE HAD BEEN MAINTAINED DURING THE TIME THAT THE PENETRATION WAS NONFUNCTIONAL. THE FIRE BARRIER PENETRATION HAD BEEN BREACHED FOR INSTALLATION OF A CONDUIT AS PART OF A DESIGN MODIFICATION ON 2-14-84. NEW CABLES WERE PULLED ON 2-16-84 AND THE CONDUIT WAS SEALED EXTERNALLY ON 2-17-84. THE CONDUIT WAS NOT SEALED INTERNALLY DUE TO PROCEDRUAL INADEQUACY IN THAT THE DESIGN SPECIFICATIONS WERE NOT FOLLOWED AND THE PROCEDURE FOR INSPECTION OF NEW OR REPAIRED FIRE BARRIER PENETRATIONS DID NOT PROVIDE GUIDANCE FOR THE INTERNAL INSPECTION OF CONDUITS FOR PROPER SEALING. TO PREVENT RECURRENCE, THE PROCEDURES WILL BE CHANGED TO PROVIDE SPECIFIC GUIDANCE FOR INSTALLATION AND VERIFICATION OF INTERNAL SEALING OF CONDUITS IN NEW OR REWORKED FIRE BARRIER PENETRATIONS.

[20] FARLEY 2 DOCKET 50-364 LER 84-009
STEAM GENERATOR TUBES PLUGGED.
EVENT DATE: 090884 REPORT DATE: 092484 NSSS: WE TYPE: PWR

(NSIC 191394) IN ACCORDANCE WITH TECH SPEC 4.4.6.5.A, THE FOLLOWING TUBE PLUGGING REPORT IS SUBMITTED. DURING RE-ANALYSIS OF THE UNIT 2 CYCLE II-III REFUELING OUTAGE INSERVICE EDDY CURRENT TEST DATA, TWO TUBES WERE IDENTIFIED IN THE 2B STEAM GENERATOR WITH TUBE WALL DEGRADATION EXCEEDING THE PLUGGABLE LIMIT. THE UNIT WAS SHUT DOWN ON 8-31-84 AND THESE TWO TUBES WERE PLUGGED. ADDITIONALLY, ONE TUBE IN THE 2A STEAM GENERATOR WHICH WAS IDENTIFIED BY LEAK TESTING WAS PLUGGED. TUBE PLUGGING WAS COMPLETED 9-8-84.

[21] FITZPATRICK DOCKET 50-333 LER 83-059
COBALT CONCENTRATION IN PERIPHYTON EXCEEDS LIMIT.
EVENT DATE: 112983 REPORT DATE: 120983 NSSS: GE TYPE: BWR

(NSIC 191539) RELEASES AT NINE MILE POINT. THE DETECTED LEVEL OF CO-60 IN THE NMPP (ONSITE) AND FITZPATRICK (ONSITE) PERIPHYTON SAMPLES WAS GREATER THAN 10 TIMES THE CONTROL LOCATION (OFFSITE) RESULTS FOR THE SAME SAMPLE PERIOD. THE CONTROL STATION 10 TIMES VALUE IS BASED ON 10 TIMES AN LLD VALUE (4.66 SIGMA). THE DETECTED LEVEL OF CO-60 IS RELATED TO LIQUID EFFLUENTS DISCHARGED FROM THE NINE MILE POINT SITE. THE TOTAL RELEASE OF CO-60, VIA LIQUID EFFLUENT FROM THE JAMES A. FITZPATRICK NUCLEAR POWER PLANT FOR THE PERIOD OF JAN 1, 1983 THROUGH AUGUST 24, 1983 WAS 0.271 CURIES. THIS REPRESENTS 2.71% OF THE TECH SPECS QUARTERLY LIMIT. A POSSIBLE EXPLANATION FOR THE DETECTION OF THE 10 TIMES CONCENTRATION FOR CO-60 IN THE PERIPHYTON SAMPLES COLLECTED IS THE HIGH BIOACCUMULATION FACTOR (CONCENTRATION FACTOR) FOR THIS ELEMENT IN COMPARISON TO OTHER ELEMENTS. DUE TO THE FACT THAT STABLE COBALT IS AN ESSENTIAL TRACE ELEMENT IMPORTANT TO FRESH WATER ALGAE, A BIOACCUMULATION FACTOR OF UP TO 30,000 CAN EXIST (MEAN VALUE = 6,760).

[22] FITZPATRICK DOCKET 50-333 LER 83-066
MANGANESE CONCENTRATION IN MOLLUSKS EXCEEDS LIMIT.
EVENT DATE: 122883 REPORT DATE: 010684 NSSS: GE TYPE: BWR

(NSIC 191526) BIOACCUMULATION. THE DETECTED LEVEL OF MN-54 IN THE FITZPATRICK (ONSITE) AND NMPP (ONSITE) MOLLUSK SAMPLE WAS GREATER THAN 10 TIMES THE CONTROL

LOCATION (OFFSITE) RESULTS FOR THE SAME SAMPLE PERIOD. THE CONTROL STATION 10 TIMES VALUE IS BASED ON 10 TIMES AN OLD VALUE (4.66 SIGMA). THE RELEASE OF LIQUID EFFLUENT DURING THIS PERIOD WAS WELL WITHIN THE OBJECTIVES OUTLINED IN THE JAMES A. FITZPATRICK NUCLEAR POWER PLANT ETS APPENDIX B SECTION 2.3.A. A POSSIBLE EXPLANATION FOR THE DETECTION OF THE 10 TIMES CONCENTRATION OF MN-54 IN THE MOLLUSK SAMPLES COLLECTED IS THE VERY HIGH BIOACCUMULATION FACTOR (CONCENTRATION FACTOR) FOR THIS ELEMENT. DUE TO THE FACT THAT STABLE MANGANESE IS AN ESSENTIAL TRACE ELEMENT IMPORTANT TO FRESH WATER MOLLUSK, A BIOACCUMULATION FACTOR OF UP TO 1,600,000 CAN EXIST (MEAN VALUE = 300,000). THE BIOACCUMULATION FACTOR WILL VARY WITH THE CONCENTRATION OF MANGANESE IN THE LAKE. BECAUSE OF THIS HIGH CONCENTRATION FACTOR, TRACE QUANTITIES OF MN-54 WILL BE ACCUMULATED IN THE MOLLUSK WHICH ARE INDIGENOUS TO THE SITE.

[23] FT. CALHOUN 1 DOCKET 50-285 LER 84-016
HIGH ALARM SETPOINT EXCEEDED ON STACK RADIATION MONITOR.
EVENT DATE: 080384 REPORT DATE: 090284 NSSS: CE TYPE: PWR

(NSIC 191207) ON JUL 5, 1984, DURING THE PERFORMANCE OF SURVEILLANCE TEST ST-RM-2, THE HIGH ALARM SETPOINT FOR RM-062, STACK NOBLE GAS MONITOR, WAS FOUND TO BE EXCEEDING THE TECH DATA BOOK HIGH ALARM SETPOINT OF 116,000 CPM PLUS OR MINUS 15%. THE AS FOUND SETPOINT WAS 150,200 CPM. RM-062 ALERT SETTING WAS WITHIN TOLERANCE. ALTHOUGH THE SETPOINT WAS VERIFIED TO BE AT 150,200 CPM ON JUL 5, 1984, PER ST-RM-2, SECTION F.2, THE DEVIATION WAS NOT DISCOVERED UNTIL REVIEW OF THIS SURVEILLANCE TEST. THIS REVIEW OCCURRED AUG 3, 1984. SUBSEQUENTLY, THE MONITOR WAS IMMEDIATELY RECALIBRATED TO THE SETPOINT REQUIREMENTS IN THE TECH DATA BOOK WHICH SATISFY THE REQUIREMENTS OF THE TECH SPECS. THIS EVENT WAS DISCOVERED WHILE RETURNING THE PLANT TO OPERATING STATUS AFTER A REFUELING SHUTDOWN.

[24] FT. ST. VRAIN DOCKET 50-267 LER 79-028 REV 1
UPDATE ON LOSS OF INSTRUMENT PANEL.
EVENT DATE: 081779 REPORT DATE: 051684 NSSS: GA TYPE: HTGR

(NSIC 191541) MAINTENANCE PERSONNEL ERROR. PLANT PERSONNEL INADVERTENTLY GROUNDED INSTRUMENT PANEL I-36, BLOWING THE PANELS FUSES AND CAUSING A VOLTAGE PERTURBATION ON INSTRUMENT BUS 2. THIS RESULTED IN A LOOP I SHUTDOWN, REACTOR SCRAM, AND LOSS OF FORCED CIRCULATION FOR 3 MINS. THIS EVENT WAS REPORTABLE PER TECH SPEC AC 7.5.2(A)5. SIMILAR REPORTS ARE RO'S: 76-01, 77-14, AND 79-17. THE GROUND WAS CAUSED BY PERSONAL ERROR OF A NON-LICENSED MAINTENANCE PERSONNEL. THE GROUND WAS CORRECTED, POWER WAS RESTORED TO THE INSTRUMENT PANEL AND ACTION WAS TAKEN TO RETURN THE PLANT TO NORMAL CONDITIONS. THE EFECTS OF THE UPSET WERE ANALYZED AND WERE DETERMINED TO HAVE NO ADVERSE IMPACT ON REACTOR INTERNAL COMPONENTS.

[25] FT. ST. VRAIN DOCKET 50-267 LER 80-030 REV 2
UPDATE ON STEAM GENERATOR PENETRATION LEAKAGE.
EVENT DATE: 060480 REPORT DATE: 070480 NSSS: GA TYPE: HTGR

(NSIC 191544) LEAK BETWEEN INTERSPACE AND PIPING. WHILE PERFORMING SR 5.2.16A-M, LOOP 2 STEAM GENERATOR PENETRATION LEAKAGE APPEARED TO BE GREATER THAN 400 POUNDS PER DAY. FURTHER TESTING REVEALED THE LEAKAGE WAS INTERNAL TO THE STEAM GENERATOR AND NOT THROUGH THE SEALS. LEAKAGE WAS GREATER THAN 700 POUNDS PER DAY ON SEVERAL OCCASIONS DURING FEB AND MAR 1981, AND RESULTED IN A PLANT SHUTDOWN ON MAR 22, 1981 FOR FURTHER INVESTIGATION. THESE EVENTS WERE REPORTED AS OPERATION IN A DEGRADED MODE OF LCO 4.2.9 PER TECH SPEC AC 7.5.2(B)2. THE PURIFIED HELIUM LEAKAGE IS INTERNAL TO THE PENETRATION INTERSPACE AND IS OCCURRING BETWEEN THE INTERSPACE AND THE ASSOCIATED COLD REHEAT STEAM PIPING. PUBLIC SERVICE COMPANY CHANGE NOTICE (CN) 1436 MODIFIED THE SG INTERSPACE TO OPERATE AT A PRESSURE

SLIGHTLY GREATER THAN COLD REHEAT STEAM PRESSURE. REVS TO LCO 4.3.7 AND 4.2.9 WERE APPOVED TO ALLOW OPERATION IN THIS MANNER AND SET LIMITS ON POSSIBLE RELEASES OF PRIMARY COOLANT ACTIVITY.

[26] FT. ST. VRAIN DOCKET 50-267 LER 80-058 REV 1
UPDATE ON LOSS OF FEEDWATER TO HELIUM CIRCULATORS.
EVENT DATE: 100980 REPORT DATE: 100384 NSSS: GA TYPE: HTGR

(NSIC 191543) EROSION OF FEEDWATER LINE. EMERGENCY FEEDWATER SUPPLY TO LOOP I HELIUM CIRCULATOR WATER TURBINE DRIVES WAS ISOLATED TO REPAIR A LINE LEAK DOWNSTREAM OF PV-21243-1. THIS EVENT WAS REPORTED AS OPERATION IN A DEGRADED MODE OF LCO 4.2.2(A) AND REPORTED PER TECH SPEC AC 7.5.2(B)2. SIMILAR REPORTS: RO 80-015, 80-023, 80-032. THE LINE LEAKAGE WAS DUE TO EROSION CAUSED BY HIGH PRESSURE/TEMPERATURE WATER FLOW. THE LOOP I EMERGENCY FEEDWATER SUPPLY HEADER WAS ISOLATED, THE DEFECTIVE PORTION OF PIPING REPLACED, AND THE SYSTEM RETURNED TO SERVICE. PUBLIC SERVICE COMPANY CHANGE NOTICES CHANGED VALVE BODIES AND DOWNSTREAM PIPING TO STAINLESS STEEL AND ADDED FLANGES TO FACILITATE ANY FUTURE REPAIR WORK.

[27] FT. ST. VRAIN DOCKET 50-267 LER 81-068 REV 2
UPDATE ON STEAM GENERATOR INTERSPACE LEAKAGE.
EVENT DATE: 102481 REPORT DATE: 032884 NSSS: GA TYPE: HTGR

(NSIC 191531) LEAKAGE INTERNAL TO INTERSPACE. DURING PLANT TEMPERATURE FLUCTUATION TESTING THE LOOP 2 SG INTERSPACE LEAKAGE EXCEEDED THE LIMITS OF LCO 4.2.9 AND THE VARIANCE AGREED TO BY PUBLIC SERVICE CO AND THE NRC ON JUN 5, 1980. THIS EVENT WAS REPORTED AS A DEGRADED MODE OF LCO 4.2.9 PER TECH SPEC AC 7.5.2(B)2. SIMILAR REPORTABLE OCCURRENCES: RO'S 80-030 AND 81-067. THE PURIFIED HELIUM LEAKAGE WAS INTERNAL TO THE PENETRATION INTERSPACE AND OCCURRED BETWEEN THE INTERSPACE AND ASSOCIATED COLD REHEAT STEAM PIPING. PUBLIC SERVICE CO CHANGE NOTICE 1436 INSTALLED MODIFICATIONS TO ALLOW OPERATION OF THE INTERSPACE AT A PRESSURE SLIGHTLY GREATER THAN COLD REHEAT STEAM. REVS TO LCO'S 4.2.7 AND 4.2.9 WERE REQUESTED AND APPROVED.

[28] FT. ST. VRAIN DOCKET 50-267 LER 82-040 REV 1
UPDATE ON PRIMARY COOLANT LEAK.
EVENT DATE: 120782 REPORT DATE: 053184 NSSS: GA TYPE: HTGR

(NSIC 191524) LEAK IN HELIUM PURIFICATION COOLER. WHILE PERFORMING A SPECIAL LEAK ISOLATION TEST, IT WAS DETERMINED THAT A PRIMARY COOLANT TO PURIFICATION COOLING WATER SYSTEM LEAK WAS PRESENT. THE LEAK WAS IDENTIFIED AS BEING IN THE B PURIFICATION TRAIN, HELIUM PURIFICATION COOLER. THE COOLER IS A SINGLE PASS, COIL TUBE HEAT EXCHANGER. THIS EVENT WAS REPORTED PER AC 7.5.2(B)4 OF THE TECH SPEC. THE FAILURE OF THE COOLER IS ATTRIBUTED TO CORROSION CAUSED BY THE NORMAL OPERATING ENVIRONMENT. FOR THE SHORT TERM, PUBLIC SERVICE COMPANY CHANGE NOTICE 1599 WAS INITIATED TO MODIFY THE COOLER PIPING TO MORE EFFICIENTLY VENT THE LEAKING GAS TO THE GAS WASTE SYSTEM. IN FEB 1984, THE COOLER WAS REPLACED WITH A QUALIFIED SPARE.

[29] FT. ST. VRAIN DOCKET 50-267 LER 83-007
REACTOR SHUTDOWN DUE TO LOSS OF INSTRUMENT BUS.
EVENT DATE: 021583 REPORT DATE: 031783 NSSS: GA TYPE: HTGR

(NSIC 191525) FUSE BLEW IN INVERTER. INSTRUMENT POWER INVERTER 1B BECAME INOPERABLE WHILE SUPPLYING THE POWER FOR UNINTERRUPTIBLE 120V AC INSTRUMENT BUS #2. THIS EVENT CONSTITUTES OPERATION IN A DEGRADED MODE OF LCO 4.6.1.F AND IS REPORTABLE PER TECH SPEC AC 7.5.2(B)2. ACCOMPANYING OCCURRENCE REPORTED IN RO

83-006. SIMILAR OCCURRENCES: RO'S 80-60, 78-26, 77-18. A BLOWN 150 AMP FUSE, INTERNAL TO INSTRUMENT POWER INVERTER 1B, RENDERED THE INVERTER (EXIDE INDUSTRY DIVISION, MODEL 120/14F1) INOPERABLE. REACTOR WAS MANUALLY SCRAMMED AS A CONSERVATIVE MEASURE. UNINTERRUPTIBLE 120V AC INSTRUMENT BUS #2 WAS REENERGIZED FROM ITS BACKUP SOURCE. INVERTER WAS TESTED, FUSE WAS REPLACED, AND INVERTER WAS RETURNED TO SERVICE.

[30] FT. ST. VRAIN DOCKET 50-267 LER 83-030 REV 1
UPDATE ON IMPEDANCE VARIATION IN PPS CABLES.
EVENT DATE: 080683 REPORT DATE: 101084 NSSS: GA TYPE: HTGR

(NSIC 191542) STEAM LEAK. DURING THE PERIOD AUG 6, 1983 TO AUG 8, 1983, INSTRUMENT CABLES CARRYING THE SPEED SIGNALS FROM THE HELIUM CIRCULATORS TO THE PLANT PROTECTIVE SYSTEM (PPS) EXPERIENCED SEVERAL INDIVIDUAL IMPEDANCE VARIATIONS. THE MINIMUM DEGREE OF REDUNDANCY ASSOCIATED WITH THE HIGH SPEED TRIP CANNOT BE MET WHEN A SPEED CABLE EXPERIENCES IMPEDANCE VARIATIONS. THESE EVENTS CONSTITUTED OPERATION IN DEGRADED MODES OF LCO 4.4.1 AND WERE REPORTABLE PER AC 7.5.2(B)2. A STEAM LEAK IN THE VICINITY OF JUNCTION BOXES CONTAINING THE AFFECTED CABLES CAUSED THE AMBIENT TEMPERATURE TO INCREASE SIGNIFICANTLY AND ERRATIC SPEED SIGNALS RESULTED. SPARE CABLES WERE PLACED IN SERVICE, AND ADDITIONAL VENTILATION WAS PROVIDED IN THE AREA OF THE JUNCTION BOXES. THE REHEAT STEAM LEAK WAS REPAIRED, AND FAULTY SECTIONS OF 7 SPEED CABLES WERE REPLACED.

[31] FT. ST. VRAIN DOCKET 50-267 LER 83-054
HELIUM CIRCULATORS LOSE FEEDWATER TWICE.
EVENT DATE: 121383 REPORT DATE: 011284 NSSS: GA TYPE: HTGR

(NSIC 191527) REPAIR OF LEAKY VALVES. ON 2 OCCASIONS IN DEC 1983, THE EMERGENCY FEEDWATER SUPPLY HEADER TO THE LOOP I HELIUM CIRCULATORS WAS UNAVAILABLE TO DRIVE THE CIRCULATORS' WATER TURBINES. THE REACTOR WAS OPERATING NEAR 70% POWER DURING EACH OF THE EVENTS. THESE EVENTS CONSTITUTE OPERATIONS IN A DEGRADED MODE OF LCO 4.2.2(A), AND ARE REPORTABLE PER TECH SPEC AC 7.5.2(B)2. SIMILAR REPORTS: 83-036, 83-023, AND 83-015. REPAIR OF THE TWO SAFETY RELIEF VALVES AND THE PRESSURE CONTROL VALVE REQUIRED THE REPLACEMENT OF VALVE INTERNAL PARTS TO ELIMINATE THE INTERNAL LEAKAGE. THESE REPAIRS NECESSITATED ISOLATION OF THE HELIUM CIRCULATOR WATER TURBINE DRIVES. IN BOTH EVENTS, THE EMERGENCY FEEDWATER HEADER WAS RETURNED TO SERVICE WITHIN THE TIME ALLOWED BY LCO 4.2.2.

[32] FT. ST. VRAIN DOCKET 50-267 LER 84-001
GASEOUS EFFLUENT MONITOR SET POINTS NOT ADJUSTED.
EVENT DATE: 010184 REPORT DATE: 013184 NSSS: GA TYPE: HTGR

(NSIC 191528) PROCEDURAL ERROR. DURING THE PERIOD JAN 1 - JAN 10, 1984, RADIOACTIVE GASEOUS EFFLUENT ACTIVITY MONITOR ALARM/TRIP SETPOINTS WERE NOT ADJUSTED IN ACCORDANCE WITH THE OFFSITE DOSE CALCULATION MANUAL (ODCM). THIS CONDITION WOULD NOT HAVE LED TO GASEOUS RADIOACTIVE EFFLUENT RELEASES EXCEEDING MAXIMUM PERMISSIBLE CONCENTRATIONS (MPC). HOWEVER, THE EVENT WAS CONTRARY TO THE REQUIREMENTS OF THE TECH SPEC ELCO 8.1.1.J, AND IS REPORTABLE PER 10 CFR 50.73(A)(2)(I). THE RADIOACTIVE GASEOUS EFFLUENT ACTIVITY MONITOR ALARM/TRIP SETPOINTS WERE PROPERLY ADJUSTED AND APPLICABLE PROCEDURE CHANGES WERE MADE TO PREVENT RECURRENCE.

[33] FT. ST. VRAIN DOCKET 50-267 LER 84-002
BEARING WATER PRESSURE DIFFERENTIAL SWITCH FAILS.
EVENT DATE: 012384 REPORT DATE: 022284 NSSS: GA TYPE: HTGR

(NSIC 191529) SWITCH FAILURE. ONE OF 3 BEARING WATER PRESSURE DIFFERENTIAL SWITCHES, WHICH INDICATE LOSS OF BEARING WATER, WAS FOUND INOPERABLE WHILE PERFORMING A ROUTINE SURVEILLANCE TEST. THIS IS A REPETITIVE EVENT AS REPORTED IN A PREVIOUS LER AND IS BEING REPORTED PER THE REQUIREMENTS OF 10 CFR 50.73(A)(2)(V). THE PROBLEMS EXPERIENCED WITH THE ITT BARTON PRESSURE DIFFERENTIAL SWITCHES IN THIS APPLICATION IS PRESENTLY BEING INVESTIGATED, AND THE RESULTS OF THIS INVESTIGATION WILL BE SUBMITTED IN A SUPPLEMENTAL REPORT. THE INOPERABLE PRESSURE DIFFERENTIAL SWITCH WAS REPLACED AND CALIBRATED TO THE INSTRUMENT OPERATING REQUIREMENTS.

[34] FT. ST. VRAIN DOCKET 50-267 LER 84-002 REV 1
UPDATE ON BEARING WATER SWITCH FAILURE.
EVENT DATE: 012384 REPORT DATE: 071384 NSSS: GA TYPE: HTGR

(NSIC 191518) SET POINT DRIFT. WITH THE REACTOR AND THE 1A HELIUM CIRCULATOR SHUTDOWN, ONE OF THREE BEARING WATER PRESSURE DIFFERENTIAL SWITCHES, WHICH INDICATE LOSS OF BEARING WATER, WAS FOUND INOPERABLE WHILE PERFORMING A ROUTINE SURVEILLANCE TEST. THIS IS A REPETITIVE EVENT AS REPORTED IN A PREVIOUS LER AND IS BEING REPORTED PER THE REQUIREMENTS OF 10 CFR 50.73(A)(2)(V). THE PROBLEMS EXPERIENCED WITH THE ITT BARTON PRESSURE DIFFERENTIAL SWITCHES IN THIS APPLICATION HAS BEEN INVESTIGATED, AND THE SWITCHES ARE NOW SCHEDULED TO BE REPLACED WITH ELECTRONIC TRANSMITTERS AND BISTABLE SWITCHES DURING THE FOURTH REFUELING OUTAGE. THE INOPERABLE PRESSURE DIFFERENTIAL SWITCH WAS REPLACED AND CALIBRATED TO THE INSTRUMENT OPERATING REQUIREMENTS. RELATED LERS: 79-011, 79-060, 81-005, 82-002, 82-025, 83-048.

[35] FT. ST. VRAIN DOCKET 50-267 LER 84-005
PCRV TENDON WIRES FAIL.
EVENT DATE: 032784 REPORT DATE: 042684 NSSS: GA TYPE: HTGR

(NSIC 191530) CORROSION. INSERVICE INSPECTION OF THE ANCHOR END ASSEMBLIES OF THE PRESTRESSED CONCRETE REACTOR VESSEL PRESTRESSING TENDONS REVEALED SOME INDIVIDUAL WIRE FAILURES IN SOME TENDONS DUE TO CORROSION ATTACK. ALTHOUGH NOT DEFINITIVE AT THIS TIME, IT IS BELIEVED THAT MOISTURE WITHIN THE ASSEMBLY, THE DRY SYSTEM USED, AND INADEQUATE CORROSION PROTECTION AT THE ANCHOR WASHER END CONTRIBUTED TO THE CORROSION ATTACK. INVESTIGATION INTO THE MECHANISM FOR MOISTURE INTRODUCTION IS CONTINUING, ALTHOUGH PROBABLE MECHANISMS HAVE BEEN HYPOTHESIZED. AN INCREASED NUMBER OF ANCHOR ASSEMBLIES WERE EXAMINED, AND ADDITIONAL ASSEMBLIES CONTINUE TO BE EXAMINED. IN ADDITION, AN INCREASED SURVEILLANCE FREQUENCY IS PLANNED. SINCE THE EXTENT OF CORROSION HAS BEEN EVALUATED AND DETERMINED NOT TO COMPROMISE PLANT SAFETY, THIS REPORT IS BEING SUBMITTED ON A VOLUNTARY BASIS IN THE INTERESTS OF OPERATIONAL INFORMATION.

[36] FT. ST. VRAIN DOCKET 50-267 LER 84-005 REV 1
UPDATE ON PCRV TENDON WIRE FAILURES.
EVENT DATE: 032784 REPORT DATE: 072784 NSSS: GA TYPE: HTGR

(NSIC 191516) CORROSION. INSERVICE INSPECTION OF THE ANCHOR END ASSEMBLIES OF THE PRESTRESSED CONCRETE REACTOR VESSEL (PCRV) PRESTRESSING TENDONS REVEALED SOME INDIVIDUAL WIRE FAILURES IN SOME TENDONS DUE TO CORROSION ATTACK. ALTHOUGH FINAL ANALYSIS IS PENDING, IT IS BELIEVED THAT MOISTURE WITHIN THE ASSEMBLY, THE TYPE OF LUBRICATION SYSTEM USED, AND INADEQUATE CORROSION PROTECTION AT THE ANCHOR WASHER END CONTRIBUTED TO THE CORROSION ATTACK. DISCOVERY OF THE UNEXPECTED FAILURES HAS RESULTED IN AN EXPANDED EXAMINATION, TESTING, AND ANALYSIS PROGRAM.

[37] FT. ST. VRAIN DOCKET 50-267 LER 84-006
REACTOR SHUTDOWN DUE TO HIGH MOISTURE LEVELS IN COOLANT.
EVENT DATE: 050484 REPORT DATE: 060184 NSSS: GA TYPE: HTGR

(NSIC 191519) MOISTURE CONTENT OF GRAPHITE. FOLLOWING REFUELING SHUTDOWN, OPERATORS BEGAN TO WITHDRAW CONTROL RODS TO ACHIEVE INITIAL CYCLE 4 CRITICALITY WHEN HIGH MOISTURE LEVELS IN THE PRIMARY COOLANT (HELIUM) WERE DETECTED BY THE PLANT PROTECTIVE SYSTEM (PPS) MOISTURE MONITORING SYSTEM. THIS INITIATED AUTOMATIC ACTUATION OF THE PPS LOOP I SHUTDOWN AND REACTOR SCRAM CIRCUITRY. THE AUTOMATIC ACTUATION OF THE PPS CIRCUITRY IS BEING REPORTED PER 10 CFR 50.73(A)(2)(IV). FOLLOWING THE AUTOMATIC ACTUATION OF THE PPS SCRAM CIRCUITRY, THE CONTROL ROOM OPERATOR INSERTED A MANUAL SCRAM BY PLACING THE REACTOR MODE SWITCH IN THE "OFF" POSITION AS REQUIRED BY PROCEDURE. THE CONTROL ROOM OPERATORS RECOVERED THE DUMPED STEAM GENERATOR LOOP AND RETURNED THE SYSTEM TO NORMAL TWO LOOP OPERATION. THE PRIMARY COOLANT PURIFICATION SYSTEM WAS UTILIZED TO REMOVE CORE MOISTURE TO ALLOW REACTOR STARTUP.

[38] FT. ST. VRAIN DOCKET 50-267 LER 84-006 REV 1
UPDATE ON SCRAM DUE TO HIGH COOLANT MOISTURE LEVEL.
EVENT DATE: 050484 REPORT DATE: 062684 NSSS: GA TYPE: HTGR

(NSIC 191521) MOISTURE IN CORE GRAPHITE. FOLLOWING REFUELING SHUTDOWN, OPERATORS BEGAN TO WITHDRAW CONTROL RODS TO ACHIEVE INITIAL CYCLE 4 CRITICALITY WHEN HIGH MOISTURE LEVELS IN THE PRIMARY COOLANT (HELIUM) WERE DETECTED BY THE PLANT PROTECTIVE SYSTEM (PPS) MOISTURE MONITORING SYSTEM. THIS INITIATED AUTOMATIC ACUTATION OF THE PPS LOOP I SHUTDOWN AND REACTOR SCRAM CIRCUITRY. THE AUTOMATIC ACTUATION OF THE PPS CIRCUITRY IS BEING REPORTED PER 10 CFR 50.73(A)(2)(IV). FOLLOWING THE AUTOMATIC ACTUATION OF THE PPS SCRAM CIRCUITRY, THE CONTROL ROOM OPERATOR INSERTED A MANUAL SCRAM BY PLACING THE REACTOR MODE SWITCH IN THE "OFF" POSITION AS REQUIRED BY PROCEDURE. THE PRIMARY COOLANT PURIFICATION SYSTEM WAS UTILIZED TO REMOVE CORE MOISTURE TO ALLOW REACTOR STARTUP.

[39] FT. ST. VRAIN DOCKET 50-267 LER 84-007
LOOP 1 SHUTDOWN DUE TO HIGH TRANSFORMER TEMPERATURE.
EVENT DATE: 052984 REPORT DATE: 062884 NSSS: GA TYPE: HTGR

(NSIC 191520) UNKNOWN. A LOOP I SHUTDOWN OCCURRED WHEN THE RAPID RISE RELAY (RRR-1) ON THE 4160/480 VOLT TRANSFORMER (N9274) ACTUATED. THIS ACTUATION RESULTED IN A TRIP OF THE 4160/480 VOLT TRANSFORMER, SUPPLYING THE 480V AC ESSENTIAL BUS 1A, AND A LOOP I SHUTDOWN, DUE TO THE TRIP OF BOTH HELIUM CIRCULATORS (C-2101, C-2102) AND THE ASSOCIATED AUXILIARIES IN THAT LOOP, WHEN A LOSS OF CIRCULATOR BEARING WATER WAS DETECTED BY THE HELIUM CIRCULATOR'S BEARING WATER PRESSURE DIFFERENTIAL INDICATING SWITCHES. NO APPARENT MALFUNCTION IN THE RAPID RISE RELAY WAS DETECTED WHEN INSPECTED BY PLANT ELECTRICAL PERSONNEL. THE TRANSFORMER WAS THOROUGHLY CHECKED AND SAMPLES OF THE TRANSFORMER OIL AND NITROGEN BLANKET WERE TAKEN AND TESTED. THE TRANSFORMER (N-9274) WAS PRE-WARMED AND RETURNED TO SERVICE. THE AUTOMATIC ACTUATION OF THE PLANT PROTECTIVE SYSTEM (PPS) CIRCUITRY FOR A LOOP SHUTDOWN IS BEING REPORTED PER 10 CFR 50.73(A)(2)(IV).

[40] FT. ST. VRAIN DOCKET 50-267 LER 84-008
SIX CONTROL ROD PAIRS FAIL TO INSERT.
EVENT DATE: 062384 REPORT DATE: 072384 NSSS: GA TYPE: HTGR

(NSIC 191515) UNKNOWN. THE PLANT PROTECTIVE SYSTEM (PPS) INITIATED AN AUTOMATIC SCRAM UPON SENSING HIGHER THAN NORMAL PRESSURE IN THE PRESTRESSED CONCRETE REACTOR VESSEL (PCRV). PRIOR TO THE HIGH PRESSURE TRIP, AN ORDERLY SHUTDOWN FROM 40% POWER WAS IN PROGRESS DUE TO HIGH PRIMARY COOLANT MOISTURE LEVELS FOLLOWING AN AUTOMATIC TRIP ACTION ON 'A' HELIUM CIRCULATOR. THE REACTOR WENT SUBCRITICAL

IMMEDIATELY FOLLOWING THE AUTOMATIC SCRAM ACTION, BUT IT WAS NOTED THAT 6 OF THE 37 CONTROL ROD PAIRS HAD FAILED TO AUTOMATICALLY INSERT. THE SIX ROD PAIRS WERE MANUALLY DRIVEN INTO THE CORE WITHIN 20 MINS FOLLOWING THE EVENT. THE REACTOR REMAINED SUBCRITICAL THROUGHOUT THE EVENT AND THE INDEPENDENTLY REDUNDANT RESERVE SHUTDOWN SYSTEM WAS AVAILABLE AS DESIGNED. THE CONDITIONS OF THIS EVENT ARE UNDER INVESTIGATION TO DETERMINE THE POTENTIAL IMPACT ON THE AUTOMATIC SAFE SHUTDOWN FUNCTION OF THE CONTROL ROD SYSTEM. THEREFORE, THIS EVENT IS ALSO BEING REPORTED UNDER SECTION 50.73(A)(2)(V) FOR ITS POTENTIAL IMPACT IN PREVENTING AN AUTOMATIC SAFE SHUTDOWN.

[41] FT. ST. VRAIN DOCKET 50-267 LER 84-009
BETA EMITTER CONCENTRATION IN RB SUMP EXCEEDS LIMIT.
EVENT DATE: 072684 REPORT DATE: 082484 NSSS: GA TYPE: HTGR

(NSIC 191522) MAINTENANCE ON HELIUM PURIFICATION SYSTEM. ON 7-20-84 THE DAILY SAMPLE FROM THE RBS INDICATED A HIGHER LEVEL OF TRITIUM THAN THE SAMPLE TAKEN ON THE PREVIOUS DAY. THE ACTIVITY WAS BELOW MPC. RELEASES FROM THE RBS WERE TERMINATED UNTIL THE TRITIUM LEVELS WERE REDUCED. THE SAMPLE TAKEN ON 7-21-84 INDICATED ALL RADIONUCLIDES WERE BELOW MPC, AND RELEASES RESUMED. ON 7-26-84, A SUBSEQUENT ANALYSES PERFORMED ON THE 7-20 RBS SAMPLE INDICATED CONCENTRATION OF UNKNOWN BETA EMITTERS WAS ABOVE MPC. FOR A PERIOD OF APPROX 37 HRS O[illegible] -1[illegible] AND 7-20, A RELEASE COULD HAVE OCCURRED THAT WAS IN EXCESS OF MPC FOR UNIDENTIFIED BETA EMITTERS. RELEASES FROM THE RBS WERE TERMINATED. MAINTENANCE ACTIVITIES CONCERNING THE HELIUM PURIFICATION SYSTEM REGENERATION COMPRESSOR WERE DISCOVERED TO BE THE SOURCE. THE SUMP PUMPS WERE REMOVED FROM SERVICE AND PLUGS WERE INSTALLED IN THE FLOOR DRAINS IN THE AREA OF THE COMPRESSOR. THE FLOOR DRAINS WILL BE ROUTED TO THE LIQUID WASTE SYSTEM RATHER THAN THE REACTOR BLDG SUMP.

[42] GRAND GULF 1 DOCKET 50-416 LER 84-037
LCO TIME LIMIT FOR SAMPLING EXCEEDED.
EVENT DATE: 081384 REPORT DATE: 091184 NSSS: GE TYPE: BWR

(NSIC 191430) FROM 8-10-84 TO 8-24-84, A LIMITING CONDITION FOR OPERATION (LCO) WAS IN EFFECT DUE TO THE INOPERABILITY OF THE RADWASTE BUILDING NOBLE GAS ACTIVITY MONITOR. THE CONDITION ALLOWED CONTINUED OPERATION OF THE RADWASTE BUILDING VENTILATION SYSTEM PROVIDED GRAB SAMPLES WERE TAKEN EVERY 8 HRS. DUE TO PERSONNEL ERROR, THE FREQUENCY OF THE GRAB SAMPLES EXCEEDED THE TECH SPEC LIMIT ON AUG 11, 12 AND 13 BY 20, 5 AND 24 MINS RESPECTIVELY. ALL OF THE CHEMISTS WILL BE REINSTRUCTED ON THEIR RESPONSIBLITY FOR MEETING THESE REQUIREMENTS AND THE SAMPLING INSTRUCTION WILL BE REVISED TO INCLUDE A LOG OF WHEN SAMPLES ARE TAKEN AND WHEN THE NEXT SAMPLE IS DUE.

[43] GRAND GULF 1 DOCKET 50-416 LER 84-038
FUEL OIL SAMPLE FOUND OUT OF TECHNICAL SPECIFICATION LIMITS.
EVENT DATE: 081584 REPORT DATE: 091484 NSSS: GE TYPE: BWR

(NSIC 191431) QA DETERMINED DURING AN AUDIT THAT THE SURVEILLANCE REQUIREMENTS OF TECH SPEC 4.8.1.1.2.C WERE NOT FULLY MET ON FEB 8, 1984 AND MAY 3, 1984 FOR THE DG FUEL VISCOSITY ANALYSIS AND ON MAY 24, 1984 FOR THE GAS TURBINE GENERATOR FUEL VISCOSITY.

[44] GRAND GULF 1 DOCKET 50-416 LER 84-039
ISOLATION OF RWCU SYSTEM CONTAINMENT ISOLATION VALVE.
EVENT DATE: 081884 REPORT DATE: 091784 NSSS: GE TYPE: BWR

(NSIC 191432) ON AUGUST 18, 1984, THE REACTOR WATER CLEANUP SYSTEM TRIPPED WHEN THE SYSTEM CONTAINMENT ISOLATION VALVE CLOSED. THE CAUSE OF THIS ISOLATION

SIGNAL COULD NOT BE DETERMINED. THE REACTOR WAS IN COLD SHUTDOWN WITH A COOLANT TEMPERATURE OF APPROXIMATELY 100F AT THE TIME OF THE EVENT.

[45] HATCH 1 DOCKET 50-321 LER 84-013
INADVERTENT ACTUATION OF HPCI.
EVENT DATE: 072984 REPORT DATE: 082284 NSSS: GE TYPE: BWR

(NSIC 191213) ON 7/29/84, DURING PERFORMANCE OF THE 'REACTOR WATER LEVEL INSTRUMENT (LPCI) FT&C' PROCEDURE HNP-1-3154, PERSONNEL TESTED THE REACTOR LOW WATER LEVEL INSTRUMENT B21-N031D WHICH ENERGIZED E41-K53. ONCE ENERGIZED, E41-K53 COMPLETED ONE HALF OF THE LOGIC FOR 'HPCI AUTOMATIC INJECTION LOGIC', BUT HPCI AUTO STARTED AND INJECTED INTO THE REACTOR WHEN IT WAS NOT SUPPOSED TO. THE CAUSE OF THIS EVENT WAS A SHORT CIRCUIT EXISTING ACROSS ONE HALF OF THE LOGIC FOR THE HPCI AUTOMATIC INJECTION LOGIC DURING THE TIME THAT B2 -N031D WAS BEING TESTED FOR THE OTHER HALF. A SHORT CIRCUIT WAS DISCOVERED BETWEEN PIN A AND PIN B INSIDE OF HPCI TEST JACK E41-J1. WHEN HPCI AUTO-STARTED AND INJECTED, PERSONNEL TRIPPED HPCI AND RETURNED IT TO STANDBY. HPCI TEST JACK E41-J1 WAS INSPECTED, CLEANED, AND SATISFACTORILY RETURNED TO SERVICE.

[46] HATCH 2 DOCKET 50-366 LER 84-008 REV 1
UPDATE ON PROCEDURE INADEQUATE IN MEETING GROUP I ISOLATION LOGIC.
EVENT DATE: 032784 REPORT DATE: 082384 NSSS: GE TYPE: BWR

(NSIC 191217) ON 2-15-84, SURVEILLANCE PERSONNEL NOTED THAT THE 'TURBINE BLDG AREA TEMPERATURE FT&C' PROCEDURE (HNP-2-3725) WAS INADEQUATE IN MEETING THE MONTHLY CHANNEL FUNCTIONAL TEST REQUIREMENT OF TECH SPECS TABLE 4.3.2-1, ITEM 1.F. ON 02-23-84, THIS EVENT WAS INITIALLY REVIEWED BY THE PLANT REVIEW BOARD (PRB) AND WAS DETERMINED AS BEING NON-REPORTABLE. HOWEVER, ON 4-3-84, THE PRB REVIEWED THIS EVENT AGAIN AND DETERMINED THE EVENT AS BEING REPORTABLE PER 10 CFR 50.73(A)(2)(I)(B. THE TEMPERATURE RECORDER WAS FUNCTIONALLY TESTED, BUT THE GROUP 1 ISOLATION LOGIC WAS NOT TESTED. ON 3-27-84, PLANT PERSONNEL NOTED THAT HNP-2-3725 WAS INADEQUATE IN MEETING THE 18 MONTH CHANNEL CALIBRATION REQUIREMENT OF TECH SPECS 4.3.2-1, ITEM 1.F. THE TEMPERATURE RECORDER WAS CHECKED FOR CALIBRATION, BUT THE THERMO-COUPLE/PRIMARY SENSOR WAS NOT CHECKED. THESE EVENTS ARE THE RESULT OF PROCEDURAL INADEQUACY DUE TO PERSONNEL MISINTERPRETING THE TECH SPEC'S DEFINITION OF CHANNEL FUNCTIONAL TEST AND CHANNEL CALIBRATION. HNP-2-3725 WAS REVISED SUCH THAT IT ADEQUATELY MEETS TECH SPECS 4.3.2.1 AND TABLE 4.3.2-1, ITEM 1.F. ON 8-19-84, THE NEW REV OF HNP-2-3725 WAS PERFORMED FOR THE MONTHLY CHANNEL FUNCTIONAL TEST AND THE 18 MONTH CHANNEL CALIBRATION. THE RESULTS OF BOTH TESTS WERE SATISFACTORY. IT IS EVIDENT THAT NO ACTUAL AND POTENTIAL SAFETY CONSEQUENCES AND IMPLICATIONS EXISTED DUE TO THIS EVENT.

[47] HATCH 2 DOCKET 50-366 LER 84-014
UNAUTHORIZED UNPLUGGED RELAYS.
EVENT DATE: 081184 REPORT DATE: 091084 NSSS: GE TYPE: BWR

(NSIC 191396) ON 8/11/84 PLANT PERSONNEL DETERMINED THAT THE REACTOR RECIRCULATION PUMP AUTO TRIP RELAYS 2B21-K43B AND 2B21-K43D HAD BEEN REMOVED FROM THEIR SOCKETS AND PLACED IN THE BOTTOM OF CONTROL PANEL 2H11-P613. INSTALLATION AND OPERATION OF THESE RELAYS CANNOT BE VERIFIED DURING THE PERIOD OF TIME FROM 12/21/83 UNTIL 1/13/84. THEREFORE, IT IS POSSIBLE THAT THE PLANT MIGHT HAVE BEEN OPERATED IN A CONDITION PROHIBITED BY TECH SPECS. THIS LER IS REPORTABLE PER 10CFR 50.73(A)(2)(I)(B).

[48] HATCH 2 DOCKET 50-366 LER 84-023
FAILURE OF DIESEL GENERATORS' EMERGENCY BUS LOADING TIMERS.
EVENT DATE: 081184 REPORT DATE: 090784 NSSS: GE TYPE: BWR
VENDOR: EAGLE SIGNAL

(NSIC 191400) PLANT PERSONNEL DETERMINED THAT THE LOCA (LOSS OF COOLANT ACCIDENT) LOADING TIMERS' RESET CLUTCH COILS FOR "2F" EMERGENCY BUS WERE BURNED OUT. ON 8-11-84, PLANT PERSONNEL DETERMINED THAT THE LOCA LOADING TIMERS' RESET CLUTCH COILS FOR "2E" EMERGENCY BUSSES WERE ALSO BURNED OUT. THESE EVENTS ARE REPORTABLE PER 10CFR 50.73(A)(2)(V)(A) BECAUSE THEY AFFECT A SYSTEM WHICH IS DESIGNED TO SUPPORT SHUTTING DOWN THE REACTOR AND MAINTAINING IT IN A SAFE CONDITION. THE LOCA LOADING TIMERS' COILS FOR THE THE "2F" AND "2E" BUSSES WERE REPLACED AND THE LOCA TIMERS WERE SATISFACTORILY FUNCTIONALLY TESTED PER A SPECIALLY WRITTEN FUNCTIONAL TEST AND RETURNED TO SERVICE ON 8-13-84 AND 8-14-84, RESPECTIVELY.

[49] HATCH 2 DOCKET 50-366 LER 84-013
INABILITY TO MONITOR REACTOR WATER CONDUCTIVITY.
EVENT DATE: 081284 REPORT DATE: 091084 NSSS: GE TYPE: BWR

(NSIC 191395) ON 08/08/84, THE REACTOR WATER CONDUCTIVITY RECORDER (2G31-R601) WAS INOPERABLE DUE TO THE REACTOR WATER CLEANUP SYSTEM'S BEING OUT OF SERVICE FOR MAINTENANCE. SINCE RWCU WAS OUT OF SERVICE, REACTOR WATER SAMPLES WERE BEING TAKEN FROM THE RESIDUAL HEAT REMOVAL (RHR) HEAT EXCHANGER'S SAMPLE LINE. PLANT PERSONNEL NOTED ON 8/12/84 THAT A SAMPLE OF REACTOR WATER COULD NOT BE OBTAINED NOR ANALYZED FOR CONDUCTIVITY EVERY 24 HOURS AS REQUIRED BY TECH SPECS SECTION 4.4.4.C DUE TO A FAILED VALVE IN THE SAMPLE LINE. THIS EVENT IS THE RESULT OF COMPONENT FAILURE. THE SAMPLE LINE'S VALVE WOULD NOT OPERATE DUE TO THE VALVE'S PACKING BINDING AGAINST THE STEM. THE PACKING IN THE SAMPLE LINE'S VALVE WAS LOOSENED TO SATISFACTORILY REPAIR THE VALVE ON 8/13/84. THE REACTOR WATER CLEANUP SYSTEM WAS RETURNED TO SERVICE ON 8/13/84, THUS RETURNING 2G31-R601 TO OPERATION.

[50] HATCH 2 DOCKET 50-366 LER 84-015
SURVEILLANCE TESTING PERFORMED LATE.
EVENT DATE: 081484 REPORT DATE: 091084 NSSS: GE TYPE: BWR

(NSIC 191397) THE PERFORMANCE OF THE "MONITORING SETTLEMENT OF SEISMIC CATEGORY 1 STRUCTURES" PROCEDURE (HNP-2-3475) MEETS THE REQUIREMENT OF TECH SPECS SECTION 4.7.8.B. IN ORDER TO MEET THE REQUIRED FREQUENCY, PLANT PERSONNEL HAD SCHEDULED THE PROCEDURE TO BE PERFORMED NO LATER THAN 08/13/84 (I.E., THE DUE DATE OF 06/28/84 PLUS A 45 DAY GRACE PERIOD AS ALLOWED BY UNIT 2 TECH SPECS SECTION 4.0.2); HOWEVER, THE REQUIRED SURVEILLANCE WAS NOT SATISFACTORILY COMPLETED UNTIL 08-22-84. THIS FAILURE TO PERFORM A TECH SPECS SURVEILLANCE AT THE REQUIRED FREQUENCY CONSTITUTES AN OPERATION OR CONDITION PROHIBITED BY THE PLANT'S TECH SPECS, AND IS THUS REPORTABLE PER 10CFR50.73(A)(2)(I)(B). THIS NON-REPETITIVE EVENT IS THE RESULT OF PERSONNEL ERROR. THE GROUP RESPONSIBLE FOR PERFORMING THE SURVEILLANCE WAITED UNTIL NEAR THE END OF THE GRACE PERIOD BEFORE BEGINNING TO PERFORM THE SURVEILLANCE. THEN WHEN EXTRA TIME WAS REQUIRED DUE TO THE "BADGING PROCESS", THEY WERE NOT ABLE TO COMPLETE THE SURVEILLANCE WITHIN THE TECH SPECS TIME CONSTRAINT.

[51] HATCH 2 DOCKET 50-366 LER 84-016
UNPLANNED ACTUATION OF AN ESF ON A LOCA SIGNAL.
EVENT DATE: 081584 REPORT DATE: 091084 NSSS: GE TYPE: BWR
VENDOR: BARTON INSTRUMENT CO., DIV OF ITT

(NSIC 191398) ON 8-15-84 AT 1830 CST, A SPURIOUS LOCA SIGNAL INITIATED THE

FOLLOWING: 4 RHR PUMPS STARTED, 2 CORE SPRAY PUMPS STARTED AND INJECTED INTO THE REACTOR VESSEL, 3 DG'S STARTED, HPCI AND RCIC INITIATED. AFTER AN INVESTIGATION IT WAS LEARNED THAT THE "PRESSURE TESTING OF PIPING AND COMPONENTS" PROCEDURE (HNP-6907) DATA PACKAGE HAD BEEN INCORRECTLY COMPLETED IN REGARDS TO THE PROPER VALVE ALIGNMENT FOR THE TESTING OF NEW INSTRUMENT TUBING WELDS. THIS RESULTED IN A PRESSURE DIFFERENTIAL THAT THE PRESSURE TRANSMITTER SENSED AS A LOCA SIGNAL. THIS EVENT IS THE RESULT OF PERSONNEL ERROR IN THE COMPLETING OF THE PROCEDURE DATA PACKAGE. NO PROCEDURE REVISION WAS REQUIRED SINCE THE PROCEDURE DATA PACKAGE WAS FOR A ONE TIME USE. ON 8-15-84 AT 1835 CST, THE LOCA SIGNAL WAS CLEARED AND THE AFFECTED SYSTEMS WERE IMMEDIATELY RETURNED TO NORMAL STANDBY STATUS.

[52] HATCH 2 DOCKET 50-366 LER 84-020
ESF SYSTEM ACTUATION DUE TO PROCEDURE INADEQUACY.
EVENT DATE: 082184 REPORT DATE: 092084 NSSS: GE TYPE: BWR

(NSIC 191399) ON 8-21-84 AT 1305 CDT, DURING THE PERFORMANCE OF "TURBINE FIRST STAGE PRESSURE PERMISSIVE FT&C" PROCEDURE (HNP-2-3010) AN UNPLANNED FULL RPS ACTUATION OCCURRED. FURTHER INVESTIGATION REVEALED THAT A FULL RPS ACTUATION OCCURRED BECAUSE LINKS WERE OPENED WHEN THE TURBINE WAS OFF LINE WHEN HNP-2-3010 STEP F.5 WAS PERFORMED. HNP-2-3010 WILL BE REVISED BY 10-1-84 SO THAT IT CAN BE PERFORMED IN ANY TURBINE CONDITION WITHOUT CAUSING A FULL RPS ACTUATION.

[53] INDIAN POINT 2 DOCKET 50-247 LER 84-007
FAILURE TO MAINTAIN CONTINUOUS FIRE WATCH.
EVENT DATE: 071184 REPORT DATE: 081084 NSSS: WE TYPE: PWR

(NSIC 191195) THIS REPORT SATISFIES THE REQUIREMENTS FOR THE SPECIAL REPORT REQUIRED BY TECH SPEC 3.13 F AND 10CFR73. AN OPERABILITY TEST FOR THE HALON FIRE PROTECTION SYSTEM FOR THE CABLE SPREADING ROOM WAS PERFORMED ON JUN 1, 1984. THE SYSTEM DID NOT FULLY MEET THE ACCEPTANCE CRITERIA AND A CONTINUOUS FIRE WATCH WAS ESTABLISHED. SUBSEQUENTLY ON JUN 2, 1984 A UNIT SHUTDOWN WAS INITIATED FOR A REFUELING AND MAINTENANCE OUTAGE. ADDITIONAL MAINTENANCE AND TESTING ON THE SYSTEM TOOK PLACE DURING THIS OUTAGE. ON JULY 11, 1984 IT WAS DETERMINED THAT THE POSTED CONTINUOUS FIRE WATCH WAS INTERRUPTED FOR APPROX A 4 HR PERIOD.

[54] LA SALLE 1 DOCKET 50-373 IER 84-023 REV 1
UPDATE ON REACTOR WATER CLEAN-UP DIFFERENTIAL FLOW ISOLATION.
EVENT DATE: 041584 REPORT DATE: 080384 NSSS: GE TYPE: BWR
VENDOR: LONERGAN, J.E., CO.

(NSIC 191221) UNIT 1 REACTOR WATER CLEAN-UP SYSTEM ISOLATED ON 4-15-84, AT 1754 DUE TO HIGH DIFFERENTIAL FLOW, ATTRIBUTED TO LOSSES THROUGH A STUCK OPEN RELIEF VALVE ON THE SHELL SIDE OF THE REGENERATIVE HEAT EXCHANGER. THE 'A' HEAT EXCHANGER STRING WAS ISOLATED AND THE SYSTEM WAS RETURNED TO SERVICE 2249 USING THE 'B' HEAT EXCHANGER STRING. ALL ACTIONS OCCURRED IN ACCORDANCE WITH SYSTEM DESIGN. SAFE PLANT CONDITIONS WERE MAINTAINED AT ALL TIMES.

[55] LA SALLE 1 DOCKET 50-373 LER 84-045
REACTOR WATER CLEANUP DIFFERENTIAL FLOW ISOLATION.
EVENT DATE: 071584 REPORT DATE: 080984 NSSS: GE TYPE: BWR

(NSIC 191222) ON 7-15-84, AT 0511 HRS WITH UNIT 1 AT 87% POWER, THE REACTOR WATER CLEANUP SYSTEM ISOLATED ON HIGH DIFFERENTIAL FLOW. THE SYSTEM HIGH DIFFERENTIAL FLOW WAS A RESULT OF FILLING A FILTER/DEMINERALIZER THAT HAD PARTIALLY DRAINED DURING A PRECOAT CYCLE. AIR 1-84-67113 HAS BEEN ISSUED TO FURTHER INVESTIGATE THIS TYPE OF ISOLATION PROBLEM.

[56] LA SALLE 1 DOCKET 50-373 LER 84-046
RWCU ISOLATION ON HIGH DIFFERENTIAL FLOW.
EVENT DATE: 072784 REPORT DATE: 082384 NSSS: GE TYPE: BWR

(NSIC 191402) ON 7-27-84, AT 2140 HRS, WITH UNIT 1 OPERATING IN MODE 1 AT 96% POWER, THE REACTOR WATER CLEANUP SYSTEM (RWCU) ISOLATED ON HIGH DIFFERENTIAL FLOW. THE ISOLATION OCCURRED WHILE DE-ISOLATING THE "C" FILTER DEMINERALIZER AND WAS CAUSED BY A PARTIAL LOSS OF SYSTEM FLOW THROUGH OPEN FILTER DRAIN VALVES. THE PARTIAL LOSS OF FLOW WAS FROM THE COLD SIDE OF THE RWCU SYSTEM AND THEREFORE CREATED HIGH SYSTEM TEMPERATURES DUE TO REDUCED COOLING AT THE REGENERATIVE HEAT EXCHANGERS. THIS HIGHER SYSTEM TEMPERATURE CAUSED A SYSTEM ISOLATION (NON-ESF) AT 2210 HRS TO PROTECT THE FILTER/DEMINERALIZER RESIN BEDS. AFTER COOLING THE RWCU SYSTEM USING CYCLED CONDENSATE, A SYSTEM ISOLATION OCCURRED AT 0441 HRS ON 7-28-84, WHILE PLACING SYSTEM BACK IN SERVICE AND WAS DUE TO HIGH DIFFERENTIAL FLOW FOR UNKNOWN REASONS. THE RWCU SYSTEM WAS THEN SUCCESSFULLY PLACED IN SERVICE AT 0450 HRS ON 7-28-84. THIS EVENT WILL BE REVIEWED BY THE OPERATING AND MECHANICAL MAINTENANCE DEPARTMENTS.

[57] LA SALLE 1 DOCKET 50-373 LER 84-047
REACTOR WATER CLEANUP HIGH DIFFERENTIAL FLOW ISOLATION.
EVENT DATE: 080784 REPORT DATE: 082884 NSSS: GE TYPE: BWR

(NSIC 191403) ON 8-7-84, AT 2137, THE REACTOR WATER CLEANUP SYSTEM ISOLATED ON HIGH DIFFERENTIAL FLOW. AFTER THE FILTER ISOLATED, FLUIDS BEGAN TO FLOW OUT OF THE PRECOAT TANK ONTO THE SURROUNDING FLOOR. THE EXACT CAUSE OF THE OVERFLOW, AND HENCE THE ISOLATION, CANNOT BE DETERMINED, HOWEVER A VENT VALVE WAS FOUND OPEN. AN INSPECTION OF THE AREA AND EQUIPMENT FOUND NO MAJOR SYSTEM MALFUNCTIONS. SAFE PLANT CONDITIONS WERE MAINTAINED AND CONTROLLED AT ALL TIMES.

[58] LA SALLE 1 DOCKET 50-373 LER 84-050
REACTOR WATER CLEANUP ISOLATION ON HIGH DIFFERENTIAL FLOW.
EVENT DATE: 082884 REPORT DATE: 091984 NSSS: GE TYPE: BWR

(NSIC 191404) ON 8-28-84, AT 0105, THE REACTOR WATER CLEANUP SYSTEM ISOLATED ON HIGH DIFFERENTIAL FLOW. THE SYSTEM WAS RESTARTED, AND AGAIN ISOLATED. INVESTIGATION OF THE SYSTEM REVEALED TWO MANUAL VALVES THAT WERE OUT OF POSITION, PROVIDING A DRAIN PATH FOR WATER TO RADWASTE. AFTER THESE VALVES WERE CLOSED, THE SYSTEM WAS SATISFACTORILY RESTARTED AT 0200. A MECHANICAL CHECKLIST WAS PERFORMED ON ALL SYSTEM VALVES WHICH WERE NOT LOCATED IN THE DRYWELL.

[59] LA SALLE 2 DOCKET 50-374 LER 84-049
HIGH RADIATION DOORS UNSECURED.
EVENT DATE: 080184 REPORT DATE: 083084 NSSS: GE TYPE: BWR

(NSIC 191224) ON 7-26-84, AT 1125 HRS, DOORS 436, 437, AND 438 WERE POSTED AS HIGH RADIATION AREAS AND WERE UPGRADED TO STATUS LEVELS 20, 21 AND 22 ON THE SECURITY COMPUTER. ON 8-1-84, A GROUP OF STATIONMEN WITH PROPER AUTHORIZATION ATTEMPTED TO ENTER THE AREA CONTROLLED BY THESE DOORS. UPON UTILIZING THE ISSUED HIGH RADIATION KEYCARD, THEY RECEIVED AN ERROR MESSAGE. HOWEVER, THEY DID GAIN ACCESS WITH THEIR OWN PRODUCTION LEVEL CARDS. IT WAS DETERMINED THAT THE DOORS WERE ON PRODUCTION LEVEL STATUS DUE TO A PERSONNEL ERROR AS A RESULT OF UNFAMILIARITY WITH UPDATED SOFTWARE LOADED INTO THE SECURITY COMPUTER CONTROLLING DOOR ACCESS LEVELS. THIS LOSS OF POSITIVE CONTROL IS CONTRARY TO TECH SPEC 6.1.1 AND 10CFR20.203(C)(2). THE DOORS WERE IMMEDIATELY PLACED ON HIGH RAD STATUS UPON DISCOVERING THE SITUATION BY DROPPING PRODUCTION LEVEL STATUS.

[60] LA SALLE 2 DOCKET 50-374 LER 84-047
REACTOR SCRAM CAUSED BY VENDOR ERROR.
EVENT DATE: 080584 REPORT DATE: 082184 NSSS: GE TYPE: BWR

(NSIC 191223) ON 8-5-84, AT 1900 UNIT 2 WAS OPERATING IN MODE 1 AT 85% POWER. AT THIS TIME STP 22-2 (POWER ASCENSION DATA) WAS BEING COMPLETED TO MEASURE TURBINE CONTROL VALVE DEMAND SIGNAL VERSUS SUCCESSIVE TURBINE LOADS. A GE STARTUP INDIVIDUAL, WHILE CHECKING OUT A SUSPECT DVM (DIGITAL VOLT METER), INADVERTENTLY CONNECTED THE DVM SO THAT IT CAUSED THE CONTROL VALVES TO GO SHUT. WHEN THE CONTROL VALVES SHUT, A PRESSURE SPIKE OCCURRED IN THE MAIN STEAM SYSTEM; 5 MAIN STEAM BY-PASS VALVES OPENED; 3 MAIN STEAM PRESSURE RELIEF VALVES OPENED; AND THE UNIT 2 REACTOR SCRAMMED ON HIGH NEUTRON FLUX. SUBSEQUENT TRIPS AND ACTIONS HAPPENED AS EXPECTED TO SHUT DOWN THE REACTOR TO A STABLE TEMPERATURE AND PRESSURE. THERE ARE NO CONSEQUENCES TO THIS OCCURRENCE BECAUSE ALL SYSTEM SAFETY DEVICES WERE OPERABLE AND OPERATED CORRECTLY SO AS NOT TO EXCEED ANY SYSTEM PARAMETERS AND SUCCEEDED IN SHUTTING DOWN THE REACTOR IN A SAFE AND TIMELY MANNER. THE GE STARTUP INDIVIDUAL WAS GIVEN ADDITIONAL INDIVIDUAL TRAINING BY HIS SUPERVISORS TO ONLY UTILIZE LASALLE COUNTY STATION STARTUP PROCEDURES DURING FUTURE TESTING.

[61] LA SALLE 2 DOCKET 50-374 LER 84-050
ERROR IN TESTING TURBINE CONTROL VALVES CAUSES REACTOR SCRAM.
EVENT DATE: 081084 REPORT DATE: 090584 NSSS: GE TYPE: BWR
VENDOR: GEN ELEC CO (STEAM TURB/ENGRD PROD)

(NSIC 191405) A UNIT 2 REACTOR SCRAM OCCURRED ON 8-10-84, AT 0753 DUE TO REACTOR VESSEL HIGH PRESSURE DURING PERFORMANCE OF CONTROL VALVE SURVEILLANCE STARTUP TEST STP-2"-2. THE MAXIMUM COMBINED FLOW LIMITER OF THE ELECTRO-HYDRAULIC CONTROL SYSTEM LIMITED THE OPENING OF THE #1 BYPASS VALVE TO COMPENSATE FOR INCREASED PRESSURE WHEN THE #1 MAIN TURBINE CONTROL VALVE WAS CYCLED CLOSED. THEREFORE, REACTOR PRESSURE EXCEEDED THE SCRAM SETPOINT OF 1043 PSIG. REACTOR WATER LEVEL DROPPED TO NEAR -50 INCHES AND A HALF ISOLATION SIGNAL WAS RECEIVED AS WELL AS A REACTOR CORE ISOLATION COOLING AUTO INITIATION AND A 'B' REACTOR RECIRCULATION PUMP TRIP ON AN ATWS SIGNAL. ALL ACTIONS OCCURRED IN ACCORDANCE WITH SYSTEM DESIGN. SAFE PLANT CONDITIONS WERE MAINTAINED AT ALL TIMES. PROCEDURES WILL BE REVISED.

[62] LA SALLE 2 DOCKET 50-374 LER 84-053
MISSED HYDROGEN SAMPLE OF OFF-GAS.
EVENT DATE: 081684 REPORT DATE: 091484 NSSS: GE TYPE: BWR

(NSIC 191407) A HYDROGEN SAMPLE ON THE OFF-GAS SAMPLE WAS MISSED DURING A UNIT STARTUP. THE STATUS OF EQUIPMENT WAS APPARENTLY NOT COMMUNICATED BETWEEN DEPARTMENTS. THE OVERSIGHT WAS NOTED APPROX 7 HRS AFTER THE OFF-GAS SYSTEM WAS STARTED. RAD/CHEM WAS CONTACTED AND SAMPLING DID NOT INDICATE ANY HYDROGEN IN THE SYSTEM. THIS WAS AN ISOLATED INCIDENT. NO FURTHER ACTION IS REQUIRED.

[63] LA SALLE 2 DOCKET 50-374 LER 84-052
TURN-TO-TURN FAULT IN EXCITER CAUSES TURBINE TRIP AND REACTOR TRIP.
EVENT DATE: 081784 REPORT DATE: 091184 NSSS: GE TYPE: BWR
VENDOR: GEN ELEC CO (STEAM TURB/ENGRD PROD)

(NSIC 191406) ON 8-17-84, AT 0845 HRS, WHILE UNIT 2 WAS AT 52% POWER, THE UNIT 2 TURBINE RECEIVED A TRIP SIGNAL. THIS IMMEDIATELY PRODUCED A UNIT 2 REACTOR SCRAM. UPON INVESTIGATION IT WAS DISCOVERED THAT THE 'A' PHASE OF THE ALTERNATOR - EXCITER STATOR WINDINGS HAD DEVELOPED A TURN-TO-TURN FAULT. THIS TURN-TO-TURN FAULT PRODUCED A VOLTAGE IMBALANCE IN THE THREE PHASE 'Y' NETWORK. THIS IMBALANCE WAS IMMEDIATELY DETECTED BY THE PHASE FAULT DETECTOR, RESULTING IN A

TRIP OF THE UNIT 2 TURBINE. THE ALTERNATOR - EXCITER (EXC) WAS REPLACED AND THE UNIT WAS PUT BACK INTO SERVICE ON 8-30-84.

[64] LA SALLE 2 DOCKET 50-374 LER 84-055
FAILURE OF 'B' RHR FULL FLOW TEST VALVE TO CLOSE.
EVENT DATE: 081884 REPORT DATE: 091484 NSSS: GE TYPE: BWR
VENDOR: ANCHOR/DARLING VALVE CO.

(NSIC 191408) WHILE CYCLING THE 2B RESIDUAL HEAT REMOVAL (BO) FULL FLOW TEST VALVE, 2E12-F024B, AFTER MAINTENANCE ACTIVITIES ON THE 2B RHR PUMP, THE VALVE FAILED TO CLOSE ON DEMAND. THE INTERFACE BETWEEN THE VALVE STEM AND DISK WAS LOOSE, ALLOWING THE DISK TO TILT EXCESSIVELY. THIS ALLOWED THE DISK TO JAM INTO THE SIDE GUIDES OF THE VALVE, FORCING IT TO FAIL. THE CONSEQUENCES OF THE INCIDENT WERE MINIMAL SINCE ALL OTHER ECCS SYSTEMS WERE OPERABLE. IMMEDIATELY UPON DETERMINING THAT A PROBLEM EXISTED, MAINTENANCE PERSONNEL WERE DISPATCHED TO TROUBLESHOOT IT. WHEN THE CAUSE WAS DETERMINED, A SKIRT WAS ADDED TO THE DISK TO INCREASE THE AREA CONTACTING THE SIDE GUIDES, WHICH COULD KEEP THE DISK FROM COCKING AND JAMMING.

[65] LA SALLE 2 DOCKET 50-374 LER 84-058
REACTOR WATER CLEANUP HIGH DIFFERENTIAL TEMPERATURE ISOLATION.
EVENT DATE: 082684 REPORT DATE: 091984 NSSS: GE TYPE: BWR

(NSIC 191410) ON 8-26-84, AT 0830 HRS WITH UNIT 2 AT 0% POWER IN MODE 4, AN ISOLATION OF REACTOR WATER CLEANUP OCCURRED DUE TO HIGH DIFFERENTIAL TEMPERATURE IN THE 'A' PUMP ROOM. AT THE TIME OF THIS ISOLATION THE REACTOR BLDG VENTILATION WAS SHUT DOWN TO FACILITATE REPAIRS TO THE SYSTEM. THE ISOLATION RESULTED FROM A LACK OF AIR FLOW THROUGH THE ROOM WHICH IS REQUIRED FOR THE PRESENT LEAK DETECTION SCHEME TO FUNCTION. A TECH SPEC CHANGE WILL BE REQUESTED TO REMOVE THESE INSTRUMENTS.

[66] LA SALLE 2 DOCKET 50-374 LER 84-056
REACTOR WATER CLEANUP ISOLATION ON SPURIOUS HIGH DIFFERENTIAL TEMPERATURE SIGNAL.
EVENT DATE: 082784 REPORT DATE: 091884 NSSS: GE TYPE: BWR
VENDOR: RILEY-BEAIRD, INC.

(NSIC 191409) ON 8-27-84, AT 1145 HRS WITH UNIT 2 IN COLD SHUTDOWN, THE REACTOR WATER CLEANUP (RWCU) INBOARD ISOLATION VALVE 2G33-F001 CLOSED AND THE REACTOR WATER CLEANUP PUMPS TRIPPED. THE CONTROL ROOM PANEL ALARMS INDICATED THAT THE SYSTEM HAD ISOLATED ON A SPURIOUS HIGH DIFFERENTIAL TEMPERATURE FROM THE RILEY LEAK DETECTION ISOLATION SYSTEM. AFTER VERIFYING THAT NO ABNORMAL CONDITION EXISTED THE RWCU SYSTEM WAS RESTARTED.

[67] LA SALLE 2 DOCKET 50-374 LER 84-062
DIVISION II ISOLATION ON RHR SHUTDOWN COOLING.
EVENT DATE: 082784 REPORT DATE: 092184 NSSS: GE TYPE: BWR
VENDOR: ITT-BARTON

(NSIC 191412) WITH UNIT 2 IN COLD SHUTDOWN, THE B RHR PUMP WAS STARTED IN THE SHUTDOWN COOLING MODE. THERE WAS A DIVISION II HI SUCTION FLOW TRIP WHICH CLOSED THE DIVISION II RHR SHUTDOWN COOLING PUMP SUCTION INBOARD VALVE. THE VALVE CLOSURE CAUSED THE B RHR PUMP TO TRIP. THE HIGH SUCTION FLOW TRIP WAS APPARENTLY CAUSED BY A MOMENTARY SPIKE IN THE START OF THE RHR PUMP. THE B RHR PUMP WAS RESTARTED WITH NO REOCCURRENCE. NO CORRECTIVE ACTION WAS REQUIRED.

[68] LA SALLE 2 DOCKET 50-374 LER 84-059
MISSED SURVEILLANCE ON CRD SCRAM DISCHARGE VOLUME HIGH LEVEL DIFFERENTIAL PRESSURE SWITCHES.
EVENT DATE: 082884 REPORT DATE: 091984 NSSS: GE TYPE: BWR

(NSIC 191411) ON 8-28-84, IT WAS DISCOVERED THAT ATTACHMENT B OF LIS-RD-403, UNIT 2 CONTROL ROD DRIVE SCRAM DISCHARGE LEVEL FUNCTIONAL TEST, WAS BEING SIGNED OFF AS THE COMPLETED SURVEILLANCE REQUIREMENTS OF ATTACHMENT A OF LIS-RD-403. THE INSTRUMENT DEPARTMENT SURVEILLANCE PROCEDURES ARE BEING CHANGED TO A NUMBERING SYSTEM ALLOWING FOR ONE NUMBER FOR EACH SURVEILLANCE PERFORMED. THE PROBLEM OCCURRED WHEN LIS-RD-403 FUNCTIONAL HAD TWO PARTS AND TWO DATA SHEETS. AT THE TIME OF THE EVENT, INSTRUMENTATION COVERED BY LIS-RD-01, WHICH PERFORMS THE SAME FUNCTION ON REDUNDANT SWITCHES, WAS WITHIN TECH SPECS. AT THE TIME OF THE EVENT LIS-RD-203 (CALIBRATION) WAS WITHIN ITS TECH SPECS. SURVEILLANCE LIS-RD-403 WAS IMMEDIATELY PERFORMED SATISFACTORILY; THEREFORE, PROBABLE CONSEQUENCES WERE MINIMAL. THE SECOND STEP OF LIS-RD-403 HAS BEEN CHANGED TO A SEPARATE PROCEDURE (LIP-RD-603).

[69] LACROSSE DOCKET 50-409 LER 84-011
LOSS OF OFFSITE POWER.
EVENT DATE: 071684 REPORT DATE: 080884 NSSS: AC TYPE: BWR
VENDOR: ALLIS CHALMERS
WESTINGHOUSE ELECTRIC CORP.

(NSIC 191230) DURING A STORM, THE POTENTIAL TRANSFORMER IN THE LACBWR SWITCHYARD SHORTED OUT DUE TO THE ACCUMULATION OF WET, DEAD MAYFLIES ON IT. A LOSS OF OFFSITE POWER RESULTED. THE REACTOR WAS IN THE HOT SHUTDOWN CONDITION AT THE TIME, WITH PRIMARY COOLANT AT 395 F. BOTH EMERGENCY DG'S (EDG) STARTED, BUT THE 1B EDG'S OUTPUT BREAKER DID NOT CLOSE. OFFSITE POWER WAS REGAINED IN 20 MINS. TECH SPEC TESTING REQUIRED WHEN AN EDG IS INOPERABLE WERE PERFORMED APPROX 6.5 HRS AFTER THE LOSS OF OFFSITE POWER, RATHER THAN 4 HRS. THE 1A EDG AND ITS BREAKER LINEUP HAD DEMONSTRATED THEIR OPERABILITY DURING THE EVENT. PRIORITY WAS PLACED ON ACHIEVING A STABLE, KNOWLEDGABLE PLANT CONDITION RATHER THAN PERFORMING THE OFFICIAL SURVEILLANCE TESTS. EXTENSIVE TROUBLESHOOTING WAS PERFORMED ON THE 1B EDG OUTPUT BREAKER AND ITS CLOSING CIRCUIT. AFTER THE BREAKER TOGGLE ROLLNUT WAS LUBRICATED, THE BREAKER TESTED SATISFACTORILY. THE POTENTIAL TRANSFORMER WAS REPLACED.

[70] LACROSSE DOCKET 50-409 LER 84-012
1B HIGH PRESSURE SERVICE WATER DIESEL SURVEILLANCE TEST FAILURE.
EVENT DATE: 081584 REPORT DATE: 090784 NSSS: AC TYPE: BWR
VENDOR: ALLIS CHALMERS

(NSIC 191425) DURING A MONTHLY SURVEILLANCE TEST ON THE 1B HIGH PRESSURE SERVICE WATER (HPSW) DIESEL-DRIVEN PUMP, THE DIESEL STARTED, CAME UP TO SPEED AND THEN DIED OFF. FURTHER ATTEMPTS TO START THE DIESEL WERE UNSUCCESSFUL. THE 1B HPSW DIESEL-DRIVEN PUMP IS 1 OF THE 2 REDUNDANT PUMPS IN THE ALTERNATE CORE SPRAY (ACS) SYSTEM. THE WORDING OF LACBWR TECH SPECS CAUSES THE PLANT TO ENTER SECTION 3.0.3 WHENEVER EVEN 1 OF THE 2 PUMPS IS INOPERABLE. THEREFORE, THIS EVENT IS REPORTABLE, EVEN THOUGH THE REDUNDANT FULL CAPACITY PUMP WAS OPERABLE. IT WAS CONCLUDED THAT AIR HAD ENTERED THE FUEL LINE, CAUSING THE MALFUNCTION. THE DIESEL FUEL FILTERS AND GASKETS WERE CHANGED AND THE VALVE ON THE SUCTION OF THE PRIMING TANK HAND PUMP WAS ENSURED TIGHTLY CLOSED. A SUCCESSFUL TEST WAS CONDUCTED ON THE 1B HPSW DIESEL PUMP PRIOR TO THE EXPIRATION OF THE 12 HOUR HOT SHUTDOWN REQUIREMENT.

[71] LACROSSE DOCKET 50-409 LER 84-014
HIGH WATER LEVEL SCRAM SIGNAL WHILE SHUTDOWN.
EVENT DATE: 082284 REPORT DATE: 091884 NSSS: AC TYPE: BWR

(NSIC 191426) WHILE THE REACTOR WAS SHUT DOWN DURING A MAINTENANCE OUTAGE, REACTOR WATER LEVEL INDICATION ON WATER LEVEL SAFETY CHANNEL NO. 1 REACHED 17 INCHES ABOVE THE NOMINAL WATER LEVEL ZERO. ALL CONTROL RODS WERE ALREADY FULLY INSERTED, BUT THE SCRAM SOLENOIDS HAD BEEN RESET AND THE ROD MECHANISMS WERE CHARGED. A HIGH WATER LEVEL SCRAM SIGNAL WAS GENERATED WHICH DE-ENERGIZED THE SCRAM SOLENOIDS. THE REACTOR OPERATOR HAD BEEN MONITORING WATER LEVEL USING A WATER LEVEL CHANNEL WHICH WAS INDICATING LOWER WATER LEVEL AND THEREFORE MORE MARGIN TO THE SCRAM SETPOINT. HE ERRED IN NOT NOTICING THE SAFETY CHANNEL 1 INDICATION APPROACHING THE SETPOINT. HE LOWERED WATER LEVEL FOLLOWING THE SCRAM SIGNAL.

[72] LACROSSE DOCKET 50-409 LER 84-015
OPERATOR ERROR CAUSES SHUTDOWN CONDENSER INITIATION DURING REACTOR SHUTDOWN.
EVENT DATE: 082984 REPORT DATE: 091884 NSSS: AC TYPE: BWR

(NSIC 191427) DURING A NORMAL REACTOR SHUTDOWN AND COOLDOWN, THE REACTOR BLDG MAIN STEAM ISOLATION VALVE (RBMSIV) CLOSED WHEN PRIMARY SYSTEM PRESSURE DECREASED TO 1000 PSIG. THE CLOSURE OF THE RMBSIV CAUSED THE SHUTDOWN CONDENSER TO COME INTO SERVICE. THESE AUTOMATIC ACTIONS ARE SUPPOSED TO BE BYPASSED DURING A NORMAL REACTOR SHUTDOWN, BUT HAD NOT BEEN BYPASSED PRIOR TO THE REACTOR PRESSURE REACHING THE SETPOINT. THE NECESSARY KEYS WERE PLACED IN BYPASS, WHICH REMOVED THE SHUTDOWN CONDENSER FROM SERVICE.

[73] MCGUIRE 2 DOCKET 50-370 LER 83-074
COMPONENT COOLING WATER CONTAINMENT ISOLATION VALVES FAIL TO CLOSE.
EVENT DATE: 102883 REPORT DATE: 112883 NSSS: WE TYPE: PWR
VENDOR: FISHER FLOW CONTROL DIV (ROCKWELL INT)
LIMITORQUE CORP.

(NSIC 187752) WHILE IN MODE 5, DURING THE PERFORMANCE OF COMPONENT COOLING SYSTEM VALVE STROKE TIMING-SHUTDOWN TESTING, VALVES 2KC-338 (REACTOR COOLANT PUMPS SUPPLY HEADER PENETRATION OUTSIDE ISOLATION) AND 2KC-424 (REACTOR COOLANT PUMPS RETURN HEADER PENETRATION INSIDE ISOLATION) STOPPED IN INTERMEDIATE POSITIONS WHILE BEING CLOSED AND WERE SUBSEQUENTLY DECLARED INOPERABLE. THIS CONSTITUTES A DEGRADATION OF CONTAINMENT ISOLATION VALVES (TECH SPEC 3.6.3) WHICH IS REPORTABLE PER TECH SPEC 6.9.1.11(D). OPERABLE REDUNDANT VALVES WERE AVAILABLE TO SEAL THE PENETRATIONS IF NEEDED. ALTHOUGH UNIT 2 WAS IN MODE 5 WHEN THE INOPERABLE VALVES WERE DISCOVERED, THEY ARE PRESUMED TO HAVE BEEN UNABLE TO CLOSE DURING EARLIER HIGHER MODE OPERATION. THIS IS ATTRIBUTED TO COMPONENT MALFUNCTION. EXERCISING THE VALVES (FISHER BUTTERFLY, TYPE 9220 WITH LIMITORQUE ACTUATORS) BY MANUAL OPERATION ELIMINATED WHATEVER BINDING HAD BEEN OCCURRING AND ALLOWED OPERATION FROM THE CONTROL ROOM. TEST FREQUENCY WILL BE INCREASED TO DETERMINE IF THE "STICKING" IS A RECURRING PROBLEM, WITH APPROPRIATE MEASURES TAKEN.

[74] MILLSTONE 1 DOCKET 50-245 LER 84-007
COBALT CONCENTRATION IN AQUATIC FLORA EXCEEDS LIMIT.
EVENT DATE: 040984 REPORT DATE: 051684 NSSS: GE TYPE: BWR

(NSIC 191540) PLANT RELEASES. AQUATIC FLORA IS SAMPLED WITHIN 500 FEET OF THE QUARRY CUT DISCHARGE INTO THE LONG ISLAND SOUND. A GAMMA SCAN PERFORMED ON 3 OF THESE SAMPLES INDICATED THE PRESENCE OF CO-60 AT CONCENTRATIONS OF .65 PLUS OR MINUS .09, .60 PLUS OR MINUS .07, AND .41 PLUS OR MINUS .02 PCI/G. THIS EXCEEDED THE CONTROL STATION AVERAGE ACTIVITY BY GREATER THAN A FACTOR OF 10. AS A RESULT OF THESE CONCENTRATIONS, THE MEASURED EFFLUENTS WERE EVALUATED BY USING THE

LADTAP CODE. THIS ANALYSIS RESULTS IN CALCULATIONS OF 0.0083 MILLIREM TO THE ADULT WHOLE BODY AND 0.045 MILLIREM TO THE ADULT GASTROINTESTINAL TRACT - LOWER LARGE INTESTINE FOR THE FIRST QUARTER (DUE TO FISH AND SHELLFISH CONSUMPTION). THIS IS A SMALL FRACTION (0.0015) OF THE NATURAL BACKGROUND RADIATION EXPOSURE (30 MILLIREM) AN INDIVIDUAL WOULD RECEIVE OVER THIS PERIOD OF TIME (3 MONTHS).

[75] NINE MILE POINT 1 DOCKET 50-220 LER 84-013 REV 1
UPDATE ON THREE MAIN STEAM RELIEF VALVES INOPERABLE.
EVENT DATE: 061484 REPORT DATE: 072784 NSSS: GE TYPE: BWR
VENDOR: DRESSER INDUSTRIAL VALVE & INST DIV

(NSIC 191192) DURING STARTUP AFTER THE RECENT REFUELING OUTAGE ON JUN 14, 1984, CYCLIC SURVEILLANCE TEST N1-ST-C2, 'MANUAL OPENING OF THE SOLENOID ACTUATED PRESSURE RELIEF VALVES AND FLOW VERIFICATION,' WAS BEING PERFORMED. DURING THE TEST, 4 OF THE PLANT'S 6 MAIN STEAM LINE SOLENOID ACTUATED RELIEF VALVES WERE TESTED. 3 OF THESE VALVES FAILED TO OPERATE PROPERLY; 2 VALVES STUCK OPEN, AND THE 3RD VALVE BLEW FUSES AND FAILED TO OPEN WHEN IT WAS TESTED. WIRES LOCATED INSIDE THE PILOT VALVE ASSOCIATED WITH THE BLOWN FUSES PREVENTED THE MOVEMENT OF THE SHORTING BAR CAUSING THE FUSES TO BLOW WHEN THE RELIEF VALVE WAS TESTED. THESE WIRES WERE RELOCATED TO ASSURE THAT THEY WOULD NOT INTERFERE WITH THE MOVEMENT OF THE SHORTING BAR. SEAT LEAKAGE IN THE PILOT VALVES ASSOCIATED WITH THE STUCK OPEN RELIEF VALVES WAS SUSPECTED AS HAVING CAUSED THE MAIN RELIEF VALVES TO STICK OPEN AFTER TESTING. MAINTENANCE WORK WAS PERFORMED ON THESE PILOT VALVES TO CORRECT THE SEAT LEAKAGE ON EACH. ALL 4 MAIN RELIEF VALVES WERE THEN MANUALLY STROKED SUCCESSFULLY TO INSURE THAT THEY ALL MOVED FREELY. THE SURVEILLANCE TEST WAS THEN PERFORMED A 2ND TIME ON ALL 6 RELIEF VALVES ON JUN 17, 1984. 3 RELIEF VALVES LEAKED PAST THEIR SEATS AFTER TESTING DUE TO MATERIAL LODGING IN THE SEAT AREA OF EACH VALVE, AND ANOTHER RELIEF VALVE, 121 STUCK OPEN DUE TO DEBRIS PLUGGING THE PILOT GUIDE OPENINGS. THIS 2ND INCIDENT IS REPORTED IN LER 84-14.

[76] NINE MILE POINT 1 DOCKET 50-220 LER 84-014 REV 1
UPDATE ON COMPLETION OF REACTOR SHUTDOWN DUE TO INOPERABLE ELECTROMATIC RELIEF VALVES.
EVENT DATE: 061784 REPORT DATE: 072784 NSSS: GE TYPE: BWR
VENDOR: DRESSER INDUSTRIAL VALVE & INST DIV

(NSIC 191193) DURING STARTUP ON JUN 17, 1984 (AFTER THE RECENTLY COMPLETED REACTOR SHUTDOWN, WHICH OCCURRED ON JUN 14, 1984 AND WAS REPORTED IN LER 84-13), CYCLIC SURVEILLANCE TEST N1-ST-C2, "MANUAL OPENING OF THE SOLENOID-ACTUATED PRESSURE RELIEF VALVES AND FLOW VERIFICATION," WAS BEING PERFORMED ON ALL 6 OF THE PLANT'S SOLENOID ACTUATED PRESSURE RELIEF VALVES. THESE RELIEF VALVES RECENTLY HAD MAINTENANCE PERFORMED ON THEM AFTER 3 OF THE VALVES INITIALLY FAILED THE SURVEILLANCE TEST ON JUN 14, 1984. DURING THIS 2ND TEST, AT 0625 HRS, 1 RELIEF VALVE (#121) FAILED TO CLOSE AND 3 (#112, 113, AND 123) EXHIBITED SEAT LEAKAGE AFTER SUCCESSFUL TESTING. THE MANUAL BLOCKING VALVE FOR #121 WAS CLOSED TO LIMIT REACTOR BLOW DOWN. A REACTOR SHUTDOWN WAS COMPLETED IN ACCORDANCE WITH THE PLANT'S TECH SPECS IMMEDIATELY AFTER THE EVENT OCCURRED. WORK REQUESTS WERE ISSUED TO PERFORM NECESSARY MAINTENANCE ON THE RELIEF VALVES TO RESTORE THEM TO AN OPERABLE STATUS. WHILE PERFORMING MAINTENANCE ON THE 4 VALVES (#112, 113, 121 AND 123) MATERIAL WAS FOUND IN THE MAIN VALVE SEATS AND PILOT VALVE GUIDE OPENINGS. BASED ON THIS, A DECISION WAS MADE TO CLEAN AND OVERHAUL ALL 6 PILOT AND MAIN VALVES. THE VALVES WERE RESTORED TO AN OPERABLE STATUS AND SUCCESSFULLY TESTED ON JUN 22, 1984.

[77] PEACH BOTTOM 2 DOCKET 50-277 LER 84-010 REV 1
UPDATE ON JET PUMP INSTRUMENTATION LINE CRACK.
EVENT DATE: 060784 REPORT DATE: 073084 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CO.

(NSIC 191202) ON JUN 7, 1984, WITH UNIT 2 SHUT DOWN FOR A REFUELING AND MAJOR MODIFICATION OUTAGE, A THROUGH-WALL CRACK WAS DISCOVERED IN THE 'A' LOOP JET PUMP INSTRUMENTATION PENETRATION REDUCER TO SAFE END WELD. ULTRASONIC EXAMINATIONS WERE PERFORMED ON FIVE WELDS ASSOCIATED WITH EACH JET PUMP INSTRUMENTATION PENETRATION. A CRACK-LIKE INDICATION ORIENTED CIRCUMFERENTIALLY WAS DISCOVERED IN THE REDUCER TO SAFE END WELD ON ONLY THE 'A' LOOP JET PUMP INSTRUMENTATION PENETRATION.

[78] PEACH BOTTOM 2 DOCKET 50-277 LER 84-015
SMOKE DETECTORS REMOVED FROM SERVICE WITHOUT A CONTINUOUS FIREWATCH.
EVENT DATE: 071584 REPORT DATE: 082084 NSSS: GE TYPE: BWR

(NSIC 191205) ON JUL 9, 1984, WITH UNIT 2 IN THE COLD SHUTDOWN CONDITION, SMOKE DETECTOR ALARMS WERE RECEIVED FROM THE UNIT 2 BATTERY AND 4KV EMERGENCY SWITCH GEAR ROOMS. INVESTIGATION BY THE FIRE BRIGADE REVEALED THAT THERE WAS NO FIRE AND THE REASON FOR THE ALARMS COULD NOT BE DETERMINED. AN HOURLY FIREWATCH PATROL WAS ALREADY ESTABLISHED IN THE AREA FOR FIRE BARRIER PENETRATION SEALING WORK, WHICH WAS NEARING COMPLETION. TO PREVENT FURTHER UNNEEDED ACTIVATION OF THE FIRE BRIGADE, IT WAS CONSIDERED ALLOWABLE TO REMOVE SMOKE DETECTORS FROM SERVICE IN ACCORDANCE WITH TECH SPEC 3.14.C.2. REMOVING THE DETECTORS FROM SERVICE, HOWEVER, VIOLATED THE RECENT REV OF TECH SPEC 3.14.D.3 REQUIREMENTS FOR INOPERABLE FIRE BARRIERS. AN EXPEDITED COPY OF THIS REV WAS IN USE, BUT THE CONTROLLED COPIES HAD NOT YET BEEN ISSUED. NO PROBLEMS WERE DETECTED BY THE HOURLY FIRE-WATCH PATROL WHILE THE DETECTORS WERE OUT OF SERVICE, PROCEDURE A-29, REVIEW AND IMPLEMENTATION OF AMENDMENTS TO TECH SPECS, WILL BE REVISED TO IMPROVE THE METHOD OF INFORMING SHIFT SUPERVISION OF CHANGES TO TECH SPECS, AND PERSONNEL INVOLVED WILL BE COUNSELED ON BEING FULLY AWARE OF AND UNDERSTANDING NEWLY ISSUED TECH SPEC REVS.

[79] PEACH BOTTOM 2 DOCKET 50-277 LER 84-016
JET PUMP INLET RISER HAS SAFE-END CRACK-LIKE INDICATIONS.
EVENT DATE: 072784 REPORT DATE: 082784 NSSS: GE TYPE: BWR

(NSIC 191206) ON JUL 27, 1984, WHILE UNIT 2 WAS SHUT DOWN FOR A REFUELING AND MAJOR MODIFICATION OUTAGE, LIQUID PENETRANT EXAMINATIONS OF THE REACTOR PRESSURE VESSEL JET PUMP INLET RISER SAFE ENDS REVEALED CRACK-LIKE INDICATIONS APPROX 1 INCH FROM THE SAFE END THERMAL SLEEVE WELD ON THE JET PUMP INLET RISER SAFE END. ULTRASONIC EXAMINATION OF ALL THE VESSEL JET PUMP INLET RISER SAFE ENDS AND THE RECIRCULATION SUCTION SAFE ENDS IDENTIFIED CRACK-LIKE INDICATIONS IN 5 OF THE RISER NOZZLE SAFE ENDS. THE SAFE END MATERIAL IS 316 LOW CARBON STAINLESS STEEL.

[80] SAN ONOFRE 2 DOCKET 50-361 LER 83-C00S
25 FIRE DOORS INOPERABLE.
EVENT DATE: 121583 REPORT DATE: 011884 NSSS: CE TYPE: PWR

(NSIC 191513) LATCHING MECHANISM FAILURE. THIS SUBMITTAL PROVIDES THE 30-DAY WRITTEN REPORT, PURSUANT TO TECH SPEC 6.9.1.13.B, FOR FIRE-RATED ASSEMBLIES (SPECIFICALLY FIRE DOORS) FOUND INOPERABLE DURING ROUTINE SURVEILLANCES. IN ADDITION, IN THE REFERENCED REPORT FOR NOV 1983, THE NUMBER OF DOORS REPORTED INOPERABLE DUE TO LATCHING MECHANISM FAILURES WAS INCORRECT. FIRE DOORS FOUND INOPERABLE DURING THE DECEMBER ROUTINE SURVEILLANCES ARE IDENTIFIED IN THE ATTACHMENT AND INCLUDE: 25 LATCHING MECHANISM FAILURES; 16 CLOSURE MECHANISM FAILURES; AND 25 DOORS BLOCKED OPEN TYPICALLY FOR CONSTRUCTION, STARTUP OR

MAINTENANCE ACTIVITIES. AS REPORTED PREVIOUSLY, DESIGN CHANGE PACKAGES (DCP'S) ARE BEING IMPLEMENTED TO UPGRADE DOOR LATCHES AND CLOSURE MECHANISMS INTO HEAVIER DUTY HARDWARE AND TO ENSURE A CONSTANT PRESSURE DIFFERENTIAL ACROSS THE ACCESS DOORS IN THE RADWASTE AND CONTROL BLDGS IN ORDER TO REDUCE THE DOOR CLOSURE PROBLEMS. THE NUMBER OF INOPERABLE FIRE DOORS WITH THESE PROBLEMS IS DECREASING AS THESE DCP'S ARE IMPLEMENTED.

[81] SAN ONOFRE 2 DOCKET 50-361 LER 84-044
TOXIC GAS ISOLATION SYSTEM ACTUATION.
EVENT DATE: 080384 REPORT DATE: 090484 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 191387) ON AUGUST 3, 1984, AT 1010, WITH UNIT 2 IN MODE 1 AT 100% AND UNIT 3 IN MODE 5, TOXIC GAS ISOLATION SYSTEM (TGIS) EIIS SYSTEM CODE VI) TRAIN A INITIATED DUE TO HIGH BUTANE (HYDROCARBONS). THE CAUSE WAS DETERMINED TO BE FUMES FROM THE USE OF A CLEANING SOLVENT ON A CONTROL ROOM HVAC DAMPER (EIIS COMPONENT CODE DMP). THERE WAS NO EFFECT ON THE CONTROL ROOM ATMOSPHERE BECAUSE THE CONTROL ROOM HAD ALREADY BEEN PLACED IN AN ISOLATED MODE, WITH CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) (EIIS SYSTEM CODE VI) TRAIN B IN SERVICE PRIOR TO THE DAMPER CLEANING. ALL TGIS TRAIN A COMPONENTS WERE VERIFIED TO HAVE FUNCTIONED PROPERLY. CORRECTIVE ACTION WILL BE TO REVISE APPROPRIATE MAINTENANCE PROCEDURES TO ENSURE MANUAL CREACUS INITIATION AND TO PROVIDE A PROCEDURAL CAUTION THAT A TGIS ACTUATION MAY RESULT WHEN USING CLEANING SOLVENTS ON THE CONTROL ROOM HVAC UNITS OUTSIDE THE CONTROL ROOM ENVELOPE. THERE ARE NO REASONABLE OR CREDIBLE CIRCUMSTANCES UNDER WHICH THIS EVENT COULD HAVE BEEN MORE SEVERE.

[82] SAN ONOFRE 2 DOCKET 50-361 LER 84-043
FAILED CORE PROTECTION CALCULATOR CAUSES UNDESIRED REACTOR TRIP.
EVENT DATE: 080884 REPORT DATE: 090684 NSSS: CE TYPE: PWR
VENDOR: COMBUSTION ENGINEERING, INC.

(NSIC 191386) ON AUGUST 8, 1984 AT 1710, WITH UNIT 2 IN MODE 1 AT 100% POWER, A PENALTY FACTOR FROM CONTROL ELEMENT ASSEMBLY CALCULATOR (CEAC 1) CAUSED THE CPC'S TO GENERATE LOW DEPARTURE FROM NUCLEATE BOILING RATIO TRIP SIGNALS TO THE REACTOR PROTECTION SYSTEM. THE REACTOR TRIPPED, AND THE EMERGENCY FEEDWATER SYSTEM ACTUATED ON LOW STEAM GENERATOR LEVEL DUE TO SHRINK. THE CEAC 1 PENALTY FACTOR RESULTED FROM SPURIOUS ROD POSITION INDICATIONS DUE TO AN ANALOG INPUT POWER SUPPLY FAILURE IN CPC B. EACH CONTROL ELEMENT ASSEMBLY (CEA) HAS TWO REED SWITCH POSITION TRANSMITTER STACKS. EACH STACK SUPPLIES CEA POSITION INDICATION TO ONE CEAC AND ONE CPC. THE FAILURE OF THE POWER SUPPLY IN CPC B CAUSED A FEEDBACK THROUGH THIS COMMON CIRCUIT TO CEAC 1 SUCH THAT THE CPC B TARGET CEA'S INDICATED PARTIALLY INSERTED AND CEAC 1 CALCULATED A PENALTY FACTOR BASED ON THESE ERRONEOUS INDICATIONS. THE DEFECTIVE POWER SUPPLY WAS REPLACED. ADDITIONALLY, COMPUTER TECHNICIANS HAVE BEEN DIRECTED TO SET THE CEAC INOP FLAG IN THE CPC'S WHEN PERFORMING CPC MAINTENANCE WHICH REQUIRES DEENERGIZING A CPC POWER SUPPLY.

[83] SAN ONOFRE 2 DOCKET 50-361 LER 84-045
CHARGING PUMP'S CRACKED BLOCK CAUSES LEAK.
EVENT DATE: 080984 REPORT DATE: 091084 NSSS: CE TYPE: PWR
VENDOR: GAULIN CORP.

(NSIC 191388) ON AUGUST 2, 1984, AT 1240, WITH UNIT 2 IN MODE 1 AT 100 PERCENT POWER, DURING A ROUTINE CONTROL OPERATOR TOUR, LEAKAGE WAS OBSERVED PAST THE PLUNGER BORE CAP OF CHARGING PUMP 2P191. ALTHOUGH 2P191 DID NOT FAIL TO OPERATE, THE PUMP WAS STOPPED. ON AUGUST 5, 1984, AT 1700, 2P191 WAS DECLARED INOPERABLE AND WAS REMOVED FROM SERVICE FOR TESTING TO DETERMINE THE CAUSE OF THE LEAKAGE. ON AUGUST 9, 1984, A DYE PENETRANT TEST (PT) WAS PERFORMED ON THE CYLINDER BLOCK

BORES. THE PT EXPOSED A CRACK APPROXIMATELY 3 INCHES LONG, RUNNING FROM THE SUCTION CHECK VALVE SEAT THROUGH THE PLUNGER REMOVAL BORE AND DOWN THE FRONT FACE. THIS CRACK WAS DETERMINED TO BE THE CAUSE OF THE LEAKAGE. THE CAUSE OF THE CRACK HAS NOT BEEN DETERMINED. AS CORRECTIVE ACTION, THE CRACKED CYLINDER BLOCK WAS REPLACED WITH A SPARE. PUMP 2P191 WAS RETESTED AND RETURNED TO SERVICE ON AUGUST 15, 1984, AT 1145. METALLURGICAL EXAMINATIONS AND ANALYSES OF THE CRACKED BLOCK ARE BEING PLANNED TO DETERMINE THE ROOT CAUSE OF THE CRACK. THE REMAINING UNITS 2 AND 3 CHARGING PUMPS ARE DETERMINED TO BE OPERABLE AND CAPABLE OF PERFORMING THEIR SAFETY FUNCTIONS.

[84] SAN ONOFRE 2 DOCKET 50-361 LER 84-047
SPURIOUS CONTROL ROOM ISOLATION SYSTEM ACTUATIONS.
EVENT DATE: 081184 REPORT DATE: 090784 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 191390) ON AUGUST 11, 1984, AT 1141 AND 1144, WITH BOTH UNITS 2 AND 3 IN MODE 1 AT 100% POWER, THE CONTROL ROOM ISOLATION SYSTEM (CRIS) (EIIS SYSTEM CODE VA) TRAIN 'A' SPURIOUSLY ACTUATED APPARENTLY FROM NOISE SPIKES ON CONTROL ROOM AIRBORNE RADIATION MONITOR 2/3 RE-7824 (EIIS COMPONENT CODE RIT). ALSO ON AUGUST 11, 1984, AT 1302 AND AGAIN AT AIRBORNE RADIATION MONITOR 2/3 RE-7825. IN EACH INSTANCE THE CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM (CREACUS) (EIIS SYSTEM CODE VI) WAS ALREADY ACTUATED DUE TO A NORMAL CHILLER BEING OUT OF SERVICE. OPERATORS USED AIR GRAB SAMPLES TO VERIFY THAT ACTUAL CONTROL ROOM RADIATION LEVELS WERE BELOW THE CRIS ACTUATION SETPOINTS BEFORE RESETTING THE CRIS. THE CAUSE OF THE ELECTRICAL NOISE SPIKES IS OF UNKNOWN ORIGIN. SIMILAR EVENTS WERE PREVIOUSLY REPORTED IN LER'S 84-022, 84-023, AND 84-038 (ALL DOCKET NO. 50-361). AS REPORTED IN LER 84-023, AN ENGINEERING EVALUATION IS BEING PERFORMED TO DETERMINE THE CAUSE OF THE SPIKES. THE RESULTS OF THE EVALUATION AND ANY PLANNED CORRECTIVE ACTION WILL BE REPORTED IN A REVISION TO LER 84-023. THERE ARE NO REASONABLE OR CREDIBLE CIRCUMSTANCES THAT WOULD HAVE INCREASED THE SEVERITY OF THIS INCIDENT.

[85] SAN ONOFRE 2 DOCKET 50-361 LER 84-046
COMPONENT COOLING WATER TRAINS INOPERABLE.
EVENT DATE: 081584 REPORT DATE: 091784 NSSS: CE TYPE: PWR
OTHER UNITS INVOLVED: SAN ONOFRE 3 (PWR)

(NSIC 191389) ON 8/15/84, AT 1130, WITH UNIT 2 IN MODE 1 AT 80% POWER AND UNIT 3 IN MODE 1 AT 100% POWER, THE LOCAL READOUT FOR SALTWATER COOLING FLOW TO THE TRAIN B COMPONENT COOLING WATER (CCW) HEAT EXCHANGER INDICATED A FAULT CONDITION. THE TRAIN A CCW HEAT EXCHANGER WAS OUT OF SERVICE FOR CLEANING. BECAUSE A HIGH DIFFERENTIAL PRESSURE EXISTED ACROSS THE TRAIN B CCW HEAT EXCHANGER, IT WAS ASSUMED THAT TRAIN B SALTWATER COOLING FLOW WAS LESS THAN THE FLOW REQUIRED FOR SYSTEM OPERABILITY. TRAIN B CCW WAS DECLARED INOPERABLE, AND LIMITING CONDITION FOR OPERATION (LCO) 3.0.3 WAS INVOKED ON UNIT 2. EMERGENCY CHILLER E-335 WAS DECLARED INOPERABLE SINCE TRAIN B CCW WAS SUPPLYING ITS COOLING WATER. LOSS OF E-335 RENDERS TWO VITAL INVERTERS INOPERABLE IN EACH UNIT, AND LCO 3.0.3 WAS INVOKED FOR UNIT 3. SHUTDOWN OF BOTH UNITS WAS INITIATED. THE TRAIN B SALTWATER COOLING PUMP WAS STOPPED AND RESTARTED, AND THE DIFFERENTIAL PRESSURE ACROSS THE HEAT EXCHANGER DECREASED. AT 1230 THE SALTWATER COOLING FLOW INDICATION WAS RESTORED. SALTWATER COOLING FLOW WAS DETERMINED TO BE ABOVE THE MINIMUM REQUIRED FLOW, AND LCO 3.0.3 WAS EXITED. THE SALTWATER COOLING FLOW INDICATION WAS RESTORED BY SWITCHING READOUT CHANNELS. IT IS SUSPECTED THAT THE INITIAL FAULT INDICATION WAS DUE TO READING AN INOPERABLE CHANNEL. SALTWATER COOLING FLOW INDICATION WILL BE INPUT TO THE PI COMPUTER TO PROVIDE REMOTE INDICATION AND TO ELIMINATE THE NECESSITY OF LOC. READOUT.

[86] SAN ONOFRE 3 DOCKET 50-362 LER 84-009
INOPERABILITY OF THE CONTAINMENT SPRAY SYSTEM.
EVENT DATE: 031784 REPORT DATE: 060184 NSSS: CE TYPE: PWR

(NSIC 190477) AT APPROXIMATELY 0145, MARCH 17, 1984, DURING ROUTINE SURVEILLANCE OF SYSTEM ALIGNMENT STATUS, WITH THE UNIT IN MODE 1 AT APPROXIMATELY 100% POWER, MANUAL ISOLATION VALVES MU012 AND MU014 WERE IDENTIFIED AS CLOSED, RENDERING BOTH TRAINS OF THE CONTAINMENT SPRAY SYSTEM (CSS) INOPERABLE CONTRARY TO TECH SPEC 3.6.2.1. THE VALVES WERE IMMEDIATELY OPENED. TO PREVENT RECURRENCE, WE (1) MODIFIED PROCEDURES TO CLARIFY THE VALVE LINEUP REQUIREMENTS AND ADD FLOW VERIFICATION THROUGH MU012 AND MU014, (2) MODIFIED ADMINISTRATIVE PROCEDURES TO PROVIDE BETTER CONTROL OF THE USE OF VALVE LINEUP CHECKLISTS, (3) WILL ADD MU012 AND MU014 TO OUR MONTHLY VALVE LINEUP SURVEILLANCE, AND (4) WILL MAKE IMPROVEMENTS TO OUR TRAINING PROGRAM. CLOSURE OF MU012 AND MU014 DURING MODE 1 OPERATION DID NOT CREATE A SIGNIFICANT HAZARD.

[87] SAN ONOFRE 3 DOCKET 50-362 LER 84-015 REV 1
UPDATE ON DOSE EQUIVALENT IODINE LIMITS EXCEEDED.
EVENT DATE: 042784 REPORT DATE: 060884 NSSS: CE TYPE: PWR

(NSIC 190627) PURSUANT TO LIMITING CONDITION FOR OPERATION (LCO) 3.4.7, ACTION STATEMENT 'D' OF APPENDIX A, TECH SPECS TO FACILITY OPERATING LICENSE NPF-15 FOR SAN ONOFRE UNIT 3, THIS SUBMITTAL PROVIDES THE REQUIRED 30-DAY WRITTEN LICENSEE EVENT REPORT (LER) FOR THREE OCCURRENCES INVOLVING THE REACTOR COOLANT SYSTEM. SPECIFIC ACTIVITY EXCEEDED 1.0 MICROCURIE/GRAM DOSE EQUIVALENT (DE) I-131 AT 1005 ON APR 27, 1984 WITH UNIT 3 IN MODE 1 AT 80% POWER; AT 0330, ON MAY 5, 1984 WITH UNIT 3 IN MODE 3; AND AT 0820, MAY 7, 1984 WITH UNIT 3 IN MODE 1 AT APPROX 20% POWER. RCS ACTIVITY WAS REDUCED TO LESS THAN 1.0 MICROCURIE/GRAM DE I-131 WITHIN 48 HRS AFTER EACH OCCURRENCE BY PURIFICATION FLOW. DURING THE 3RD OCCURRENCE, ON MAY 7, 1984, A REQUIRED RCS SAMPLE DUE AT 2025 WAS DELAYED UNTIL 2200 BECAUSE ALL ACTIVITIES INVOLVING CONTAMINATED SYSTEMS INCLUDING RCS SAMPLING, WERE SUSPENDED PENDING INVESTIGATION OF A PLANT VENT STACK ALARM. AS A RESULT, THE 4 HR LIMIT REQUIRED BY LCO 3.4.7, ACTION STATEMENT 'D,' WAS NOT MET. IN ADDITION, IT WAS DETERMINED THAT THERE HAVE BEEN PAST OCCURRENCES WHEN RCS SAMPLES WERE NOT TAKEN AND ANALYZED WITHIN THE REQUIRED 4 HRS. WE WILL CONTINUE TO MONITOR AND EVALUATE PRIMARY COOLANT ACTIVITY.

[88] SAN ONOFRE 3 DOCKET 50-362 LER 84-030
CONTAINMENT PURGE ISOLATION SYSTEM ACTUATES.
EVENT DATE: 072784 REPORT DATE: 082784 NSSS: CE TYPE: PWR
VENDOR: NUCLEAR MEASUREMENTS CORP.

(NSIC 191391) ON JULY 27, 1984, AT 1758, WITH UNIT 3 IN MODE 5 AND A CONTAINMENT MAIN PURGE IN PROGRESS, CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) (EISS SYSTEM IDENTIFIER VA) TRAIN 'A' WAS ACTUATED BY A SPURIOUS INSTRUMENT FAIL SIGNAL FROM CONTAINMENT AREA RADIATION MONITOR 3RT-7856 (EIIS COMPONENT IDENTIFIER RIT). THE ACTUATION OCCURRED WHEN THE CABINET HOUSING 3RT-7856 WAS CLOSED AFTER PERFORMANCE OF A ROUTINE SURVEILLANCE. AT THAT TIME, A DEENERGIZATION OF THE INSTRUMENT FAILURE RELAY OCCURRED, INITIATING THE FAIL SIGNAL. ALL TRAIN 'A' CPIS ACTUATED VALVES FUNCTIONED PROPERLY, ISOLATING THE MAIN PURGE. REDUNDANT TRAIN 'B' REMAINED OPERABLE TO PERFORM THE REQUIRED SAFETY FUNCTIONS. THE RELAY WAS IMMEDIATELY RESET, AND THE INSTRUMENT FAIL SETPOINT WAS VERIFIED TO BE PROPERLY SET. AN INSTRUMENT CHECK WAS PERFORMED AND THE MONITOR WAS OPERATING CORRECTLY. THERE WERE NO APPARENT DEFECTS FOUND WHICH WOULD CAUSE A FAIL SIGNAL. CPIS TRAIN 'A' WAS RESET AND THE MAIN PURGE WAS REESTABLISHED. THE 3RT-7856 INSTRUMENT FAILURE COULD NOT BE REPRODUCED. HOWEVER, AN ENGINEERING EVALUATION IS CURRENTLY IN PROGRESS TO DETERMINE THE AREA AND PROCESS RADIATION MONITOR'S SUSCEPTIBILITY TO NOISE, AND THE RESULTS WILL BE REPORTED IN A REVISION TO LER 84-023 (DOCKET NO. 50-361).

[89] SAN ONOFRE 3 DOCKET 50-362 LER 84-031
CONTAINMENT PURGE ISOLATION SYSTEM ACTUATION.
EVENT DATE: 080384 REPORT DATE: 090484 NSSS: CE TYPE: PWR

(NSIC 191392) ON 8/3/84, AT 1845, WITH A MAIN PURGE IN PROGRESS, THE CONTAINMENT AIRBORNE RADIATION MONITOR 3RE-7804 (EIIS IDENTIFIER RT) REACHED ITS ALARM SETPOINT AND INITIATED THE TRAIN 'A' CONTAINMENT PURGE ISOLATION SYSTEM (CPIS) (EIIS IDENTIFIER VA) DUE TO A BRIEF INCREASE IN CONTAINMENT AIRBORNE ACTIVITY DURING REACTOR COOLANT PUMP SEAL REPLACEMENT. THE OFFSITE DOSE CALCULATION MANUAL (ODCM) LIMIT WAS NOT EXCEEDED SINCE CONTAINMENT WAS ISOLATED AT 1200 CPM (WELL BELOW THE 17,910 CPM ODCM LIMIT). ALL CPIS ACTUATED COMPONENTS FUNCTIONED PROPERLY. AT 2314, 3RE-7804 WAS RESET AND CONTAINMENT PURGE WAS SUBSEQUENTLY REESTABLISHED. THERE ARE NO REASONABLE OR CREDIBLE CIRCUMSTANCES WHICH COULD HAVE INCREASED THE SEVERITY OF THE INCIDENT.

[90] SAN ONOFRE 3 DOCKET 50-362 LER 84-032
HIGH STEAM GENERATOR WATER LEVEL REACTOR TRIP.
EVENT DATE: 080884 REPORT DATE: 090784 NSSS: CE TYPE: PWR

(NSIC 191393) AT 1540, ON AUGUST 8, 1984, WITH UNIT 3 IN MODE 1 AT 15 PERCENT POWER, A REACTOR TRIP OCCURRED ON HIGH STEAM GENERATOR WATER LEVEL. THE TRIP OCCURRED AS A RESULT OF OVERFEEDING THE STEAM GENERATORS DURING MANUAL OPERATION OF THE FEEDWATER CONTROL SYSTEM (FWCS). NO SYSTEM OR COMPONENT MALFUNCTIONED DURING THIS EVENT. MANUAL STEAM GENERATOR LEVEL CONTROL IS DIFFICULT AT LOW POWER DUE TO THE "SHRINK" AND "SWELL" RESPONSES OF STEAM GENERATOR LEVELS. PROCEDURE S023-9-6, "FEEDWATER REGULATING SYSTEM OPERATION," HAS BEEN REVISED TO PROVIDE ADDITIONAL GUIDANCE IN MAINTAINING THE FWCS DURING LOW POWER OPERATIONS. AS PREVIOUSLY REPORTED IN LER 84-020 (DOCKET NO. 50-361) AND LER 84-017 (DOCKET NO. 50-362), DESIGN CHANGES TO OPTIMIZE STEAM GENERATOR WATER LEVEL CONTROL AT ALL POWER LEVELS ARE UNDER CONSIDERATION. THERE ARE NO REASONABLE OR CREDIBLE ALTERNATIVE CIRCUMSTANCES UNDER WHICH THIS EVENT WOULD HAVE BEEN MORE SEVERE.

[91] SEQUOYAH 1 DOCKET 50-327 LER 84-006S
TIME LIMIT FOR 2 OPEN FIRE DOORS EXCEEDED.
EVENT DATE: 092684 REPORT DATE: 102384 NSSS: WE TYPE: PWR

(NSIC 191538) ADMINISTRATIVE ERROR. ON 9/24/84 AT 2140 CST THE PENETRATION FIRE BARRIER BREACH PERMIT (PFBBP) FOR DOOR DE-3 EXPIRED. THE DOOR HAD BEEN BREACHED TO ALLOW VENTILATION TO THE CDWE BUILDING SINCE THE AIR CONDITIONING UNIT WAS INOPERABLE. A FIRE WATCH HAD BEEN ESTABLISHED AND REMAINED IN EFFECT THROUGHOUT THE DOOR BREACH. ON 9/26/84 AT 1030 CST AN AUDIT OF BREACH PERMIT BOOK BY AN ASE REVEALED THE PERMIT HAD EXPIRED. THE DOOR WAS IMMEDIATELY CLOSED. DOOR A-92 WAS FOUND TO BE INOPERABLE BY A FIRE WATCH ON 10/07/84. PENETRATION FIRE BARRIER BREACH PERMIT NO. 1830 WAS WRITTEN AND THE CONTROLS OF TECH SPEC 3.7.12 WERE PLACED IN EFFECT. MAINTENANCE REQUEST (MR) NO. A121506 WAS WRITTEN AND SENT TO BE LOADED INTO THE MR TRACKING SYSTEM. THE MR WAS NOT LOADED INTO THE SYSTEM AND NO WORK WAS PERFORMED ON DOOR DURING THE 7 DAYS THAT BREACH PERMIT NO. 1830 WAS IN EFFECT. ON 10/14/84 PERMIT NO. 1830 EXPIRED AND A SECOND PERMIT, NO. 1907, WAS WRITTEN ALONG WITH A NEW MR, NO. A121508. THE CRAFTSMEN RECEIVED THE MR ON 10/15/84 AND THE DOOR WAS REPAIRED THE SAME DAY.

[92] SUMMER 1 DOCKET 50-395 LER 84-036
DEGRADED FIRE BARRIER.
EVENT DATE: 080884 REPORT DATE: 090784 NSSS: WE TYPE: PWR

(NSIC 191416) ON AUGUST 8, 1984, OPERATIONS QUALITY CONTROL PERSONNEL DISCOVERED MISSING OR DEGRADED KAOWOOL IN BATTERY VENTILATION ROOMS IB-23-01 AND IB-23-02. THE LICENSEE IMMEDIATELY INITIATED ACTION AS REQUIRED BY THE APPLICABLE TECH SPEC

ACTION STATEMENT. REPAIRS TO THE KAOWOOL WERE COMPLETED AND THE FIRE RATED ASSEMBLIES WERE DECLARED OPERABLE ON AUGUST 13, 1984. AN INVESTIGATION BY THE LICENSEE FAILED TO IDENTIFY THE CAUSE OF THIS EVENT. AN INTEROFFICE NOTICE HAS BEEN DISTRIBUTED TO ALL RESPONSIBLE MANAGERS REQUIRING THAT THEY EMPHASIZE THE IMPORTANCE OF THE KAOWOOL FIRE BARRIER PROGRAM TO THEIR PERSONNEL.

[93] SUMMER 1 DOCKET 50-395 LER 84-037
STEAM GENERATOR WIDE RANGE INDICATION DISCREPANCY.
EVENT DATE: 082084 REPORT DATE: 091984 NSSS: WE TYPE: PWR

(NSIC 191417) WHILE VALIDATING NEW EMERGENCY OPERATING PROCEDURES ON THE TRAINING SIMULATOR, A DISCREPANCY WAS OBSERVED BETWEEN THE SG WIDE RANGE AND NARROW RANGE LEVEL INDICATIONS AT 100% SG LEVEL. THE LEVEL DISCREPANCY, WHICH ALSO EXISTS WITH THE PLANT, WAS DETERMINED TO BE CAUSED BY THE 'COLD' CALIBRATION OF THE WIDE RANGE LEVEL TRANSMITTER. TECH SPEC TABLES 3.3-10 (ITEM 7) AND 3.3-9 (ITEM 5) EACH REQUIRE THAT 1 SG WIDE RANGE LEVEL CHANNEL PER SG BE OPERABLE IN MODES 1, 2, AND 3. THESE CHANNELS ARE PRESENTLY 'COLD' CALIBRATED IN ACCORDANCE WITH FINAL SAFETY ANALYSIS REPORT TABLE 7.5-2. INFORMATION HAS BEEN MADE AVAILABLE TO THE OPERATORS IN THE CONTROL ROOM FOR CORRELATING 'COLD' CALIBRATED INDICATIONS TO THE CORRESPONDING 'HOT PLANT' LEVELS. THE LICENSEE WILL CONTINUE TO EVALUATE THIS CONDITION TO DETERMINE IF ANY ADDITIONAL ACTION IS REQUIRED.

[94] SUSQUEHANNA 1 DOCKET 50-387 LER 84-000S
FIRE BARRIER PENETRATION LEFT OPEN.
EVENT DATE: 121483 REPORT DATE: 012084 NSSS: GE TYPE: BWR

(NSIC 191514) ADMINISTRATIVE ERROR. THIS SPECIAL REPORT DOCUMENTS THE CONDITION WHEREBY A FIRE BARRIER PENETRATION WAS NOT SEALED FOR A PERIOD IN EXCESS OF 7 DAYS IN ACCORDANCE WITH THE ACTION STATEMENT FOR TECH SPEC 3.7.7.A. ON DEC 14, 1983, THE SEAL FOR PENETRATION X21-6-D20 WAS VIOLATED TO IMPLEMENT CABLE PULLING FOR A MODIFICATION. A FIRE WATCH WAS ESTABLISHED IN ACCORDANCE WITH THE ACTION STATEMENT FOR TECH SPEC 3.7.7.A AND WAS MAINTAINED UNTIL THE PENETRATION SEAL WAS REPLACED AND DECLARED OPERABLE ON DEC 21, 1983, SEVERAL HOURS AFTER THE SEVEN DAY LIMIT HAD BEEN EXCEEDED.

[95] SUSQUEHANNA 2 DOCKET 50-388 LER 84-012
CORE SPRAY ISOLATION LOGIC MODIFICATION ADVERSELY AFFECTS ESF LOGIC.
EVENT DATE: 070984 REPORT DATE: 080984 NSSS: GE TYPE: BWR
OTHER UNITS INVOLVED: SUSQUEHANNA 1 (BWR)

(NSIC 191413) DURING MODIFICATION OF THE CORE SPRAY LOGIC, TWO (2) CONTROL POWER FUSES WERE REMOVED. THESE FUSES WERE MENTIONED IN THE CONSTRUCTION WORK ORDER (CWO) AS A POSSIBLE BLOCKING POINT FOR PERSONNEL PROTECTION. THE FUSES WERE CONSTRUED TO BE A LOCAL BLOCKING POINT. THESE FUSES WERE NOT MENTIONED IN THE EQUIPMENT RELEASE FORM (ERF), WHICH TRACKS EQUIPMENT TAKEN OUT OF SERVICE, SINCE OTHER SUITABLE BLOCKING WAS IDENTIFIED. THE BELOW EQUIPMENT WAS AFFECTED UPON FUSE REMOVAL: 1) THE "A" LOOP OF CORE SPRAY WOULD NOT RECEIVE AN INJECTION SIGNAL TO THE A&C CORE SPRAY PUMPS AND THE "A" INJECTION VALVES WOULD NOT POSITION PROPERLY. (LCO WAS SPECIFIED PRIOR TO WORK RELEASE.) 2) REMOVED THE UNIT 2 LOCA SIGNAL TO THE "A" DIESEL GENERATOR. 3) REMOVED THE RHR SIGNALS FROM "A" AND "C" CHANNELS FOR RX VESSEL LOW LEVEL/RX VESSEL LOW PRESSURE. 4) REMOVED THE HPCI SIGNALS FROM "A" AND "C" CHANNELS FOR THE RX VESSEL LOW LEVEL/HI DRYWELL PRESSURE. 5) THE "A" AND "C" 4KV ESS BUSES IN UNIT 1 AND UNIT 2 WOULD NOT RECEIVE A LOAD SHED INITIATION TIME CHANGE IF A LOCA WAS PRESENT. AN INVESTIGATION WAS PERFORMED AND THE FUSES WERE REINSTALLED. CORRECTIVE ACTIONS WERE TAKEN WHICH STOPPED ALL ELECTRICAL PLANT MODIFICATION WORK UNTIL TRAINING SESSIONS WERE CONDUCTED TO PREVENT A RECURRENCE.

[96] SUSQUEHANNA 2 DOCKET 50-388 LER 84-013
LOSS OF OFFSITE POWER AND DIESEL GENERATORS FAIL TO START.
EVENT DATE: 072684 REPORT DATE: 082484 NSSS: GE TYPE: BWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 191414) ON 7/26/84, AT 0137, WITH UNIT 2 OPERATING AT 30% POWER, A LOSS OF TURBINE GENERATOR AND OFFSITE POWER, STARTUP TEST ST31.1 WAS INITIATED FROM THE CONTROL ROOM BY OPENING THE UNIT 2 MAIN GENERATOR OUTPUT BREAKERS AND THE STARTUP TRANSFORMER BREAKER. THIS RESULTED IN A SCRAM DUE TO TURBINE CONTROL VALVE FAST CLOSURE AND DEENERGIZATION OF THE 13.8KV, 4.16KV. THE ABOVE EVENTS WERE EXPECTED PLANT RESPONSE PER ST31.1. THE 4 EMERGENCY DIESEL GENERATORS WHICH PROVIDE POWER TO THE 4.16KV BUS DID NOT AUTOMATICALLY START, DUE TO A MISALIGNMENT DURING THE BREAKER LINE UP REQUIRED FOR ST31.1. THE DC KNIFE SWITCHES WHICH WERE OPENED WERE FOR THE BUS LOGIC CIRCUITS, WHICH INCLUDED THE DIESEL GENERATOR START RELAYS. THIS KNIFE SWITCH WAS OPENED INSTEAD OF THE KNIFE SWITCH FOR THE CONTROL AND TRIP DC POWER FOR THE 4.16KV FEEDER BREAKERS. A RELIEF VALVE OPENED TO LIMIT THE REACTOR VESSEL PRESSURE. THE LOSS OF REACTOR VESSEL WATER INVENTORY FROM THE RELIEF VALVE OPENING CAUSED A DECREASE IN WATER LEVEL. RCIC WAS MANUALLY INITIATED TO MAINTAIN VESSEL LEVEL, POWER WAS RESTORED ON THE FIRST OF FOUR 4.16KV BUSES 11 MIN. INTO THE TRANSIENT AND THE FINAL 4.16KV BUS WAS RE-ENERGIZED 17 MIN. INTO THE TRANSIENT. THIS IS REENFORCED BY THE FACT THAT THE OPERATOR HAS AT LEAST 8 HOURS TO RESTORE AC POWER BEFORE ANY SAFETY SYSTEM DEGRADATION WOULD BE EXPECTED. (REFERENCE PLA-1136 TO NRC, 6/15/84) 1982).

[97] SUSQUEHANNA 2 DOCKET 50-388 LER 84-016
SURVEILLANCE TEST OF LPCI PUMP DISCHARGE PRESSURE INSTRUMENTATION COMPLETED LATE.
EVENT DATE: 080984 REPORT DATE: 090784 NSSS: GE TYPE: BWR

(NSIC 191415) THE 31-DAY SURVEILLANCE TEST OF THE RESIDUAL HEAT REMOVAL LOW PRESSURE COOLANT INJECTION MODE PUMP DISCHARGE PRESSURE INSTRUMENTATION WAS RELEASED BY THE INSTRUMENTATION AND CONTROLS (I&C) SCHEDULER TO THE PROPER I&C ASSISTANT FOREMAN FOR COMPLETION. THE ISSUANCE OCCURRED, PER ESTABLISHED PRACTICE, SEVERAL DAYS PRIOR TO THE TEST'S DUE DATE OF AUGUST 1, 1984. BECAUSE OF A VERBAL MISCOMMUNICATION, BETWEEN THE I&C ASSISTANT FOREMAN AND THE SCHEDULER, THE SCHEDULER BELIEVED THAT THE SURVEILLANCE TEST HAD BEEN COMPLETED. THE FACT THAT THE SURVEILLANCE TEST HAD NOT BEEN PERFORMED WAS NOT IDENTIFIED UNTIL APPROXIMATELY MID-MORNING ON AUGUST 9, 1984. THE RESULT WAS THAT THE MAXIMUM ALLOWABLE EXTENSION OF THE SURVEILLANCE INTERVAL WAS EXCEEDED BY 3.3. HOURS. TO PREVENT RECURRENCE, AN I&C SHOP INSTRUCTION WILL BE IMPLEMENTED TO ROUTE COMPLETED SURVEILLANCE TESTS THROUGH THE I&C SCHEDULER PRIOR TO THE ASSISTANT FOREMAN'S REVIEW. THE SCHEDULER WILL THEN COMPARE THE COMPLETION DATES WITH VARIOUS PROCEDURE STATUS PRINTOUTS ON A DAILY BASIS.

[98] TROJAN DOCKET 50-344 LER 84-012
SPENT FUEL EXHAUST VENTILATION INOPERABILITY DURING NEW FUEL MOVEMENT.
EVENT DATE: 072784 REPORT DATE: 082284 NSSS: WE TYPE: PWR

(NSIC 191216) ON 7-27-84 AT 1730, IN SUPPORT OF REFUELING OUTAGE SCHEDULED ACTIVITIES, NEW NUCLEAR FUEL ASSEMBLIES WERE TRANSFERRED FROM THE NEW FUEL STORAGE ROOM TO THE SPENT FUEL POOL WITHOUT AN OPERABLE TRAIN OF SPENT FUEL POOL VENTILATION IN SERVICE AS REQUIRED BY TECH SPEC 3.9.12. PERSONNEL ERROR OCCURRED BECAUSE THE SPENT FUEL POOL VENTILATION TRAIN THAT WAS PLACED IN SERVICE HAD NOT BEEN TESTED TO PROVE ITS OPERABILITY FOLLOWING A FIRE IN ITS VENTILATION ZONE. THE OPERABLE TRAIN OF VENTILATION WAS SUBSEQUENTLY PLACED IN SERVICE. A CLEARANCE TAG WAS PLACED ON THE INOPERABLE TRAIN FAN TO EXPLICITLY REQUIRE ENGINEERING DEPARTMENT APPROVAL PRIOR TO OPERATION. THE PERSONNEL INVOLVED WERE COUNSELED REGARDING PREMATURE DECLARATION OF EQUIPMENT OPERABILITY. ON 6-26-84, A SMALL FIRE OCCURRED IN THE FUEL BLDG SPENT FUEL TRANSFER CANAL AREA WHEN THE WATER LEVEL IN THE CANAL WAS LOWERED WHILE A WALL-MOUNTED REFUELING LIGHT

REMAINED ENERGIZED. THE LIGHT OVERHEATED, BURNED UP ELECTRICAL CORDS, AND CAUSED SMOKE IN THE AREA AROUND THE TRANSFER CANAL AND SPENT FUEL POOL. THE FIRE WAS PROMPTLY EXTINGUISHED AND THE 'A' TRAIN OF SPENT FUEL POOL EXHAUST VENTILATION WAS TURNED ON TO HELP CLEAR THE AREA OF SMOKE. TECH SPEC 4.9.12.2 REQUIRES THAT IN-SITUATION TESTING BE PERFORMED ON THE VENTILATION FAN, FILTER, AND CHARCOAL ABSORBER TO DEMONSTRATE OPERABILITY FOLLOWING A FIRE IN THE VENTILATION ZONE.

[99] WPPSS 2 DOCKET 50-397 LER 84-061 REV 1
UPDATE ON BREACH OF FIRE BARRIER IN REACTOR BUILDING.
EVENT DATE: 061484 REPORT DATE: 072684 NSSS: GE TYPE: BWR
VENDOR: BURNS & ROE, INC.

(NSIC 191225) REV 0 OF LER 84-061 REPORTED AN OPEN FLOOR DRAIN WHICH WAS DISCOVERED IN THE REACTOR BLDG AND CONSTITUTED A VIOLATION OF THE FIRE BARRIER SEPARATING THE ROOM FROM OTHER FIRE ZONES. AS A RESULT, AN HOURLY FIRE WATCH WAS INSTITUTED (TSAS 3.7.7) AND AN INVESTIGATION INTO THE CAUSE OF THE CONDITION WAS INITIATED. THE ENGINEERING REVIEW OF THIS CONDITION HAS BEEN COMPLETED ALONG WITH A WALKDOWN OF OTHER AREAS IN THE PLANT. DUE TO THIS EFFORT, 2 ADDITIONAL DRAINS PENETPATING FIRE ZONES IN THE REACTOR BLDG WERE DISCOVERED.

[100] WPPSS 2 DOCKET 50-397 LER 84-034 REV 1
UPDATE ON CONTAINMENT TEMPERATURE MONITORING.
EVENT DATE: 070384 REPORT DATE: 072684 NSSS: GE TYPE: BWR

(NSIC 191436) REV 0 OF LER 034 WAS SUBMITTED ON MAY 11, 1984 DESCRIBING DRYWELL TEMPERATURE INDICATIONS ABOVE 150 F. THIS REV IS BEING ISSUED TO REPORT THAT ON JULY 3, 1984 DRYWELL TEMPERATURE MONITOR CMS-TI-55 INDICATED ABOVE 150 F FOR A PERIOD OF GREATER THAN 8 HRS AND THUS, ALSO FALLS INTO THE REPORTING CATEGORY OF TECH SPEC REQUIREMENT 3.7.8.A. THIS CONDITION IS A CONTINUATION OF THE ORIGINAL PROBLEM ADDRESSED IN REV 0. THE AVERAGE DRYWELL TEMPERATURE DID NOT EXCEED 135 F AS PER TECH SPEC 3.6.1.7 DURING THE EVENT OF JULY 3, 1984.

[101] WPPSS 2 DOCKET 50-397 LER 84-080
TURBINE INADVERTENTLY PRESSSURIZED FOLLOWING TRIP TEST.
EVENT DATE: 080184 REPORT DATE: 087484 NSSS: GE TYPE: BWR

(NSIC 191227) A TURBINE STOP VALVE CLOSURE REACTOR TRIP OCCURRED AS A RESULT OF PRESSURIZING THE TURBINE FIRST STAGE SHELL ABOVE THE 30% POWER EQUIVALENT PRESSURE SWITCH SETPOINT DURING A ROUTINE OPERATOR INITIATED TURBINE TRIP TEST WHILE STARTING UP THE TURBINE GENERATOR. DURING THE POWER ASCENSION TESTING PROGRAM (WHILE PERFORMING A TURBINE GENERATOR STARTUP), A ROUTINE OPERATOR-INITIATED TURBINE TRIP WAS ACCOMPLISHED. AS TURBINE SPEED WAS STABILIZING, THE OPERATOR BEGAN RECOVERY FROM THE TRIP BY RELATCHING THE TURBINE AND INITIATING TV/GV TRANSFER (THROTTLE VALVE/GOVERNOR VALVE CONTROL). DUE TO MINOR DEVIATIONS IN THE THROTTLE VALVE POSITION AND TURBINE SPEED DEH (DIGITAL ELECTRO-HYDRAULIC TURBINE CONTROL SYSTEM) INPUT CIRCUIT PARAMETERS AND THE EFFECT OF TURBINE SPEED NOT BEING COMPLETELY STABILIZED, THE CONTROL SYSTEM RESPONDED BY OPENING BOTH THE GOVERNOR AND THROTTLE VALVES AT THE SAME TIME. THIS ACTION ALLOWED THE TURBINE FIRST STAGE TO BE PRESSURIZED TO GREATER THAN 131.5 PSIG AND ACTUATE THE PRESSURE SWITCHES WHICH PROVIDE INPUT TO THE RPS FOR THE LESS THAN 30% POWER LEVEL BYPASS OF THE TURBINE STOP VALVE CLOSURE REACTOR TRIP. WHEN THE 30% POWER BYPASS WAS REMOVED, SINCE TURBINE THROTTLE VALVES WERE POSITIONED LESS THAN 90% OPEN SETPOINT, A REACTOR TRIP OCCURRED. IMMEDIATE CORRECTIVE ACTION WAS TO RECOVER THE PLANT PER OPERATING PROCEDURES, TROUBLESHOOT AND RECALIBRATE DEH INPUT CIRCUITRY. NO FURTHER ACTION WAS NECESSARY.

[102] WPPSS 2 DOCKET 50-397 LER 84-083
MANUAL SCRAM OF REACTOR DUE TO HIGH REACTOR COOLANT CONDUCTIVITY.
EVENT DATE: 080284 REPORT DATE: 083084 NSSS: GE TYPE: BWR
VENDOR: WESTINGHOUSE ELECTRIC CORP.

(NSIC 191228) A MANUAL SCRAM WAS IMPLEMENTED AT 0437 ON 8-12-84 DUE TO HIGH REACTOR WATER CONDUCTIVITY. THE PLANT WAS IN MODE 2 AT 1% POWER AT THE TIME OF SCRAM AS A RESULT OF AN ORDERLY SHUTDOWN FROM 60% POWER DUE TO CONDENSER WATER INLEAKAGE. ACTIONS TAKEN TO AMELIORATE THE CONDENSER LEAK WERE: REDUCTION OF POWER AT THE ONSET OF CONDUCTIVITY INCREASE; MANUAL SCRAM WHEN REACTOR WATER CONDUCTIVITY WAS OBSERVED TO BE ABOVE THE TECH SPEC LIMIT OF 10 UMHO/CM; FEEDWATER INPUT WAS RESTRICTED; CLEANUP DEMINERALIZERS WERE PRECOATED AND RETURNED TO SERVICE; CONTROL ROD DRIVE WATER WAS SWITCHED TO THE CONDENSATE STORAGE SUPPLY TO MINIMIZE IMPURITY INPUT; THE HOTWELL WAS ISOLATED FROM THE CONDENSATE STORAGE TANKS TO MINIMIZE CROSS CONTAMINATION; AND CONDENSER VACUUM WAS BROKEN AND CIRCULATING WATER SHUTOFF TO REDUCE FURTHER IMPURITY INPUT TO THE HOTWELL.

[103] WPPSS 2 DOCKET 50-397 LER 84-090
RPS ACTUATION ON LOW RPV LEVEL.
EVENT DATE: 080784 REPORT DATE: 090684 NSSS: GE TYPE: BWR

(NSIC 191423) ON 08/07/84 WITH THE REACTOR IN HOT SHUTDOWN, AND THE CONDENSATE FEEDWATER SYSTEM NOT IN SERVICE YET, THE MAIN STEAM LINE DRAIN VALVES WERE OPENED IN ACCORDANCE WITH THE MINIMUM STARTUP CHECKLIST. THE OPEN DRAIN VALVES PROVIDED A DIRECT FLOWPATH FROM THE RPV TO THE MAIN CONDENSER WHICH CAUSED RPV LEVEL TO DECREASE TO +13" RESULTING IN A RPS ACTUATION. THE DRAIN VALVES WERE CLOSED BY OPERATOR ACTION AND THE RPV LEVEL RESTORED TO NORMAL. ONSHIFT OPERATORS INVOLVED IN THE EVENT WERE BRIEFED IMMEDIATELY ON THE CAUSE OF THE RPV LEVEL DECREASE AND ON THE IMPORTANCE OF OBSERVATION OF SAFETY RELATED PLANT PARAMETERS.

[104] WPPSS 2 DOCKET 50-397 LER 84-079
REACTOR SCRAM DUE TO LOW REACTOR WATER LEVEL.
EVENT DATE: 080984 REPORT DATE: 082484 NSSS: GE TYPE: BWR

(NSIC 191226) A REACTOR SCRAM OCCURRED AUTOMATICALLY ON LOW REACTOR WATER LEVEL AFTER THE REACTOR FEED WATER (RFW) PUMP TRIPPED DUE TO LOSS OF CONTROL POWER. WHILE PREPARING TO ROLL THE TURBINE IN A NORMAL RAMP UP MODE THE CONTROL ROOM OPERATOR STARTED THE 3RD LARGE CIRCULATING WATER PUMP. AT THIS TIME, THE PLANT WAS BEING SUPPLIED BY THE STARTUP TRANSFORMER WHICH WAS HEAVILY LOADED. THE LARGE STARTING CURRENT FOR THIS MOTOR (3300 AMPS) COINCIDENT WITH THE HEAVILY LOADED CONDITION OF THE STARTUP TRANSFORMER, RESULTED IN A VOLTAGE DROP ON THE SECONDARY OF THE TRANSFORMER. THIS VOLTAGE DROPPED BELOW THE SETPOINT FOR THE 2ND LEVEL (DEGRADED) UNDERVOLTAGE PROTECTION. THE VOLTAGE HAD NOT EXCEEDED THE RESET SETPOINT WITHIN THE 8 SEC TIME DELAY AND THE 2ND LEVEL UNDERVOLTAGE CIRCUITRY INITIATED LOAD SHEDDING AS DESIGNED. THE TEMPORARY LOSS OF POWER TO THE CONTROL CIRCUITRY RESULTED IN TRIPPING OF THE RFW PUMP. THE LOSS OF FEEDWATER TO THE REACTOR RESULTED IN A DROP OF REACTOR WATER LEVEL TO LEVEL 3 (-12") AND THE REACTOR SCRAMMED AS DESIGNED. REACTOR WATER LEVEL WAS RESTORED USING THE RCIC SYSTEM. THE PLANT ELECTRICAL LINEUP WAS RESTORED TO A NORMAL CONFIGURATION. ALL SAFETY SYSTEMS FUNCTIONED AS DESIGNED.

[105] WPPSS 2 DOCKET 50-397 LER 84-085
TECHNICAL SPECIFICATION VIOLATION IN DIESEL GENERATOR SURVEILLANCE.
EVENT DATE: 081184 REPORT DATE: 090684 NSSS: GE TYPE: BWR
VENDOR: GENERAL MOTORS

(NSIC 191418) EVENT 1 - 08-11-84 PERFORMED SURVEILLANCE ON #2 STANDBY DG (DG1B)

WITHOUT PRELUBE/WARMUP IN VIOLATION OF TECH SPEC 4.8.1.1.2.A.4. EVENT 2 - 08-17-84 PERFORMED SURVEILLANCE ON #1 STANDBY DG (DG1A) WITHOUT PRELUBE/WARMUP IN VIOLATION OF TECH SPEC 4.8.1.1.2.A.4. EVENTS ARE THE RESULT OF PREVIOUS CHANGES TO TECH SPEC REQUIRING ACTION THAT THE COMPONENT DESIGN CURRENTLY DOES NOT ALLOW. EVENT 1 - OPERATING MODE 1, POWER LEVEL 037. EVENT 2 - OPERATING MODE 2, POWER LEVEL 002.

[106] WPPSS 2 DOCKET 50-397 LER 84-086
FAILURE TO CONDUCT FIRE TOUR.
EVENT DATE: 081484 REPORT DATE: 090684 NSSS: GE TYPE: BWR

(NSIC 191419) ON 8-14-84 THE EQUIPMENT OPERATOR ASSIGNED TO PERFORM HOURLY FIRE TOURS PURSUANT TO TECH SPEC 3.7.7 FAILED TO COMPLETE APPROX 1/2 OF THE REQUIRED CHECKS FOR 0500 AND 0600. FIRE TOUR WAS REESTABLISHED AND CONTINUED IN THE MANNER PRESCRIBED BY TECH SPEC 3.7.7. OPERATOR INVOLVED WAS STRONGLY REPRIMANDED WITH EMPHASIS ON TIMELY PERFORMANCE OF TECH SPEC RELATED DUTIES. NO FURTHER CORRECTIVE ACTION IS REQUIRED AS THIS WAS A SINGLE OCCURRENCE INVOLVING A SINGLE OPERATOR.

[107] WPPSS 2 DOCKET 50-397 LER 84-088
FAILURE TO SAMPLE STANDBY SERVICE WATER.
EVENT DATE: 081484 REPORT DATE: 090684 NSSS: GE TYPE: BWR
VENDOR: KAMAN SCIENCES CORP.

(NSIC 191421) ON 8-14-84 IT WAS DETERMINED THAT THE RESIDUAL HEAT REMOVAL STANDBY SERVICE WATER MONITOR LOOP B (SW-SR-43) HAD BEEN INOPERABLE SINCE 08-08-84 BECAUSE OF A LEAKING PUMP SEAL AT THE SAMPLE RACK. SAMPLING AS REQUIRED BY TECH SPEC 3.3.7.11 WAS NOT BEING PERFORMED AND WAS NOT FULLY IMPLEMENTED UNTIL 08-23-84. IN THIS PERIOD OF TIME, THE PLANT MADE SEVERAL START-UPS, OPERATED AT A MAXIMUM OF ABOUT 650 MWE, AND STOOD IN HOT STANDBY.

[108] WPPSS 2 DOCKET 50-397 LER 84-089
SCRAM INITIATED BY SURVEILLANCE TESTING.
EVENT DATE: 081684 REPORT DATE: 090684 NSSS: GE TYPE: BWR
VENDOR: GENERAL ELECTRIC CORP. (NUCLEAR ENG DIV)

(NSIC 191422) INSTRUMENT AND CONTROL (I&C) TECHNICIANS WERE PERFORMING SURVEILLANCE TESTS ON CONTROL ROD BLOCK RECIRCULATION FLOW COMPARATOR, UNIT 1, AND MAIN STEAM LINE RADIATION MONITORS. EACH SURVEILLANCE GENERATED A 1/2 SCRAM SIGNAL IN THE REACTOR PROTECTION SYSTEM CHANNELS A AND B, THUS CREATING A DIVISION I RPS SCRAM. THE RECIRCULATION FLOW COMPARATOR SURVEILLANCE PROCEDURE HAD NOT INDICATED THAT 1/2 SCRAM SIGNAL WOULD BE GENERATED.

[109] WPPSS 2 DOCKET 50-397 LER 84-087
ROD MOVEMENT NOT VERIFIED.
EVENT DATE: 081884 REPORT DATE: 090684 NSSS: GE TYPE: BWR

(NSIC 191420) DURING PERFORMANCE OF A SURVEILLANCE PROCEDURE IT WAS NOTED THAT THE ROD WORTH MINIMIZER (RWM) DID NOT INITIATE A SELECT ERROR LIGHT WHEN AN OUT OF SEQUENCE ROD WAS SELECTED. A PROCEDURE DEVIATION WAS IMPLEMENTED WHICH DELETED THE PORTION WHICH VERIFIED THE SELECT ERROR. THUS THE "SELECT ERROR" WAS NOT CONFIRMED PRIOR TO AUTOMATIC INITIATION OF RWM. SINCE THE SURVEILLANCE PROCEDURE NOW DID NOT SPECIFY "SELECT ERROR" VERIFICATION, THE RWM WAS NOT DECLARED INOPERABLE AND A SECOND LICENSED OPERATOR WAS NOT STATIONED TO VERIFY CONTROL ROD MOVEMENT AND PATTERN.

[110] WPPSS 2 DOCKET 50-397 LER 84-091
RHR ISOLATION AND REACTOR LOW WATER LEVEL TRIP.
EVENT DATE: 082384 REPORT DATE: 091784 NSSS: GE TYPE: BWR

(NSIC 191424) WITH THE REACTOR SHUTDOWN AND AT 60 PSIG, RHR LOOP B WAS BEING WARMED UP FOR SHUTDOWN COOLING (SDC) OPERATION WHEN RHR-V-8 SHUT AUTOMATICALLY. THE CAUSE OF THIS ISOLATION WAS APPARENTLY HIGH SDC SUCTION FLOW. HOWEVER NO ANNUNCIATION WAS PROVIDED FOR BY DESIGN, AND THE ISOLATION WENT UNNOTICED FOR APPROXIMATELY 15 MINUTES. DURING THIS TIME, THE RHR LOOP B PARTIALLY DRAINED (FLOWPATH WAS TO RADWASTE THROUGH THE WARMUP LINE VIA RHR-V-40). WHEN RHR-V-8 WAS REOPENED, A LOW REACTOR WATER LEVEL RPS ACTUATION OCCURRED. WHEN RHR-V-8 WAS REOPENED, REACTOR WATER BEGAN TO FILL THE PARTIALLY DRAINED RHR LOOP. RHR-V-8 WAS IMMEDIATELY SHUT BY THE CONTROL ROOM OPERATOR WHEN REACTOR WATER LEVEL STARTED TO DECREASE AT A RAPID RATE. THE LOWEST REACTOR WATER LEVEL RECORDED WAS +10" DURING THIS EVENT.

[111] YANKEE ROWE DOCKET 50-029 LER 83-035 REV 1
UPDATE ON STEAM GENERATOR BLOWDOWN RADIATION MONITOR FAILED.
EVENT DATE: 100383 REPORT DATE: 070684 NSSS: WE TYPE: PWR
VENDOR: NUCLEAR RESEARCH CORP.

(NSIC 191183) WHILE IN MODE 1, OPERATING AT FULL POWER, THE NUMBER 4 SG BLOWDOWN RADIATION MONITOR FAILED. THIS IS CONTRARY TO TECH SPECS TABLE 3.3-4. PREVIOUS FAILURE OF THIS NATURE WAS REPORTED IN LER 82-11. THE SG BLOWDOWN TANK RADIATION MONITOR WAS AVAILABLE AND OPERATIONAL, AND A TEMPORARY CONTINUOUS RADIATION MONITOR WAS INSTALLED DURING THIS TIME. THIS EVENT HAS BEEN ATTRIBUTED TO BUILDUP OF DIRT/TARNISH ON THE ELECTRICAL CONTACTS ON THE RATEMETER CARD, PB-3, AND ON THE HIGH VOLTAGE OPERATE AND TEST SWITCH, S-3. THE RATEMETER IS A MODEL AR2S, MADE BY NUCLEAR RESEARCH CORP. ALL CONTACTS WERE CLEANED AND POLISHED AND COMPONENTS RETURNED TO SERVICE.

[112] ZION 1 DOCKET 50-295 LER 82-038 REV 1
UPDATE ON FAILURE OF LOW LEVEL AMPLIFIER ITM-431B.
EVENT DATE: 101582 REPORT DATE: 082284 NSSS: WE TYPE: PWR
VENDOR: HAGAN CORPORATION

(NSIC 191182) THIS REPORT UPDATES LER 50-295/82-38/03-L-0. ON 10-1-82, ITM-431B NARROW RANGE RTD'S AMPLIFIER FAILED. A FAILURE ANALYSIS ON THE UNIT, PERFORMED BY WESTINGHOUSE ELECTRIC CORP., REVEALED INCORRECT CAPACITOR VOLTAGE VALUES ON THE DEVICE WERE THE CAUSE FOR BREAKDOWN. TO REPAIR THE UNIT, WESTINGHOUSE REPLACED THESE COMPONENTS AND RETURNED THE MODULE. ZION STATION HAS IMPLEMENTED IMPROVED QUALITY ASSURANCE PROCEDURES FOR MAINTENANCE ACTIVITIES ON SAFETY-RELATED PARTS AND HAS CONDUCTED A SPECIFIC TRAINING SESSION AS A RESULT OF THIS OCCURRENCE. NO FURTHER ACTION IS REQUIRED.

COMPONENT INDEX

This index is based on component and component-related keywords assigned by the NSIC staff when the summaries of the LERs are prepared for computer entry.

SYSTEM INDEX

This index is based on system and system-related keywords assigned by the NSIC staff when the summaries of the LERs are prepared for computer entry.

SYSTEM INDEX

KEYWORD INDEX

This index is based on the keywords assigned by the NSIC staff when the summaries of the LERs are prepared for computer entry.

KEYWORD INDEX

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13. ABSTRACT (200 words or less)

This monthly report contains Licensee Event Report (LER) operational information that was processed into the LER data file of the Nuclear Safety Information Center (NSIC) during the one month period identified on the cover of the document. The LERs, from which this information is derived, are submitted to the Nuclear Regulatory Commission (NRC) by nuclear power plant licensees in accordance with federal regulations. Procedures for LER reporting for those events (and revisions to those events) occurring prior to 1984 are described in NRC Regulatory Guide 1.16 and NUREG-0161, Instructions for Preparation of Data Entry Sheets for Licensee Event Reports. For those events occurring on and after January 1, 1984, LERs are being submitted in accordance with the revised rule contained in Title 10 Part 50.73 of the Code of Federal Regulations (10 CFR 50.73-144) 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 the chronologically by event date for each facility. Component, system, keyword, sytem and general keyword indexes are assigned by the computer using correlation tables from the Sequence Coding and Search System.

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