CP&L
Carolina Power & Light Company

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MAR 27 1992

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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

BRUNSWICK STEAM ELECTRIC PLANT UNIT 1
DOCKET NO. 50-325
LICENSE NO. DRP-71
LICENSEE EVENT REPORT 1-92-005

Gentlemen:

In accordance with Title 10 of the Code of Federal Regulations, the enclosed Licensee Event Report is submitted. This report fulfills the requirement for a written report within thirty (30) days of a reportable occurrence and is submitted in accordance with the format set forth in NUREG-1022, September 1983.

Very truly yours,

J. W. Spencer, General Manager
Brunswick Nuclear Project

GT/

Enclosure

cc: Mr. S. D. Ebneter
Mr. N. B. Le
BSEP NRC Resident Office

IE22
1/1

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Brunswick Steam Electric Plant Unit 1	05000325	1

TITLE (4) REACTOR SCRAM DURING STOP VALVE TESTING

EVENT DATE (5)			LER NUMBER (6)					REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR		SEQ. NO.		REV. NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
02	29	92	92	-	05	-	0	03	27	92		

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)							
			20.402(b)		20.405(c)	X	50.73(a)(2)(iv)		73.71(b)
POWER LEVEL (10)	80		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)
			20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER (Specify in Abstract and Text)
			20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		
			20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Glen M. Thearling, Regulatory Compliance Specialist	(919) 457-2038

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	TG	XCV	C084	Y							

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single space typewritten lines) (16)

At 23:00 on February 29, 1992, Unit 1 reactor was at approximately 80% reactor power for Main Turbine Stop Valve (TSV) testing which was in progress, when a reactor scram occurred. During the testing on the "A1" Reactor Protection System (RPS) Logic Channel, a Turbine Stop Valve closure, "B1" (RPS) logic channel trip occurred. The simultaneous trip of these two logic channels resulted in a full scram signal to Unit 1. Analysis of the scram data indicated the full scram signal was caused by the closure of TSV's #1 and #3 in addition to the expected closure of TSV #2. The unexpected full scram is attributed to a circuit malfunction in the Master/Slave logic used for TSV #2. This circuit uses an "inhibit" to allow individual TSV testing. Such a malfunction during #2 TSV testing, would signal TSV's #1, #3, and #4 to begin closing, when TSV #2 is closed below 95% open.

Following the reactor scram, reactor vessel water level decreased below the low level 1 setpoint (162.5") and briefly approached the low level 2 setpoint (112"). This level decrease is normal during a high power reactor scram. As designed, the low level 1 signal resulted in Primary Containment Isolation System (PCIS) Groups 2 (Drywell Floor and Equipment Drains), 6 (Containment Atmosphere Control) isolations, and an isolation signal to the normally closed Group 8 (Residual Heat Removal Shutdown Cooling). As reactor vessel level approached the low level 2 setpoint, the Reactor Core Isolation Cooling System automatically initiated and injected, Standby Gas Trains initiated, and Secondary Containment and the PCIS Group 3 (Reactor Water Cleanup) isolated. As reactor vessel water level was only briefly at the low level 2 setpoint, High Pressure Coolant Injection (HPCI) initiated but did not inject. The safety significance of this isolated event is minimal as Safety Systems functioned as designed.

INITIAL CONDITIONS

At 23:00 on February 29, 1992, Unit 1 reactor power had been reduced to approximately 80% to support Main Turbine Stop Valve Testing (TSV). A surveillance (1-MST-RPS35R) on the TSV's was being conducted to verify response time for the "A1" Reactor Protection System (RPS) trip logic. The Emergency Core Cooling Systems were operable.

EVENT NARRATIVE

At 23:00 on February 29, 1992, during the testing on the "A1" RPS Logic Channel, a TSV closure trip on the "B1" Reactor Protection System (RPS) logic Channel occurred. The simultaneous trip of these two logic channels resulted in a full scram signal to Unit 1.

The Main Turbine Electro-Hydraulic Control (EHC) circuitry controlling the TSV's is arranged in a Master/Slave configuration with the #2 TSV functioning as the Master. During normal operation, if TSV #2 is stroked open or closed, the remaining TSV's 1, 3, and 4 would follow. During the testing, TSV #2 is closed to below 95% full open using a test pushbutton. To allow testing of the #2 TSV without affecting the other TSV's, an "inhibit" circuit defeats the Master/Slave circuit. The operator releases the test pushbutton after the "Turbine Stop Valve Closure Trip" annunciator has alarmed and the signal is received in the "A" RPS logic. The RPS logic is designed such that two TSV's not full open are needed to trip one logic train. The surveillance simulated closure of one TSV in the "A1" RPS trip logic while the second TSV in this logic channel was stroked, allowing a response time measurement of the half Scram function actuation.

Analysis of the scram data indicated the full scram was caused by the closure of TSV's #1 and #3 in addition to the planned closure of TSV #2. The closure of TSV's #1 and #3 de-energized the "B1" RPS logic and initiated a full scram signal. The "B1" logic trip was logged on the Process Computer which indicated the normally closed contacts of the RPS logic opened. This documents that the TSV's #1 and #3 actually moved. There was no indication of EHC hydraulic pressure problems which could have caused these TSV's to close.

Following the reactor scram, reactor vessel water level decreased below the low level 1 setpoint (162.5") and approached the low level 2 setpoint (112") for a brief period. This reactor vessel level decrease is normal a during high power reactor scram. As designed the low level 1 signal resulted in isolations of the Primary Containment Isolation System (PCIS) Groups 2 (Drywell Floor and Equipment Drains), 6 (Containment Atmosphere Control), and an isolation signal to the normally closed 8 (Shutdown Cooling) isolations occurring per design. As reactor vessel level approached the low level 2 setpoint, the Reactor Core Isolation Cooling System (RCIC) automatically initiated and injected, the Reactor Building (Secondary Containment) isolated with the Standby Gas Trains initiating, and PCIS Group 3 (Reactor Water Cleanup) isolated. Since the reactor vessel water level was momentarily at the low level 2 setpoint, the High Pressure Coolant Injection System (HPCI) initiated, but reactor level did not stay at this level long enough to allow HPCI to inject. Reactor vessel water level was returned to the normal operating band and Unit 1 was stabilized.

While the HPCI system was being secured two problems were noted that did not impact system operation during this event. The HPCI Turbine Steam Supply Valve (E41-F001) did not give a full closed indication when it was shut and the auxiliary oil pump was found not running, as it should have been, after the HPCI system shutdown.

CAUSE OF EVENT

The only credible explanation was a circuit malfunction which prevented the "inhibit" function of the Master/Slave logic needed to allow individual TSV testing. With such a failure during TSV testing, the closure of TSV #2 below 95% open position would signal valves #1, #3, and #4 to begin closing. The operator would release the test pushbutton when the TSV #2 passed below 90% and the half-scram signal in the "A1" logic was received. TSV #1, #3, and #4, however would continue closing until TSV #2 had reversed and reached the 95% open position. At this position, a limit switch on TSV #2 would actuate to signal TSV #1, #3, and #4 to open. However, before TSV #2 could actuate the 95% limit switch, TSV #1 and #3 actuated their respective 90% RPS limit switches and activated the "B1" RPS logic. Since the "A1" logic of RPS was already tripped, a full scram signal resulted.

To verify the above hypothesis, a test was formulated by the Technical Support Group to simulate the pretrip conditions and re-create the failure. The tests were developed such that if the failure could not be duplicated, a failure of the suspect circuit would be introduced to allow comparison to the data obtained from the actual scram.

The first portion of the test sequence stroked TSV #2 frequently in an attempt to identify a problem with the Master/Slave circuit. Duplication of the failure in the Master/Slave circuit was not observed during testing. There were no problems identified with the Master/Slave circuit that would explain the scram experienced on Unit 1.

The next portion of the testing involved the introduction of a failure in the suspect portion of the Master/Slave circuit. This testing duplicated the sequence of logic actuations that occurred during the actual scram but did not produce a similar time line. The timing inconsistency was traced to a sticking problem with the actuation of the limit switch on the TSV #2 which controls the opening/closing of the remaining TSV's. While the sticking limit switch made data comparisons to the scram more difficult, it is not believed that this sticking problem was a contributor to the scram. The limit switch was inspected and the sluggish behavior was found to be internal to the switch and not with the operating lever. It was found that by slightly tapping the switch enclosure the limit switch contacts would actuate. It is believed that the vibration of the TSV's during power operation would be sufficient to insure operation of the switch. Thus, the sticking of the switch during the initial testing sequence caused the time line to disagree but this discrepancy was explainable. The testing continued with a series of tests where the limit switch actuation was aided by slight tapping on the switch during TSV #2 stroking. This test established data which very closely resembled the timing and sequence of events obtained during the actual scram.

Technical Support concluded the scram on Unit 1 was due to a spurious failure of the Master/Slave circuit of the TSV's. However, the individual component failure in this Master/Slave circuit has not been identified as of this time. Nuclear Engineering Department (NED) and General Electric (GE) have concurred with Technical Support on the failure cause being within the Master/Slave circuit of the TSV's.

Investigation of the E41-F001 valve found that the valve position limit switch that bypasses the torque switch through its travel to the 4% open position was set to open slightly before the switch that provides full closed indication. Testing found these limit switches to be operating within their normal bands. The closing torque switch has a setting that corresponds to approximately 150 psid pressure across the valve disc. The 150 psid value was selected based on the normal shutdown sequence which has the Turbine Stop Valve (E41-V8) go closed before a differential pressure occurs across the E41-F001. In this case the ERFIS trace shows turbine speed and pump discharge pressure rapidly falling off at 23:07:03. The E41-V8 full closed signal did not occur until 11 seconds later. This indicates that the E41-F001 was actually closed against a differential pressure much higher than 150 psid. Therefore the torque switch was open prior to the valve passing the 4% open position. At this time, the

position limit switch opened and the valve motion quickly stopped due to the friction associated with a high differential pressure. Since the position indication limit switch required the valve to be slightly more closed to change state, the full closed indication was never received. The E41-V8 was tested to verify reliable closing from the control room turbine trip push button.

The HPCI auxiliary oil pump investigation looked into the possibility that the pump may have cycled more than usual during the HPCI shutdown and why it was then found off. During a standard HPCI shutdown the auxiliary oil pump will cycle on and off a few times and then stays on until manually secured. The auxiliary oil pump was investigated along with the logic, control switch, and relays. During shutdowns from test runs of the HPCI turbine, the auxiliary oil pump started cycling on and off when turbine speed reached 1000 rpm and then continued cycling for several cycles after the turbine reached 0 rpm. It stayed on until secured with the control switch. The cycling after reaching 0 rpm is caused by a dynamic interaction between the auxiliary oil pump start and the pressure switch when the HPCI oil system piping pressurized. It only occurs on turbine shutdown and does not indicate a problem that would interfere with the ability of HPCI to start and perform its design function. No component problem was found that would have caused the auxiliary oil pump to not continue to run after HPCI was shutdown. One possible but inconclusive cause is that the operator could have inadvertently bumped the control switch (located at the bottom row of switches) during the process of securing the HPCI turbine in accordance with the operating procedure. This would have dropped out the sealed-in E41-K62 relay and allowed the oil pump to stay off.

CORRECTIVE ACTIONS

The sticking limit switch on TSV #2 was replaced.

The replacement of the remaining TSV limit switches will be evaluated.

A temporary test switch was installed on Unit 1's TSV Master/Slave circuit to allow disabling of the circuit during TSV testing, pending an evaluation and permanent repair/replacement of the existing test circuit.

Based on the evaluation results, permanent repair of the Unit 1 TSV test circuit is to be implemented during the next scheduled outage.

Due to the temporary test switch installed on Unit 1, the procedures controlling testing of the TSV's are being revised prior to their next use.

An Evaluation of a design change/component replacement for the Unit 2 TSV test circuit will be performed to allow implementation during the next scheduled outage or a temporary test switch will be installed.

The procedures used to secure HPCI are being evaluated, to see if they can be enhanced by tripping the turbine prior to closing a steam line isolation valve.

Training on this event has been provided to appropriate licensed operators.

SAFETY ASSESSMENT

The safety significance of this scram is minimal as the TSV malfunction occurred in non-safety related test logic and Engineered Safety Feature systems functioned as designed.

PREVIOUS SIMILAR EVENTS

None

EIIS COMPONENT IDENTIFICATION

System/Component	EIIS Code
Turbine Stop Valve/ Limit Switch	TA/ZIS
Main Turbine Control Fluid System/TSV Control	TG/XCV
High Pressure Coolant Injection System/ Limit Switch	BJ/ZIS

SEQUENCE OF EVENTS

FEBRUARY 29, 1992

BRUNSWICK UNIT 1 HAD BEEN SYNCHRONIZED FOR 40 DAYS. REACTOR POWER HAD BEEN LOWERED TO APPROXIMATELY 80% TO SUPPORT A RESPONSE TIME TEST OF THE MAIN TURBINE STOP VALVE LOGIC. THIS TEST (1MST-RPS35R) DOES INSERT A HALF SCRAM ON THE REACTOR PROTECTION SYSTEM "A1" LOGIC. THERE WERE NO OTHER ACTIVITIES OR PROBLEMS THAT WERE EXPECTED TO IMPACT ON POWER GENERATION.

NOTE: THE TIMES SHOWN BELOW ARE TAKEN FROM THE PROCESS COMPUTER. TIMES ARE MODIFIED BY ADDING 7.8 SECONDS TO THE "ERFIS" TIMES TO CORRELATE THE TWO DATA FORMS.

22:00 PRE-JOB BRIEFING ON SURVEILLANCE TEST 1-MST-RPS35R.

22:33 AUTHORIZED PERFORMANCE OF 1-MST-RPS35R. PURPOSE OF THE TEST IS TO MEASURE RESPONSE TIME OF RELAY LOGIC ASSOCIATED WITH THE TURBINE STOP VALVES. DURING THE TEST, TWO HALF SCRAMS ARE TO BE GENERATED. THE HALF SCRAM IS CREATED BY REMOVING A FUSE IN ONE SECTION OF THE LOGIC AND THEN STROKING ONE TURBINE STOP VALVE (TSV) TO LESS THAN 90% OPEN. WHEN THE HALF SCRAM IS RECEIVED, THE TEST BUTTON IS RELEASED AND THE STOP VALVE RE-OPENS. THE HALF SCRAM IS RESET BY THE CONTROL OPERATOR. THE INSTRUMENT AND CONTROL (I&C) TECHNICIANS INSERT THE FUSE AND CONFIRM RELAY CONTACT STATUS. THIS PROCEDURE IS REPEATED A SECOND TIME REVERSING OF ROLE OF THE TWO SENSOR RELAYS. ALL TESTING IS CONFINED TO THE "A1" COMPARTMENT OF PANEL H12-P609.

I&C BEGINS 1MST-RPS35R. AFTER THE TEST RECORDER IS INSTALLED, THEY REMOVE FUSE "1C71-F10E" TO DE-ENERGIZE SENSOR RELAY 1C71-K10E.

22:50:26.9 FOLLOWING THE MST, THE CONTROL OPERATOR HAS DEPRESSED THE TEST PUSH BUTTON AND BEGUN CLOSING TSV NO. 1. WHEN THE VALVE GOES LESS THAN 90% OPEN, THE LIMIT SWITCH DE-ENERGIZES SENSOR RELAY 1C71-K10A. WITH BOTH RELAYS (K10A AND K10E) DROPPED OUT, A HALF SCRAM IS GENERATED. HALF SCRAM ANNUNCIATION AND COMPUTER PRINTOUTS ARE RECEIVED. INSTRUCTIONS IN THE PROCEDURE TELL THE OPERATOR TO RELEASE THE PUSH BUTTON WHEN THE ANNUNCIATOR IS RECEIVED.

22:50:29.0 TSV NO. 1 RETURNS TO GREATER THAN 90% OPEN AND RELAY K10A IS ENERGIZED.

22:50:40.4 CONTROL OPERATOR RESETS THE HALF SCRAM.

THE I&C TECHNICIAN INSERTS FUSE 1C71-F10E AND MAKES A VISUAL CONFIRMATION THAT RELAY K10E HAS PICKED UP AND CONTACTS ARE CLOSED.

FUSE 1C71-F10A IS REMOVED TO DE-ENERGIZE RELAY 1C71-K10A.

22:59:42.5 THE OPERATOR HAS DEPRESSED THE TEST PUSH BUTTON AND BEGUN CLOSING TSV NO. 2. WHEN THE VALVE GOES LESS THAN 90% OPEN, A LIMIT SWITCH DE-ENERGIZES SENSOR RELAY 1C71-K10E. WITH BOTH RELAYS (K10A AND K10E) DROPPED OUT, A HALF SCRAM IS GENERATED. HALF SCRAM ANNUNCIATION AND COMPUTER PRINTOUTS ARE RECEIVED. AS BEFORE, THE OPERATOR RELEASES THE PUSH BUTTON WHEN ANNUNCIATION IS RECEIVED.

22:59:45.3 ALARM "TSV FAST CLOSURE CHNL B1 TRIP" IS PRINTED OUT. THIS SIGNIFIES THAT BOTH RELAYS 1C71-K10B AND K10F DROPPED OUT. THE SCRAM CONTACTORS IN "B" LOGIC (PANEL H12-P611) ARE DROPPED.

WITH BOTH SCRAM CONTACTORS DE-ENERGIZED, A FULL SCRAM IS PRESENT. CONTROL ROD INSERT MOTION BEGINS.

22:59:45:.4 TSV NO. 2 HAS RE-OPENED TO GREATER THAN 90%, RELAY K10E IS PICKED UP.

22:59:45.6 PRINTOUT "TSV FAST CLOSURE CHNL B1 RESET" IS RECEIVED. EITHER RELAY K10B AND/OR K10F HAS PICKED BACK UP.

22:59:47.4 RPS CHANNEL "B2" TRIPS ON NEUTRON MONITORING. ROD INSERTION HAS REDUCED RX POWER BELOW THE AVERAGE POWER RANGE MONITOR (APRM) DOWNSCALE SETPOINT. THE MODE SWITCH FOR INTERMEDIATE RANGE MONITOR (IRM) CHANNEL "D" IS IN "STANDBY" AND THUS "INOP". AS THE REACTOR MODE SWITCH IS STILL IN "RUN", ALL CONDITIONS EXIST FOR THE "B2" RPS TRIP ON NEUTRON MONITORING.

22:59:50 ALL FOUR RPS CHANNELS TRIP ON LOW RX WATER LEVEL DUE TO THE "SHRINK". AN "A2" AUTO SCRAM IS RECEIVED. ISOLATIONS COMMANDS FOR GROUP 2 AND GROUP 6 ARE RECEIVED.

22:59:51 THE ROD WORTH MINIMIZER CONFIRMS ALL CONTROL RODS ARE FULL-IN.

22:59:52/54 INBOARD AND OUTBOARD ISOLATION VALVES FOR THE DRYWELL FLOOR AND EQUIPMENT DRAINS ARE CLOSED.

22:59:54 FOLLOWING LEP-02, THE OPERATOR INSERTS A MANUAL SCRAM, TRANSFERS THE RX MODE SWITCH TO SHUTDOWN, TRIPPED THE "1B" RX FEED PUMP AND BEGAN TO INSERT THE MOVABLE NEUTRON MONITORING DETECTORS.

22:59:56 REACTOR WATER LEVEL REACHES LOW LEVEL 2, ALTERNATE ROD INJECTION IS INITIATED, HPCI AND RCIC SYSTEMS ARE INITIATED, REACTOR RECIRCULATION (RR) MOTOR/GENERATOR SETS ARE TRIPPED, A GROUP 3 ISOLATION IS GENERATED, STANDBY GAS TREATMENT STARTS AND THE REACTOR BUILDING VENTILATION SYSTEM IS ISOLATED.

23:00:00.6 ALL FOUR RX BUILDING ISOLATION DAMPERS ARE CLOSED.

23:00.09 THE HPCI STOP VALVE BEGINS TO OPEN, RX LEVEL AT THIS TIME IS ABOUT 143 INCHES, THEREFORE A VALID INITIATION LEVEL NO LONGER EXISTS. HPCI WILL GO TO RATED SPEED BUT WILL NOT INJECT.

23:00:10 THE RCIC INJECTION VALVE IS OPEN, RCIC IS INJECTING.

23:00:12/15 ALL FOUR SCRAM DISCHARGE HI-HI LEVEL TRIP SIGNALS ARE RECEIVED IN RPS.

23:00:17.5 THE MAIN TURBINE TRIP IS TRIPPED, ALL FOUR TSV CLOSURE RPS TRIP FUNCTIONS ARE RECEIVED. A GENERATOR BACKUP LOCKOUT IS GENERATED BY THE STOP VALVE CLOSURE AND A COMMAND IS SENT TO THE UNIT PCB'S TO OPEN. POWER IS LOST TO THE UNIT TRANSFORMERS AND THUS POWER TO RR M/G'S IS LOST.

23:00:18 ALL FOUR TCV FAST CLOSURE RPS TRIP FUNCTIONS ARE RECEIVED. THE UNIT'S PCB'S ARE OPEN.

23:00:18/19 ALL FOUR LOW LEVEL 1 RX WATER LEVEL CHANNELS RESET.

23:00:20 THE RWCU OUTBOARD VALVE (1-G31-F004) IS CLOSED, THE RWCU PUMP TRIPS DUE

TO CLOSURE OF THIS SUCTION VALVE.

23:00:25 THE RWCU INBOARD VALVE (1-G31-F001) IS CLOSED.

23:05 IRM "D" IS PLACED IN "OPERATE" REMOVING THE NEUTRON MONITORING TRIP IN RPS CHANNEL "B2".

23:07 CONTROL OPERATOR USES THE [illegible]K SWITCH TO BYPASS THE SDV HI-HI TRIP, AND RESETS THE SCRAM.

THE HPCI TURBINE IS TRIPPED AND [illegible]ATION IS RESET. THE STEAM ADMISSION VALVE (E41-F001) [illegible] FULL CLOSED INDICATION. LATER IT IS ALSO NOTED THE AUXILIA[illegible] PUMP HAS NOT CONTINUED TO RUN.

23:10 THE GROUP 2, 3 AND 6 ISOLATION COMMANDS ARE RESET.

23:11 OPERATOR BEGINS TO RESTORE THE RWCU SYSTEM.

23:12/13 THE "1A" REACTOR FEED PUMP TURBINE TRIPS ON HI LEVEL. RCIC INJECTION VALVE IS CLOSED.

23:15 HIGHEST WATER LEVEL REACHED (210")

23:19 RX FEED PUMP "1A" RESET AND ROLLED ON MINIMUM FLOW.

23:22 FEED TO THE VESSEL NOW THROUGH "1A" RFP.

22:36 RESTORED RX BUILDING VENTILATION.

23:43 BUS "1B" IS RE-ENERGIZED FROM THE STATION AUX. TRANSFORMER.

23:50 STARTED THE "1B" RR PUMP.

STARTED SBGT.

MARCH 1, 1992

00:17 DRYWELL VENTING BEGUN, UPWARD TREND NOTED ON CAC-1260, 1261 AND 1262. SECURED VENTING UNTIL A SAMPLE (PARTICULATE, IODINE AND NOBLE GAS) COULD BE OBTAINED.

00:22 OPERATOR VERIFIES THE REACTOR RECIRCULATION PUMP SUCTION TEMPERATURE PRIOR TO RESTARTING THE PUMPS.

00:37 STARTED THE "1A" RR PUMP.

01:22 DRYWELL GAS SAMPLE RESULTS RECEIVED, DW PURGE IS APPROVED.

02:27 ISOLATED HPCI STEAM SUPPLY "IAW" OP-19 SECTION 8.6.

04:11 COMMENCED VENTING DRYWELL, PRESSURE WAS 1.0 PSI.

04:16 RCIC RETURNED TO STANDBY ALIGNMENT.

END OF SEQUENCE.