

**Recommend answer key be modified to accept either C or D for RO
Question 34.**

The answer identified in the key assumed all charging flow is directed to the pressurizer and remains that way for the entire 200 gallon boration. If this occurs, then the entire 200 gallons of boric acid is added via the pressurizer and answer (d) is correct.

If all charging flow is not through the pressurizer during the entire 200 gallon boration, then the answer is a function of actual flow to the RCS and pressurizer compared to the normal cooldown condition.

Initiation of auxiliary spray flow will result in RCS pressure reduction. Since the RCS cooldown and depressurization have not been initiated, RCS pressure is maintained by the operator within the normal control band. Thus auxiliary spray flow may not be supplied continuously, but rather to the extent possible while maintaining RCS pressure within the normal band.

The amount of flow through the auxiliary spray line is also affected by the position of CV-31328, Regen HX Charging Line Outlet valve. If the valve is left open, then charging flow is supplied through both paths (auxiliary spray line and normal charging return). The normal cooldown procedure recognizes this aspect and directs the closure of CV-31328, Regen HX Charging Line Outlet valve, during RCS depressurization. E-3, "Steam Generator Tube Rupture," Step 18 also recognized that this valve may need to be closed and provides this information in a note. Since RCS depressurization is not the intent of ES-0.3A, "Natural Circulation Cooldown with CRDM Fans," Step 2, CV-31328, Regen HX Charging Line Outlet valve, may be either open or closed depending upon RCS pressure response. The position of the valve will affect RCS and pressurizer boration.

In fact, during an actual NC cooldown performed in 2001, RCS boron and pressurizer boron concentrations were logged after the boration with actual results that match choice (c) instead of the keyed answer.

Since there is no requirement to continuously direct the full charging/boration flow to the pressurizer, either C or D could be the correct answer. Neither A or B can be true because of the reasons stated in the "Explanation" section of the question's answer key.

Ref: 1ES-0.3A, Pages 1-5
1ES-0.3A Basis Page 2
Attached pages 1 through 10 from AUTO LOG, dated August 3, 2001 to August 4, 2001, printed 9/23/2003

UNIT 1
NATURAL CIRCULATION COOLDOWN
WITH CRDM FANS

LEVEL OF USE

CONTINUOUS USE
<ul style="list-style-type: none">• Continuous use of procedure required.• Read each step prior to performing.• Mark off steps as they are completed.• Procedure SHALL be at the work location.

O.C. REVIEW DATE: 4/22/02	OWNER: D Smith	EFFECTIVE DATE: 4/22/02
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NATURAL CIRCULATION COOLDOWN WITH CRDM FANS

A. PURPOSE

This procedure provides actions to perform a natural circulation RCS cooldown and depressurization to Mode 5, Cold Shutdown, with no accident in progress, under requirements that will preclude and upper head void formation. This procedure addresses the natural circulation cooldown for the case with CRDM fans operating.

B. ENTRY CONDITIONS

1. Transition entry from:

1ES-0.1, Step 22
1ES-0.3B, Step 1
1ECA-0.1, Step 22

C. ATTACHMENTS:

NONE

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STEP

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

Caution

- *IF SI actuation occurs at any time, THEN 1E-0, REACTOR TRIP OR SAFETY INJECTION, should be performed.*
- *IF RCP seal cooling had previously been lost, THEN the affected RCP(s) should not be started prior to a status evaluation.*

NOTE

- *IF conditions can be established for starting an RCP during this procedure, THEN Step 1 should be repeated.*
- *Refer to Figure ES03A-1 and Figure ES03A-2 for condensate requirements while performing this procedure.*

1 Attempt To Restart An RCP:

- a. Establish conditions for starting an RCP per C3, REACTOR COOLANT PUMP
- b. Start one RCP
- c. Check if RCS cooldown is required
- d. Go to 1C1.3, UNIT 1 SHUTDOWN

- a. WHEN RCS cooldown is required, THEN go to Step 2.
- b. WHEN RCS cooldown is required, THEN go to Step 2.
- c. Go to 1C1.2, UNIT 1 STARTUP PROCEDURE.

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
2	<p>Borate RCS To Figure C1-10A Boron Concentration:</p> <p>a. Borate RCS per FIG C1-10A</p> <p>b. Check letdown - IN SERVICE</p> <p>c. Initiate auxiliary spray to provide mixing in PRZR</p>	<p>b. Establish letdown per C12.1, LETDOWN, CHARGING AND SEAL WATER INJECTION.</p> <p><u>IF NOT, THEN</u> go to Step 3.</p>
3	<p>Verify FIG C1-10A Boron Concentration By Sampling:</p> <p>a. RCS hot leg</p> <p>b. PRZR liquid</p> <p>c. Letdown line</p>	<p>Return to Step 2.</p>
4	<p>Check VCT Makeup Control System:</p> <p>a. Makeup set for greater than FIG C1-10A boron concentration</p> <p>b. Makeup set for automatic control</p>	<p>Adjust controls, as necessary.</p>
5	<p>Verify Both CRDM Fans - RUNNING</p>	<p>Start both fans.</p> <p><u>IF NOT, THEN</u> go to 1ES-0.3B, NATURAL CIRCULATION COOLDOWN WITHOUT CRDM FANS, Step 1.</p>

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STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
6	Locally Adjust RTD Manifold Valves 1/4 Turn Off The Backseat: <ul style="list-style-type: none"> • RC-1-6 • RC-1-9 • RC-1-14 • RC-1-15 	
7	Place ERCS In "Heatup/Cooldown" Mode Per C41.3, ERCS SAFETY ASSESSMENT SYSTEM (SAS) AND SAFETY PARAMETER DISPLAY SYSTEM (SPDS)	
8	Initiate RCS Cooldown To Mode 5, Cold Shutdown: <ul style="list-style-type: none"> a. Maintain cooldown rate in RCS cold legs - LESS THAN 25° F/HR b. Check one condensate pump - RUNNING c. Dump steam to condenser d. Maintain SG narrow range level - BETWEEN 30% AND 36% e. Maintain RCS temperature and pressure - WITHIN LIMITS OF FIGURE ES03A-3 	<ul style="list-style-type: none"> b. Start one condensate pump. c. Dump steam using SG PORVs. d. Control AFW flow, as necessary.
9	Check RCS Hot Leg Temperatures - LESS THAN 550° F	Return to Step 8.

Procedure Steps, Step 1

Cooling down under forced convection conditions allows faster plant cooldown with less potential for upper head voiding than under natural circulation conditions. This step outlines the conditions necessary for starting an RCP and thereby establishing forced flow cooling.

The decision on when RCS cooldown is required could be based on items such as condensate requirements, Technical Specification required action time limits, or prior loss of all RCP seal cooling. If all seal cooling has been lost long enough that the maximum RCP seal parameters identified in C3, REACTOR COOLANT PUMP, have been exceeded, seal injection and CCW thermal barrier cooling should not be established to the affected RCP(s). Both of these methods of seal cooling could have unintended consequences that result in additional pump damage or the failure of plant safety systems. Seal cooling is restored by cooling the RCS, which reduces the temperature of water flowing through the pump seals.

Procedure Steps, Step 2

It is important to provide reasonable assurance that even a fairly rapid temperature drop, which results in a large outsurge of relatively dilute PRZR liquid into the active (loop) portion of the reactor coolant system, will not cause problems with loss of core shutdown margin. Without RCP-driven PRZR spray, no adequate means of mixing the loop coolant with PRZR liquid exists. In addition, the upper head will not mix unless an RCP is started at a later time. This means that the active (loops and core) portions of the system must be over-borated to some extent to achieve the required boron concentration on an overall basis. Since the method used (nomographs or boration tables) to determine the necessary boron addition is based on normal system inventory, the determination of the amount of boric acid to add will not change. However, when sampling is performed, an overboration is expected due to mixing only in the active portions of the system. Figure C1-10A provides the boron concentration requirements to achieve and maintain Mode 5, Cold Shutdown.

Procedure Steps, Step 3

After completing the boration, it is important that the operator determine the system boron distribution by obtaining samples from available sample points, particularly the PRZR liquid. Even with auxiliary spray, adequate mixing of the boron in the PRZR will take longer than in the loops. As mixing occurs in the active portions of the RCS, the boron concentration in the loop with no charging connection should rise to meet the boron concentration in the loop with the charging connection. The boron concentration in the hot legs and in the letdown line should approach a common value as boron mixing in the active portions of the RCS proceeds. The ultimate shutdown condition of the reactor must be judged from the response of nuclear instrumentation. The operator is instructed to borate until Figure C1-10A boron concentration is achieved in the active portions of the RCS. This ensures adequate shutdown margin while cooling down to Mode 5, Cold Shutdown.

Operations Log Entries

Log: Start Date: End Date: Sort: Entry Contains:

Report Generated: 9/23/2003 6:12:37 AM

Log Date	Entry	Sub Log	User ID
8/3/2001 12:18:59 AM	Satisfactorily completed procedure SP 1012 ROD DEVIATION COMPARATOR COMPUTER FUNCTIONAL TEST per WO# 0109300.	1CR	osgr01
8/3/2001 12:36:41 AM	Completed 8000 gal dilution per 1C12 and SS direction.	1CR	osgr01
8/3/2001 12:53:21 AM	Completed review of Rad Monitor Report SP1001T	1CR	osgr01
8/3/2001 1:00:59 AM	RCS boron sample results were 1683 ppm.	1CR	osgr01
8/3/2001 1:44:42 AM	Stopped 11 RCP per 1C3 and SP1016, WO#0109301.	1CR	osgr01
8/3/2001 2:12:16 AM	Completed 2000 gallon dilution per 1C12.1 and SS direction.	1CR	osgr01
8/3/2001 3:00:13 AM	RCS boron sample result is 1565 ppm.	1CR	osgr01
8/3/2001 4:17:16 AM	Satisfactorily completed procedure SP 1253 ALTERNATING IN-SERVICE CONTROL ROOM CHILLERS per WO# 0105769.	1CR	Chrb02
8/3/2001 4:26:26 AM	145-451, 11 RC PMP OIL LIFT PMP, started.	1CR	osgr01
8/3/2001 4:29:51 AM	Started 11 RCP per 1C3.	1CR	osgr01
8/3/2001 4:31:44 AM	145-451, 11 RC PMP OIL LIFT PMP, stopped.	1CR	osgr01
8/3/2001 4:33:01 AM	145-052, 12 RC PMP, stopped.	1CR	osgr01
8/3/2001 4:51:40 AM	11 BAST sample results - 12.4w%. Took 11 BAST off fast recirc.	1CR	osgr01
8/3/2001 5:25:01 AM	Withdrew shutdown banks to 228 steps.	1CR	osgr01
8/3/2001	Unit 1 LPE & RO:, Human, Unit 1 PE & RO:, Rhody BA INT:, 82485.0, RMW INT:, 338586, EM BA INT:, 134411 RCS		

6:20:56 AM	BORON:, 1449, PPM AVG TEMP:, 537.8, F, Press:, 2235, psig AVG NUC PWR:, 0, %, Gen Load:, 0, MWe	1CR	hmnj02
8/3/2001 6:24:52 AM	Unit 1 RCS Boron is, 1449, PPM.	1CR	hmnj02
8/3/2001 7:20:40 AM	Unit -1 ERCS video driver failed. ERCS personnel informed.	1CR	hmnj02
8/3/2001 7:29:39 AM	Completed PINGP 26 Unit 1 Heat Trace Log.	1CR	hmnj02
8/3/2001 8:18:00 AM	145-452, 12 RC PMP OIL LIFT PMP, started.	1CR	hmnj02
8/3/2001 8:21:00 AM	145-052, 12 RC PMP, started.	1CR	hmnj02
8/3/2001 8:22:00 AM	145-452, 12 RC PMP OIL LIFT PMP, stopped.	1CR	hmnj02
8/3/2001 8:31:33 AM	Satisfactorily completed procedure SP 1016 RCP BREAKERS TEST per WO# 0109301.	1CR	hmnj02
8/3/2001 8:35:00 AM	Started blow down on 11 SG. Duty Chemist informed.	1CR	hmnj02
8/3/2001 8:45:00 AM	Started blow down on 12 SG. Duty Chemist informed.	1CR	hmnj02
8/3/2001 9:05:46 AM	Placed 12 MDAFWP to the Shutdown Auto position.	1CR	hmnj02
8/3/2001 9:15:00 AM	Started dilution to Critical boron concentration.	1CR	hmnj02
8/3/2001 9:25:00 AM	Stopped dilution of the RCS. Added 580 gals. of RMU.	1CR	hmnj02
8/3/2001 9:48:15 AM	Unit 1 RCS Boron is, 1421, PPM.	1CR	hmnj02
8/3/2001 9:56:37 AM	Commencing Unit-1 Reactor Startup. Entering Mode 2 Hot Standby.	1CR	hmnj02
8/3/2001 10:03:30 AM	Satisfactorily completed procedure SP 1001 for 0600 UNIT 1 DAILY CONTROL ROOM LOG per WO#0105257 .	1CR	slyb02
8/3/2001 10:38:38 AM	13 Cond. filter Demin is in service.	1CR	hmnj02
8/3/2001 11:35:42 AM	Unit-1 Reactor is critical.	1CR	hmnj02
8/3/2001 11:47:33 AM	Unit 1 RCS Boron is, 1413, PPM.	1CR	hmnj02
8/3/2001 11:48:00 AM	CRITICAL DATA: Sample Time 1140, RCS Boron 1413 ppm, Tave 547.6, Control Bank D @ 45 steps, Power level is 10E-8 amps.	1CR	hmnj02
8/3/2001 11:57:00 AM	Unit-1 Reactor is at the POAH.	1CR	hmnj02

8/3/2001 12:00:00 PM	Received unexpected annunciator, 47024-1101 11 DC PANEL GROUND DETECTION. Dispatched operator to investigate per ARP. Initiated Corrective Action.	1CR	hmnj02
8/3/2001 1:00:00 PM	Entered 1C5 AOP3 "Misalignment of Groups within a Bank" for problems with step counter in Control Bank A.	1CR	whtm03
8/3/2001 2:00:20 PM	Discovered that U1 Field Breaker was the source of the DC Panel 11 Ground. Repairing.	1CR	hmnj02
8/3/2001 2:20:28 PM	Exited 1C5 AOP3 "Misalignment of Groups Within a Bank".	1CR	hmnj02
8/3/2001 2:37:31 PM	Started 11 Main Feedwater Pump.	1CR	hmnj02
8/3/2001 2:40:09 PM	ERCS in service CPU (B) failed. ERCS failed over to A CPU. ERCS Engineer notified.	1CR	hmnj02
8/3/2001 2:40:13 PM	Started process of borating to increase height of control rod bank D per nuclear engineer request.	1CR	hmnj02
8/3/2001 2:40:29 PM	ERCS failover has occurred.	1CR	hmnj02
8/3/2001 2:46:37 PM	ERCS Backup CPU returned to service.	1CR	hmnj02
8/3/2001 2:50:07 PM	U1 Field Breaker repaired per WO# 0109517.	1CR	hmnj02
8/3/2001 3:23:29 PM	Satisfactorily completed procedure SP 1001AA DAILY REACTOR COOLANT SYSTEM LEAKAGE TEST per WO# 0105355. Used the walkdown method due to Rx startup and changing conditions.	1CR	slyb02
8/3/2001 3:23:52 PM	Placed unit 1 Main Feedwater System in service.	1CR	whtm03
8/3/2001 3:31:46 PM	Stopped 12 AFW Pump per C28.	1CR	whtm03
8/3/2001 3:40:43 PM	Entered 1C5 AOP3 "Misalignment of Groups Within a Bank" for problem with step counter in Control Bank C.	1CR	whtm03
8/3/2001 3:50:22 PM	Exited 1C5 AOP3 "Misalignment of Groups Within a Bank".	1CR	whtm03
8/3/2001 3:53:09 PM	Entering Mode 1 for Unit 1.	1CR	hmnj02
8/3/2001 4:15:54 PM	Unit 1 RCS Boron is, 1482, PPM.	1CR	whtm03
8/3/2001 4:40:18 PM	Started main turbine rollup per C1.2.	1CR	whtm03
8/3/2001 5:30:00 PM	Placed Unit 1 on line per C1.2.	1CR	whtm03
8/3/2001 6:04:08 PM	Unit 1 Power Increase On Hold @ 15% Power Per App. B Of 1C1.2 For 15 Minutes	1CR	Chrb02

8/3/2001 6:04:21 PM	Unit 1 LPE & RO:, B. Churchill, Unit 1 PE & RO:, P. Finholm BA INT:, 82608.9, RMW INT:, 339397, EM BA INT:, 134411 RCS BORON:, 1482, PPM AVG TEMP:, 548, F, Press:, 2238, psig AVG NUC PWR:, 16, %, Gen Load:, 47, MWe	1CR	Chrb02
8/3/2001 7:36:00 PM	Completed PINGP 26 Unit 1 Heat Trace Log.	1CR	Chrb02
8/3/2001 8:40:34 PM	Unit 1 reactor trip	1CR	schw22
8/3/2001 8:40:48 PM	Received unexpected annunciator, 47022-0611 FIRE DETECTION PANEL FP121 FIRE ALARM.	1CR	schw22
8/3/2001 8:40:55 PM	Received unexpected annunciator, 47022-0108 HI RADIATION TRAIN B PANEL ALARM. 122 Spent Fuel Special and 21 in-service purge exhaust fan started due to R31 hi spike at time of Rx trip.	1CR	schw22
8/3/2001 8:43:41 PM	Unit 1 ERCS failover	1CR	schw22
8/3/2001 8:44:19 PM	Outplant operator called in and reported bus 12 is on fire.	1CR	schw22
8/3/2001 8:44:39 PM	Fire alarm sounded, and fire brigade activated	1CR	schw22
8/3/2001 8:50:40 PM	Turbine building evacuated due to heavy smoke from bus 12 fire	1CR	schw22
8/3/2001 8:57:41 PM	Started 121 Motor Driven fire pump from control room	1CR	schw22
8/3/2001 8:58:42 PM	Fire Brigade is attacking fire with CO2 extinguishers	1CR	schw22
8/3/2001 8:59:08 PM	Red Wing Fire Department at guardhouse.	1CR	schw22
8/3/2001 9:00:08 PM	Fire Chief reports fire inside bus 12 cabinet and heavy smoke in turbine building	1CR	schw22
8/3/2001 9:00:54 PM	Bypassed Fire zones 15, 84, and 55, and reset fire panel	1CR	schw22
8/3/2001 9:01:55 PM	Received unexpected annunciator, 47524-1101 21 DC PANEL GROUND DETECTION.	1CR	schw22
8/3/2001 9:05:24 PM	Fire brigade chief reports fire is inside breaker cubicle 12-4, with an electrical arc.	1CR	schw22
8/3/2001 9:09:56 PM	Stopped 11 RCP	1CR	schw22
8/3/2001 9:11:34 PM	Fire Brigade Chief reports one fire brigade member has heat exhaustion.	1CR	schw22
8/3/2001 9:12:37 PM	Declared NUE	1CR	schw22
8/3/2001	Red Wing Fire Department is at scene of fire	1CR	schw22

9:13:24 PM			
8/3/2001 9:23:05 PM	Started 121 cooling water pump	1CR	schw22
8/3/2001 9:25:25 PM	15 minute calls by SEC completed	1CR	schw22
8/3/2001 9:26:04 PM	Transferred bus 15 to CT11 from 1RY transformer	1CR	schw22
8/3/2001 9:30:30 PM	Fire Brigade Chief reports that turbine building bus rooms have been inspected, and there is no fire except at bus 12.	1CR	schw22
8/3/2001 9:31:05 PM	Call to NRC Inspector Steve Ray completed.	1CR	schw22
8/3/2001 9:32:29 PM	Made NUE announcement	1CR	schw22
8/3/2001 9:36:19 PM	11 and 21 turbine building vent fans stopped because they are blowing on fire.	1CR	schw22
8/3/2001 9:46:13 PM	Opened PNL 21-3 4kv SWGR 11 xfer SW. alt supply, and pnl 21-24 4kv SWGR 12 xfer SW alt supply	1CR	schw22
8/3/2001 9:46:23 PM	Annunciator, 47524-1101 21 DC PANEL GROUND DETECTION cleared.	1CR	schw22
8/3/2001 9:51:11 PM	Red Wing Fire Department is spraying CO2 above bus 12 to cool cable trays	1CR	schw22
8/3/2001 9:59:20 PM	2RY AND 1RY SECONDARIES 4.16KV cross tied per 1C20.5	1CR	schw22
8/3/2001 10:02:02 PM	ENS call completed	1CR	schw22
8/3/2001 10:09:09 PM	6H2 and 6H5 are opened to isolate 1R transformer. bus 12 is dead.	1CR	schw22
8/3/2001 10:10:20 PM	Unit one turbine placed on turning gear manually	1CR	schw22
8/3/2001 10:12:39 PM	opened PNL 11-1, 4KV SWGR bus 11 xfer SW norm supply and PNL 11-2, 4kv SWGR 12 xfer SW norm supply	1CR	schw22
8/3/2001 10:14:31 PM	Fire brigade has opened bus 12 doors, and is spraying inside with CO2 extinguisher	1CR	schw22
8/3/2001 10:19:21 PM	Fire Brigade Chief calls fire out on bus 12	1CR	schw22
8/3/2001 10:23:23 PM	Second member of fire brigade has heat exhaustion, is sent off site in ambulance.	1CR	schw22
8/3/2001 10:26:27 PM	Completed SP1118 VERIFYING PATHS FROM THE GRID TO UNIT 1 BUSES, due to the need to deenergized the 1R transformer, due to a fire in BKR 12-4. Operable path to both buses 15 & 16 is 1-2 from CT11.	1CR	osgr01
8/3/2001 10:42:30 PM	Breaker is pulled from cubicle 12-4, and is still very hot.	1CR	schw22

8/3/2001 10:47:39 PM	Fire Brigade Chief reports that fire brigade no longer needed at fire scene, and a fire brigade fire watch will be set.	1CR	schw22
8/3/2001 10:57:50 PM	11 and 21 Turb bldg vent fans are reenergized.	1CR	schw22
8/3/2001 11:03:49 PM	Shut down 122 spent fuel special and 21 in-service purge exhaust fan.	1CR	schw22
8/3/2001 11:09:14 PM	Red Wing Fire department sent off site.	1CR	schw22
8/3/2001 11:29:24 PM	Plant Services has taken fire watch over from fire brigade for bus 12	1CR	schw22
8/3/2001 11:29:50 PM	Satisfactorily completed procedure SP 1172 VENTILATION SYSTEM MONTHLY OPERATION per WO# 0105680.	1CR	osgr01
8/3/2001 11:45:10 PM	Placed 2nd 40 GPM Orifice In Service Per 1C12.1	1CR	Chrb02
8/3/2001 11:48:34 PM	Placed Aux Spray In Service For Pzr Mixing	1CR	Chrb02
8/3/2001 11:50:33 PM	Shut down 121 Motor driven fire pump	1CR	schw22
8/4/2001 12:12:16 AM	Terminated NUE	1CR	schw22
8/4/2001 12:27:28 AM	Completed review of Rad Monitor Report SP1001T	1CR	Chrb02
8/4/2001 12:28:09 AM	Turbine building released for normal use	1CR	schw22
8/4/2001 1:30:13 AM	Unit 1 RCS Boron is, 1576, PPM., Pzr Boron is 1541 PPM @ 0115	1CR	Chrb02
8/4/2001 2:00:14 AM	1R/XFMR, 1R RES AUX XFMR, Taken out of service. Component is unavailable.	1CR	Chrb02
8/4/2001 2:13:47 AM	Satisfactorily completed procedure SP 1001 UNIT 1 DAILY CONTROL ROOM LOG per WO# 0105257.	1CR	Chrb02
8/4/2001 3:49:57 AM	Satisfactorily completed procedure SP 1524 122 DIESEL FIRE PUMP WEEKLY TEST per WO#0105894__.	1CR	osgr01
8/4/2001 3:51:44 AM	Removed One 40 GPM Orifice From Service Per C12.1 In Preparation For Placing Cation Bed Inservice.	1CR	Chrb02
8/4/2001 4:25:38 AM	Entered C47.0 AOP1 Annunciator Malf. Due To BOP Annunc. System Ground.	1CR	Chrb02
8/4/2001 6:00:00 AM	Unit 1 LPE & RO:, M. White, Unit 1 PE & RO:, L. Horton BA INT:, 82942.5, RMW INT:, 341206, EM BA INT:, 134411 RCS BORON:, 1576, PPM AVG TEMP:, 549, F, Press:, 2247, psig AVG NUC PWR:, 0, %, Gen Load:, 0, MWe	1CR	whtm03
8/4/2001 6:14:00 AM	Received unexpected annunciator, 47015-0102 BORIC ACID HEAT TRACING LOCAL ALARM. Dispatched operator to investigate per ARP.	1CR	HRTL03

8/4/2001 6:26:00 AM	Satisfactorily completed procedure SP 1118 VERIFYING PATHS FROM THE GRID TO U-1 BUSES. Setpoints Are 100% For 345 KV 161 KV is NA. Operable Paths Are 1-2 To Bus 15 & 16. SP Was Run Due To 1R OOS.	1CR	Chrb02
8/4/2001 6:50:00 AM	Returned Fire Detection Zones 15, 84, and 55 to normal per SS.	1CR	HRTL03
8/4/2001 7:00:00 AM	Received unexpected annunciator, 47013-0608 NSSS ANNUNC SYSTEM GROUND. Alarm is coming in and clearing immediately. This has happened 3 times so far this shift. SS informed. Entered C47 AOP1 "Annunciator System malfunction" for this condition as well as already being in it for the BOP Trouble.	1CR	whtm03
8/4/2001 7:23:02 AM	RFO 149245 Rev. #2 completed. "Breaker and 1/2" scheme is returned to normal, per 1C1.3.	1CR	whtm03
8/4/2001 7:43:54 AM	Received unexpected annunciator, 47023-0305 121 NEUT TANK LOCAL ALARM. Dispatched operator to investigate per ARP.	1CR	HRTL03
8/4/2001 7:44:15 AM	Local checks in relay room of BOP and NSSS annunciator systems completed satisfactorily per C47 AOP1 "Annunciator System Malfunction".	1CR	whtm03
8/4/2001 7:56:29 AM	Completed PINGP 26 Unit 1 Heat Trace Log.	1CR	whtm03
8/4/2001 8:36:10 AM	Added 125 gals. BA to RCS per SS.	1CR	HRTL03
8/4/2001 9:02:56 AM	Added 125 gals. BA to RCS per SS.	1CR	HRTL03
8/4/2001 9:23:25 AM	Received unexpected annunciator, 47015-0101 WASTE DISPOSAL BORON RECYCLE LOCAL ALARM. Dispatched operator to investigate per ARP.	1CR	HRTL03
8/4/2001 9:40:27 AM	Unit 1 RCS Boron is, 1712, PPM., as sampled from MBIX inlet, 1668 ppm as sampled from MBIX outlet.	1CR	whtm03
8/4/2001 9:59:28 AM	Placed second 40 gpm orifice in service per C12.1 Sect. 5.9 in preparation for RCS degasification.	1CR	HRTL03
8/4/2001 10:02:03 AM	Unit 1 RCS Boron is, 1760, PPM., for loop sample, 1616 ppm for Pzr liquid sample.	1CR	whtm03
8/4/2001 10:09:15 AM	Transitioning from 1ES-0.1 "Reactor Trip Recovery" to 1ES-0.3A "Natural Circulation Cooldown With CRDM Fans".	1CR	whtm03
8/4/2001 10:18:05 AM	Placed Pzr Htrs groups B, D and E in "ON" to support spray flow created when second orifice placed in service with associated increase in charging flow.	1CR	whtm03
8/4/2001 10:38:29 AM	Received unexpected annunciator, 47015-0308 RESIN DISPOSAL BUILDING LOCAL ALARM. Dispatched operator to investigate per ARP.	1CR	HRTL03
8/4/2001	Placed 1LC-428F Rack Mounted Pzr Level Controller	1CR	whtm03

10:39:33 AM	Remote/Local in Local with a setpoint of 30% per 1C1.3.		
8/4/2001 10:46:06 AM	Placed 12 Charging pump in Automatic speed control.	1CR	HRTL03
8/4/2001 11:14:32 AM	Chemist reports the following BA concentrations: RCS loop 1753 PPM, PZR 1703 PPM, MBIX in 1756 PPM, MBIX out 1756.	1CR	whtm03
8/4/2001 11:17:49 AM	Started procedure SP 1093 D1 DIESEL GENERATOR MONTHLY SLOW START TEST.	1CR	whtm03
8/4/2001 11:31:18 AM	Satisfactorily completed procedure SP 1118 VERIFYING PATHS FROM THE GRID TO U-1 BUSES per WO# 0109533, sp 1093 D1 DG Monthly Slow Start Test. SP 1118 performed due to only having one required path to the grid and due to taking D1 and D2 Diesel Generators OOS, one at a time, to perform required SPs. 161 KV Setpoint is N/A. 345 KV setpoint is 100%. Operable Path is 1-2 to Bus 15 and 1-2 to Bus 16.	1CR	whtm03
8/4/2001 12:25:31 PM	Chemist reported the following RCS Boron Results: Mixed bed Inlet is 1758 ppm, mixed bed outlet is 1761 ppm, Pzr liquid is 1734 ppm, and RCS loop is 1756 ppm	1CR	whtm03
8/4/2001 1:30:23 PM	Satisfactorily completed procedure SP 1001 for 0600 UNIT 1 DAILY CONTROL ROOM LOG per WO# 0105258.	1CR	whtm03
8/4/2001 1:32:30 PM	Performed 3 Burps of the U1 VCT per 1C12.4 Sect. 5.2.	1CR	HRTL03
8/4/2001 2:05:49 PM	Received unexpected annunciator, 47015-0601 11 BORIC ACID TANK HI/LO/LO-LO LVL. Responded per ARP.	1CR	HRTL03
8/4/2001 2:26:00 PM	Completed SP 1118 "Verifying paths From the Grid to U-1 Buses" due to 1R Source being unavailable to the U1 Safeguards Buses. Operable path to Bus 15 is 1-2, operable path to bus 16 is 1-2.	1CR	whtm03
8/4/2001 2:38:11 PM	Started procedure SP 1182A OVERPRESSURE PROTECTION SYSTEM REFUELING OUTAGE per WO# 0109540.	1CR	whtm03
8/4/2001 3:00:57 PM	Satisfactorily completed procedure SP 1182A OVERPRESSURE PROTECTION SYSTEM REFUELING OUTAGE per WO# 0109540.	1CR	whtm03
8/4/2001 3:03:36 PM	Started procedure SP 1181 OVERPRESSURE PROTECTION SYSTEM SETPOINT per WO# 0109539.	1CR	whtm03
8/4/2001 3:15:31 PM	Added 790 gals. of Boric Acid to to U1 RCS per SS.	1CR	HRTL03
8/4/2001 3:35:06 PM	Satisfactorily completed procedure SP 1181 OVERPRESSURE PROTECTION SYSTEM SETPOINT per WO# 0109539.	1CR	whtm03
8/4/2001 3:43:53 PM	Satisfactorily completed procedure SP 1093 D1 DIESEL GENERATOR MONTHLY SLOW START TEST per WO# 0109533.	1CR	wbbd01

8/4/2001 4:22:31 PM	Satisfactorily completed procedure TP 1759 NIS SOURCE RANGE HIGH FLUX AT SHUTDOWN per WO# 0109554.	1CR	whtm03
8/4/2001 4:25:40 PM	Started procedure SP 1305 D2 DIESEL GENERATOR MONTHLY SLOW START TEST per WO# 0109534.	1CR	whtm03
8/4/2001 4:40:07 PM	Satisfactorily completed procedure SP 1132 UNIT 1 PERSONNEL & MAINTENANCE AIRLOCK DOOR because this SP has not been completed since last Maint Airlock entry on 2 Aug.	1CR	whtm03
8/4/2001 4:45:00 PM	Satisfactorily completed procedure SP 1001AA DAILY REACTOR COOLANT SYSTEM LEAKAGE TEST per WO# 0105356.	1CR	whtm03
8/4/2001 5:10:28 PM	Boron sample results are as follows: Mixed bed Inlet is 2256 ppm, Pzr liquid is 2248 ppm, and RCS loop is 2693 ppm.	1CR	whtm03
8/4/2001 6:00:55 PM	Unit 1 LPE & RO:, R. Osgood, Unit 1 PE & RO:, W. Schaller BA INT:, 84236.2, RMW INT:, 343411, EM BA INT:, 134411 RCS BORON:, 2693, PPM AVG TEMP:, 553.4, F, Press:, 2237, psig AVG NUC PWR:, 0, %, Gen Load:, 0, MWe	1CR	osgr01
8/4/2001 6:12:54 PM	Completed PINGP 26 Unit 1 Heat Trace Log.	1CR	osgr01
8/4/2001 6:50:44 PM	Received unexpected annunciator, 47015-0102 BORIC ACID HEAT TRACING LOCAL ALARM. Dispatched operator to investigate per ARP.	1CR	schw22
8/4/2001 7:10:40 PM	CS-46929 D2 exciter control switch will not raise KVAR. Will lower to approx. 0. Attempted to raise to 1000 but could not get past 750 KVAR.	1CR	osgr01
8/4/2001 7:15:01 PM	RCS boron sample results are as follows: Mixed Bed inlet is 2266 ppm, RCS loop is 2260 ppm, and Pzr liquid is 2394ppm.	1CR	osgr01
8/4/2001 7:21:07 PM	Exited the C47.0 AOP for NSSS due to the fact that the originating alarm has not come in for several hours.	1CR	osgr01
8/4/2001 7:30:32 PM	Satisfactorily completed procedure SP 1118 VERIFYING PATHS FROM THE GRID TO U-1 BUSES due to D2 out of service for operability run. Operable paths are 1-2 to both bus 15 and bus 16.	1CR	osgr01
8/4/2001 7:32:29 PM	Satisfactorily completed procedure SP 1001 UNIT 1 DAILY CONTROL ROOM LOG per WO# 0105258.	1CR	schw22
8/4/2001 8:30:53 PM	Late Entry: Unsatisfactorily completed procedure SP 1305 D2 DIESEL GENERATOR MONTHLY SLOW START TEST per WO# 0109534. Unsat due to problems with the exciter control switch being unable to raise Kvars above 750.	1CR	osgr01
8/4/2001 9:04:47 PM	Completed VCT burp per c12.4	1CR	schw22
8/4/2001 9:53:09 PM	11 BAST sample results were 12.5 w/%. Took 11 BAST off fast recirc.	1CR	osgr01
8/4/2001	Satisfactorily completed procedure SP 1118 VERIFYING		

10:26:55 PM	PATHS FROM THE GRID TO U-1 BUSES due to 1R path from grid being oos. Operable path to bus 15 & 16 is 1-2.	1CR	osgr01
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