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HEATING THE CONDENSATE STORAGE TANKS

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INITIALS

NOTE: **Due to Improved Technical Specifications (ITS) implementation, in order to allow use of this procedure prior to and after implementation, both the custom and improved Technical Specification information is shown, with the ITS information in Braces. Example: CTS info {ITS info}**

1.0 PURPOSE

This procedure provides instruction for filling the Condensate Storage Tank, T-24A or T-24B from the opposite units Condensate Feedwater System or Waste Condensate System to provide approximately 42,000 gallons of water at a temperature of 95°F (80 °F to 110 °F) to fill the Steam Generator and Main Steam line.

2.0 PREREQUISITES

The IT-300/305 transfer hose (rated at greater than 2000 psig) is available for use.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Do **NOT** allow CST temperature to exceed 120 Degrees F during the fill with a final target temperature of approximately 110 degrees F.

3.2 Observe appropriate safety precautions when IT-300/305 transfer hose is pressurized. The temperature and pressure could be approximately 210 °F and approximately 400 psig.

4.0 INITIAL CONDITIONS

4.1 Ensure greater than 13,000 gallons usable condensate volume in each CST if required by current plant conditions per CTS 15.3.4 {ITS 3.7.6}. JD

4.2 Permission to Perform Evolution

The conditions required by this evolution are consistent with required plant conditions including equipment operability. Permission is granted to perform this evolution.

DSS James E Scully Time 1101 Date 9/16/02

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5.0 PROCEDURE

NOTE: **If both Units are in Cold Shutdown {ITS MODE 5, 6, or defueled}then heat the CSTs using Waste Heating Returns per section 5.3 or 5.4 as applicable.**

NOTE: **Approximately 42,000 gallons of water will be needed to fill the Steam Generator and Main Steam line. This will require multiple filling of the target CST.**

NOTE: **Maintain a minimum of 13,000 gallons of water in the target CST to satisfy the on-line units technical specification for Auxiliary Feedwater source volume.**

NOTE: **It will be necessary to perform this procedure more than once to fill the SG and MS line and maintain the minimum CST TS required level.**

NOTE: **Each section of the procedure stands alone. Perform only the section(s) required.**

5.1 Heat T-24A (South) CST to between 80 and 110 degrees F. using Unit 2 2A Feedwater Heater.

5.1.1 Record the As-Found position AND position the valves to the required position to Split the North and South CSTs.

Valve		As Found	Required	
AF-2	T-24A Mini Recirc Isolation	LO	OPEN	MB
AF-9	T-24B CST Recirc isolation	LC	SHUT	MB
AF-3	T-24A Service Outlet	LO	OPEN	MB
AF-8	T-24B Service Outlet	LO	OPEN	MB
AF-5	T-24A CST Outlet To Aux Feed Pumps	LO	OPEN	MB
AF-6	T-24B CST Outlet To Aux Feed Pumps	LO	SHUT	MB
AF-7A	T-24B CST Inlet From Water Treatment	O	OPEN	MB
AF-4A	T-24A CST Inlet From Water Treatment	O	SHUT	MB

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5.1.2 Install IT-300/305 transfer hose by:

a. Connect one end of IT-300/305 transfer hose to 2CS-107C, HX-17A LP FWH 2A Outlet to HX-19A LP FWH 3A DRN.

b. Connect the other end of IT-300/305 transfer hose to AF-13, T-24A CST Drain.

CAUTION

Feedwater outlet temperature is approximately 210 ^{0}F and approximately 400 psig. When the transfer hose between Unit 2 2A FW Heater and T-24A is used, AF-13 is to be opened before throttling open 2CS-107C and 2CS-107C is to be shut before shutting AF-13 to minimize the pressure on the transfer hose.

5.1.3 Hang Temporary Information tags containing the information in the Caution above on:

a. AF-13, T-24A CST Drain.

b. 2CS-107C, HX-17A LP FWH 2A Outlet to HX-19A LP FWH 3A DRN.

5.1.4 Open AF-13, T-24A CST Drain.

NOTE: 2CS-107C, HX-17A LP FWH 2A Outlet to HX-19A LP FWH 3A DRN, may be throttled open or closed to vary fill or rate of temperature change.

NOTE: Steps 5.1.5 and 5.1.6 or 5.1.7 may be performed concurrently.

5.1.5 Using the tool provided, throttle open 2CS-107C, HX-17A LP FWH 2A Outlet to HX-19A LP FWH 3A DRN AND check hose for leaks.

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5.1.6 IF it is desired to cool T-24A (South) CST water volume, AND there is sufficient level in the T-24B (North) CST, THEN perform the following:
(Otherwise mark this step as N/A)

a. Throttle open AF-6, T-24B CST Outlet To Aux Feed Pumps, to sluice water from T-24B to T-24A. N/A RH

b. WHEN the CST water volume has cooled to 95 ^{0}F (80 ^{0}F-110 ^{0}F), THEN Close AF-6, T-24B CST Outlet To Aux Feed Pumps. N/A RH

5.1.7 IF it is desired to cool T-24A (South) CST water volume, AND there is NOT sufficient level in the T-24B (North) CST, THEN perform the following:
(Otherwise mark this step as N/A)

a. Open AF-4A, T-24A CST Inlet From Water Treatment. N/A RH

b. WHEN the CST water volume has cooled to 95 ^{0}F (80 ^{0}F - 110 ^{0}F), THEN close AF-4A, T-24A CST Inlet From Water Treatment. N/A RH

5.1.8 IF necessary to temporarily stop heating T-24A (South) CST water volume, THEN perform the following:
(Otherwise mark this step as N/A)

a. Shut 2CS-107C, HX-17A LP FWH 2A Outlet to HX-19A LP FWH 3A DRN. ? 1330, 98° RB

b. WHEN heating T-24A (South) CST water volume is to be restarted, THEN go to step 5.1.10. RB

5.1.9 WHEN T-24A (South) CST level is at the level desired by Shift Management, AND temperature is at 95 ^{0}F (80 ^{0}F-110 ^{0}F), THEN shut 2CS-107C, HX-17A LP FWH 2A Outlet to HX-19A LP FWH 3A DRN. RB

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NOTE: **It maybe necessary to repeats steps that refill and reheat T-24A (South) CST as the Steam Generator(s) and Main Steam Line(s) are filled.**

5.1.10 IF it is necessary to refill and reheat T-24A (South) CST, THEN repeat steps 5.1.5 through steps 5.1.9, AND document steps performed below. (Mark step not performed N/A). MB

STEP NO.	1st PERFORMANCE	2nd PERFORMANCE
5.1.5	MB	MB
5.1.6	N/A	N/A
5.1.7	N/A	N/A
5.1.8	N/A	MB
5.1.9	MB	N/A

NOTE: **Perform the next three steps without delay in case 2CS-107C, HX-17A LP FWH 2A Outlet To HX-19A LP FWH 3A DRN leaks by.**

5.1.11 Using the tool provided, shut 2CS-107C, HX-17A LP FWH 2A Outlet To HX-19A LP FWH 3A DRN. MMB IV

5.1.12 Shut AF-13, T-24A CST Drain. MMB IV

5.1.13 Remove IT-300/305 transfer hose from AF-13, T-24A CST Drain AND route to a floor drain. MMB ① N/A

5.1.14 Cap AF-13, T-24A CST Drain. MB ① N/A IV

5.1.15 Remove IT-300/305 transfer hose from 2CS-107C, HX-17A LP FWH 2A Outlet To HX-19A LP FWH 3A DRN AND drain hose into floor drain. ① N/A

5.1.16 Cap 2CS-107C, HX-17A LP FWH 2A Outlet To HX-19A LP FWH 3A DRN. ① N/A IV

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5.1.17 Remove the Temporary Information tags hung during step 5.1.3 on AF-13, T-24A CST Drain **AND** 2CS-107C, HX-17A LP FWH 2A Outlet To HX-19A LP FWH 3A DRN. ① N/A mms

5.1.18 Allow the IT-300/305 transfer hose to cool to approximately ambient temperature while continuing with the balance of this section. RJ

5.1.19 Place the following valves to the original as-found position recorded in step 5.1.1 or as directed by the DSS.

		As-found /DSS	
AF-9	T-24B CST Recirc Isolation	LO	
AF-2	T-24A Mini Recirc Isolation	LO	
AF-3	T-24A Service Outlet	LO	
AF-8	T-24B Service Outlet	LO	
AF-6	T-24B CST Outlet To Aux Feed Pumps	LO	
AF-5	T-24A CST Outlet To Aux Feed Pumps	LO	
AF-7A	T-24B CST Inlet From Water Treatment	0	
AF-4A	T-24A CST Inlet From Water Treatment	0	

5.1.20 Provide Independent Verification of the Redlocked valves listed below.

Valve		Required	IV
AF-2	T-24A Mini Recirc Isolation	LO	
AF-9	T-24B CST Recirc isolation	LO	
AF-3	T-24A Service Outlet	LO	
AF-8	T-24B Service Outlet	LO	
AF-5	T-24A CST Outlet To Aux Feed Pumps	LO	
AF-6	T-24B CST Outlet To Aux Feed Pumps	LO	

5.1.21 Store the IT-300/305 transfer hose as designated by the DSS. ① N/A mms

Remarks ① IT-300 will be performed later in outage leave hoses in place

② steps reperformed after draining the A CST

RHastings

Performed By		
Bruce Tesarik Bruce Tesarik Performer (Print and Sign)	8-5-02 1500 Date Time	BT Initials
JOHN BORISH John Borish Performer (Print and Sign)	9/16/02 1215 Date Time	JB Initials
Bob Cs Performer (Print and Sign)	9/16/02 1730 Date Time	B Initials
M.D. Bosdech Michael D Boadech Performer (Print and Sign)	9-19-02 1230 Date Time	MDB Initials
Steve Johnson Performer (Print and Sign)	9-23-2 10145 Date Time	SJ Initials
R Hastings Performer (Print and Sign)	9-23-2 0359 Date Time	RH Initials

Reviewed By

R Hastings Reviewer (Print and Sign)	9-23-2 0359 Date Time	RH Initials

6.0 REFERENCES

6.1 Technical Specifications:

- 15.3.4, Steam and Power Conversion System.
- {ITS: 3.7.6 Condensate Storage Tank (CST)} .

6.2 FSAR:

- Section 10.0, Steam and Power Conversion System.

6.3 P&IDs:

- M-217, Sheet 1, Auxiliary Feedwater System.
- M-202, Sheet 1, Condensate System.
- M-2202, Sheet 1, Condensate System.

6.4 Tank Level Book:

- Condensate Storage Tank (T-24 A/B).
- Calculation - N97-155, PBNPIC-42.

6.5 OM 5.4.4 Control of Posted Plant Information