

OI 150

HEATING THE CONDENSATE STORAGE TANKS

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A/259

HEATING THE CONDENSATE STORAGE TANKS

INITIALS

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 TS 3.7.6.
- 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 _____ Time _____ Date _____

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5.0 PROCEDURE

NOTE: If both Units are in 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.

CAUTION

AT LEAST ONE CST WITH SUFFICIENT VOLUME TO COMPLY WITH TS 3.7.6 MUST ALWAYS BE ALIGNED TO THE AFW PUMPS

Per TLB-34, 7.399ft is required in One Tank for One Unit

5.1.1 Split the CST's with T-24A aligned to AFW and Unit 1 and T-24B aligned to Unit 2 as follows:

a. Ensure the following valves are locked open

AF-2, T-24A Recirc Isolation LOCKED OPEN _____

AF-3, T-24A Service Outlet LOCKED OPEN _____

AF-5, T-24A Outlet to AFW Pumps LOCKED OPEN _____

AF-8, T-24B Service Outlet LOCKED OPEN _____

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- | | | |
|---|------|--|
| b. Ensure Open AF-7A, T-24B Supply from Water Treatment | OPEN | |
| c. Shut the following valves to split the CST's | | |
| AF-4A, T-24A Supply from Water Treatment | SHUT | |
| AF-6, T-24B Outlet to AFW Pumps | SHUT | |
| AF-9, T-24B Recirc Isolation | SHUT | |

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 °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. | |

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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.

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.

b. WHEN the CST water volume has cooled to 95 °F (80 °F-110 °F),
THEN Close AF-6, T-24B CST Outlet To Aux Feed Pumps.

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.

b. WHEN the CST water volume has cooled to 95 °F (80 °F - 110 °F),
THEN close AF-4A, T-24A CST Inlet From Water Treatment.

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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. _____

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

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

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). _____

STEP NO.	1st PERFORMANCE	2nd PERFORMANCE
5.1.5		
5.1.6		
5.1.7		
5.1.8		
5.1.9		

CAUTION

AT LEAST ONE CST WITH SUFFICIENT VOLUME TO COMPLY WITH TS 3.7.6 MUST ALWAYS BE ALIGNED TO THE AFW PUMPS

Per TLB-34, 7.399ft is required in One Tank for One Unit

NOTE: If T-24B (North) CST level is lower than T-24A (South) CST then water will transfer from T-24A to T-24B. If this is not acceptable, then raise T-24B level to greater than or equal to T-24A prior to shifting tanks.

NOTE: The following steps will cause the CST's to equalize in level.

5.1.11 WHEN a heated water source to the AFW Pumps is no longer required,
THEN align T-24B (North) CST to AFW Pumps as follows:

a. Ensure Locked Open the following valves

AF-8, T-24B Service Outlet. LOCKED OPEN _____

AF-6, T-24B Outlet to Auxiliary
Feed Pumps LOCKED OPEN _____

AF-9, T-24B Recirc Isolation, LOCKED OPEN _____

b. Ensure Open AF-7A T-24B Supply from Water Treatment _____

c. Perform Independent verification of the following valves:

AF-8, T-24B Service Outlet LOCKED OPEN _____

AF-6, T-24B Outlet to Auxiliary
Feed Pumps LOCKED OPEN _____

AF-9, T-24B, Recirc Isolation LOCKED OPEN _____

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d. Isolate T-24A (South) CST by Shutting the following valves:

- | | | |
|---|------|--|
| AF-3, T-24A Service Outlet. | SHUT | |
| AF-4A, T-24A Supply from Water Treatment. | SHUT | |
| AF-2, T-24A Recirc Isolation | SHUT | |

5.1.12 Notify the Control Room that T-24B (North) CST is aligned to AFW pumps and Condenser makeup.

~~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.

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

IV

5.1.14 Shut AF-13, T-24A CST Drain.

IV

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

5.1.16 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.

5.1.17 Cap 2CS-107C, HX-17A LP FWH 2A Outlet To HX-19A LP FWH 3A DRN.

IV

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5.1.18 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.

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

5.1.20 Store the IT-300/305 transfer hose as designated by the DSS.

NOTE: Entry into TSAC 3.7.6.A is not required for one CST inoperable Provided the aligned CST has sufficient volume to comply with LCO 3.7.6.

5.1.21 Declare T-24A CST inoperable.

5.1.22 Tag Shut the following T-24A valves to prevent use.

AF-3, T-24A Service Outlet

AF-4A, T-24A Supply from Water Treatment.

AF-2, T-24A Recirc Isolation.

5.1.23 Notify Chemistry to Sample T-24A for discharge.

Permit Required Yes No (circle one)

CAUTION

DO NOT Exceed the pumping capacity of the Turbine Bldg Sump Pumps when draining the CST.

5.1.24 Discharge/Drain T-24A (South) CST by throttling open AF-13, T-24A Drain. Maintain drain rate within the limits of the Turbine Bldg Sump Pump(s).

5.1.25 WHEN T-24A (South) CST has finished draining, THEN Shut and Cap AF-13. T-24A (South) CST Drain.

IV

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INITIALS

CAUTION

MAINTAIN SUFFICIENT VOLUME ALIGNED TO AFW
PUMPS TO COMPLY WITH TS 3.7.6 AT ALL TIMES
Per TLB-34, 7.399ft is required in One Tank for One Unit

NOTE: Remove Tags on T-24A (South) CST while performing the following steps.

5.1.26 Begin Refill of T-24A, (South) by opening AF-4A, T-24A Supply from Water Treatment.

CAUTION

MAINTAIN SUFFICIENT VOLUME ALIGNED TO AFW
PUMPS TO COMPLY WITH TS 3.7.6 AT ALL TIMES
Per TLB-34, 7.399ft is required in One Tank for One Unit

NOTE: T-24A and T-24B will equalize in the following step. It may be necessary to allow T-24A to fill partially from Water Treatment before proceeding.

5.1.27 Throttle Open AF-3, T-24 Service Outlet to equalize T-24A and T-24B.

5.1.28 Align Both CST's T-24A and T-24B to normal as follows:

AF-3, T-24A Service Outlet. LOCKED OPEN

IV

AF-8, T-24B Service Outlet LOCKED OPEN

IV

AF-5, T-24A Outlet to AFW Pumps LOCKED OPEN

IV

AF-6, T-24B Outlet to AFW Pumps LOCKED OPEN

IV

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	AF-2, T-24A Recirc Isolation	LOCKED OPEN	_____

			IV
	AF-9, T-24B Recirc Isolation	LOCKED OPEN	_____

			IV
	AF-4A, T-24A Supply from Water Treatment	OPEN	_____
	AF-7A, T-24B Supply from Water Treatment	OPEN	_____
5.1.29	Declare T-24A CST returned to service.		_____

5.2 Heat T-24B (North) CST to between 80 and 110 degrees F. using Unit 1 2B Feedwater Heater

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

<u>Valve</u>	<u>As-found</u>	<u>Required</u>	
AF-9 T-24B CST Recirc Isolation	_____	OPEN	_____
AF-2 T-24A Mini Recirc Isolation	_____	SHUT	_____
AF-3 T-24A Service Outlet	_____	OPEN	_____
AF-8 T-24B Service Outlet	_____	OPEN	_____
AF-6 T-24B CST Outlet To Aux Feed Pumps	_____	OPEN	_____
AF-5 T-24A CST Outlet To Aux Feed Pumps	_____	SHUT	_____
AF-4A T-24A CST Inlet From Water Treatment	_____	OPEN	_____
AF-7A T-24B CST Inlet From Water Treatment	_____	SHUT	_____

5.2.2 Install IT-300/305 transfer hose by:

- a. Connect one end of IT-300/305 transfer hose to 1CS-99C, HX-17B LP FWH 2B Outlet Drain. _____
- b. Connect the other end of IT-300/305 transfer hose to AF-14, T-24B CST Drain. _____

CAUTION

Feedwater outlet temperature is approximately 210 Degrees F and approximately 400 psig. When the transfer hose between Unit 1 2B FW Heater and T-24B is used, AF-14 is to be Opened before Throttling Open with 1CS-99C and 1CS-99C is to be Shut before Shutting AF-14 to minimize the pressure on the transfer hose.

5.2.3 Hang temporary information tags containing the information in the Caution on above on:

AF-14, T-24B CST Drain.

1CS-99C, HX-17B LP FWH 2B Outlet Drain.

5.2.4 Open AF-14, T-24B CST Drain.

NOTE: 1CS-99C, HX-17B LP FWH 2B Outlet Drain, may be throttled open or closed to vary fill or rate of temperature change.

NOTE: Steps 5.2.5 and 5.2.6 or 5.2.7 may be performed concurrently.

5.2.5 Using the tool provided, throttle open 1CS-99C, HX-17B LP FWH 2B Outlet Drain, AND check hose for leaks

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

a. Throttle open AF-5, T-24A CST Outlet To Aux Feed Pumps, to sluice water from T-24A to T-24B.

b. WHEN the CST water volume has cooled to 95 °F (80 °F-110 °F), THEN Close AF-5, T-24A CST Outlet To Aux Feed Pumps.

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

- a. Open AF-7A, T-24B CST Inlet From Water Treatment. _____
- b. WHEN the CST water volume has cooled to 95 °F (80 °F -
110 °F),
THEN close AF-7A, T-24B CST Inlet From Water
Treatment. _____

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

- a. Shut 1CS-99C, HX-17B LP FWH 2B Outlet Drain. _____
- b. WHEN heating T-24B (North) CST water volume is to be
restarted,
THEN go to step 5.1.10. _____

5.2.9 WHEN 24B (North) CST level is at the level desired by Shift
Management,
AND temperature is at 95 °F (80 °F-110 °F),
THEN shut 1CS-99C, HX-17B LP FWH 2B Outlet Drain. _____

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NOTE: It may be necessary to repeat steps that refill and reheat 24B (North) CST as the Steam Generator(s) and Main Steam Line(s) are filled.

5.2.10 IF it is necessary to refill and reheat 24B (North) CST, THEN repeat steps 5.2.5 through steps 5.2.9, AND document steps performed below. (Mark step not performed N/A).

STEP NO.	1st PERFORMANCE	2nd PERFORMANCE
5.2.5		
5.2.6		
5.2.7		
5.2.8		
5.2.9		

NOTE: Perform the next three steps without delay in case 1CS-99C, HX-17B LP FWH 2B Outlet Drain leaks by.

5.2.11 Using the tool provided, shut 1CS-99C, HX-17B LP FWH 2B Outlet Drain.

IV

5.2.12 Shut AF-14, T-24B CST Drain.

IV

5.2.13 Remove IT-300/305 transfer hose from AF-14, T-24B CST Drain AND ROUTE to a floor drain.

5.2.14 Cap AF-14, T-24B CST Drain.

IV

5.2.15 Remove IT-300/305 transfer hose from 1CS-99C, HX-17B LP FWH 2B Outlet Drain AND drain hose into floor drain.

5.2.16 Cap 1CS-99C, HX-17B LP FWH 2B Outlet Drain.

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- 5.2.17 Remove the Temporary Information tags hung during step 5.2.3 on AF-14, T-24B CST Drain AND 1CS-99C, HX-17B LP FWH 2B Outlet Drain. _____
- 5.2.18 Allow the IT-300/305 transfer hose to cool to approximately ambient temperature while continuing with the balance of this section. _____
- 5.2.19 Place the following valves to the original as-found position recorded in step 5.2.1 or as directed by the DSS. _____

As-found
/DSS

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

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5.2.20 Provide Independent Verification of the Redlocked valves listed below.

<u>Valve</u>	<u>Required</u>	<u>IV</u>
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	_____

5.2.21 Store the IT-300/305 transfer hose as designated by Shift management. _____

5.3 Heat T-24A (South) CST using Waste Heating Returns.

5.3.1 Align the Waste Heating Returns to the South CST as follows:

- a. AF-67, Heating Boiler Feedwater Pump Suction. SHUT _____
- b. AF-10, T-24 A/B CST heating Return Header Isolation. OPEN _____
- c. AF-69, Heating Boiler Condensate Return. OPEN _____
- d. AF-68, Heating Boiler Feedwater and Condensate Crossover. SHUT _____

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

<u>Valve</u>	<u>As Found</u>	<u>Required</u>
AF-2 T-24A Mini Recirc Isolation	_____	OPEN _____
AF-9 T-24B CST Recirc isolation	_____	SHUT _____
AF-3 T-24A Service Outlet	_____	OPEN _____
AF-8 T-24B Service Outlet	_____	OPEN _____
AF-5 T-24A CST outlet to Aux Feed Pumps	_____	OPEN _____
AF-6 T-24B CST outlet to Aux Feed Pumps	_____	SHUT _____
AF-7A T-24B CST inlet from Water Treatment	_____	OPEN _____
AF-4A T-24A CST inlet from Water Treatment	_____	SHUT _____

5.3.3 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. _____
- b. WHEN the CST water volume has cooled to 95 °F (80 °F-110 °F), THEN Close AF-6, T-24B CST Outlet To Aux Feed Pumps. _____

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5.3.4 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. _____

b. WHEN the CST water volume has cooled to 95 °F (80 °F - 110 °F), THEN close AF-4A, T-24A CST Inlet From Water Treatment. _____

5.3.5 WHEN T-24A (South) CST level is at the level desired by Shift Management, AND temperature is at 95 °F (80 °F-110 °F), THEN with Shift Management concurrence, continue with Step 5.3.6. to stop heating T-24A (South) CST. _____

5.3.6 Place the following valves to the original As-Found position recorded in step 5.3.2 or as directed by the DSS.

		<u>As-found</u> <u>/DSS</u>	
AF-9	T-24B CST Recirc isolation	_____	_____
AF-2	T-24A Mini Recirc Isolation	_____	_____
AF-3	T-24A Service Outlet	_____	_____
AF-8	T-24B Service Outlet	_____	_____
AF-6	T-24B CST outlet to Aux Feed Pumps	_____	_____
AF-5	T-24A CST outlet to Aux Feed Pumps	_____	_____
AF-7A	T-24B CST inlet from Water Treatment	_____	_____
AF-4A	T-24A CST inlet from Water Treatment	_____	_____

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5.3.7 Provide Independent Verification of the Redlocked valves listed below.

<u>Valve</u>	<u>Required</u>	<u>IV</u>
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	_____

5.3.8 Align the Waste Heating Returns as follows:

- a. AF-67, Heating Boiler Feedwater Pump Suction. SHUT _____
- b. HV-68, Heating Boiler Feedwater and Condensate Cross-Connect. OPEN _____
- c. AF-10, T-24 A/B CST heating Return Header Isolation. SHUT _____
- d. AF-69, Heating Boiler Condensate Return. OPEN _____

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5.4 Heat T-24B (North) CST using Waste Heating Returns.

5.4.1 Align the Waste Heating Returns to the North CST as follows:

- | | | | |
|----|---|------|-------|
| a. | AF-67, Heating Boiler Feedwater Pump Suction. | SHUT | _____ |
| b. | AF-10, T-24 A/B CST heating Return Header Isolation. | SHUT | _____ |
| c. | HV-68, Heating Boiler Feedwater and Condensate Cross-Connect. | OPEN | _____ |
| d. | AF-69, Heating Boiler Condensate Return. | OPEN | _____ |

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

<u>Valve</u>	<u>As Found</u>	<u>Required</u>
AF-9 T-24B CST Recirc Isolation	_____	OPEN _____
AF-2 T-24A Mini recirc isolation	_____	SHUT _____
AF-3 T-24A Service Outlet	_____	OPEN _____
AF-8 T-24B Service Outlet	_____	OPEN _____
AF-6 T-24B CST Outlet To Aux Feed Pumps	_____	OPEN _____
AF-5 T-24A CST Outlet To Aux Feed Pumps	_____	SHUT _____
AF-4A T-24A CST Inlet From Water Treatment	_____	OPEN _____
AF-7A T-24B CST Inlet From Water Treatment	_____	SHUT _____

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

a. Throttle open AF-5, T-24A CST Outlet To Aux Feed Pumps, to sluice water from T-24A to T-24B. _____

b. WHEN the CST water volume has cooled to 95 °F (80 °F-110 °F),
THEN Close AF-5, T-24A CST Outlet To Aux Feed Pumps. _____

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

a. Open AF-7A, T-24B CST Inlet From Water Treatment. _____

b. WHEN the CST water volume has cooled to 95 °F (80 °F - 110 °F),
THEN close AF-7A, T-24B CST Inlet From Water Treatment. _____

5.4.5 WHEN T-24B (North) CST level is at the level desired by Shift Management,
AND temperature is at 95 °F (80 °F-110 °F),
THEN with Shift Management concurrence, continue with Step 5.4.6 to stop heating T-24A (South) CST. _____

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5.4.6 Place the following valves to the original As-Found position recorded in step 5.4.2 or as directed by the DSS.

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

5.4.7 Provide Independent Verification of the Redlocked valves listed below.

<u>Valve</u>	<u>Required</u>	<u>IV</u>
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	_____

5.4.8 Align the Waste Heating Returns to the North CST as follows:

- a. AF-67, Heating Boiler Feedwater Pump Suction. SHUT _____
- b. HV-68, Heating Boiler Feedwater and Condensate Cross-Connect. OPEN _____
- c. AF-69, Heating Boiler Condensate Return. OPEN _____
- d. AF-10, T-24 A/B CST heating Return Header Isolation. SHUT _____

HEATING THE CONDENSATE STORAGE TANKS

Remarks

Performed By

_____ Performer (Print and Sign)	_____ Date Time	_____ Initials
_____ Performer (Print and Sign)	_____ Date Time	_____ Initials
_____ Performer (Print and Sign)	_____ Date Time	_____ Initials
_____ Performer (Print and Sign)	_____ Date Time	_____ Initials
_____ Performer (Print and Sign)	_____ Date Time	_____ Initials
_____ Performer (Print and Sign)	_____ Date Time	_____ Initials

Reviewed By

_____ Reviewer (Print and Sign)	_____ Date Time	_____ Initials
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HEATING THE CONDENSATE STORAGE TANKS

6.0 REFERENCES

6.1 Technical Specifications:

- TS: 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