

**PRELIMINARY**

**APPENDIX V**

**MECHANICAL SYSTEMS WALKDOWN CHECKLISTS**

<u>Checklist No.</u>	<u>Equipment</u>
WD-MS-01	Component Cooling Water Surge Tank
WD-MS-02	Component Cooling Water Pump
WD-MS-03	Component Cooling Water Heat Exchanger
WD-MS-04	Residual Heat Removal Heat Exchanger
WD-MS-05	Containment Spray Heat Exchanger
WD-MS-06	Control Room A/C Chiller Condenser
WD-MS-07	Nuclear Cooled Water System Chiller Condenser
WD-MS-08	Piping
WD-MS-09	Component Cooling Water Valves

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PDR ADOCK 05000445  
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Texas Utilities Generating Company  
Independent Assessment Program, Phase 4  
Final Report TR-84056-01, Rev. 0



PRELIMINARY

## Independent Design Review Checklist

Equipment: Component Cooling Water  
Surge Tank CPI-CCATST-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-01

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. CCW Surge Tank CPI-CCATST-01 (Design Data)				
• Tank nameplate affixed in accordance with ASME Section III.	X			
• Tank capacity agrees with:				
a. Specification			X	Not shown on nameplate. Not required by ASME. Tank size based on field measurement is correct.
b. Calculation			X	
• Design pressure in agreement with specification.	X			
• Design temperature in agreement with specification.	X			Specification = 130°F Nameplate = 200°F, Conservative
• Tank N-stamped.	X			
• Correct safety class.	X			
• Tank is piped in accordance with flow diagram.	X			
• Tank is piped in accordance with isometrics.	X			
• Safety/relief valve provided.	X			
• Correct safety/relief valve setting.	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Component Cooling Water  
Surge Tank CPI-CCATST-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-01

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. CCW Surge Tank CPI-CCATST-01 (Design Data) (continued) <ul style="list-style-type: none"><li>• Vacuum breaker provided.</li><li>• Vacuum braker correctly sized.</li></ul>	X X			
2. CCW Surge Tank CPI-CCATST-01 (Hazards Protection) <u>Fire</u> <ul style="list-style-type: none"><li>• Fire/smoke detection provided in vicinity of surge tank.</li><li>• Suppression equipment provided in vicinity of tank.</li><li>• Redundant trains protected from damage by a single fire.</li></ul> <u>Flood</u> <ul style="list-style-type: none"><li>• Lowest piece of equipment associated with surge tank (drain valves, etc) is located above flood level.</li></ul>	X X  X	  X		Common tank for both CCW trains. Acceptable due to lack of combustibles, passive nature of tank and detection/suppression equipment.



PRELIMINARY

## Independent Design Review Checklist

Equipment: Component Cooling Water  
Surge Tank CPI-CCATST-01

Reviewer J. Foley/R. Hess

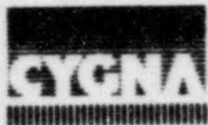
Approver Eric van Stijgeren

Checklist No. WD-MS-01

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. CCW Surge Tank CPI-CCATST-01 (Hazards Protection) (continued)				
• No openings from floors above which could flood surge tank area.	X			Located high in building on open metal grating.
• Protected from a single flood that could damage both trains.	X			
<u>Missile Protection</u>				
• Protected from rotating equipment in vicinity of surge tank which could generate a missile which could damage both trains.	X			
<u>High Energy Line Breaks</u>				
• Protected from unrestrained high energy lines in the vicinity which could rupture and damage both sides of surge tank.	X			
<u>Seismic Protection</u>				
• Protected from non-seismic equipment in the vicinity of the surge tank which could fail in a seismic event and damage both trains of the surge tank.	X			





PRELIMINARY

## Independent Design Review Checklist

Equipment: Component Cooling Water  
Pump CP1-CCAPCC-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-02

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. CCW Pump CP1-CCAPCC-01 (Design Data)				
• Pump nameplate affixed in accordance with ASME Section III.	X			
• Correct safety class.	X			
• Nameplate flow rate in accordance with specification.	X			
• NPSH in accordance with specification.	X			
• Nameplate pressure according to specification.	X			
• Certified pump curve available at site, per purchase specification	X			
• Pump is piped in accordance with flow diagram.	X			
• Pump is piped in accordance with isometrics.	X			
2. CCW Pump CP1-CCAPCC-01 (Hazards Protection)				
<u>Fire</u>				
• Fire/smoke detection provided in vicinity of CCW pump.	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Component Cooling Water  
Pump CP1-CCAPCC-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-02

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. CCW Pump CP1-CCAPCC-01 (Hazards Protection) (continued)				
• Suppression equipment provided in vicinity of CCW pump.	X			
• Redundant trains protected from damage by a single fire.	X			
<u>Flood</u>				
• Lowest piece of equipment associated with CCW pump (drain valves, etc.) located above flood level.	X			
• No openings from floors above which could flood CCW pump.	X			
• Protected from a single flood that could damage both trains.	X			
<u>Missile Protection</u>				
• Protected from rotating equipment in vicinity which could generate a missile which could damage both trains.	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: ~~Component Cooling Water~~  
~~Pump CP1-CCAPCC-01~~

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-02

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. CCW Pump CP1-CCAPCC-01 (Hazards Protection) (continued)				
<u>High Energy Line Breaks</u>				
• Protected from unrestrained high energy lines which could rupture and damage both CCW pumps.	X			
<u>Seismic Protection</u>				
• Protected from non-seismic equipment in the vicinity of the CCW pump which could fail in a seismic event and damage both CCW pumps.	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Component Cooling Water Heat  
Exchanger CP1-CCAHHX-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-03

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. CCW Heat Exchanger CP1-CCAHHX-01 (Design Data)				
• Nameplate affixed in accordance with ASME Section III.	X			
• Surface area in accordance with specification.	X			
• Heat exchanger N-stamped.	X			
• Correct safety class.	X			
• Design temperature in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Design pressure in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Vents and drains.	X			
• Component piped in accordance with flow diagram.	X			
• Component piped in accordance with isometric drawings.	X			





PRELIMINARY

## Independent Design Review Checklist

Equipment: ~~Component Cooling Water Heat~~  
Exchanger CP1-CCAHHX-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-03

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. CCW Heat Exchanger CP1-CCAHHX-01 (Hazards Protection)				
<u>Fire</u>				
• Fire/smoke detection provided in vicinity of CCW heat exchanger.	X			
• Fire suppression equipment provided in vicinity of CCW heat exchanger.	X			
• Redundant trains protected from damage by a single fire.		X		Located in same room without intervening fire barriers. Acceptable due to lack of combustibles, spacing and availability of detection/suppression equipment.
<u>Flood</u>				
• Lowest piece of equipment associated with CCW heat exchanger (drain valves, etc.) is located above flood level.	X			
• No openings from floors above which could damage both CCW heat exchangers.	X			Opening from CCW pump room on floor above but heat exchanger room volume will allow sufficient time to isolate leakage prior to damaging heat exchanger.



PRELIMINARY

## Independent Design Review Checklist

Equipment: Component Cooling Water Heat  
Exchanger CP1-CCAHHX-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-03

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. CCW Heat Exchanger CP1-CCAHHX-01 (Hazards Protection) (continued)				
<u>Missile Protection</u>				
• Protected from rotating equipment in vicinity which could generate a missile which could damage both trains?	X			
<u>High Energy Line Breaks</u>				
• Protected from unrestrained high energy lines in the vicinity which could rupture and damage both CCW heat exchangers.	X			
<u>Seismic Protection</u>				
• Protected from non-seismic equipment in the vicinity which could fail in a seismic event and damage both trains of the CCW heat exchangers.	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Residual Heat Removal  
Heat Exchanger TBX-RHAHRS-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-04

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. RHR Heat Exchanger TBX-RHAHRS-01 (Design Data)				
• Nameplate affixed in accordance with ASME Section III.	X			
• Surface area in agreement with specification.	X			
• Heat exchanger N-stamped.	X			
• Correct safety class.	X			
• Design temperature in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Design pressure in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Vents and drains.	X			
• Component piped in accordance with flow diagram.	X			
• Component piped in accordance with isometric drawings.	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Residual Heat Removal  
Heat Exchanger TBX-RHAHRS-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-04

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. RHR Heat Exchanger TBX-RHAHRS-01 (Design Data) (continued)				
• Safety/relief valves.	X			Located on CCM piping.
2. RHR Heat Exchanger TBX-RHAHRS-01 (Hazards Protection)				
<u>Fire</u>				
• Fire/smoke detection provided in vicinity of RHR heat exchanger.	X			
• Suppression equipment provided in vicinity of RHR heat exchanger.	X			
• Redundant trains protected from damage by a single fire.	X			
<u>Flood</u>				
• Lowest piece of equipment associated with RHR heat exchanger (drain valves, etc.) is located above flood level.	X			
• No openings from floors above which could flood RHR heat exchangers.	X			





PRELIMINARY

## Independent Design Review Checklist

Equipment: Residual Heat Removal  
Heat Exchanger TBX-RHAHRS-01

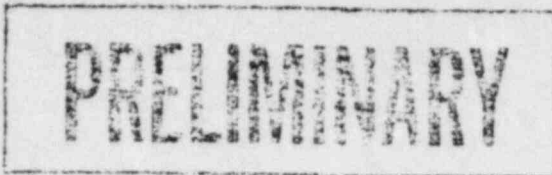
Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-04

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. RHR Heat Exchanger TBX-RHAHRS-01 (Hazards Protection) (continued)				
• Protected from a single flood that could damage both trains.	X			
<u>Missile Protection</u>				
• Protected from rotating equipment in vicinity which could generate a missile and damage both trains.	X			
<u>High Energy Line Breaks</u>				
• Protected from unrestrained high energy lines which could rupture and damage both RHR heat exchangers.	X			
<u>Seismic Protection</u>				
• Protected from non-seismic equipment in the vicinity which could fail in a seismic event and damage both RHR heat exchangers.	X			



## Independent Design Review Checklist

Equipment: Containment Spray Heat  
Exchanger CP1-CTAHCS-01

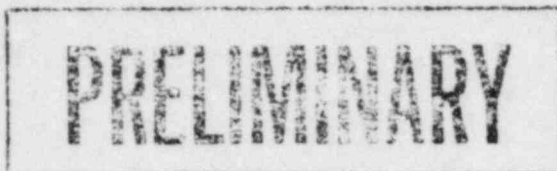
Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-05

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. Containment Spray Heat Exchanger CP1-CTAHCS-01 (Design Data)				
• Nameplate affixed in accordance with ASME Section III.	X			
• Surface area in agreement with specification.	X			
• Heat exchanger N-stamped.	X			
• Correct safety class.	X			
• Design temperature in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Design pressure in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Vents and drains.	X			
• Component is piped in accordance with flow diagram.	X			
• Safety/relief valves provided.	X			Located on CCW pipeline.



Equipment: Containment Spray Heat Exchanger CPI-CTAH-S-01

Date 7/20/84

Texas Utilities Generating Company; 84056  
Independent Assessment Program, Phase 4



PRELIMINARY

## Independent Design Review Checklist

Equipment: Containment Spray Heat  
Exchanger CPI-CTAHCS-01

Reviewer J. Foley/R. Hess

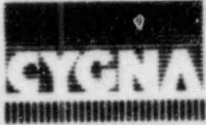
Approver Eric van Stijgeren

Checklist No. WD-MS-05

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. Containment Spray Heat Exchanger CPI-CTAHCS-01 (Hazards Protection) (continued)				
• No openings from floors above which could flood CS heat exchanger.	X			
• Protected from a single flood that could damage both trains.	X			
<u>Missile Protection</u>				
• Protected from rotating equipment in vicinity which could generate a missile which could damage both trains.	X			
<u>High Energy Line Breaks</u>				
• Protected from unrestrained high energy lines in the vicinity which could rupture and damage both sides of CS heat exchangers.	X			
<u>Seismic Protection</u>				
• Protected from non-seismic equipment in the vicinity which could fail in a seismic event and damage both CS heat exchangers.	X			





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## Independent Design Review Checklist

Equipment: Control Room A/C Chiller  
Condenser CPX-VAACCR-01

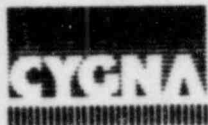
Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-06

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. Control Room A/C Chiller Condenser CPX-VAACCR-01 (Design Data)				
• Nameplate affixed in accordance with ASME Section II.	X			
• Surface area agreement with specification.			X	None listed on name plate. Not required by TEMA.
• Heat exchanger N-stamped.	X			
• Safety class correct.	X			
• Design temperature in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Design pressure in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Vents and drains.	X			
• Component is piped in accordance with flow diagram.	X			
• Component is piped in accordance with isometric drawings.	X			



## Independent Design Review Checklist

Equipment: Control Room A/C Chiller  
Condenser CPX-VAACCR-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-U6

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. Control Room A/C Chiller Condenser CPX-VAACR-01 (Hazards Protection)				
<u>Fire</u>				
• Fire/smoke detection provided in vicinity of control room A/C chiller condenser.	X			
• Suppression equipment provided in vicinity of control room A/C chiller condenser.	X			
• Redundant trains protected from simultaneous damage by single fire.	X			
<u>Flood</u>				
• Lowest piece of equipment associated with control room A/C chiller condenser (drain valves, etc.) located above flood level.	X			
• No openings from floors above which could flood control room A/C chiller condenser.	X			
• Protected from a single flood that could damage both trains.	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Control Room A/C Chiller  
Condenser CPX-VAACCR-01

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-U6

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. Control Room A/C Chiller Condenser CPX-VAACR-01 (Hazards Protection) (continued)				
<u>Missile Protection</u>				
• Protected from rotating equipment in vicinity which could generate a missile which could damage both trains.	X			
<u>High Energy Line Breaks</u>				
• Protected from unrestrained high energy lines in the vicinity which could rupture and damage both control room A/C chiller condensers.	X			
<u>Seismic Protection</u>				
• Protected from non-seismic equipment in the vicinity which could fail in a seismic event and damage both trains of the control room A/C chiller condenser.	X			



**PRELIMINARY**

## Independent Design Review Checklist

Equipment: Nuclear Chilled Water System  
~~Chiller Condenser CP1-CHCICE-05~~

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-07

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. Nuclear Chilled Water System Chiller Condenser CP1-CHCICE-05 (Design Data)				
• Nameplate affixed in accordance with ASME Section III.	X			
• Surface area agreement with specification.			X	Not listed on name plate. Not required by TEMA.
• Condenser N-stamped.	X			
• Correct safety class.	X			
• Design temperature in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Design pressure in agreement with specification.				
a. Shell side.	X			
b. Tube side.	X			
• Vents and drains.	X			
• Component is piped in accordance with flow diagram.	X			
• Component is piped in accordance with isometric drawings.	X			





PRELIMINARY

## Independent Design Review Checklist

Equipment: Nuclear Chilled Water System  
~~Chiller Condenser CP1-CHCICE-05~~

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-07

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. Nuclear Chilled Water System Chiller Condenser CP1-CHCICE-05 (Hazards Review)				
<u>Fire</u>				
• Fire/smoke detection provided in vicinity of chiller condenser.	X			
• Suppression equipment provided in vicinity of chiller condenser.	X			
• Redundant trains protected from damage by a single fire.	X			Double fire doors between rooms 115A & B do not have U.L. identi- fication tag. Proper doors were on order. Subsequent Cygna rein- spection verified proper doors were installed.
<u>Flood</u>				
• Lowest piece of equipment associated with chiller condenser (drain valves, etc.) located above flood level.	X			
• No openings from floors above which could flood chiller condenser area.	X			
• Protected from a single flood that could damage both trains.	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Nuclear Chilled Water System  
Chiller Condenser CP1-CHCICE-05

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-07

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
2. Nuclear Chilled Water System Chiller Condenser CP1-CHCICE-05 (Hazards Review) (continued)				
<u>Missile Protection</u>				
• Protected from rotating equipment in vicinity which could generate a missile and damage both trains.	X			
<u>High Energy Line Breaks</u>				
• Protected from unrestrained high energy lines in the vicinity which could rupture and damage both chiller condensers.	X			
<u>Seismic Protection</u>				
• Protected from non-seismic equipment in the vicinity which could fail in a seismic event and damage both chiller condensers.	X			



**PRELIMINARY**

## Independent Design Review Checklist

Equipment: Piping

Reviewer **J. Foley/R. Hess**

Approver **E. van Stijgeren**

Checklist No. **WD-MS-08**

Date **7/20/84**

Item	Satisfactory			Comments
	Yes	No	N/A	
1. BRP-CC-1-AB-046 Rev. 7				
a. 6"-CC-1-948-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
b. 6"-CC-1-07-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations of valves	X			
(3) Check branch connections off pipe run	X			
2. BRP-CC-1-AB-030 Rev. 8				
a. 6"-CC-1-07-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves			X	No valves.
(3) Check branch connections off pipe run	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
3. BRP-CC-1-AB-003 Rev. 16				
a. 24"-CC-1-15-152-3				
(1) Visually review piping runs for geometry and approximate length	X			No valves.
(2) Check approximate locations and orientation of valves			X	
(3) Check branch connections off pipe run	X			
b. 24"-CC-1-10-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
c. 24"-CC-1-08-152-3				
(1) Visually review piping runs for geometry and approximate length	X			No valves.
(2) Check approximate locations and orientation of valves			X	
(3) Check branch connections off pipe run	X			





PRELIMINARY

## Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
4. BRP-CC-1-AB-007 Rev. 13				
a. 10"-CC-1-09-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
b. 2"-CC-1-013-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
c. 2"-CC-1-071-152-5				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
d. 2"-CC-1-072-152-5 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X		X	No valves.
e. 2"-CC-1-14-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X X X			
5. BRP-CC-1-AB-005 Rev. 18 a. 24"-CC-1-19-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X X X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
b. 24"-CC-1-51-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X X X			
6. BRP-CC-1-AB-009 Rev. 12 a. 24"-CC-1-19-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X X X			
7. BRP-CC-1-AB-013 Rev. 17 a. 24"-CC-1-020-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X X X			



PRELIMINARY

# Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

## Satisfactory

Item	Satisfactory			Comments
	Yes	No	N/A	
b. 24"-CC-1-28-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X X X			
8. BRP-CC-1-AB-049 Rev. 13 a. 24"-CC-1-28-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X  X		X	No valves.
b. 8"-CC-1-48-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X  X		X	No valves.





PRELIMINARY

# Independent Design Review Checklist

Equipment: Piping

Reviewer

J. Foley/R. Hess

Approver

E. van Stijgeren

Checklist No.

WD-MS-08

Date

7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
c. 4"-CC-1-138-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X  X		X	No valves.
9. BRP-CC-1-AB-060 Rev. 15  a. 4"-CC-1-138-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	  X X X			
10. BRP-CC-1-EC-018 Rev. 9  a. 4"-CC-1-138-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	  X  X		X	No valves.



PRELIMINARY

# Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
b. 3"-CC-1-136-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
c. 3"-CC-1-137-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
11. BRP-CC-1-EC-019 Rev. 9				
a. 3"-CC-1-136-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			



PRELIMINARY

# Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
12. BRP-CC-1-EC-002 Rev. 12				
a. 6"-CC-1-40-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
b. 3"-CC-1-951-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
13. BRP-CC-1-AB-008 Rev. 16				
a. 24"-CC-1-70-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			





PRELIMINARY

## Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
14. BRP-CC-1-AB-041 Rev. 10				
a. 16"-CC-1-158-152-3				
(1) Visually review piping runs for geometry and approximate length	X			No valves.
(2) Check approximate locations and orientation of valves			X	
(3) Check branch connections off pipe run	X			
b. 12"-CC-1-159-152-3				
(1) Visually review piping runs for geometry and approximate length	X			No valves.
(2) Check approximate locations and orientation of valves			X	
(3) Check branch connections off pipe run	X			
15. BRP-CC-1-SB-009 Rev. 8				
a. 12"-CC-1-159-152-3				
(1) Visually review piping runs for geometry and approximate length	X			No valves.
(2) Check approximate locations and orientation of valves			X	
(3) Check branch connections off pipe run	X			





PRELIMINARY

# Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijoren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
16. BRP-CC-1-SB-008 Rev. 15				
a. 12"-CC-1-159-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate and orientation locations of valves			X	No valves.
(3) Check branch connections off pipe run	X			
b. 8"-CC-1-160-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves			X	No valves.
(3) Check branch connections off pipe run	X			
c. 8"-CC-1-250-152-2				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
17. BRP-CC-1-RB-049 Rev. 12				
a. 8"-CC-1-250-152-2				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
b. 8"-CC-1-249-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			
c. 6"-CC-1-246-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves			X	No valves.
(3) Check branch connections off pipe run	X			



**PRELIMINARY**

## Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
18. BRP-CC-1-RB-033 Rev. 12				
a. 4"-CC-1-255-152-3				
(1) Visually review piping runs for geometry and approximate length	X			No valves.
(2) Check approximate locations and orientation of valves			X	
(3) Check branch connections off pipe run	X			
b. 2"-CC-1-267-152-3				
(1) Visually review piping runs for geometry and approximate length	X			No valves.
(2) Check approximate locations and orientation of valves			X	
(3) Check branch connections off pipe run	X			
c. 2"-CC-1-252-2503-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			



PRELIMINARY

## Independent Design Review Checklist

Equipment: Piping

Reviewer J. Foley/R. Hess

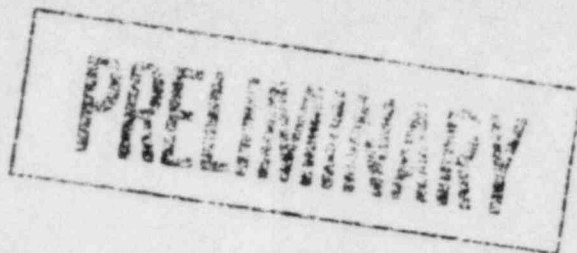
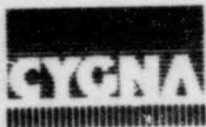
Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
19. 2"-CC-1-RB-001 Rev. 8				
2"-CC-1-252-2503-3				
(1) Visually review piping runs for geometry and approximate length	X			No valves.
(2) Check approximate locations and orientation of valves			X	
(3) Check branch connections off pipe run	X			
b. 1-1/2"-CC-1-282-2503-3				
(1) Visually review piping runs for geometry and approximate length	X			No valves.
(2) Check approximate locations and orientation of valves			X	
(3) Check branch connections off pipe run	X			
20. BRP-CC-1-RB-036 Rev. 12				
a. 4"-CC-1-257-152-3				
(1) Visually review piping runs for geometry and approximate length	X			
(2) Check approximate locations and orientation of valves	X			
(3) Check branch connections off pipe run	X			





# Independent Design Review Checklist

Equipment: Piping

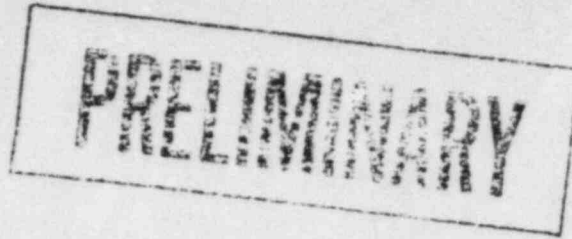
Reviewer J. Foley/R. Hess

Approver E. van Stijgeren

Checklist No. WD-MS-08

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
b. 3"-CC-1-264-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X		X	No valves.
c. 3"-CC-1-256-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X		X	No valves.
21. BRP-CC-1-RB-037 Rev. 14 a. 3"-CC-1-260-152-3 (1) Visually review piping runs for geometry and approximate length (2) Check approximate locations and orientation of valves (3) Check branch connections off pipe run	X X X			



## Independent Design Review Checklist

Equipment: Component Cooling Water Valves

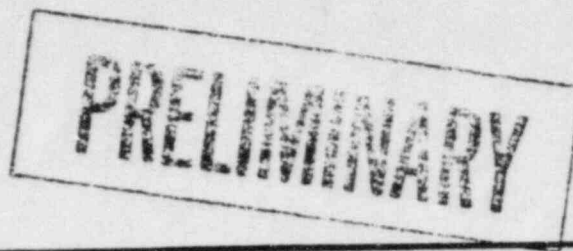
Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-09

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
1. 1 HV-4527				
a. Correct valve type specified for this application.	X			
b. Valve "N" stamped per ASME code.	X			
c. Safety class properly specified.	X			
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.	X			
2. 1 HV-4526				
a. Correct valve type specified for this application.	X			
b. Valve "N" stamped per ASME code.		X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
c. Safety class properly specified.		X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.	X			



## Independent Design Review Checklist

Equipment: Component Cooling Water Valves

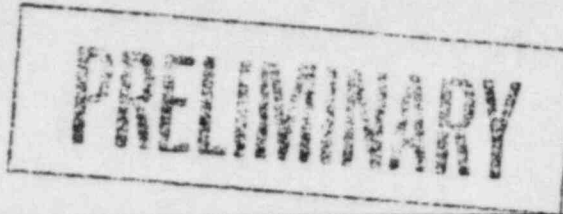
Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-09

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
3. 1 FV-4650				
a. Correct valve type specified for this application.	X			No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code. No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
b. Valve "N" stamped per ASME code.		X		
c. Safety class properly specified.		X		
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.	X			
4. ICCP-HV-4515				
a. Correct valve type specified for this application.	X			
b. Valve "N" stamped per ASME code.	X			
c. Safety class properly specified.	X			
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.	X			



## Independent Design Review Checklist

Equipment: Component Cooling Water Valves

Reviewer J. Foley/R. Hess

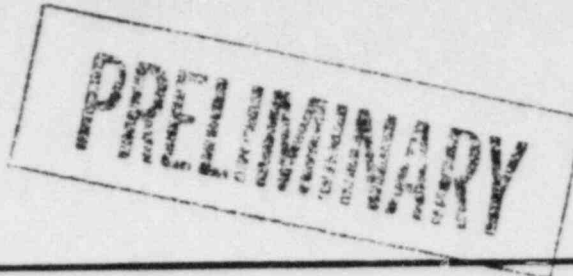
Approver Eric van Stijgeren

Checklist No. WD-MS-09

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
5. ICCP-HV-4514				
a. Correct valve type specified for this application.	X			
b. Valve "N" stamped per ASME code.	X			
c. Safety class properly specified.	X			
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.	X			
6. ICC-023				
a. Correct valve type specified for this application.	X			
b. Valve "N" stamped per ASME code.		X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
c. Safety class properly specified.		X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.			X	Manual.





## Independent Design Review Checklist

Equipment: Component Cooling Water Valves

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-09

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
7. CPI-CVSS-01				
a. Correct valve type specified for this application.	X			
b. Valve "N" stamped per ASME code.	X			
c. Safety class properly specified.	X			
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.			X	Vacuum breaker.
8. 1-CC-020				
a. Correct valve type specified for this application.	X			
b. Valve "N" stamped per ASME code.	X			
c. Safety class properly specified.		X		Two tags on valve; ASME tag indicates Class 3; CPSES tag indicates Class 2 relief valve. CPSES tag was incorrect and has been subsequently changed.
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.			X	



**PRELIMINARY**

## Independent Design Review Checklist

Equipment: Component Cooling Water Valves

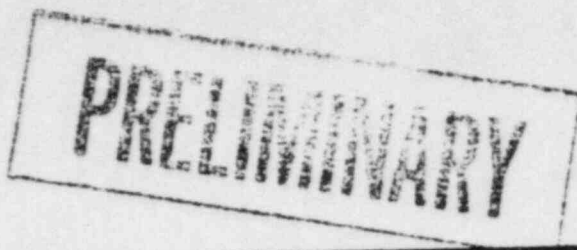
Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-09

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
9. 1-RV-4508				
a. Correct valve type specified for this application.	X			
b. Valve "N" stamped per ASME code.	X			
c. Safety class properly specified.	X			
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.	X			
10. 1-HV-4574				
a. Correct valve type specified for this application.	X			Tag indicates Unit 2. However, PET (Permanent Equipment Transfer) has transferred valve to Unit 1.
b. Valve "N" stamped per ASME code.	X			
c. Safety class properly specified.	X			
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.	X			



## Independent Design Review Checklist

Equipment: Component Cooling Water Valves

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-09

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
11. 1-CC-031				
a. Correct valve type specified for this application.	X	X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code. No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
b. Valve "N" stamped per ASME code.		X		
c. Safety class properly specified.				
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.			X	
12. ICC-694				
a. Correct valve type specified for this application.	X	X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
b. Valve "N" stamped per ASME code.				



PRELIMINARY

## Independent Design Review Checklist

Equipment: Component Cooling Water Valves

Reviewer J. Foley/R. Hess

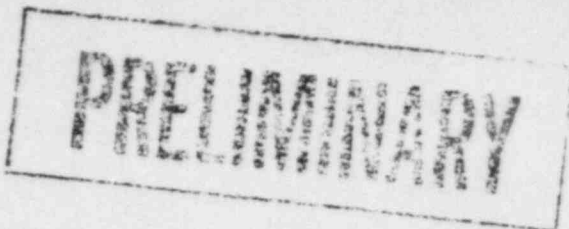
Approver Eric van Stijgeren

Checklist No. WD-MS-09

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
c. Safety class properly specified.		X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.			X	Manual stop check.
13. ICC-896				
a. Correct valve type specified for this application.	X			
b. Valve "N" stamped per ASME code.		X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
c. Safety class properly specified.		X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.			X	Manual.





## Independent Design Review Checklist

Equipment: Component Cooling Water Valves

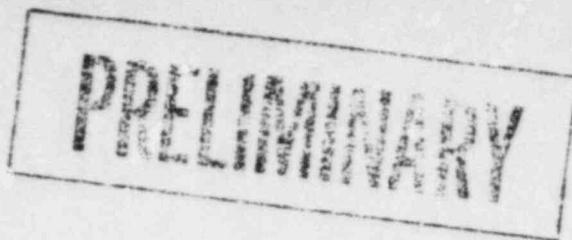
Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-09

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
14. ICC-713				
a. Correct valve type specified for this application.	X			No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
b. Valve "N" stamped per ASME code.		X		
c. Safety class properly specified.		X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
d. Valve size specified as per flow diagram.	X			Manual.
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.			X	
15. HV-4699				
a. Correct valve type specified for this application.	X			No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
b. Valve "N" stamped per ASME code.		X		



## Independent Design Review Checklist

Equipment: Component Cooling Water Valves

Reviewer J. Foley/R. Hess

Approver Eric van Stijgeren

Checklist No. WD-MS-09

Date 7/20/84

Item	Satisfactory			Comments
	Yes	No	N/A	
c. Safety class properly specified.		X		No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.	X			
16. HV-4700				
a. Correct valve type specified for this application.	X			No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code. No tag on valve. However, traceability to valve data package exists via valve identification and serial number. This is acceptable per ASME Code.
b. Valve "N" stamped per ASME code.		X		
c. Safety class properly specified.		X		
d. Valve size specified as per flow diagram.	X			
e. Application suitable for intended function.	X			
f. For power operated valves, operator is as specified.	X			

5/16/85

TO: DOCUMENT CONTROL

FROM: S. B. Burwell x 27038

SUBJECT: Cygna Review (Phase 4) Comanche Peak

Attached is the following document:  
CYGNA Letter to S. Burwell from  
N.H. Williams, Letter No. 84056.067  
dated May 3, 1985 enclosing  
walkdown checklists for mechanical  
and electrical disciplines

Please distribute as follows:

Reg File	LB#1/DL S.B. Burwell(4)
NRC PDR	MEB/DE D. Terao
LPDR	SGEB/DE F. Rinaldi
NTIS	EQB/DE G. Bagchi
NSIC	PSB/DSI O. Chopra
Region IV	ICSB/DSI H. Li
Region IV: D. Harnicutt	EGCB/IE J. Fair
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	EQB/DE V. Noonan
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