

CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT 2
IN-SERVICE INSPECTION PROGRAM

INTERVAL 2

MARCH 7, 1981 TO MARCH 7, 1991

8103130517

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ABSTRACT
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT 2
IN-SERVICE INSPECTION PROGRAM
INTERVAL 2 - MARCH 7, 1981 TO MARCH 7, 1991

In accordance with 10CFR 50.55a(g)(4)(ii) the H. B. Robinson Unit 2 ISI Program is being updated to ASME Section XI, 1977 Edition with addenda through the summer, 1978, addenda. Steam generator inspections will continue to be inspected under Plant Technical Specifications. Specific reliefs are requested in accordance with 10CFR 50.55a(g)(5)(iii).

The interval for which this program is applicable will commence on March 7, 1981, and end on March 7, 1991. Class 1, 2, and 3 inspections required to be completed during the first interval will be completed at the next refueling outage currently scheduled for the fall of 1981.

The ISI Program was developed employing the classification guidelines contained in 10CFR 50.2(v) for Quality Group A. Regulatory Guide 1.26, Revision 2 was used for classification of items in Quality Groups B and C, along with ANSI N18.2, 1973 and ANSI N18.2a, 1975. Quality Groups A, B, and C are the same as ASME classes 1, 2 and 3 respectively.

The List of Drawings identifies the drawings used in developing the program.

Attachment A describes the Class 1, 2, and 3 component inspection program developed in accordance with Subsections IWB, IWC, and IWD of ASME Section XI.

Attachment B describes the Class 1, 2, and 3 pump and valve inspection program developed in accordance with Subsections IWP and IWV of ASME Section XI.

H. B. ROBINSON STEAM ELECTRIC PLANT UNIT 2
IN-SERVICE INSPECTION PROGRAM
LIST OF DRAWINGS

<u>Drawing #</u>	<u>Sheets</u>	<u>Title</u>
ISI-5379-353		Sampling System
ISI-5379-376	1 of 3	Component Cooling System
	2 of 3	
	3 of 3	
ISI-5379-684		Chemical and Volume Control System
ISI-5379-685	1 of 3	Chemical and Volume Control System
	2 of 3	
	3 of 3	
ISI-5379-686	1 of 2	Chemical and Volume Control System
	2 of 2	
ISI-5379-920	1 of 4	(Liquid) Waste Disposal System
ISI-5379-921	1 of 2	(Gaseous) Waste Disposal System
	2 of 2	
ISI-5379-1082	1 of 2	Safety Injection System
	2 of 2	
ISI-5379-1484		Residual Heat Removal System
ISI-5379-1485		Spend Fuel Pit Coolant System
ISI-5379-1971	1 of 2	Reactor Coolant System
	2 of 2	
ISI-G-190196	1 of 3	Main, Extraction and Aux. Steam Sys.
ISI-G-190197	2 of 3	Feedwater, Condensate and Air Evacuation Sys.
ISI-G-190199	1 of 7	Service & Cooling Water System
	2 of 7	
	3 of 7	
ISI-G-190234	1 of 2	Steam Generator Blow-Down System
ISI-G-190261	3 of 8	Penetration Pressurization System
	7 of 8	
	8 of 8	
ISI-G-190262		Isolation Valve Seal Water
ISI-G-190304	1 of 2	HVAC - Turb, Fuel, Aux, and Reactor Buildings
ISI-HBR2-6490		Post Accident Sampling System
ISI-HBR2-6933		Post Accident Containment Venting System
ISI-HBR2-7063		Flow Diagram Legend
ISI-SK-1		Fire Protection System
ISI-SK-2		Fuel Transfer Tube

Attachment A

ASME SECTION XI COMPONENT INSPECTION PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

The component inspection program to be conducted in accordance with Subsections IWB, IWC, and IWD of ASME Section XI will be developed and submitted prior to January 1, 1982.

Attachment B

ASME SECTION XI PUMP & VALVE TEST PROGRAM H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

The pump and valve testing program shall be conducted in accordance with Subsections IWP and IWV of Section XI of the 1977 Edition of the ASME Boiler and Pressure Vessel Code through the Summer, 1978 Addenda, except for specific relief requested in accordance with 10CFR50.55a(g) (5)(iii), which is identified in Tables 2 and 3 for pumps and valves respectively.

The interval for which this pump and valve testing program is applicable commences on March 7, 1981, and expires on March 7, 1991.

The pump and valve testing program was developed employing the classification guidelines contained in 10CFR50.2(v) for Quality Group A and Regulatory Guide 1.26, Revision 2 for Quality Groups B and C along with ANSI N18.2, 1973, and N18.2a, 1975. Quality Groups A, B, and C are the same as ASME Class 1, 2, and 3, respectively.

The List of Drawings identifies the drawings used to develop the pump and valve testing program.

Table 1 lists the codes and symbols used throughout the program.

Table 2 lists all safety related Class 1, 2, and 3 pumps included in the testing program. The test parameters measured and the testing frequency are also listed.

Table 3 lists all safety related Class 1, 2, and 3 valves included in the program. Specifically excluded per IWV-1200 are valves used for operating convenience only, such as manual vent, drain, instrument, test maintenance, pressure regulating, thermal relief, and system control valves. Test methods and frequencies are also listed. Valve maximum stroke times are listed. Valves which cannot be tested during normal operation have the next acceptable frequency listed as allowed by IWV-3412(a), IWV-3415 and IWV-3416.

Cold shutdown testing, when required, will commence 48 hours after initiation of cold shutdown conditions as defined in Technical Specifications, except for refueling outages. Testing will continue until completed or until the plant is ready to return to operation. Completion of all testing will not be a prerequisite to returning to operation. Testing not completed at one shutdown will be continued during subsequent shutdowns within the required frequencies.

TABLE 1

H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

CODES AND SYMBOLS

Valve Types

BF Butterfly
 CK Check
 DA Diaphragm
 GA Gate
 GL Globe
 ND Needle
 REG Regulator
 RV Relief/Safety
 3W 3-Way
 VB Vacuum Breaker

Actuator Types

AO Air
 M Manual
 MO Motor
 SA Self Actuate
 SO Solenoid

Valve Position

CL Closed
 O Open
 LC Locked Closed
 LO Locked Open

Valve Test Methods

F Observe Failure Mode
 FF Normally closed check valves
 are given a forward flow test
 to verify that disc opens.
 J Category A containment isolation
 valve tested in accordance with
 10CFR50 App. J.
 LT Leak Test
 RF Normally open check valves are
 given a reverse flow test to show
 that disc seats.
 RV Relief Valve (Test per IWV-3510)
 S Full Stroke
 T Measure Time
 VI Verify Remote Indication

Test Intervals

M Monthly
 Q Quarterly
 C Cold Shutdown
 R Refueling
 A Annual
 X Frequency Determined from
 Table IWV-3510-1
 J Frequency Determined by
 10CFR50 App. J.

Misc. Symbols

NA Not Applicable
 NR Not Required

TABLE 2
H. B. ROBINSON DAM ELECTRIC PLANT UNIT NO. 2
PUMP TEST PROGRAM

Page 1 of 2

Pump Name & Drawing Number	Pump No.	Test Parameter Measured							Relief Request
		Speed n	Inlet Pressure P_i	Differential Pressure ΔP	Flow Rate Q	Vibration Amplitude V	Lubricant Level or Pressure	Bearing Temperature T_b	
Auxiliary Feedwater G-190197	AFW-A*	NR	Q	Q	NR	Q	Q	NR	1,2,4
	AFW-B*	NR	Q	Q	NR	Q	Q	NR	1,2,4
	AFW-SD	Q	Q	Q	NR	Q	Q	NR	1,2,4
Safety Injection 5379-1082	SI-A*	NR	Q	Q	NR	Q	Q	NR	1,2,4
	SI-B*	NR	Q	Q	NR	Q	Q	NR	1,2,4
	SI-C*	NR	Q	Q	NR	Q	Q	NR	1,2,4
Residual Heat Removal 5379-1484	RHR-A*	NR	Q	Q	NR	Q	Q	NR	1,2,4
	RHR-B*	NR	Q	Q	NR	Q	Q	NR	1,2,4
Containment Spray 5379-1082	CS-A*	NR	Q	Q	NR	Q	Q	NR	1,2,4
	CS-B*	NR	Q	Q	NR	Q	Q	NR	1,2,4
Service Water G-190199 Sh. 1	SW-A*	NR	Q	R	NR	Q	Q	NR	1,2,3
	SW-B*	NR	Q	R	NR	Q	Q	NR	1,2,3
	SW-C*	NR	Q	R	NR	Q	Q	NR	1,2,3
	SW-D*	NR	Q	R	NR	Q	Q	NR	1,2,3
Component Cooling 5379-376 Sh. 1	CCW-B*	NR	Q	Q	NR	Q	Q	NR	1,2,4
	CCW-C*	NR	Q	Q	NR	Q	Q	NR	1,2,4
Service Water Booster G-190199 Sh. 2	SWBP-A*	NR	Q	Q	Q	Q	Q	NR	1,2
	SWBP-B*	NR	Q	Q	Q	Q	Q	NR	1,2

*Synchronous or induction motors do not require speed check (IWP-4400).

TABLE 2

Pump Name & Drawing Number	Pump No.	Test Parameter Measured							Relief Request
		Speed n	Inlet Pressure P_i	Differential Pressure ΔP	Flow Rate Q	Vibration Amplitude V	Lubricant Level or Pressure	Bearing Temperature T_b	
Charging 5379-685 Sh. 2	CVC-B	Q	Q	Q	Q	Q	Q	NR	1,2
	CVC-C	Q	Q	Q	Q	Q	Q	NR	1,2
Boric Acid Transfer 5379-685 Sh. 3	A*	NR	Q	Q	NR	Q	Q	NR	1,2,4
	B*	NR	Q	Q	NR	Q	Q	NR	1,2,4

*Synchronous or induction motors do not require speed check (IWP-4400).

TABLE 2

H. B. ROBINSON UNIT 2
SPECIFIC REQUESTS FOR RELIEF

This section provides justification for the specific relief requested from Code test requirements as provided for in 10CFR50.55a(g)(5)(iii). Each request is identified by a unique number and identifies the pump(s) for which the request is being made. The specific Code test requirement found to be impractical is defined and the basis for exclusion from Code requirements is presented. Any testing performed in lieu of Code requirements is specified.

1. Specific Relief Request:

Monthly In service Test

Applicable To:

All pumps

Basis for Relief Request:

Monthly Section XI operability testing has been a plant requirement for most of these pumps since operation began. An analysis of the results of these tests and comparable data from other operating plants has shown no significant changes in performance. Based on this analysis, the continuation of Section XI monthly testing would not significantly increase plant safety.

Monthly pump testing requires a total of at least 250 hours per year of pump operation, at least 575 man-hours per year, for data acquisition, and at least 50 man-hours per year for data reduction, analysis, and record keeping. This amounts to a total of 525 man-hours per year. At a conservative total cost of \$20 per man-hour, this amounts to \$12,500 per year. Based upon the average exposure rates in the pump access areas, the total man-rem exposure per year for pump testing is approximately 1.0 man-rem. At the present conservatively estimated cost of \$10,000 per man-rem to plant personnel, this exposure costs an additional \$10,000 per year. Total cost to our customers is approximately \$25,200 per year, for no significant increase in safety.

Alternate Testing:

Pumps will be tested in compliance with ASME Section XI and this program once per quarter. This is in agreement with changes that were implemented in Subsection IWP of the Code in the Winter, 1979, addenda.

TABLE 2

H. B. ROBINSON UNIT 2
SPECIFIC REQUESTS FOR RELIEF

2. Specific Relief Request:

Measuring pump bearing temperature annually.

Applicable to:

All pumps.

Basis for Relief Request:

The referenced Edition of the Code requires bearing temperature to be recorded annually. It has been demonstrated by experience that bearing temperature rise occurs only minutes prior to bearing failure. Therefore, the detection of possible bearing failure by a yearly temperature measurement is extremely unlikely. It requires at least an hour of pump operation to achieve stable bearing temperatures. The small probability of detection of bearing failure by temperature measurement does not justify the additional pump operating time required to obtain the measurements.

Alternate Testing:

NONE. This is in agreement with present changes that are being implemented in Subsection IWP of the Code to delete yearly bearing temperature measurement. Deletion of bearing temperature has been approved and will be included in future Addenda. See minutes of the November 28, 1979, meeting of the Operating and Maintenance Working Group - Testing of Pumps and Valves in San Jose, California, dated January 9, 1980.

3. Specific Relief Request:

A. Flow rate measurements as required by IWP-3000.

B. Differential pressure measurements as required by IWP-3000.

Applicable To:

Service Water Pumps

Basis for Relief Request:

The service water pumps are used for removing heat from certain secondary system components during normal operation. Since heat load varies and inlet temperatures vary, automatic temperature control valves will vary the flow rates through

TABLE 2

H. B. ROBINSON UNIT 2 SPECIFIC REQUESTS FOR RELIEF

the individual components, thus varying pump resistance. The system has no installed flow measuring devices capable of measuring flow from the pumps. The piping is concrete lined which prohibits the use of ultrasonic flow measuring techniques. There is insufficient room on the outlet piping of each individual pump to allow installation of any accurate flow devices.

H. B. Robinson currently verifies service water system operation during refueling by conducting a "dead head" (zero flow) test on each pump. This test provides a point for comparison to determine the condition of the pumps since the previous tests. These tests will be used as an alternative to the monthly Section XI test. If a pump is declared inoperable and maintenance is required on that pump, the pump will be tested in the manner in which the refueling tests are performed. Vibration and normal pump parameters will be checked on a quarterly basis as per the ISI Program requirements.

Alternate Testing:

Verification of system operation during refueling by conducting "dead head" (zero flow) test on each pump.

4. Specific Relief Request:

Measure Flow Rate.

Applicable To:

Auxiliary Feedwater A, B, and SD, Safety Injection A, B, and C, Residual Heat Removal A and B, Containment Spray A and B, Component Cooling A and B, and Boric Acid Transfer A and B.

Basis for Relief Request:

Instrumentation is not installed to measure flow rate for testing.

For the first ISI interval, these pumps (except Boric Acid Transfer A and B) were tested in a fixed resistance configuration so that any change in performance would be indicated by a change in differential pressure. This method of testing has proven satisfactory and will be continued.

Alternate Testing:

NONE.

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Sampling System

P&ID No. ISI-200-5379-353

Page 1 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
956A	2	B-5	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q Q J	1	60	
956B	2	B-6	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q Q J	1	60	
956C	2	C-5	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q Q J	1	60	
956D	2	C-6	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q Q J	1	60	
956E	2	E-5	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q Q J	1	60	

System Name Sampling System P&ID No. ISI-200-5379-353

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
956F	2	E-6	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	1	60	
956G	2	G-5	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	1	60	
956H	2	G-6	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	1	60	
959	2	J-4	X					3/8	GL	AO	CL	N	S F T VI	Q Q Q Q		60	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S. ELECTRIC PLANT UNIT NO. 2

System Name Auxiliary Coolant Sys. Component

P&ID No. ISI-200-5379-376, Sh. 1 of 3

Page 1 of 1

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
702A	3	H-5		X				16	CK	SA	O/C	N	FF RF	Q			
702B	3	K-5		X				16	CK	SA	O/C	N	FF RF	Q			
702C	3	M-5		X				16	CK	SA	O/C	N	FF RF	Q			
707	3	B-4		X				3x4	RV	SA	CL	N	RV	X			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name Auxiliary Coolant Sys. Component
Cooling

P&ID No. ISI-200-5379-376, Sh. 2 of 3

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Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
FCV-626	2	K-14	X					3	GA	MO	O	Y	S T VI J	C C C J	1	60	Cycling valve during normal operations would interrupt CCW flow to the Reactor Coolant Pump
715	2	N-12			X			3x4	RV	SA	CL	Y	RV	X			
716A	3	J-3		X				6	GA	MO	O	Y	S T VI	C C C		60	Cycling valve during normal operation would interrupt CCW flow to RCP's
716B	2	J-3	X					6	GA	MO	O	Y	S T J VI	C C J C	1	60	Cycling valve during normal operation would interrupt CCW flow to RCP's
722A	3	M-8			X			3/4x1	RV	SA	CL	Y	RV	X			
722B	3	I-8			X			3/4x1	RV	SA	CL	Y	RV	X			
722C	3	K-8			X			3/4x1	RV	SA	CL	Y	RV	X			
729	2	H-13			X			3x4	RV	SA	CL	Y	RV	X			
730	2	I-14	X					6	GA	MO	O	Y	S T J VI	C C J C	1	60	Cycling valve during normal operation would interrupt CCW flow to RCP's

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S. ELECTRIC PLANT UNIT NO. 2

System Name Auxiliary Coolant Sys. Component Cooling

P&ID No. ISI-200-5379-376, Sh. 2 of 3

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Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
735	3	J-16	X					3	GL	MO	O	Y	S T VI	C C C	1	120	Cycling valve during normal operations would interrupt CCW flow to Reactor Coolant Pumps
737A	2	N-3	X					3	GA	M	O	Y	S	Q			
739	2	M-14	X					3	GL	AO	CL	Y	S F T VI	Q Q Q Q		60	
749A	3	D-3	X					16	GA	MO	CL	Y	S T VI	Q Q Q			
749B	3	D-6	X					16	GA	MO	CL	Y	S T VI	Q Q Q			
791A	3	B-15	X					3/4x1	RV	SA	CL	Y	R	X			
791B	3	D-15	X					3/4x1	RV	SA	CL	Y	R	X			

System Name Auxiliary Coolant Sys. Component Cooling P&ID No. ISI-200-5379-376, Sh. 3 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
791D	3	L-10		X				3/4x1	RV	SA	CL	Y	RV	X			
791E	3	I-10		X				3/4x1	RV	SA	CL	Y	RV	X			
791J	3	C-4		X				3/4x1	RV	SA	CL	Y	RV	X			
791K	3	E-5		X				3/4x1	RV	SA	CL	Y	RV	X			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S. ELECTRIC PLANT UNIT NO. 2

System Name CVCS

PEID No. ISI-200-5379-685, Sh. 1 of 3

Page 1 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
200A	2	B-9	X					2	GL	AO	C	Y	S F T VI	Q Q Q R		10	
200B	2	B-11	X					2	GL	AO	C	Y	S F T VI	Q Q Q R		10	
200C	2	B-10	X					2	GL	AO	O	Y	S F T VI	Q Q Q R		10	
202A	2	C-15	X					3	GA	M	O	N	S J	Q C J			Cycling valve during normal operation would interrupt charging flow
203	2	A-9	X					2x3	RV	SA	CL	Y	RV	X			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name CVCS

P&ID No. ISI-200-5379-685, Sh. 1 of 3

Page 2 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
204A	2	A-13	X					2	GL	AO	O	Y	S F T VI	C C C J		10	Cycling valve during normal operation would interrupt letdown flow to CVCS.
204B	2	A-13	X					2	GL	AO	O	Y	J S F T VI	C C C J	1	60	Cycling valve during normal operation would interrupt letdown flow to CVCS.
282	2	D-14	X					2	GL	M	O	Y	J S J	C J	1		Cycling valve during normal operation would interrupt charging flow.
292A	2	N-14	X					3/4	GL	M	O	N	S J	C J	1		Cycling valves during normal operations would interrupt seal water flow to Reactor Coolant Pumps.
293A	2	M-14	X					2	GL	M	o/c	N	S J	C J	1		
293C	2	L-14	X					2	GL	M	o/c	N	S J	C J	1		
295	2	N-15	X					3	GL	M	C	N	S J	C J	1		
297A	2	M-1	X					2	ND	M	O	N	S J	C J	1		
297B	2	A-19	X					2	ND	M	O	N	S J	C J	1		

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name CVCS

P&ID No. ISI-200-5379-685, Sh. 1 of 3

Page 3 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
297C	2	M-10	X					2	ND	M	O	N	S J	C J	1		Cycling valve during normal operation would interrupt seal water flow to the Reactor Coolant Pumps.
309A	2	D-15	X				X	2	GL	M	CL	N	J	J	1		
313	1	E-2			X			2	CK	SA	C	Y	FF	C			Cycling valve requires opening valve CVC-311 which could cause reactor trip on low pressurizer pressure upon failure of CVC-311 in non-conservative position.
381	2	G-14	X					3	GA	MO	O	N	S T VI J	C C C J	1	60	Cycling valve during normal operation would interrupt seal water flow to RCP's
382	2	F-13			X			3	RV	SA	CL	Y	RV	X			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name CVCS

P&ID No. ISI-200-5379-685, Sh. 2 of 3

Page 1 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
FCV-113A	3	J-13		X				1	GL	AO	C	Y	S F T VI	C C C C		300	Cycling valve during normal operation would cause injection of highly borated water into Reactor Coolant loop. Cycling valve during normal operation could result in over-boration of the primary system
LCV-115B	2	K-9		X				4	BF	AO	CL	N	S F T VI	C C C C		300	
LCV-115C	2	H-7		X				4	GA	MO	O	Y	S T VI	C C C		300	
209	2	B-7			X			2x3	RV	SA	CL	Y	RV	X			Back flow testing during normal operation would interrupt flow from VCT to charging pumps.
257	2	C-8			X			2x3	RV	SA	CL	Y	RV	X			
266	2	I-7			X			4	CK	SA	O	Y	RF	C			
283A	2	J-3			X			3/4x2	RV	SA	CL	Y	RV	X			
283B	2	K-3			X			3/4x2	RV	SA	CL	Y	RV	X			
283C	2	M-3			X			3/4x2	RV	SA	CL	Y	RV	X			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name

CVC5

PSID No.

ISI-200-5379-685, Sh. 2 of 3

Page 2 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
350	2	L-13		X				2	GA	MO	CL	Y	S T VI	C C C		60	Cycling valve during normal operation would result in injection of highly borated water into Reactor Coolant loop.
351	2	L-13			X			2	CK	SA	CL	Y	FF	C			Cycling valve requires opening CVC-350 (see above).
355	3	J-13			X			1	CK	SA	CL	Y	FF	C			Cycling valve requires opening CVC-FCV-113A.
357	2	K-10			X			4	CK	SA	CL	Y	FF	C			Must be tested with LCV-115B

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S. ELECTRIC PLANT UNIT NO. 2

System Name CVCS

P&ID No. ISI-200-5379-685, Sh. 3 of 3

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Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
397A	3	L-7		X				2	CK	SA	CL	N	FF	Q			
397B	3	L-8		X				2	CK	SA	CL	N	FF	Q			

System Name Waste Disposal

P&ID No. ISI-406-5379-920, Sh. 1 of 4

Page 1 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
1721	2	J-10	X					3	DA	AO	O	Y	S F T VI J	Q Q Q Q J	1	60	
1722	2	J-9	X					3	DA	AO	O	Y	S F T VI J	Q Q Q Q J	1	60	
1723	2	L-9	X					2	DA	AO	O	Y	S F T VI J	Q Q Q Q J	1	60	
1728	2	L-10	X					2	DA	AO	O	Y	S F T VI J	Q Q Q Q J	1	60	
1786	2	F-11	X					1	DA	AO	O	Y	S F T VI J	Q Q Q Q J	1	60	

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
1787	2	E-11	X					1	DA	AO	O	Y	S F T VI J	Q Q Q Q J	1	60	
1789	2	F-10	X					3/4	DA	AO	O	Y	S F T VI J	Q Q Q Q J	1	60	
1793	2	E-11		X				1	DA	M		Y	S	Q		NA	
1794	2	G-11	X					3/4	DA	AO	O	Y	S F T VI J	Q Q Q Q J	1	60	

ISI-200-5379-1082, Sh. 1

of

Failures of valves in closed position would result in loss of SI, RHR and C.S, Systems

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 1

Page 2 of 4

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
867A	2	F-7		X				4	GA	MO	CL	Y	S T VI	Q Q R Q Q R		10	
867B	2	F-7		X				4	GA	MO	CL	Y	S T VI	C C C C C C		10	
869	2	B-1		X				3	GA	MO	O	N	S T VI	C C C C C C	1	60	Failure in closed position would result in loss offlow path to hot legs.
870A	2	G-1		X				3	GA	MO	CL	N	S T VI	Q Q Q Q Q Q		10	
870B	2	G-1		X				3	GA	MO	CL	N	S T VI	Q Q Q Q Q Q	1	10	
870C	3	H-5			X			3/4	VB	SA	CL	N	S	Q			
870D	3	H-5			X			3/4	VB	SA	CL	N	S	Q			
872	3	H-6			X			3/4x1	RV	SA	CL	N	RV	X			
878A	3	F-10		X				4	GA	MO	O	N	S T VI	C C C C C C		120	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 1

Page 3 of 4

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
878B	3	D-10		X				4	GA	MO	O	N	S T VI	C C C		120	
879A	3	H-11			X			3	CK	SA	CL	N	FF	Q			
879B	2	E-11			X			3	CK	SA	CL	N	FF	Q			
879C	2	C-11			X			3	CK	SA	CL	N	FF	Q			
880A	2	M-9		X				6	GA	MO	CL	N	S T VI	Q Q Q		60	
880B	2	N-9		X				6	GA	MO	CL	N	S T VI	Q Q Q		60	
880C	2	K-9		X				6	GA	MO	CL	N	S T VI	Q Q Q		60	
880D	2	K-9		X				6	GA	MO	CL	N	S T VI	Q Q Q		60	
883L	2	H-2		X				1	GL	M	LC	N	J	J	1		
883W	2	G-3		X				1	GL	M	LC	N	J	J	1		

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 1

Page 4 of 4

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
889A	2	L-13			X			2	CK	SA	CL	N	FF	Q			<p>Testing valves during normal operation would require injection of borated water and sodium hydroxide into the containment.</p> <p>The safety positions of these valves are open which is their normal position. The only reason they would be closed is to perform the IST, therefore compromising the integrity of the system does not appear to be justified in testing the valves quarterly</p>
889B	2	L-13			X			2	CK	SA	CL	N	FF	Q			
890A	2	M-8			X			6	CK	SA	CL	N	FF	C			
890B	2	K-8			X			6	CK	SA	CL	N	FF	C			
891A	2	N-5	X					6	GA	M	O	N	S J	C J	1		
891B	2	K-5	X					6	GA	M	O	N	S J	C J	1		
894	3	F-5			X			1	CK	SA	CL	Y	FF	Q			
895V	2	A-2	X				X	3/4	GL	M	LC	N	J	J	1		
898F	2	A-2	X				X	3/4	GL	M	LC	N	J	J	1		

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 2

Page 1 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
849	2	C-2			X			3/4	CK	SA	CL	Y	FF	C			Cycling during normal operation would require opening valve 895V and 898L which are required by Tech. Spec. to be closed.
858A	2	B-11			X			2x3	RV	SA	CL	Y	RV	X			
858B	2	E-11			X			2x3	RV	SA	CL	Y	RV	X			
858C	2	H-11			X			2x3	RV	SA	CL	Y	RV	X			
859	2	C-1			X			3/4	RV	SA	CL	N	RV	X			
860A	2	N-8		X				14	GA	MO	CL	Y	S T VI	Q Q Q		120	
860B	2	N-8		X				14	GA	MO	CL	Y	S T VI	Q Q Q		120	
861A	2	N-9		X				14	GA	MO	CL	Y	S T VI	Q Q Q		120	
861B	2	N-9		X				14	GA	MO	CL	Y	S T VI	Q Q Q		120	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 2

Page 2 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
865A	2	D-9		X				10	GA	MO	O	Y	S T VI	C C C		120	Valves are for accumulator discharge isolation. Tech. Spec. requires valves to be open with electrical breakers pulled when reactor pressure is above 1000 psig.
865B	2	G-9		X				10	GA	MO	O	Y	S T VI	C C C		120	
865C	2	J-9		X				10	GA	MO	O	Y	S T VI	C C C		120	
866A	1	G-1		X				2	GA	MO	CL	Y	S T VI	C C C		60	Valves are for high-head safety injection to hot leg isolation. Valves are required by Tech. Spec. to be closed with electrical breakers pulled when reactor is above 1000 psig.
866B	1	G-2		X				2	GA	MO	CL	Y	S T VI	C C C		60	
873A	2	H-2			X			2	CK	SA	CL	Y	FF	R			These valves are in safety injection high-head flow path to RCS cold leg. Valves are kept closed during normal operation by Reactor Coolant pressure. Verifying opening of these valves would require injection of highly concentrate (Cont'd on page 3 of 3)
873B	2	G-2			X			2	CK	SA	CL	Y	FF	R			
873C	2	G-3			X			2	CK	SA	CL	Y	FF	R			
873D	2	L-2			X			2	CK	SA	CL	Y	FF	R			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 2

Page 3 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
873E	2	K-3			X			2	CK	SA	CL	Y	FF	R			(Cont'd from page 2 of 3) boric acid into the RCS. Testi during cold shutdown is also no practical for the same reason and because the RCS must be vented in order to perform the test. Valves are in series with 866A & B. Valves are in Safety Injection cold leg flow path. Valves are kept closed during normal operation by Reactor Coolant pressure.
873F	2	I-4			X			2	CK	SA	CL	Y	FF	R			
874A	1	H-1			X			2	CK	SA	CL	Y	FF	C			
874B	1	H-2			X			2	CK	SA	CL	Y	FF	C			
875A	1	J-3			X			10	CK	SA	CL	Y	FF	C			
875B	1	K-3			X			10	CK	SA	CL	Y	FF	C			
875C	1	M-2			X			10	CK	SA	CL	Y	FF	C			
875D	1	D-7			X			10	CK	SA	CL	Y	FF	C			
875E	1	G-7			X			10	CK	SA	CL	Y	FF	C			
875F	1	J-7			X			10	CK	SA	CL	Y	FF	C			
876A	1	D-6			X			8	CK	SA	CL	Y	FF	C			
876B	1	G-6			X			8	CK	SA	CL	Y	FF	C			
876C	1	J-6			X			8	CK	SA	CL	Y	FF	C			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Residual Heat Removal

P&ID No. ISI-200-5379-1484

Page 1 of 1

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
706	2	L-1			X			2x3	RV	SA	CL	Y	RV	X			Valves interlocked with SI-862A & B such that they cannot be opened unless the SI valves are closed. 862A & B must be open during normal operation or RHR suction is lost.
744A	2	M-1		X				10	GA	MO	CL	Y	S T VI	Q Q Q		15	
744B	2	M-3		X				10	GA	MO	CL	Y	S T VI	Q Q Q		15	
750	1	N-16		X				14	GA	MO	CL	Y	S T VI	C C C		300	
751	1	M-16		X				14	GA	MO	CL	Y	S T VI	C C C		300	
753A	2	G-10			X			10	CK	SA	CL	Y	FF	Q			
753B	2	G-10			X			10	CK	SA	CL	Y	FF	Q			
759A	2	G-5		X				10	GA	MO	O	Y	S T VI	Q Q R		120	
759B	2	D-5		X				10	GA	MO	O	Y	S T VI	Q Q R		120	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Reactor Coolant

P&ID No. ISI-100-5379-1971, Sh. 2

Page 1 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
DWC-1	2	F-18	X				X		GA	M	CL	Y	LT	R			
DWC-2	2	F-19	X				X		GA	M	CL	Y	LT	R			
PCV-455C	1	E-17		X				3	GL	AO	CL	Y	S F T VI	Q Q Q R			
PCV-456	1	D-17		X				3	GL	AO	CL	Y	S F T VI	Q Q Q R			
PCV-473	2	E-1		X				3/4	GL	AO	O	Y	S F T	C C C		120	Failure in open position could result in overpressurization of relief tank. Test at cold shutdown with tank vented.
516	2	C-1	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	1	60	
519A	2	F-1	X					3	DA	AO	CL	Y	S F T VI J	Q Q Q Q J	1	60	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Reactor Coolant

P&ID No. ISI-100-5379-1971, Sh. 2

Page 2 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
519B	2	F-2	X					3	DA	AO	CL	Y	S F T VI J	Q Q Q Q Q J	1	60	
535	1	D-17		X				3	GA	MO	O	Y	S T VI	Q Q R			
536	1	E-17		X				3	GA	MO	O	Y	S T VI	Q Q R			
550	2	E-2		X				3/4	DA	AO	O	Y	S F T	C C C			
551A	1	B-11			X			4x6	RV	SA	CL	Y	RV	X			
551B	1	B-13			X			4x6	RV	SA	CL	Y	RV	X			
551C	1	B-15			X			4x6	RV	SA	CL	Y	RV	X			
553	2	C-2	X					3/8	GL	AO	C	Y	S F T VI J	Q Q Q Q Q J	1	60	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON & SONS ELECTRIC PLANT UNIT NO. 2

System Name Main Extraction & Auxiliary Steam

P&ID No. ISI-G-190196, Sh. 1

Page 1 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
MS-V1-3A	2	J-16			X			26	CK	SA	O	N			2		
MS-V1-3B	2	E-16			X			26	CK	SA	O	N			2		
MS-V1-3C	2	A-16			X			26	CK	SA	O	N			2		
MS-V1-3A Isol.	2	J-15		X				26	GA	AO	O	N	S F T VI	C C C C		5	
MS-V1-3B Isol.	2	E-15		X				26	GA	AO	O	N	S F T VI	C C C C		5	
MS-V1-3C Isol.	2	A-15		X				26	GA	AO	O	N	S F T VI	C C C C		5	
MS-V1-8A	2	K-15		X				2	GL	MO	C	N	S T VI	Q Q Q		120	
MS-V1-8B	2	G-15		X				2	GL	MO	C	N	S T VI	Q Q Q		120	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON ELECTRIC PLANT UNIT NO. 2

System Name Main Extraction & Auxiliary Steam

P&ID No. ISI-G-190196, Sh. 1

Page 2 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
MS-V1-8C	2	C-15		X				2	GL	MO	C	N	S T VI	Q Q Q		120	
MS-V1-9A	3	K-15			X			2	CK	SA	CL	N	FF	Q			
MS-V1-9B	3	G-16			X			2	CK	SA	CL	N	FF	Q			
MS-V1-9C	3	C-16			X			2	CK	SA	CL	N	FF	Q			
SV1-1A	2	J-10			X			6	RV	SA	C	N	RV	X			
SV1-2A	2	J-11			X			6	RV	SA	C	N	RV	X			
SV1-3A	2	J-12			X			6	RV	SA	C	N	RV	X			
SV1-4A	2	J-13			X			6	RV	SA	C	N	RV	X			
SV1-1B	2	F-10			X			6	RV	SA	C	N	RV	X			
SV1-2B	2	F-11			X			6	RV	SA	C	N	RV	X			
SV1-3B	2	F-12			X			6	RV	SA	C	N	RV	X			
SV1-4B	2	F-13			X			6	RV	SA	C	N	RV	X			
SV1-1C	2	B-10			X			6	RV	SA	C	N	RV	X			
SV1-2C	2	B-11			X			6	RV	SA	C	N	RV	X			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON ELECTRIC PLANT UNIT NO. 2

System Name Main Extraction & Auxiliary Steam P&ID No. ISI-G-190196, Sh. 1

Page 3 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
SVI-3C	2	B-12		X				6	RV	SA	C	N	RV	X			
SVI-4C	2	B-13		X				6	RV	SA	C	N	RV	X			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name Feedwater Condensate & Air Evacuation P&ID No. ISI-G-190197, Sh. 2

Page 1 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
AFW-2	3	I-17			X			6	CK	SA	CL	N	FF	Q			Verified open during testing of Motor driven aux. feed pump.
AFW-19	3	H-11			X			6	CK	SA	CL	N	FF	Q			
AFW-20A	3	L-8		X				4	GA	MO	O	N	S T VI	Q Q Q		60	
AFW-20B	3	M-8		X				4	GA	MO	O	N	S T VI	Q Q Q		60	
AFW-24	3	L-14		X				6	GA	M	LC	N	S	Q		NA	
AFW-40	3	L-10			X			4	CK	SA	CL	N	FF	Q			
AFW-41	3	N-10			X			4	CK	SA	CL	N	FF	Q			
AFW-68	2	M-5			X			4	CK	SA	CL	Y	FF	C			
AFW-69	2	L-5			X			4	CK	SA	CL	Y	FF	C			
AFW-70	2	N-5			X			4	CK	SA	CL	Y	FF	C			
AFW-V2-14A	2	C-10		X				4	GA	MO	CL	Y	S T VI	Q Q Q		60	Normal feedwater pressure on back side of valves prevents cycling during normal operation.
AFW-V2-14B	2	E-10		X				4	GA	MO	CL	Y	S T VI	Q Q Q		60	



Cycling during normal operations could result in steam flow/feed flow mismatch and plant trip.

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Feedwater Condensate & Air Evacuation P&ID No. ISI-G-190197, Sh. 2

Page 3 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
FCV-499	2	F-11		X				4	GL	AO	CL	Y	S F T VI	C C C C		60	Cycling during normal operation could result in steam flow/feed flow mismatch and plant trip.
FW-V2-6A	2	B-12		X				16	GA	MO	O	N	S T VI	C C C		120	
FW-V2-6B	2	D-12		X				16	GA	MO	O	N	S T VI	C C C		120	
FW-V2-6C	2	F-12		X				16	GA	MO	O	N	S T VI	C C C		120	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Service and Cooling Water

P&ID No. ISI-G-190199, Sh. 1

Page 1 of 1

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
374	3	K-2			X			18	CK	SA	O/C	N	FF RF	Q			
375	3	K-5			X			18	CK	SA	O/C	N	FF RF	Q			
376	3	K-3			X			18	CK	SA	O/C	N	FF RF	Q			
377	3	K-6			X			18	CK	SA	O/C	N	FF RF	Q			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name Service and Cooling Water

P&ID No. ISI-G-190199, Sh. 2

Page 1 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
V6-33A	2	H-8		X				6	BF	MO	O	N	S T VI	Q Q Q		300	
V6-33B	2	H-7		X				6	BF	MO	O	N	S T VI	Q Q Q		300	
V6-33C	2	H-7		X				6	BF	MO	O	N	S T VI	Q Q Q		300	
V6-33D	2	H-6		X				6	BF	MO	O	N	S T VI	Q Q Q		300	
V6-33E	2	H-8		X				6	BF	MO	O	N	S T VI	Q Q Q		300	
V6-33F	2	J-7		X				6	BF	MO	O	N	S T VI	Q Q Q		300	
V6-34A	2	D-16		X				6	BF	MO	O	N	S T VI	Q Q Q		300	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name Service and Cooling Water

P&ID No. ISI-G-190199, Sh. 2

Page 2 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
V6-34B	2	C-16		X				6	BF	MO	O	N	S T VI	Q Q Q		300	
V6-34C	2	C-16		X				6	BF	MO	O	N	S T VI	Q Q Q		300	
V6-34D	2	B-16		X				6	BF	MO	O	N	S T VI	Q Q Q		300	
V6-35A	2	B-12		X				1	GL	MO	O	N	S T VI	Q Q Q		300	
V6-35B	2	B-11		X				1	GL	MO	O	N	S T VI	Q Q Q		300	
V6-35C	2	B-11		X				1	GL	MO	O	N	S T VI	Q Q Q		300	
V6-35D	2	B-10		X				1	GL	MO	O	N	S T VI	Q Q Q		300	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Service and Cooling Water P&ID No. ISI-G-190199, Sh. 2

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Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
560	3	J-7			X			12	CK	SA	O/C	N	FF	Q			
561	3	J-8			X			12	CK	SA	O/C	N	FF	Q			
580	3	M-12		X				1	GT	SO	O	N	S	Q			
581	3	I-12		X				1	GT	SO	O	N	S	Q			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON ELECTRIC PLANT UNIT NO. 2

System Name Service and Cooling Water

P&ID No. ISI-G-190199, Sh. 3

Page 1 of 1

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
V6-16A	3	N-20	X					16	GA	MO	O	N	S T	Q		300	
V6-16B	3	M-20	X					16	GA	MO	O	N	S T	Q		300	
118	3	M-20	X					6	GA	M	LC	N	S	Q		NA	
530	3	L-25		X				1	CK	SA	CL	N	FF	Q			
541	3	I-19		X				30	CK	SA	O/C	N	FF	Q			
542	3	M-19		X				1	CK	SA	CL	N	FF	Q			
543	3	M-19		X				1	CK	SA	CL	N	FF	Q			
544	3	M-20		X				6	CK	SA	CL	N	FF	Q			
545	3	M-20		X				30	CK	SA	O/C	N	FF	Q			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Steam Generator Blowdown

P&ID No. ISI-G-190234

Page 1 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
FCV-1930A	2	B-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1930B	2	B-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1931A	2	F-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1931B	2	F-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1932A	2	K-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1932B	2	K-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name Steam Generator Blowdown

P&ID No. ISI-G-190234

Page 2 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
FCV-1933A	2	C-4		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1933B	2	D-4		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1934A	2	G-4		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1934B	2	H-4		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1935A	2	K-4		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	
FCV-1935B	2	L-4		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON & S. ELECTRIC PLANT UNIT NO. 2

System Name Penetration Pressurization (PPS)

P&ID No. ISI-G-190261, Sh. 7 of 8

Page 1 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
EV-H2A	2	E-2	X					1	3W	SO	-	N	S F VI J	Q Q Q J	1		
EV-H2B	2	E-5	X					3/8	3W	SO	-	N	S F VI J	Q Q Q J	1		
EV-1722	2	E-9	X					1	3W	SO	-	N	S F VI J	Q Q Q J	1		
EV-1727	2	D-5	X					3/8	3W	SO	-	N	S F VI J	Q Q Q J	1		
EV-1728	2	A-5	X					3/8	3W	SO	-	N	S F VI J	Q Q Q J	1		
225C	2	A-5	X					3/8	GA	M	CL	N	J	J	1		
226C	2	C-5	X				X	3/8	GA	M	CL	N	J	J	1		

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON ELECTRIC PLANT UNIT NO. 2

System Name

PPS

P&ID No.

ISI-G-190261, Sh. 7 of 8

Page 2 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
235C	2	E-5	X				X	3/8	GA	M	CL	N	J	J	1		
245A	2	E-9	X				X	3/8	GA	M	CL	N	J	J	1		
251C	2	E-2	X				X	3/8	GA	M	CL	N	J	J	1		

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON S ELECTRIC PLANT UNIT NO. 2

System Name Penetration Pressurization (PPS)

P&ID No. ISI-G-190261, Sh. 8 of 8

Page 1 of 1

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
EV-1723	2	A-12	X					1	3W	SO	-	N	S F VI J	Q Q Q J	1		
EV-1724	2	A-16	X					1	3W	SO	-	N	S F VI J	Q Q Q J	1		
241C	2	A-16	X				X	3/8	GA	M	CL	M	J	J	1		
248A	2	A-12	X				X	3/8	GA	M	CL	N	J	J	1		
274C	2	G-12	X		X			3/8	CK	SA	-	N	J	J	1		

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name HVAC

PEID No. ISI-G-190304, Sh. 1 of 2

Page 1 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
RMS-1	2	I-19	X					1	GA	AO	0	N	S F T VI J	Q Q Q Q J	1	60	
RMS-2	2	I-19	X					1	GA	AO	0	N	S F T VI J	Q Q Q Q J	1	60	
RMS-3	2	I-19	X					1	GA	AO	0	N	S F T VI J	Q Q Q Q J	1	60	
RMS-4	2	I-19	X					1	GA	AO	0	N	S F T VI J	Q Q Q Q J	1	60	
VI2-6	2	F-10	X					42	BF	AO	0	N	S F T VI J	Q Q Q Q J	1	60	

System Name HVACP&ID No. ISI-G-190304, Sh. 1 of 2Page 2 of 3

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
V12-7	2	F-11	X					42	BF	AO	O	N	S F T T V I J	Q Q Q Q Q J	1	60	
V12-8	2	G-18	X					42	BF	AO	O	N	S F T T V I J	Q Q Q Q Q J	1	60	
V12-9	2	G-17	X					42	BF	AO	O	N	S F T T V I J	Q Q Q Q Q J	1	60	
V12-10	2	H-18	X					6	BF	AO	C	Y	S F T T V I J	Q Q Q Q Q J	1	60	
V12-11	2	H-17	X					6	BF	AO	C	Y	S F T T V I J	Q Q Q Q Q J	1	60	

System Name HVAC

PSID No. ISI-G-190304, Sh. 1 of 2

Page 3 of 3

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
VI2-12	2	G-10	X					6	BF	AO	O	N	S F T T VI J	Q Q Q Q Q J	1	60	
VI2-13	2	G-11	X					6	BF	AO	O	N	S F T T VI J	Q Q Q Q Q J	1	60	

System Name Post Accident Sampling

P&ID No. ISI-HBR2-6490

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
PAS-1	2	C-5	X				X		GL	M	CL	N	LT	R			
PAS-2	2	D-5	X				X		GL	M	CL	N	LT	R			
PAS-3	2	C-5	X				X		GL	M	CL	N	LT	R			
PAS-4	2	D-5	X				X		GL	M	CL	N	LT	R			
PAS-5	2	D-5	X				X		GL	M	CL	N	LT	R			
PAS-6	2	D-5	X				X		GL	M	CL	N	LT	R			

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Post Accident Cont. Vent & Ins. Gas P&ID No. ISI-HBR2-6933

Page 1 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
PCV-1716	2	G-4		X				2	GA	AO	O	N	F VI	C C			Cycling would result in loss of instrument air. Valve can only be tested by failing air supply. Operability is further verified during SI Tests during refueling outages.
SA-43	2	G-4	X				X	2	DA	M	LC	N	J	J	1		
SA-44	2	G-3	X				X	2	DA	M	LC	N	J	J	1		
V8-5	2	G-3			X			2	CK	SA	O/C	N	RF	Q			
VI2-14	2	B-1	X					3	DA	AO	C	N	S F T VI J	C C C J	1	60	
VI2-15	2	B-3	X					3	DA	AO	C	N	S F T VI J	C C C J	1	60	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Post Accident Cont. Vent & Ins. Gas P&ID No. ISI-HBR2-6933

Page 2 of 2

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
VI2-18	2	D-2	X					3	DA	AO	C	Y	S F T VI J	C C C C C J	1	60	No testing during normal operation due to potential violation of containment integrity.
VI2-19	2	D-4	X					3	DA	AO	C	N	S F T VI J	C C C C C J	1	60	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Fire Protection

P&ID No. ISI-SK-1

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Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
FP-248	2	-	X					4	GA	MO	O	Y	S T VI LT	Q Q Q R		60	Valves installed by Plant Modification 445 O.
FP-249	2	-	X					4	GA	MO	O	Y	S T VI LT	Q Q Q R		60	
FP-256	2	-	X					4	GA	MO	O	Y	S T VI LT	Q Q Q R		60	
FP-258	2	-	X					4	GA	MO	O	Y	S T VI LT	Q Q Q R		60	

TABLE 3 VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Fuel Transfer Tube

P&ID No. ISI-SK-2

Page 1 of 1

Valve Number	Class	Drawing Coordinates	Valve Category				Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
			A	B	C	D											
FP GATE	2	-	X				X		GA	M	CL	Y	J	J			

TABLE 3 - VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT 2
SPECIFIC REQUESTS FOR RELIEF

This section provides justification for specific requests for relief from code requirements as provided for in 10CFR50.55a(g)(5)(iii). Each relief requested is identified by a unique number and identifies the valve(s) for which the relief request is being made. The code test requirement found to be impractical is defined and the basis for exclusion from code requirements is presented. Any alternate testing is specified.

1. Specific Relief Request:

Seat leak testing and Category A valves as required by IWV-3420.

Applicable to:

All Category A valves for which test method is designated as J.

Basis for Relief Request:

10CFR50 Appendix J requires periodic leak testing of Containment Isolation Valves. All Section XI Category A valves for this plant are containment isolation valves and require Section XI leak testing. In order to preclude redundant test requirements on these valves, the Appendix J requirements will be met in lieu of the Section XI requirements.

The H. B. Robinson containment has two features in its design that assure adequate integrity during and following a loss of Coolant Accident. These are the Isolation Valve Seal Water System and the Penetration Pressurization System. These two systems are conservatively designed, seismically qualified, and required to be operable by the Unit Technical Specifications. Additionally, they satisfy the requirements of 10CFR50 Appendix J for seal systems that can be used in lieu of local Type C valve testing.

Alternate Testing:

The PPS and IVSW systems will be tested as required by 10CFR50 Appendix J.

2. Specific Relief Request:

Exercising of valves as required by IWV-3520.

TABLE 3 - VALVE TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT 2
SPECIFIC REQUESTS FOR RELIEF

Applicable to:

MS-VI-3A-C

Basis for Relief Request:

These valves are the Main Steam check valves downstream of the MSIV's. Normal steam flow verifies the proper opening of the valves. Section XI requires reverse flow seating of the valves. Due to the design of the system, no meaningful test can be performed to prove this seating at any operating condition.

Alternate test:

NONE