APPENDIX A

ENG-10

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

TABLE OF CONTENTS

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.

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 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

Drawing #	Sheets	Title
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
ISI-G-190204A	1 of 3	Emergency Diesel Generator System
ISI-G-190200	1 of 3	Instrument and Service Air

Attachment A

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, Revison 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.

Table 4 provides additional information concerning testing requirements as they were applied to specific valves.

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.

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

W	Weekly
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 STEAM ELECTRIC PLANT UNIT NO. 2
PUMP TEST PROGRAM

Pump Name & Drawing Number	Pump No.	Test Parameter Measured							Relief Request And Remarks
		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 P.T.
	AFW-B*	NR	Q	Q	NR	Q	Q	NR	1,2,4 22.1A
	AFW-SD	Q	Q	Q	NR	Q	Q	NR	1,2,4 B,C
Safety Injection 5379-1082	SI-A*	NR	Q	Q	NR	Q	Q	NR	1,2,4 P.T.
	SI-B*	NR	Q	Q	NR	Q	Q	NR	1,2,4 2.7A
	SI-C*	NR	Q	Q	NR	Q	Q	NR	1,2,4 B,C
Residual Heat Removal 5379-1484	RHR-A*	NR	Q	Q	NR	Q	Q	NR	1,2,4 P.T.
	RHR-B*	NR	Q	Q	NR	Q	Q	NR	1,2,4 2.8A B,C
Containment Spray 5379-1082	CS-A*	NR	Q	Q	NR	Q	Q	NR	1,2,4 P.T.
	CS-B*	NR	Q	Q	NR	Q	Q	NR	1,2,4 3.4A B,C
Service Water G-190199 Sh. 1	SW-A*	NR	Q	R	NR	Q	Q	NR	1,2,3 P.T.
	SW-B*	NR	Q	R	NR	Q	Q	NR	1,2,3 4.1A
	SW-C*	NR	Q	R	NR	Q	Q	NR	1,2,3 B,C
	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 P.T.
	CCW-C*	NR	Q	Q	NR	Q	Q	NR	1,2,4 36.2
Service Water Booster G-190199 Sh. 2	SWBP-A*	NR	Q	Q	Q	Q	Q	NR	1,2 P.T.
	SWBP-B*	NR	Q	Q	Q	Q	Q	NR	1,2 4.1A B,C

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

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

Pump Name & Drawing Number	Pump No.	Test Parameter Measured							Relief Request And Remarks
		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 P.T.
	CVC-C	Q	Q	Q	Q	Q	Q	NR	1,2 18.2A B,C
Boric Acid Transfer 5379-685 Sh. 3	A*	NR	Q	Q	NR	Q	NR	NR	1,2,4 P.T.
	B*	NR	Q	Q	NR	Q	NR	NR	1,2,4 7.1A
Diesel Fuel Transfer G-190204A Sh. 1	A*	NR	Q	Q	R	Q	NR	NR	1,2,5
	B*	NR	Q	Q	R	Q	NR	NR	1,2,5

*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

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 2

H. B. ROBINSON UNIT 2
SPECIFIC REQUESTS FOR RELIEF

5. Specific Relief Request:

Measure Flow Rate.

Applicable To:

Diesel Fuel Oil Transfer Pumps A and B

Basis for Relief Request:

These pumps discharge through a fixed resistance system of piping into the fuel oil day tanks. There is no flow instrumentation installed in this piping. Differential pressure will be measured quarterly for these pumps.

These pumps are run weekly to restore the level in the day tank after performance of the diesel generator test. This frequency is four times that required by IWP-3400, Summer 78 Addenda, and twelve times that referenced in Relief Request 1.

Alternate Testing:

Flow rates will be measured by a separate test procedure using manual calculations at refueling intervals.

Rev. 0

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

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 J	 1	60	P.T. 40
956B	2	B-6	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
956C	2	C-5	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
956D	2	C-6	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
956E	2	E-5	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40

Rev. 1

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

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	P.T. 40
956G	2	G-5	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
956H	2	G-6	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
959	2	J-4		X				3/8	GL	AO	CL	N	S F T VI	Q Q Q Q		60	P.T. 40

Rev. 0

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

System Name Auxiliary Coolant Sys. Component Cooling 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 Q			P.T. 36.2
702B	3	K-5			X			16	CK	SA	O/C	N	FF RF	Q Q			P.T. 36.2
702C	3	M-5			X			16	CK	SA	O/C	N	FF RF	Q Q			P.T. 36.2
707	3	B-4			X			3x4	RV	SA	CL	N	RV	X			P.T. 36.1

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

Rev. 3

System Name Auxiliary Coolant Sys. Component Cooling

P&ID No. ISI-200-5379-376, Sh. 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											
FCV-626	2	K-14	X					3	GA	MO	O	Y	S T VI J	C C C J	 1	60	P.T. 42.0
715	2	N-12			X			3x4	RV	SA	CL	Y	RV	X			P.T. 36.1
716A	2	J-3		X				6	GA	MO	O	Y	S T VI	C C C		60	P.T. 42.0
716B	2	J-3	X					6	GA	MO	O	Y	S T J VI	C C J C	 1 	60	P.T. 42.0
722A	3	M-8			X			3/4x1	RV	SA	CL	Y	RV	X			P.T. 36.1
722B	3	I-8			X			3/4x1	RV	SA	CL	Y	RV	X			P.T. 36.1
722C	3	K-8			X			3/4x1	RV	SA	CL	Y	RV	X			P.T. 36.1
729	3	H-13			X			3x4	RV	SA	CL	Y	RV	X			P.T. 36.1
730	2	I-14	X					6	GA	MO	O	Y	S T J VI	C C J C	 1 	60	P.T. 42.0

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

Rev. 3

System Name Auxiliary Coolant Sys. Component Cooling

P&ID No. ISI-200-5379-376, Sh. 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											
735	2	J-16	X					3	GL	MO	O	Y	S T VI J	C C C J	1	120	P.T. 42.0
737A	2	N-3		X				3	GA	M	O	Y	S	Q			P.T. 36.2
739	2	M-14		X				3	GL	AO	CL	Y	S F T VI	Q Q Q Q		60	P.T. 36.2
749A	3	D-3		X				16	GA	MO	CL	Y	S T VI	Q Q Q		300	P.T. 2.8A
749B	3	D-6		X				16	GA	MO	CL	Y	S T VI	Q Q Q		300	P.T. 2.8A
791A	3	B-15			X			3/4x1	RV	SA	CL	Y	RV	X			P.T. 36.1
791B	3	D-15			X			3/4x1	RV	SA	CL	Y	RV	X			P.T. 36.1

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

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			P.T. 36.1
791E	3	I-10			X			3/4x1	RV	SA	CL	Y	RV	X			P.T. 36.1
791J	3	C-4			X			3/4x1	RV	SA	CL	Y	RV	X			P.T. 36.1
791K	3	E-5			X			3/4x1	RV	SA	CL	Y	RV	X			P.T. 36.1

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. 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	Q			P.T. 18.2A
													F	Q			
													T	Q		10	
													VI	Q			
200B	2	B-11		X				2	GL	AO	C	Y	S	Q			P.T. 18.2A
													F	Q			
													T	Q		10	
													VI	Q			
200C	2	B-10		X				2	GL	AO	O	Y	S	Q			P.T. 18.2A
													F	Q			
													T	Q		10	
													VI	Q			
202A	2	C-15	X					3	GA	M	O	N	S	C			P.T. 42.0
													J	J	1		
203	2	A-9			X			2x3	RV	SA	CL	Y	RV	X			P.T. 25.4

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

Rev. 3

System Name CVCS

P&ID No. ISI-200-5379-685, Sh. 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											
204A	2	A-13	X					2	GL	AO	O	Y	S	C			P.T. 42.0
													F	C			
													T	C		10	
													VI	C			
													J	J	1		
204B	2	A-13	X					2	GL	AO	O	Y	S	C			P.T. 42.0
													F	C			
													T	C		60	
													VI	C			
													J	J	1		
282	2	D-14	X					2	GL	M	O	Y	S	C			P.T. 42.0
													J	J	1		
292A	2	N-14	X					3/4	GL	M	O	N	S	C			P.T. 42.0
													J	J	1		
293A	2	M-14	X					2	GL	M	o/c	N	S	C			P.T. 42.0
													J	J	1		
293C	2	L-14	X					2	GL	M	o/c	N	S	C			P.T. 42.0
													J	J	1		
295	2	N-15	X					3	GL	M	C	N	S	C			P.T. 42.0
													J	J	1		
297A	2	M-1	X					2	ND	M	O	N	S	C			P.T. 42.0
													J	J	1		
297B	2	M-6	X					2	ND	M	O	N	S	C			P.T. 42.0
													J	J	1		

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

Rev. 3

System Name CVCS

P&ID No. ISI-200-5379-685, Sh. 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											
297C	2	M-10	X					2	ND	M	O	N	S J	C J	1		P.T. 42.0
309A	2	D-15	X				X	2	GL	M	CL	N	J	J	1		
381	2	G-14	X					3	GA	MO	O	N	S T VI J	C C C J	1	60	P.T. 42.0
382	3	F-13			X			3	RV	SA	CL	Y	RV	X			P.T. 25.4

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

Rev. 6

System Name CVCS

P&ID No. ISI-200-5379-685, Sh. 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											
FCV-113A	3	J-13		X				1	GL	AO	C	Y	S F T VI	C C C C		30	P.T. 42.0
LCV-115B	3	K-9		X				4	BF	AO	CL	N	S F T VI	C C C C		30	P.T. 42.0
LCV-115C	3	H-7		X				4	GA	MO	O	Y	S T VI	C C C		30	P.T. 42.0
209	3	B-7			X			2x3	RV	SA	CL	Y	RV	X			P.T. 25.4
257	3	C-8			X			2x3	RV	SA	CL	Y	RV	X			P.T. 25.4
266	3	I-7			X			4	CK	SA	O	Y	FF RF	Q R	11		FF Verified by normal charging pump flow.
283A	3	J-3			X			3/4x2	RV	SA	CL	Y	RV	X			P.T. 25.4
283B	3	K-3			X			3/4x2	RV	SA	CL	Y	RV	X			P.T. 25.4
283C	3	M-3			X			3/4x2	RV	SA	CL	Y	RV	X			P.T. 25.4

TABLE 3 VALVE [illegible]T PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

Rev.

System Name CVCS P&ID 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	3	L-13		X				2	GA	MO	CL	Y	S T VI	C C C		60	P.T. 42.0
351	3	L-13			X			2	CK	SA	CL	Y	FF	C			G.P. 6
355	3	J-13			X			1	CK	SA	CL	Y	FF	Q			P.T. 18.2A
357	3	K-10			X			4	CK	SA	CL	Y	FF	Q	10		P.T. 40.0 Partial Stroke

Rev. 0

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. 3 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											
397A	3	L-7			X			2	CK	SA	CL	N	FF	Q			P.T. 18.2A, P.T. 7.1A
397B	3	L-8			X			2	CK	SA	CL	N	FF	Q			P.T. 18.2A, P.T. 7.1A

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

System Name CVCS

P&ID No. 5379-686 Sh. 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											
1118A	3	B-6			X			2x3	RV	SA	CL	YES	RV	X			P.T. 25.4
1118B	3	E-6			X			2x3	RV	SA	CL	YES	RV	X			P.T. 25.4
1118C	3	G-6			X			2x3	RV	SA	CL	YES	RV	X			P.T. 25.4

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

System Name Waste Disposal P&ID No. ISI-406-5379-920, Sh. 1 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											
1721	2	J-10	X					3	DA	AO	O	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
1722	2	J-9	X					3	DA	AO	O	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
1723	2	L-9	X					2	DA	AO	O	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
1728	2	L-10	X					2	DA	AO	O	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
1786	2	F-11	X					1	DA	AO	O	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40

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

System Name Waste Disposal

P&ID No. ISI-406-5379-920, Sh. 1 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											
1787	2	E-11	X					1	DA	AO	O	Y	S	Q			P.T. 40
													F	Q			
													T	Q		60	
													VI	Q			
													J	J	1		
1789	2	F-10	X					3/4	DA	AO	O	Y	S	Q			P.T. 40
													F	Q			
													T	Q		60	
													VI	Q			
													J	J	1		
1793	2	E-11		X				1	DA	M	O	Y	S	Q			P.T. 40
1794	2	G-11	X					3/4	DA	AO	O	Y	S	Q			P.T. 40
													F	Q			
													T	Q		60	
													VI	Q			
													J	J	1		

Rev

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

System Name Waste Disposal

P&ID No. 5379-921 Sh. 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											
1621	3	C-14			X			1x2	RV	SA	CL	NO	RV	X			P.T. 25.4
1622	3	B-14			X			1x2	RV	SA	CL	NO	RV	X			P.T. 25.4
1623	3	G-14			X			1x2	RV	SA	CL	NO	RV	X			P.T. 25.4
1624	3	E-14			X			1x2	RV	SA	CL	NO	RV	X			P.T. 25.4

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

Valve Number	Class	Drawing Coordinates	Valve Category A	B	C	D	Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
RV-842	2	H-1			X			1	RV	SA	CL	N	RV	X			P.T. 25.4
841A	2	D-9		X				1	GL	AO	O	N	S	Q			P.T. 2.7A
													F	Q			
													T	Q		30	
													VI	Q			
841B	2	D-9		X				1	GL	AO	O	N	S	Q			P.T. 2.7A
													F	Q			
													T	Q		30	
													VI	Q			
845A	3	J-7		X				2	GL	MO	C	N	S	C			P.T.2.13
													T	C		60	
													VI	C			
845B	3	J-7		X				2	GL	MO	C	N	S	C			P.T.2.13
													T	C		60	
													VI	C			
857A	2	D-1			X			3/4x1	RV	SA	CL	Y	RV	X			P.T. 25.4
864A	2	D-16		X				16	GA	MO	O	N	S	C		120	P.T. 2.13
													T	C			
													VI	C			
864B	2	D-16		X				16	GA	MO	O	N	S	C		120	P.T. 2.13
													T	C			
													VI	C			

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

Rev. 3

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 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											
867A	2	F-7		X				4	GA	MO	CL	Y	S T VI	Q Q Q		10	P.T. 2.7A
867B	2	F-7		X				4	GA	MO	CL	Y	S T VI	Q Q Q		10	P.T. 2.7A
869	2	B-1	X					3	GA	MO	O	N	S T VI J	C C C J	 1	60	P.T. 42.0
870A	2	G-1	X					3	GA	MO	CL	N	S T VI J	Q Q Q J	 1	10	P.T. 2.7A
870B	2	G-1	X					3	GA	MO	CL	N	S T VI J	Q Q Q J	 1	10	P.T. 2.7A
871	2	J-14			X			3/4X1	RV	SA	CL	N	RV	X			
872	3	H-6			X			3/4x1	RV	SA	CL	N	RV	X			P.T. 25.4
878A	2	F-10		X				4	GA	MO	O	N	S T VI	C C C		120	P.T. 42.0

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

Rev.

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 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											
878B	2	D-10		X				4	GA	MO	O	N	S T VI	C C C		120	P.T. 42.0
879A	2	H-11			X			3	CK	SA	CL	N	FF	R	7		Refueling - P.T. 2.9 (Partial Stroke Quarterly P.T. 2.7A)
879B	2	E-11			X			3	CK	SA	CL	N	FF	R	7		Refueling - P.T. 2.9 (Partial Stroke Quarterly P.T. 2.7A)
879C	2	C-11			X			3	CK	SA	CL	N	FF	R	7		Refueling - P.T. 2.9 (Partial Stroke Quarterly P.T. 2.7A)
880A	2	M-9		X				6	GA	MO	CL	N	S T VI	Q Q Q		60	P.T. 3.4A
880B	2	N-9		X				6	GA	MO	CL	N	S T VI	Q Q Q		60	P.T. 3.4A
880C	2	K-9		X				6	GA	MO	CL	N	S T VI	Q Q Q		60	P.T. 3.4A
880D	2	K-9		X				6	GA	MO	CL	N	S T VI	Q Q Q		60	P.T. 3.4A
883L	2	H-2	X				X	1	GL	M	LC	N	J	J	1		
883W	2	G-3	X				X	1	GL	M	LC	N	J	J	1		

November 3, 1982

Meeting: Duke Power with NRC-MEB

Attendance

M. L. Childers	Duke-SRAL/Licensing
R. O. Sharpe	Duke-Nuclear Production/Licensing
R. R. Weidler	Duke-Design Engineering/M&N
L. B. Castles	Duke-Design Engineering/M&N
J. N. Underwood	Duke-Design Engineering/M&N
W. L. Culpepper	Duke-Design Engineering/M&N
C. L. Ray, Jr.	Duke-Design Engineering/M&N
D. Terao	NRC/MEB
Grant Marr	PNL
Gordon Beeman	PNL
K. N. Jabbour	NRC/DL/LB#4
R. W. Bonsall	Duke-Design Engineering/M&N
D. L. Caldwell	Duke-Design Engineering/M&N

cc: Mr. Jesse L. Riley
Carolina Environmental Study Group
854 Henley Place
Charlotte, North Carolina 28207

Mr. Henry A. Presler, Chairman
Charlotte-Mecklenburg Environmental Coalition
943 Henley Place
Charlotte, North Carolina 28207

Mr. Gordon Beeman
Pacific Northwest Laboratories
Richland, Washington 99352

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

Rev. 3

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 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											
889A	2	L-13			X			2	CK	SA	CL	N	FF	Q			P.T. 3.4A
889B	2	L-13			X			2	CK	SA	CL	N	FF	Q			P.T. 3.4A
890A	2	M-8			X			6	CK	SA	CL	N	FF	C R	8		P.T. 42.0 Partial Stroke Full Stroke-Refueling
890B	2	K-8			X			6	CK	SA	CL	N	FF	C R	8		P.T. 42.0 Partial Stroke Full Stroke-Refueling
891A	2	N-5	X					6	GA	M	O	N	S J	C J	1		P.T. 42.0
891B	2	K-5	X					6	GA	M	O	N	S J	C J	1		P.T. 42.0
894	2	F-5			X			1	CK	SA	CL	Y	RF	Q			P.T. 7.1A
895V	2	A-2	X					3/4	GL	M	LC	N	J	J	1		
898F	2	A-2	X					3/4	GL	M	LC	N	J	J	1		
870C	3	G-5			X			3/4	VB	SA	C	N	S	R	12		
870D	3	G-5			X			3/4	VB	SA	C	N	S	R	12		

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

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											
858A	2	B-11			X			2x3	RV	SA	CL	Y	RV	X			P.T. 25.4
858B	2	E-11			X			2x3	RV	SA	CL	Y	RV	X			P.T. 25.4
858C	2	H-11			X			2x3	RV	SA	CL	Y	RV	X			P.T. 25.4
859	2	C-1			X			3x4	RV	SA	CL	N	RV	X			P.T. 25.4
860A	2	N-8		X				14	GA	MO	CL	Y	S T VI	Q Q Q		120	P.T. 2.8A
860B	2	N-8		X				14	GA	MO	CL	Y	S T VI	Q Q Q		120	P.T. 2.8A
861A	2	N-9		X				14	GA	MO	CL	Y	S T VI	Q Q Q		120	P.T. 2.8A
861B	2	N-9		X				14	GA	MO	CL	Y	S T VI	Q Q Q		120	P.T. 2.8A

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

System Name Safety Injection P&ID No. ISI-5379-1082, Sh. 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											
862A	2	J-16		X				14	GA	MO	O	YES	S T VI	C C C		120	P.T. 42.0
862B	2	K-16		X				14	GA	MO	O	YES	S T VI	C C C		120	P.T. 42.0
863A	2	I-12		X				8	GA	MO	CL	YES	S T VI	C C C		120	P.T. 42.0
863B	2	J-12		X				8	GA	MO	CL	YES	S T VI	C C C		120	P.T. 42.0

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

Rev. 3

System Name Safety Injection

P&ID No. ISI-200-5379-1082, Sh. 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											
865A	2	D-9		X				10	GA	MO	O	Y	S T VI	C C C		10	P.T. 2.5
865B	2	G-9		X				10	GA	MO	O	Y	S T VI	C C C		10	P.T. 2.5
865C	2	J-9		X				10	GA	MO	O	Y	S T VI	C C C		10	P.T. 2.5
866A	1	G-1		X				2	GA	MO	CL	Y	S T VI	C C C		60	P.T. 42.0
866B	1	G-2		X				2	GA	MO	CL	Y	S T VI	C C C		60	P.T. 42.0
873A	2	H-2			X			2	CK	SA	CL	Y	FF	R	4		P.T. 2.9
873B	2	G-2			X			2	CK	SA	CL	Y	FF	R	4		P.T. 2.9
873C	2	G-3			X			2	CK	SA	CL	Y	FF	R	4		P.T. 2.9
873D	1	L-2			X			2	CK	SA	CL	Y	FF	R	4		P.T. 2.9

TABLE 3 VAL[illegible]EST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

Rev[illegible]

System Name Safety Injection P&ID No. ISI-200-5379-1082, Sh. 2 Page 4 of 4

Valve Number	Class	Drawing Coordinates	Valve Category A	B	C	D	Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
873E	1	K-3			X			2	CK	SA	CL	Y	FF	R	4		P.T. 2.9
873F	1	I-4			X			2	CK	SA	CL	Y	FF	R	4		P.T. 2.9
874A	1	H-1			X			2	CK	SA	CL	Y	FF	R	4		P.T. 2.9
874B	1	H-2			X			2	CK	SA	CL	Y	FF	R	4		P.T. 2.9
875A	1	J-3			X			10	CK	SA	CL	Y	FF	C			P.T. 42.0 Full Stroke P.T. 2.5 Partial Stroke
875B	1	K-3			X			10	CK	SA	CL	Y	FF	C			P.T. 42.0 Full Stroke P.T. 2.5 Partial Stroke
875C	1	M-2			X			10	CK	SA	CL	Y	FF	C			P.T. 42.0 Full Stroke P.T. 2.5 Partial Stroke
875D	1	D-7			X			10	CK	SA	CL	Y	FF	C	3		P.T. 2.5 Partial Stroke
875E	1	G-7			X			10	CK	SA	CL	Y	FF	C	3		P.T. 2.5 Partial Stroke
875F	1	J-7			X			10	CK	SA	CL	Y	FF	C	3		P.T. 2.5 Partial Stroke
876A	1	D-6			X			8	CK	SA	CL	Y	FF	C			P.T. 42.0
876B	1	G-6			X			8	CK	SA	CL	Y	FF	C			P.T. 42.0
876C	1	J-6			X			8	CK	SA	CL	Y	FF	C			P.T. 42.0

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

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			P.T 25.4
744A	2	M-1		X				10	GA	MO	CL	Y	S T VI	Q Q Q		15	P.T. 2.8A
744B	2	M-3		X				10	GA	MO	CL	Y	S T VI	Q Q Q		15	P.T. 2.8A
750	1	N-16		X				14	GA	MO	CL	Y	S T VI	C C C		300	P.T. 42.0
751	1	M-16		X				14	GA	MO	CL	Y	S T VI	C C C		300	P.T. 42.0
753A	2	G-10			X			10	CK	SA	CL	Y	FF	C			Full Stroke Cold Shutdown (GP-6) Partial Stroke Quarterly (P.T. 2.8
753B	2	G-10			X			10	CK	SA	CL	Y	FF	C			Full Stroke Cold Shutdown (GP-6) Partial Stroke Quarterly (P.T. 2.8
759A	2	G-5		X				10	GA	MO	O	Y	S T VI	Q Q Q		120	P.T. 2.8A
759B	2	D-5		X				10	GA	MO	O	Y	S T VI	Q Q Q		120	P.T. 2.8A

Rev.

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

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-455C	1	E-17		X				3	GL	AO	CL	Y	S F T VI	C C C C		2	P.T. 42.0
PCV-456	1	D-17		X				3	GL	AO	CL	Y	S F T VI	C C C C		2	P.T. 42.0
516	2	C-1	X					3/8	GL	AO	CL	Y	S F T VI J	Q Q Q Q J	 1	 60 	P.T. 40
519A	2	F-1	X					3	DA	AO	CL	Y	S F T VI J	Q Q Q Q J	 1	 60 	P.T. 40
DWC-1		F-18	X				X	3/8	GA	M	CL	Y	J	J	1		
DWC-2		F-19	X				X	3/8	GA	M	CL	Y	J	J	1		

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

Rev. 3

System Name Reactor Coolant

P&ID No. ISI-100-5379-1971, Sh. 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	Q			P.T. 40
													F	Q			
													T	Q		60	
													VI	Q			
													J	J	1		
535	1	D-17		X				3	GA	MO	O	Y	S	Q		60	P.T. 42.0(S,T)
													T	Q			P.T. 40 (VI)
													VI	C			
536	1	E-17		X				3	GA	MO	O	Y	S	Q		60	P.T. 42.0(S,T)
													T	Q			P.T. 40 (VI)
													VI	C			
550	2	E-2	X					3/4	DA	AO	O	Y	S	Q		120	P. T. 40
													F	Q			
													T	Q			
													VI	Q			
													J	J	1		
551A	1	B-11			X			4x6	RV	SA	CL	Y	RV	R			P.T. 25.1
551B	1	B-13			X			4x6	RV	SA	CL	Y	RV	R			P.T. 25.1
551C	1	B-15			X			4x6	RV	SA	CL	Y	RV	R			P.T. 25.1
553	2	C-2	X					3/8	GL	AO	C	Y	S	Q			P.T. 40
													F	Q			
													T	Q		60	
													VI	Q			
													J	J	1		

Rev

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

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

Valve Number	Class	Drawing Coordinates	Valve Category A	B	C	D	Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
MS-V1-3A	2	J-16			X			26	CK	SA	O	N	RF	R	2		
MS-V1-3B	2	E-16			X			26	CK	SA	O	N	RF	R	2		
MS-V1-3C	2	A-16			X			26	CK	SA	O	N	RF	R	2		
MS-V1-3A Isol.	2	J-15		X				26	GA	AO	O	N	S F T VI	C C C C		5	P.T. 41
MS-V1-3B Isol.	2	E-15		X				26	GA	AO	O	N	S F T VI	C C C C		5	P.T. 41
MS-V1-3C Isol.	2	A-15		X				26	GA	AO	O	N	S F T VI	C C C C		5	P.T. 41
MS-V1-8A	2	K-15		X				2	GL	MO	C	N	S T VI	Q Q Q		120	P.T. 22.1A
MS-V1-8B	2	G-15		X				2	GL	MO	C	N	S T VI	Q Q Q		120	P.T. 22.1A

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

System Name Main Extraction & Auxiliary Steam P&ID No. ISI-G-190196, Sh. 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											
MS-V1-8C	2	C-15		X				2	GL	MO	C	N	S T VI	Q Q Q		120	P.T. 22.1A
MS-V1-9A	3	K-15			X			2	CK	SA	CL	N	FF	Q			P.T. 22.1A
MS-V1-9B	3	G-16			X			2	CK	SA	CL	N	FF	Q			P.T. 22.1A
MS-V1-9C	3	C-16			X			2	CK	SA	CL	N	FF	Q			P.T. 22.1A
SV1-1A	2	J-10			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-2A	2	J-11			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-3A	2	J-12			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-4A	2	J-13			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-1B	2	F-10			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-2B	2	F-11			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-3B	2	F-12			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-4B	2	F-13			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-1C	2	B-10			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-2C	2	B-11			X			6	RV	SA	C	N	RV	R			P.T. 25.2

Rev

TABLE 3 VAL[illegible]EST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

System Name Main Extraction & Auxiliary Steam P&ID No. ISI-G-190196, Sh. 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											
SV1-3C	2	B-12			X			6	RV	SA	C	N	RV	R			P.T. 25.2
SV1-4C	2	B-13			X			6	RV	SA	C	N	RV	R			P.T. 25.2

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

Rev. 3

System Name Feedwater Condensate & Air Evacuation P&ID No. ISI-G-190197, Sh. 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											
AFW-2	3	I-17			X			6	CK	SA	CL	N	FF	C			Partial Stroke Quarterly-P.T. 22.1A Full Stroke Cold Shutdown-OP-14
AFW-19	3	H-11			X			6	CK	SA	CL	N	FF	C			Full Stroke Cold Shutdown-OP-14 Partial Stroke Quarterly-P.T. 22.1A
AFW-20A	3	L-8		X				4	GA	MO	O	N	S	Q			P.T. 22.1A
													T	Q		60	
													VI	Q			
AFW-20B	3	M-8		X				4	GA	MO	O	N	S	Q			P.T. 22.1A
													T	Q		60	
													VI	Q			
AFW-24	3	L-14		X				6	GA	M	LC	N	S	Q			P.T. 40
AFW-40	3	L-10			X			4	CK	SA	CL	N	FF	C			Partial Stroke Quarterly-P.T. 22-1A Full Stroke Cold Shutdown-OP-14
AFW-41	3	N-10			X			4	CK	SA	CL	N	FF	C			Partial Stroke Quarterly-P.T. 22-1A Full Stroke Cold Shutdown-OP-14
AFW-68	2	M-5			X			4	CK	SA	CL	Y	FF	C			OP-14
AFW-69	2	L-5			X			4	CK	SA	CL	Y	FF	C			OP-14
AFW-70	2	N-5			X			4	CK	SA	CL	Y	FF	C			OP-14
AFW-V2-14A	3	C-10		X				4	GA	MO	CL	Y	S	Q			P.T. 22.1C
													T	Q		60	
													VI	Q			
AFW-V2-14B	3	E-10		X				4	GA	MO	CL	Y	S	Q			P.T. 22.1C
													T	Q		60	
													VI	Q			

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

Rev. 3

System Name Feedwater Condensate & Air Evacuation P&ID No. ISI-G-190197, Sh. 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											
AFW-V2-14C	3	G-10		X				4	GA	MO	CL	Y	S T VI	Q Q Q		60	P.T. 22.1C
AFW-V2-16A	2	M-7		X				4	GA	MO	CL	N	S T VI	Q Q Q		60	P.T. 22.1A
AFW-V2-16B	2	L-7		X				4	GA	MO	CL	N	S T VI	Q Q Q		60	P.T. 22.1B
AFW-V2-16C	2	N-7		X				4	GA	MO	CL	N	S T VI	Q Q Q		60	P.T. 22.1C
DW-19	3	K-17		X				6	GA	M	LC	N	S	Q		NA	P.T. 40
DW-21	3	K-16		X				6	GA	M	LC	N	S	Q		NA	P.T. 40
FCV-479	3	B-11		X				4	GL	AO	CL	Y	S F T VI	C C C C		60	P.T. 41
FCV-489	3	D-11		X				4	GA	AO	CL	Y	S F T VI	C C C C		60	P.T. 41

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

Rev. 3

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

Valve Number	Class	Drawing Coordinates	Valve Category A	Valve Category B	Valve Category C	Valve Category D	Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
FCV-499	3	F-11		X				4	GL	AO	CL	Y	S F T VI	C C C C		60	P.T. 41
FW-V2-6A	3	B-12		X				16	GA	MO	O	N	S T VI	C C C		120	P.T. 41
FW-V2-6B	3	D-12		X				16	GA	MO	O	N	S T VI	C C C		120	P.T. 41
FW-V2-6C	3	F-12		X				16	GA	MO	O	N	S T VI	C C C		120	P.T. 41

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

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 Q			P.T. 4.1A
375	3	K-5			X			18	CK	SA	O/C	N	FF RF	Q Q			P.T. 4.1A
376	3	K-3			X			18	CK	SA	O/C	N	FF RF	Q Q			P.T. 4.1A
377	3	K-6			X			18	CK	SA	O/C	N	FF RF	Q Q			P.T. 4.1A

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

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	P.T. 10.1A
V6-33B	2	H-7		X				6	BF	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1A
V6-33C	2	H-7		X				6	BF	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1A
V6-33D	2	H-6		X				6	BF	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1A
V6-33E	2	H-8		X				6	BF	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1A
V6-33F	2	J-7		X				6	BF	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1A
V6-34A	2	D-16		X				6	BF	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1C

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

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	P.T. 10.1C
V6-34C	2	C-16		X				6	BF	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1C
V6-34D	2	B-16		X				6	BF	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1C
V6-35A	2	B-12		X				1	GL	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1B
V6-35B	2	B-11		X				1	GL	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1B
V6-35C	2	B-11		X				1	GL	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1B
V6-35D	2	B-10		X				1	GL	MO	O	N	S T VI	Q Q Q		300	P.T. 10.1B

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

Rev. 4

System Name Service and Cooling Water

P&ID No. ISI-G-190199, Sh. 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											
560	3	J-7			X			12	CK	SA	O/C	N	FF	Q			P.T. 4.1A
561	3	J-8			X			12	CK	SA	O/C	N	FF	Q			P.T. 4.1A
562	3	K-11			X			1	CK	SA	O/C	N	FF	Q			P.T. 22.1A
563	3	K-11			X			1	CK	SA	O/C	N	FF	Q			P.T. 22.1A

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

Rev. 0

System Name Service and Cooling Water

P&ID No. ISI-G-190199, Sh. 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											
V6-16A	3	N-20		X				16	GA	MO	O	N	S T VI	Q Q Q		300	P.T. 4.1A
V6-16B	3	M-20		X				16	GA	MO	O	N	S T VI	Q Q Q		300	P.T. 4.1A
118	3	M-20		X				6	GA	M	LC	N	S	Q		NA	P.T. 40
530	3	L-25			X			1	CK	SA	CL	N	FF	Q			P.T. 22.1A
541	3	I-19			X			30	CK	SA	O/C	N	FF	Q			P.T. 4.1A
542	3	M-19			X			1	CK	SA	CL	N	FF	Q	6		P.T. 22.1A
543	3	M-19			X			1	CK	SA	CL	N	FF	Q	6		P.T. 22.1A
544	3	M-20			X			6	CK	SA	CL	N	FF	Q	5		P.T. 40
545	3	M-20			X			30	CK	SA	O/C	N	FF	Q			P.T. 4.1A

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

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	P.T. 40
FCV-1930B	2	B-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	P.T. 40
FCV-1931A	2	F-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	P.T. 40
FCV-1931B	2	F-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	P.T. 40
FCV-1932A	2	K-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	P.T. 40
FCV-1932B	2	K-5		X				3/4	GA	AO	O	N	S F T VI	Q Q Q Q		10	P.T. 40

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

Valve Number	Class	Drawing Coordinates	Valve Category A	B	C	D	Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
CV-1933A	2	C-4		X				3/4	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		10	
													VI	Q			
CV-1933B	2	D-4		X				3/4	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		10	
													VI	Q			
CV-1934A	2	G-4		X				3/4	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		10	
													VI	Q			
CV-1934B	2	H-4		X				3/4	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		10	
													VI	Q			
FCV-1935A	2	K-4		X				3/4	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		10	
													VI	Q			
FCV-1935B	2	L-4		X				3/4	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		10	
													VI	Q			

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

System Name Penetration Pressurization (PPS) P&ID No. ISI-G-190261, Sh. 7 of 8

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											
CV-H2A	2	E-2	X					1	3W	SO	-	N	S J	Q J	1		P.T. 40
CV-H2B	2	E-5	X					3/8	3W	SO	-	N	S J	Q J	1		P.T. 40
CV-1722	2	E-9	X				X	1	3W	SO	-	N	J	J	1		
CV-1727	2	D-5	X					3/8	3W	SO	-	N	S J	Q J	1		P.T. 40
CV-1728	2	A-5	X					3/8	3W	SO	-	N	S J	Q J	1		P.T. 40
225C	2	A-5	X				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 STEAM ELECTRIC PLANT UNIT NO. 2

System Name PPS

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

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		

Rev. 0

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

System Name Penetration Pressurization (PPS) P&ID No. ISI-G-190261, Sh. 8 of 8

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											
:V-1723	2	A-12	X				X	1	3W	SO	-	N	J	J	1		
:V-1724	2	A-16	X				X	1	3W	SO	-	N	J	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		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 Isolation Valve Seal Water P&ID No. ISI-G-190262

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											
Check valves at class boundaries	2		X		X			3/8	CK	SA	O/CL	Y	J FF	J R	1		P.T. 2.6

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

System Name HVAC P&ID No. ISI-G-190304, Sh. 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											
RMS-1	2	I-19	X					1	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		60	
													VI	Q			
													J	J	1		
RMS-2	2	I-19	X					1	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		60	
													VI	Q			
													J	J	1		
RMS-3	2	I-19	X					1	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		60	
													VI	Q			
													J	J	1		
RMS-4	2	I-19	X					1	GA	AO	O	N	S	Q			P.T. 40
													F	Q			
													T	Q		60	
													VI	Q			
													J	J	1		
V12-6	2	F-10	X				X	42	BF	AO	O	N	J	J	1	60	

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

System Name HVAC P&ID No. ISI-G-190304, Sh. 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											
V12-7	2	F-11	X				X	42	BF	AO	O	N	J	J	1	60	
V12-8	2	G-18	X				X	42	BF	AO	O	N	J	J	1	60	
V12-9	2	G-17	X				X	42	BF	AO	O	N	J	J	1	60	
V12-10	2	H-18	X					6	BF	AO	C	Y	S F T VI J	Q Q Q Q J	 1	 60 	P.T. 40
V12-11	2	H-17	X					6	BF	AO	C	Y	S F T VI J	Q Q Q Q J	 1	 60 	P.T. 40

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

System Name HVAC P&ID No. ISI-G-190304, Sh. 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											
V12-12	2	G-10	X				X	6	BF	AO	O	N	J	J	1	60	
V12-13	2	G-11	X				X	6	BF	AO	O	N	J	J	1	60	

TABLE 3 VA[illegible] TEST PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

Rev. 3

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	3/8	GL	M	CL	N	LT	R			P.T. 51
PAS-2	2	D-5	X				X	3/8	GL	M	CL	N	LT	R			P.T. 51
PAS-3	2	C-5	X				X	3/8	GL	M	CL	N	LT	R			P.T. 51
PAS-4	2	D-5	X				X	3/8	GL	M	CL	N	LT	R			P.T. 51
PAS-5	2	D-5	X				X	3/8	GL	M	CL	N	LT	R			P.T. 51
PAS-6	2	D-5	X				X	3/8	GL	M	CL	N	LT	R			P.T. 51

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

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	S F VI J	C C C J	 1 	60	P.T. 42.0
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		X			2	CK	SA	O/C	N	J	J	9		
V12-14	2	B-1	X					3	DA	AO	C	N	S F T VI J	Q Q Q Q J	 1	 60 	P.T. 40
V12-15	2	B-3	X					3	DA	AO	C	N	S F T VI J	Q Q Q Q J	 1	 60 	P.T. 40

TABLE 3 VALVE [redacted] PROGRAM
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

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

Valve Number	Class	Drawing Coordinates	Valve Category A	Valve Category B	Valve Category C	Valve Category D	Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
V12-18	2	D-2	X					3	DA	AO	C	Y	S F T VI J	Q Q Q Q J	 1	60	P.T. 40
V12-19	2	D-4	X					3	DA	AO	C	N	S F T VI J	Q Q Q Q J	 1	60	P.T. 40

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

System Name Fire Protection P&ID No. ISI-SK-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-248	2	-	X					4	GA	MO	O	Y	S T VI LT	Q Q Q R		60	S, T, VI - P.T. 40
FP-249	2	-	X					4	GA	MO	O	Y	S T VI LT	Q Q Q R		60	S, T, VI - P.T. 40
FP-256	2	-	X					4	GA	MO	O	Y	S T VI LT	Q Q Q R		60	S, T, VI - P.T. 40
FP-258	2	-	X					4	GA	MO	O	Y	S T VI LT	Q Q Q R		60	S, T, VI - P.T. 40

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

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	1		

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

System Name: Emergency Diesel Generator

P&ID No.: G-190204A, Sh. 1 of 3

Valve Number	Class	Drawing Coordinates	Valve Category A	Valve Category B	Valve Category C	Valve Category D	Passive	Size (inches)	Valve Type	Actuator Type	Normal Position	High Radiation Area	Test Method	Test Frequency	Relief Request	Max. Stroke Time (sec.)	Remarks
)-14	3	M-2		X				2	GL	M	CL	N	S	Q			P.T. 40
)-9B-2	3	G-5		X				2	GA	SO	CL	N	S	Q			P.T. 40
)-10B	3	G-5		X				2	GL	M	CL	N	S	Q			P.T. 40
)-9B-1	3	F-5		X				2	GA	SO	CL	N	S	Q			P.T. 40
O-10A	3	M-5		X				2	GL	M	CL	N	S	Q			P.T. 40
O-9A-2	3	N-5		X				2	GA	SO	CL	N	S	Q			P.T. 40
O-9A-1	3	M-5		X				2	GA	SO	CL	N	S	Q			P.T. 40
)G-AS-14	3	D-15		X				3/4	GL	M	CL	N	S	Q			P.T. 40
)G-ASA-1	3	F-15			X			3/4	CK	SA	-	N	FF	Q			P.T. 40
DG-AS-10	3	D-13		X				2	GL	M	CL	N	S	Q			P.T. 40
DG-ASB-1	3	C-15			X			3/4	CK	SA	-	N	FF	Q			P.T. 40

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 operated in accordance with Unit Technical Specifications and 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-V1-3A-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. Therefore, a special test method must be employed to verify reverse flow seating due to the special requirements that will be necessary. The frequency will be refueling outage intervals.

3. SPECIFIC RELIEF REQUEST:

Full Stroke Testing as Required by IWV-3520

APPLICABLE TO:

Valves 875D, 875E, and 875F

BASIS FOR RELIEF REQUEST:

These Accumulator Check Valves are partially stroked at cold shutdown by varying reactor coolant system pressure and observing increases and decreases in accumulator level. Stroke verification by passing design flow during cold shutdown is not practical due to the large volume of water that would be added to the Reactor Coolant System. Calculations have shown that a differential pressure of approximately 25 psi will shear any particles that may attempt to prevent the valve from functioning (FSAR Section 6.2.3). Based on this calculation and partial stroke testing presently performed full stroke testing requirements are waived.

4. SPECIFIC RELIEF REQUEST:

Full Stroke Testing as Required by IWV-3520

APPLICABLE TO:

Valves 873A, 873B, 873C, 873D, 873E, 873F, 874A, and 874B

BASIS FOR RELIEF REQUEST:

These valves in the Safety Injection System can only be tested by adding water to the Reactor Coolant System. During normal operation, this is not possible. Injection during cold shutdown is not practical due to boron concentration of the water added. At refueling intervals, these valves are fully stroked during the Safety Injection System Test while the reactor vessel head is removed and the refueling cavity can be filled. This constitutes the only practical interval that this test can be performed.

5. SPECIFIC RELIEF REQUEST:

Full Stroke Testing as Required by IWV-3520

APPLICABLE TO:

Valve SW-544

BASIS FOR RELIEF REQUEST:

This valve is partially stroked quarterly by verifying flow through a downstream tell-tale drain. Valve SW-544 is in the service water supply to the Auxiliary Feedwater (AFW) Pump Suction Line. It is a back-up water supply that would only be initiated in emergency conditions (condensate tank level less than 10%). The deep well water system also serves as a back-up AFW pump suction supply source.

Full stroke testing can only be accomplished by adding untreated lake water to the AFW System which has controlled water chemistry. Therefore, system design does not allow

full stroke testing. Dismantling the valve at refueling intervals is not considered necessary nor practical. Disassembly for full stroke vertification only does not add to the safety margin verified by a quarterly partial stroke test. In fact, disassembly for full stroke vertification may prove detrimental and could possibly add to services water system leakage during operation. The position taken is, considering partial stroke testing now performed quarterly and the redundant role this system shares with the deep well water system, no other testing or periodic disassembly for testing purposes is required.

6. SPECIFIC RELIEF REQUEST:

Individual Full Stroke Verification of Valves

APPLICABLE TO:

Valves SW-542 and SW-543

BASIS FOR RELIEF REQUEST:

These valves are installed in parallel, non-isolable flowpaths. Therefore, full stroke verification cannot be performed individually on each valve. Flow through these valves is verified collectively at quarterly intervals.

7. SPECIFIC RELIEF REQUEST:

Full Stroke Testing as Required by IWV-3520

APPLICABLE TO:

Valves 879A, 879B, and 879C

BASIS FOR RELIEF REQUEST:

These valves are partially stroked quarterly while performing the Safety Injection Pump Test while aligned for recirculation operation. Full stroke testing during normal plant operation would require injection into the reactor coolant loops which is not possible. These valves are, however, full stroke exercised during performance of the Safety Injection System Test at each refueling outage. Therefore, exemption to the cold shutdown stroking requirement of IWV-3520 is claimed.

8. SPECIFIC RELIEF REQUEST:

Full Stroke Testing as Required by IWV-3520

APPLICABLE TO:

Valves 890A and 890B

BASIS FOR RELIEF REQUEST:

These valves are tested at cold shutdown by injecting air upstream and observing a pressure increase on a temporary test gauge downstream. The cold shutdown test constitutes the only method to verify disk travel short of initiating flow through the spray nozzles or disassembly.

Proper full stroke operation of these valves will be verified at refueling intervals.

9. SPECIFIC RELIEF REQUEST:

Reverse Flow Testing

APPLICABLE TO:

Valve V8-5

BASIS FOR RELIEF REQUEST:

This valve, in the instrument air supply line to containment, cannot be aligned for a reverse flow test. This valve is subject to a reverse flow test during the containment integrated leak rate test which is conducted at intervals not to exceed three refueling outages.

Instrument air is a closed system inside containment with valve IA-PCV-1716 serving as the boundary isolation valve.

10. SPECIFIC RELIEF REQUEST:

Full Stroke Forward Flow Testing

APPLICABLE TO:

Valve 357

BASIS FOR RELIEF REQUEST:

This valve is partially stroked quarterly by verifying flow through valve 121E. Since 357 cannot be isolated from the RWST, it cannot be disassembled periodically to inspect the internals.

11. SPECIFIC RELIEF REQUEST:

Reverse Flow Testing at Quarterly Intervals

APPLICABLE TO:

Valve 266

BASIS FOR RELIEF REQUEST:

Reverse flow testing of this valve during normal operation is not possible since this would result in loss of suction to the charging pumps. Since special techniques; i.e., pressure drop across valve, or radiography, or disassembly, etc., must be used to verify seating of the valve, a cold shutdown testing interval is not practical. Seating of this check valve will be verified during refueling outages.

12. SPECIFIC RELIEF REQUEST:

Stroke Test of IWV-3520

APPLICABLE TO:

Valves 870C and 870D

BASIC FOR RELIEF REQUEST:

Due to special techniques that must be performed to ensure the vacuum breaking capability of these valves, the frequency has been set at refueling intervals. Vacuum breakers are not specifically identified in Section XI. A classification of C-active has been conservatively chosen.

TABLE 4

ADDITIONAL IN[illegible]ATION

SYSTEM	VALVE	DESCRIPTION	REMARKS
CVCS	FCV-113A	RCS Normal Boration Flow Path Isolation	This control valve assumes a position coincident with a given primary water dilution rate to assure proper boration. Cycling the valve full open during power operation could add an undesirable concentration of boric acid to the RCS.
CVCS	LCV-115B	RWST to RCS via Charging Pumps Isolation	Testing of this valve during normal operation would result in addition of borated water (1950 ppm) to the RCS. During normal operation, this would have an undesirable effect on reactor power level. This valve opens automatically on low-low VCT level.
CVCS	LCV-115C	VCT to Charging Pumps Isolation	Testing of this valve during normal operation would disrupt suction to the charging pumps with potential loss of pumps and all RCP seal flow.
CVCS	350 & 351	Emergency Boration Flow Path to RCS	These valves are used to inject boric acid from the BAST directly to the RCS via the charging pumps. Cycling during normal operation would result in overboration.
CVCS	202A & 282	Charging Line to RCS Manual Isolation	Cycling these valves during normal operation would disrupt charging flow to the RCS. Use of the bypass valve, 309A, as a flow path while cycling 202A and 282, will bypass HCV-121 and effect RCP seal water flow, and this is undesirable.
CVCS	204A & 204B	RCS Letdown Flow Isolation	Testing during normal operation causes loss of letdown flow. Should this occur coincident with normal charging flow and one of these valves fail to reopen, a high RCS level trip would result.
CVCS	297A, B, C 292A, 293A, 293C, 295	RCP Seal Water Injection Isolation	Cycling of these valves during normal operation would disrupt seal flow to the RCP's.
CVCS	381	RCP Seal Water Return Line Isolation	Testing during normal operation would result in disruption of seal flow and raise the potential for seal damage.
CVCS	266	VCT to Charging Pumps Check Valve.	See Relief Request 11.

TABLE 4

ADDITIONAL INFORMATION

SYSTEM	VALVE	DESCRIPTION	REMARKS
Auxiliary Feedwater	AFW-2	Condensate Storage Tank to AFW Pump Suction Check Valve	This valve is partially stroked quarterly due to the running of the AFW pumps on miniflow recirculation. Design flow is passed through the valve at cold shutdown intervals when the AFW pumps feed the steam generators pursuant to OP-14. The AFW pumps are not used to feed the steam generators during normal operation due to the potential for thermal shocking the feedwater nozzles and the feed rings.
Auxiliary Feedwater	AFW-19	Steam Driven AFW Pump Discharge Check Valve	Same as for AFW-2.
Auxiliary Feedwater	AFW-40, 41	Motor Driven AFW Pumps Discharge Check Valves	Same as for AFW-2.
Auxiliary Feedwater	AFW-68, 69, 70	Auxiliary Feedwater to Main Feedwater Check Valves	These valves are not cycled at power due to the practice of not feeding steam generators via the AFW system during normal operation. The AFW pumps are not used in this situation due the potential for thermal shocking the feedwater nozzles and the feed rings.
RHR	750 & 751	RCS to RHR System Isolation	These valves cannot be opened unless valves 862A & B are closed (interlocked circuitry). Valves 862A & B are opened with A.C. control power removed when RCS pressure is above 1,000 psig (Tech. Spec. 3.3.1.1.h).
RHR	753A, B	RHR Pump Discharge Check Valves	With the plant at power, no flow path for the RHR system exists other than the miniflow recirculation line. The flow path will not introduce design flow through 753A and B. These valves pass design flow during cold shutdown while the RHR system is providing core cooling.
Auxiliary Coolant (CCW)	FCV-626 & 735	CCW from RCP Thermal Barrier Isolation Valve	Testing during normal operation would result in loss of cooling water flow to the thermal barrier of the RCP's.

SYSTEM	VALVE	DESCRIPTION	REMARKS
Auxiliary Coolant (CCW)	716A & 716B	Inlet Isolation for CCW Flow to the RCP's	Testing during normal operation would isolate all CCW to all RCP's.
Auxiliary Coolant (CCW)	730	Outlet Isolation for CCW Flow to RCP Upper and Lower Lube Oil Coolers	Testing during normal operation would result in disruption of flow to the lube oil coolers.
Reactor Coolant	PCV-455C & PCV-456	Pressurizer Power Operated Relief Valves	These valves are not taken credit for in any accident analyses. Their design function is for system control. These valves are in the ISI program to provide "information only" testing to ensure operability.
Reactor Coolant	535 & 536	Block Valves for Pressurizer Power Operated Relief Valves	These valves are not taken credit for in any accident analyses. These are maintenance valves with non-Q operators. These valves are in the ISI program due to earlier commitments made in response to IE Inspection Report 82-27.
Main Steam	MS-V1-3A,B,C (Isolation)	Main Steam Isolation Valves	Cycling these valves during normal operation is not possible due to the resulting loss of steam flow and subsequent reactor trip. A partial stroke of these valves during normal operation is not possible since these are stop-check valves and a downward movement of the disk would tend to close the valve. The valve operators are tested weekly to ensure binding does not exist.
Main Steam	MS-V1-3A,B,C (Check)	Main Steam Check Valves	No positive means of verifying disk position of these valves short of disassembly exists. Performing this type of extensive maintenance during each cold shutdown is not practical. Also, since these valves are non-isolatable, any steam leaks of appreciable size would require a plant shutdown to correct. Therefore, since disassembly on a frequent basis would increase the probability of such leaks, such maintenance is not considered a feasible alternative. Disk position verification at refueling intervals is the only practical test for these valves.

TABLE 4

ADDITIONAL IN[illegible]ATION

SYSTEM	VALVE	DESCRIPTION	REMARKS
Feedwater	FCV-479,489, 499	Main Feedwater Regulating Valve Bypass Valve	Cycling these valves during normal operation could result in a steam flow/feed flow mismatch and subsequent plant trip.
Feedwater	FW-V2-6A,6B, 6C	Main Feedwater Regulating Valve Block Valve	Same as for FCV-479, 489, and 499.
Post Accident Containment Vent	PCV-1716	Instrument Air to Containment Isolation	This valve closes only on a phase "A" containment isolation signal and can be opened only when the signal is overridden. Also, cycling this valve during normal operation would isolate air to certain valves in containment and would result in a potential plant trip.
Safety Injection	890A, B	Containment Spray Pumps Discharge Check Valves	See Relief Request 8.
Safety Injection	891A, B	Containment Spray Headers Containment Isolation Valves	These valves are normally aligned in the open position which is the primary safety-related position. In this condition, these valves could be categorized as passive. The secondary safety-related position, closed, is necessary to ensure containment integrity. Should either valve (891A or B) fail to close, two automatic valves (890A, 880A,B, or 890B, 880C, D) could provide CV isolation. CV integrity is assured during the ILRT with 891A and 891B opened.
Safety Injection	875A, B, C	Accumulator Discharge Check Valves	These valves cannot be cycled during normal operation due to the pressure differential that exists across the valves with either the SI or RHR pumps running. These valves are cycled during cold shutdown when the RHR system is providing core cooling.
Safety Injection	875D, E, F	Accumulator Discharge Check Valves	See Relief Request 3.

SYSTEM	VALVE	DESCRIPTION	REMARKS
Safety Injection	845A, B	Spray Additive Tank to Containment Spray Pump Isolation	Cycling these valves during normal operation would require closing valves 892A, 892C, or 845C to preclude level reduction in the spray additive tank. Failure of 892A, 892C, or 845C in the closed position would isolate the sodium hydroxide addition flow path. This fact, coupled with the single failure proof design of the valves 845A and 845B, justifies a cold shutdown testing interval. Also per Tech. Spec. 4.5.2.4, valves 844A and 844B must be closed before 845A and 845B are cycled. Closing valves 844A and 844B would render the containment spray system inoperable and can only be done at cold shutdown conditions.
Safety Injection	864A, B	RWST Discharge Isolation	Per Tech. Spec. 3.3.1.1.h, during conditions of operation with reactor coolant pressure in excess of 1,000 psig, the A.C. control power shall be removed from these valves with the valves in the open position. Cycling of these valves during normal operation would violate Tech. Spec.
Safety Injection	862A, B	RWST to RHR Pumps Isolation	Same as for 864A, B.
Safety Injection	865A, B, C	Accumulator Discharge Isolation	Same as for 864A, B.
Safety Injection	878A, B	SI Pump Discharge Header Cross Connect	Same as for 864A, B.
Safety Injection	873A, B, C, D, E, F	High Head SI to RCS Cold Legs Check Valves	Same as for 879A, B, C. See Relief Request 4.
Safety Injection	874A, B	High Head SI to RCS Hot Legs Check Valves	These valves cannot be full stroke exercised during normal operation due to the difference in pressure between the RCS (2235 psig) and the discharge head of the SI pumps (1500 psig). Injection into the RCS during cold shutdown is not desirable due to the possibility for low temperature overpressurization of the RCS. These valves pass design flow at refueling outages during the SI system flow test. See Relief Request 4.

TABLE 4

ADDITIONAL IN[illegible]ATION

SYSTEM	VALVE	DESCRIPTION	REMARKS
Safety Injection	863A, B	RHR Pumps Discharge to SI Pumps Suction Isolation	Per Tech. Spec. 3.3.1.1.h, during conditions of operation with reactor coolant pressure in excess of 1,000 psig, the A.C. control power shall be removed from these valves with the valves in the closed position. Cycling of these valves during normal operation would violate Tech. Spec.
Safety Injection	866A, B	High Head SI to RCS Hot Legs Isolation	Same as for 863A, B.
Safety Injection	869	High Head SI to RCS Hot Legs Containment Isolation	Testing during normal operation would momentarily take the hot legs SI flow path out of service. Failure of the valve in the closed position would isolate boric acid injection via the boron injection tank.
Safety Injection	879A, B, C	SI Pumps Discharge Check Valves	These valves cannot be full stroke exercised during normal operation due to the difference in pressure between the RCS (2235 psig) and the discharge head of the SI pumps (1500 psig). Design flow cannot be achieved with the system aligned for miniflow recirculation. Injection into the RCS via the SI pumps during cold shutdown is not desirable due to the possibility for low temperature overpressurization of the RCS. These valves pass design flow at refueling outages during the SI system flow test. See Relief Request 7.
Safety Injection	876A, B, C	RHR Pump Discharge to RCS Loop Cold Leg Check Valves	These valves cannot be full stroke exercised during normal operation due to the difference in pressure between the RCS (2235 psig) and the discharge head of the RHR pumps (160 psig). See Relief Request 12.
Safety Injection	870C, D	Spray Additive Tank Vacuum Breakers	

SYSTEM	VALVE	DESCRIPTION	REMARKS
Penetration Pressurization	EV-H2A, EV-H2B, EV-1727, & EV-1728	Penetration Pressurization Air Supply and Bleed Off Valves For V12-10 & V12-11, V12-18 & V12-19, RMS-1 & RMS-2, and RMS-3 & RMS-4 Innerspaces, respectively.	These valves are normally de-energized, i.e., in the failed position, during normal operation with air being supplied to the penetration innerspace. Therefore, a failure mode test does not apply to these valves. A full stroke open timing test does not apply to these valves since they are enclosed and stem travel can not be visually verified. Remote indication for valve position does not exist. The primary safety consideration is the operation of the valves listed in the description.
Isolation Valve Seal Water (IVSW)	Check valves on each branch line off four main headers.		The isolation valve seal water system is not taken credit for in the FSAR offsite dose calculations. Tech. Spec. 4.4.2.c requires operation of this system at refueling outage intervals. Operation of this system during normal or cold shutdown conditions that would stroke these check valves is not practical.

bs