Bases

3.2 PROTECTIVE INSTRUMENTATION

In addition to reactor protection instrumentation which initiates a reactor scram, station protective instrumentation has been provided which initiates action to mitigate the consequences of accidents which are beyond the reactor operator's ability to control, or terminate a single operator error before it results in serious consequences. This set of Specifications provides the limiting conditions of operation for the primary system isolation function and initiation of the core standby cooling and standby gas treatment systems. The objectives of the Specifications are (i) to assure the effectiveness of any component of such systems even during periods when portions of such systems are out of service for maintenance, testing, or calibration; and (ii) to prescribe the trip settings required to assure adequate performance. This set of Specifications also provides the limiting conditions of operation for the control rod block system and surveillance instrumentation.

Isolation valves (Note 1) are installed in those lines that penetrate the primary containment and must be isolated during a loss-of-coolant accident so that the radiation dose limits are not exceeded during an accident condition. Actuation of these valves is initiated by protective instrumentation shown in Table 3.2.2 which senses the condition for which isolation is required. Such instrumentation must be available whenever primary containment integrity is required. The objective is to isolate the primary containment so that the limits of 10CFR100 are not exceeded during an accident. The objective of the low turbine condenser vacuum trip is to minimize the radioactive effluent releases to as low as practical in case of a main condenser failure. Subsequent releases would continue until operator action was taken to isolate the main condenser unless the main steam line isolation valves were closed automatically on low condenser vacuum. The manual bypass is required to permit initial startup of the reactor during low power operation.

The instrumentation which initiates primary system isolation is connected in a dual-channel arrangement. Thus, the discussion given in the bases for Specification 3.1 is applicable here.

The low reactor water level instrumentation is set to trip when reactor water level is 127" above the top of the enriched fuel. This trip initiates closure of Groups 2 and 3 primary containment isolation valves. For a trip setting of 127" a one the top of the enriched fuel, the valves will be closed before perforation of the clad occurs even for the maximum break and, therefore, the setting is adequate.

The top of the enriched fuel (351.5" from vessel bottom) is designated as a common reference level for all reactor water level instrumentation. The intent is to minimize the potential for operator confusion which may result from different scale references.

Note - Isolation valves are grouped as listed in Table 4.7.2.

3.7 LIMITING CONDITIONS FOR OPERATION	4.7 SURVEILLANCE REQUIREMENTS
e. Minimum Water Volume - 68,000 cubic feet	
f. Maximum Water Volume - 70,000 cubic feet	4.7 STATION CONTAINMENT SYSTEMS
2. Primary containment integrity shall be maintained at all times when the reactor is critical or when the reactor water temperature is above 212°F and fuel is in the reactor vessel except while performing low power physics tests at atmospheric pressure at power levels not to exceed 5 Mw(t).	2. The primary containment integrity shall be demonstrated as required by Appendix J to 10 CFR Part 50 except where specific written relief has been granted by the NRC persuant to 10CFR50, Sectiin 50.12.

4.7 LIMITING CONDITIONS FOR OPERATION	4.7 SURVEILLANCE REQUIREMENTS
3. Whenever primary containment is required, the total primary containment leakage rate shall not exceed 0.8 weight percent per day (La) at a pressure of 44 psig (Pa).	
4. Whenever primary containment is required, the combined leakage rate for all penetrations and valves, except for MSIVs, shall be less then or equal to 0.6LA. The leakage from any one main steam iine isolation valve shall not exceed 15.5 scf/hr at 44 psig (Pa).	
5. Pressure Suppression Chamber - Reactor Building Vacuum Breakers	5. Pressure Suppression Chamber - Reactor Building Vacuum Breakers
a. Two of two pressure suppression chamber-Reactor Building vacuum breaker systems shall be operable at all times when the primary containment integrity is required. The setpoint of the differential pressure instrumentation which actuates the pressure suppression chamber-Reactor Building air-operated vacuum breakers shall be _ 0.5 psid. The self actuating vacuum breakers shall open fully when subjected to a force equivalent to or less than 0.5 psid acting on the valve disk.	a. The pressure suppression chamber-Reactor Building vacuum breaker systems and associated instrumentation including setpoint shall be checked for proper operator every three months.
b. From and after the date that one of the pressure suppression chamber-Reactor Building vacuum breaker systems is made or found inoperable for any reason, the vacuum breaker shall be locked closed and reactor operation is permissible only during the succeeding seven (7) days unless such vacuum breaker system is soon made operable provided that the procedure does not violate containment integrity.	b. During each refueling outage, each vacuum breaker shall be tested to determine that the force required to open the vacuum breaker does not exceed the force specified in Specification 3.4.A.5.a and eacn vacuum breaker shall be inspected and verified to meet design requirements.

THIS PAGE HAS BEEN DELETED

TABLE 4.7.2

PRIMARY CONTAINMENT ISOLATION VALVES

Isolation Group (Note 1)	Valve Identification	Number of Power Operated Valves Inboard	Number of Power Operated Valves Outboard	Maximum Operating Time (sec)	Normal Position	Action on Initiating Signal (GC=Goes Closed) (SC=Stays Closed)
1	Main Steam Line Isolation (2-80A, D & 2-86A, D)	4	4	5(note 2)	Open	GC
1	Main Steam Line Drain (2-74, 2-77)	1	1	35	Closed	SC
1	Recirculation Loop Sample Line (2-39, 2-40)	1	1	5	Closed	SC
2	Drywell Floor Drain (20-82, 20-83)		2	20	Open	GC
2	Drywell Equipment Drain (20-94, 20-95)		2	20	Open	GC
3	Drywell Air Purge Inlet (16-19-9)		1	10	Closed	SC
3	Drywell Air Purge Inlet (16-19-8)		1	10	Open	GC
3	Drywell Purge & Vent Outlet (16-19-7A)		1	10	Closed	SC
3	Drywell Purge & Vent Outlet Bypass (16-19-6A)		1	10	Closed	SC
3	Drywell & Suppression Chamber Main Exhaust (16-19-7)		1	10	Closed	SC
3	Suppression Chamber Purge Supply (16-19-10)		1	10	Closed	SC
3	Suppression Chamaber Purge & Vent Outlet (16-19-7B)		1	10	Closed	SC
3	Suppression Chamber Purge & Vent Outlet Bypass (16-19-6B)		1	10	Open	GC
3	Exhaust to Standby Gas Treatment System (16-19-6)		1	10	Open	GC
3	Containment Purge Supply (16-19-23)		1	10	Open	GC
3	Containment Purge Makeup (16-20-20, 16-20-22A, 16-20-22b)		3	NA	Closed	SC
5	Reactor Cleanup System (12-15, 12-18)	1	1	25	Open	GC
6	HPCI (23-15, 23-16)	1	1	55	Open	GC
6	RCIC (13-15, 13-16)	1	1	20	Open	GC
	Primary/Secondary Vacuum Relief (16-19-11A, 16-19-11B)		2	NA	Closed	SC
	Primary/Secondary Vacuum Relief (16-19-12A, 16-19-12B)		2	NA	Closed	Process
3	Containment Air Sampling (VG 23, VG 26, 109-76A&B)		4	5	Open	GC

TABLE 4.7.2 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

Isolation Group (Note 1)	Valve Identification	Number of Power Operated Valves Inboard	Number of Power Operated Valves Outboard	Maximum Operating Time (sec)	Normal Position	Action on Initiating Signal (GC=Goes Closed) (SC=Stays Closed)
7	RHR Return to Suppression Pool (10-39A,B)		2	70	Closed	SC
7	RHR Return to Suppression Pool (10-34A,B)		2	120	Closed	SC
7	RHR Drywell Spray (10-26A, B & 10-31A,B)		4	70	Closed	SC
7	RHR Suppression Chamber Spray (10-38A,B)		2	45	Closed	SC
3	Containment Air Compressor Suction (72-38A,B)		2	20	Open	GC
4	RHR Shutdown Cooling Supply (10-18, 10-17)	1	1	28	Closed	SC
4	RHR Reactor Head Cooling (10-32, 10-33)	1	1	25	Closed	SC
	Feedwater Check Valves (2-28A,B,27A,96A)	2	2	NA	Open	Proc.
	Reactor Head Cooling Check Valve (10-29)	1		NA	Closed	Proc.
	Standby Liquid Control Check Valves (11-16, 11-17)	1	1	NA	Closed	Proc.

NOTE: Additional manual valves, which are considered primary containment isolation valves, are identified in the Vermont Yankee Primary Containment Leak Rate Testing Program.

Table 4.7.2 Notes

1. Isolation Signals are as follows:

Group 1: The valve in Group 1 are closed upon any one of the following conditions:

1. Low-low reactor water level
2. High main steam line radiation
3. High main steam line flow
4. High main steam line tunnel temperature
5. Low main steam line pressure (run mode only)
6. Condenser low vacuum

Group 2: The valves in Group 2 are closed upon any one of the following conditions:

1. Low reactor water level
2. High drywell pressure

Group 3: The valves in Group 3 are closed upon any one of the following conditions:

1. Low reactor water level
2. High drywell pressure
3. High/low radiation - Reactor Building ventilation exhaust plenum or refueling floor

Group 4: The valves in Group 4 are closed upon any one of the following conditions:

1. Low reactor water level
2. High drywell pressure
3. High reactor pressure

Table 4.7.2 Notes (Continued)

Group 5: The valves in Group 5 are closed upon low reactor water level.

Group 6: The valves in Group 6 are closed upon any signal representing a steam line break in the HPCI system's or RCIC system's respective steam line. The signals indicating a steam line break for the respective steam line are as follows:

1. High steam line space temperature
2. High steam line flow
3. Low steam line pressure
4. High temperature in the main steam line tunnel (30 minute delay for the HPCI and the RCIC)

Group 7: The valves in Group 7 are closed upon any one of the following conditions:

1. High drywell pressure
2. Low-low reactor water level and low reactor pressure

2. The closure time shall not be less than three (3) seconds.

PRIMARY CONTAINMENT

LEAK RATE TESTING PROGRAM

for

Vermont Yankee Nuclear Power Corporation

Vermont Yankee Unit 1

Description, Program, and Examination Schedule

Applicable to:

10CFR50, Appendix J
Type B Testing
Type C Testing

Prepared by:

G. CAPPUCCIO

J P Pelletier
Plant Manager

Richard D Pagodin
PORC

Warren P Murphy
Manager of Operations

Controlled Copy No. _____

Original Issue:

Issued to: _____

PRIMARY CONTAINMENT LEAK RATE TESTING PROGRAM

Record of Changes

Change Number	Date Entered	INITIALS		
		PORC	Plant Manager	MOO

Change Number	Date Entered	INITIALS		
		PORC	Plant Manager	MOO

PRIMARY CONTAINMENT

LEAK RATE TESTING PROGRAM

- Table of Contents -

INTRODUCTION

VERMONT YANKEE PRIMARY CONTAINMENT LEAK RATE TESTING PROGRAM

The Primary Containment serves as a leak tight barrier against the uncontrolled release of radioactivity to the environment.

The leak rate testing program verifies the integrity of the primary reactor containment, related systems and components penetrating the primary containment pressure boundary.

The VY PCLRT program conforms to regulations set forth by 10CFR50 Appendix J, entitled "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactor".

There are three types of tests which make up the VY PCLRT program; they are: Type A, B and C tests. The Type A test is implemented by O.P. 4029 whereas the Type B and C test are implemented by O.P. 4030. The Type A test measures the primary reactor containment overall integrated leakage rate. The Type B test measures the local leakage across the primary containment penetrations and seals, which are listed in the VY PCLRT Program. The Type C test measures the local leakage across the containment isolation valves, which are listed in the VY PCLRT Program.

NOTES

1. Type C testing is not required for the 1-inch diameter lines with at least one isolation valve and a cap in series, which is under administrative control or where plug-in test taps form the second barrier, which is also under administrative control.

2. Type C testing is not required for lines forming a closed, seismic qualified loop totally within the reactor building, whose 30-days water supply is assured via the torus or reactor vessel and no single active failure can preclude the continuous availablility of a water seal.

3. Type C testing is not required for valves which remain open with the system operating at pressures greater than Pa throughout the 30-day post-accident period, considering possible single active failure.

4. Type C testing is not required for instrument lines of 1-inch or less that meet the provisions of Regulatory Guide 1.11.

5. Type C testing is not required for instrument lines of 1-inch or less forming a closed system within containment with no interface with containment atmosphere, has no automatic isolation, but remote manual isolation upon failure of a line.

6. Type C testing is not required for standby liquid control system lines equipped with normally closed valves, leak tight against reactor system pressure with explosive charges to open the valves under certain conditions.

7. Appendix J permits testing of isolation valves in the direction opposite the direction of accident pressure, where the leakage is equivalent in either direction.

Vermont Yankee's Leak Test Program List

In order to verify containment isolation, the Type A, B, and C Tests are performed in accordance with 10CFR50, Appendix J. The Type B and C tests are used to quantify the ability of the containment penetrations and isolation valves to perform their intended function.

The program list includes all the penetrations which are to be tested as per the requirements of Appendix J. Where the requirements of Appendix J do not apply, the program's comment section provides reference notes which contain the applicable explanations.

Where exemptions to Appendix J are required, the program's comment section will provide the relief request number.

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-1	Equipment Access Hatch	G-191148	B - Air or Nitrogen	B Air					
X-2	Airlock	G-191148 G-191175	B - Air or Nitrogen	B Air	16-19-13B	3/4	16-19-13A 16-19-56	3/4 3/4	Strongback Req. for full press test - testing not required for 16-19-56; see Note 1.
X-3	Drywell head flange	G-191175	B - Air or Nitrogen	B Air					Testing not required for test tap; see Note 1.
X-4	Drywell head access hatch	G-191148	B - Air or Nitrogen	B Air					Testing not required for test tap; see Note 1.
X-5 A thru H	Chk. vlv. covers vent from torus	G-191175	B - Air or Nitrogen	B Air					Testing not required for test tap; see Note 1.
X-5 A thru H	Check valve shaft seals	G-191175	B - Air or Nitrogen	B Air					Testing not required for test tap; see Note 1.
X-6	CRD Removal Hatch	G-191148	B - Air or Nitrogen	B Air					Testing not required for test tap; see Note 1.
X-7A	"A" Steam line	G-191167	C - Air or Nitrogen	C * Air	2-80A	18	2-86A 2-83A	18 3/4	Testing not required for vlv. 2-83A; see Note 1.
X-7A	"A" Steam line bellows		B - Air or Nitrogen	B Air					Testing not required for test tap; see Note 1.
X-7B	"B" Steam line	G-191167	C - Air or Nitrogen	C * Air	2-80B	18	2-86B 2-83B	18 3/4	Testing not required for vlv. 2-83B; see Note 1.
X-7B	"B" Steam line bellows		B - Air or Nitrogen	B Air					Testing not required for test tap; see Note 1.
X-7C	"C" Steam line	G-191167	C - Air or Nitrogen	C * Air	2-80C	18	2-86C 2-83C	18 3/4	Testing not required for vlv. 2-83C; see Note 1.
X-7C	"C" Steam line bellows		B - Air or Nitrogen	B Air					Testing not required for test tap; see Note 1.
X-7D	"D" Steam line	G-191167	C - Air or Nitrogen	C * Air	2-80D	18	2-86D 2-83D	18 3/4	Testing not required for vlv. 2-83D, see Note 1.
X-7D	"D" Steam line bellows		B - Air or Nitrogen	B Air					Testing not required for test tap; see Note 1.
X-8	Main steam drain	G-191167	C - Air or Nitrogen	C Air	2-74	3	2-77 2-75	3 3/4	Testing not required for test tap; see Note 1.
				* See relief request D-2.					

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-9A	"A" Feedwater	G-191157 G-191167 G-191169	C - Air or Nitrogen	C Air See Comments	2 - 28A	16	2-27A 2-94A	16 3/4	Testing not required for vlv. 2-28A; see relief request D-1 Testing not required for vlv. 2-94A; see Note 1.
X-9B	"B" Feedwater	G-191157 G-191167 G-191174 G-191178	C - Air or Nitrogen	C Air See Comments	2 - 28B	16	2-96A 2-94B	16 3/4	Testing not required for vlv. 2-28B; see relief request D-1 Testing not required for vlv. 2-94B; see Note 1.
X-10	RCIC Steam supply	G-191167 G-191174	C - Air or Nitrogen	C Air	13 - 15	3	13-16 13-46A 13-150A/B	3 3/4 1	Testing not required for vlv. 13-46A; see Note 1.
X-11	HPCI Steam supply	G-191167 G-191169	C - Air or Nitrogen	C Air	23 - 15	10	23-16 23-27A 23-160A/B	10 3/4 1	Testing not required for vlv. 23-27A; see Note 1.
X-12	RHR - Shut. cool. supply	G-191172	C - Air or Nitrogen	See Comments	10 - 18	20	10-17 10-84	20 3/4	Testing not required for the system; see Note 2.
X-13A	LPCI Injection	G-191167 G-191172	C - Air or Nitrogen	See Comments	10 - 46B	24	10-25B 10-78B	24 3/4	Testing not required for the system; see Note 2.
X-13B				See Comments	10 - 46A	24	10-25A 10-78A	24 3/4	Testing not required for the sytem; see Note 2.
X-14	RWCU Suction	G-191167 G-191178	C - Air or Nitrogen	See Comments	12 - 15	4	12-18 12-16	4 3/4	Testing not required for the system; see Note 2.
X-15	Spare	G-191419	A - Air	A Air					None
X-16A	Core Spray	G-191167 G-191168	C - Air or Nitrogen	See Comments	14 - 13B 14 - 30B	8 2	14-12B	8	Testing not required for the system; see Note 2.
X-16B				See Comments	14 - 13A 14 - 30A	8 2	14-12A	8	Testing not required for the system; see Note 2.
X-17	RHR Head Spray	G-191167 G-191172	None	C Air	10 - 29 10 - 32	4 4	10-33 10-83	4 3/4	Testing not required for vlv. 10-83; see Note 1. Testing not req. for vlvs. 10-29,32,33;see Note 2.
X-18	Drywell Floor drain	G-191177 Sh. 1	C - Air or Nitrogen	C Air	20 - 82 20 - 78A	3 3/4	20-83 20-79A 20-78B	3 3/4 3/4	Testing not required for vlvs: 20-79A, 78A, 78B; see Note 1.
X-19	Drywell Equip. drain	G-191177 Sh. 1	C - Air or Nitrogen	C Air	20 - 94 20 - 93A	3 3/4	20-95 20-92A 20-93B	3 3/4 3/4	Testing not required for vlvs. 20-92A, 93A, 93B; see Note 1.
X-20	Spare	G-191148	A - Air	A - Air		6			None

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-21	Service Air	G-191160 Sh6	A - Air	A - Air	72-37B	2	See Comment		Welded cap outside drywell.
X-22	Inst. Air	G-191160 Sh4	C - Air or Nitrogen	C - Air	72-89C 72-152	2 3/4	72-89B 72-103 72-153A	2 2 3/4	Testing not required for vlvs. 72-152, 153A. See Note 1.
X-23 X-24	Inlet RBCCW Outlet	G-191159 Sh3	C - Air or Nitrogen	See Comments	70-113 70-117	8 8	None None		Testing not required for the system; see Note 2.
X-25	Atmosphere Control & CAD	G-191175 VY-E-75-002	C - Air or Nitrogen	C - Air	16-19-7A 16-19-6A 16-19-12A VG-9A	18 3 1 1	16-19-7 16-19-6 VG-22A VG-17A	 1 1	Testing not required for VG-12A, 17A; see Note 1. Valves 16-19-6A, 7A is tested in the rev. direction See Note 7.
X-26	Atmosphere Control & CAD	G-191175 VY-E-75-002	C - Air or Nitrogen	C - Air	16-19-8 16-19-51/52 16-20-22B NG-13A/B 16-20-30 NG-19 16-19-33A	18 2 1 1 3/4 1 3/4	16-20-31 16-19-33B 16-19-35A 16-19-9 16-19-23 16-19-53 NG-11A/B 16-20-20 AC-22B	3/4 3/4 3/4 18 6 1 1 1 1	Testing not required for vlvs NG-19, AC-22B, 30, 31 16-19-33A, 33B, 35A; see Note 1. Valve 16-19-8 is tested in the reverse direction; see Note 7.
X-27A X-27B	Core Spray Instrument	G-191267 G-191168	C - Air or Nitrogen	See Comments	SL-25 SL -27	1 1	None		Testing not required for vlvs. SL-25, -27; see Note 4
X-27C X-27D	Core Spray Delta P	G-191168	C - Air or Nitrogen	See Comments	SL-31A SL-31B	1 1	None		Testing not required for vlvs, SL-31A,31B; see Note 4
X-27E X-27F	HPCI Auto Isolation Signal	G-191169	C - Air or Nitrogen	See Comments	SL-37A SL-37B	1 1	None		Testing not required for vlvs., SL-37A,SL-37B; see Note 4.
X-28A	RV Press & Level	G-191267	C - Air or Nitrogen	See Comments	SL-19A	1	None		Testing not required for vlv. SL-19A; see Note 4.
X-28B X-28C X-28D X-28E	Reactor Vessel Level	G-191267	C - Air or Nitrogen	See Comments	SL-17A SL-15A SL-13A SL-11	1 1 1 1	None		Testing not required for vlvs., SL-17A, 15A, 13A, 11; see Note 4.
X-28F	RV Head Leakage	G-191167	C - Air or Nitrogen	See Comments	SL-23	1			Testing not required for vlv. SL-23; see Note 4.

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-29A X-29B X-29C X-29D	Reactor Vessel Level	G-191267	C - Air or Nitrogen	See Comments	SL-19B SL-29B SL-17B SL-15B SL-13B	1 1 1 1 1	None		Testing not required for vlvs. SL-19B, 29B, 17B, 15B, 13B; see Note 4.
X-30A X-30B	Main Steam Flow "A"	G-191167	C - Air or Nitrogen	See Comments	SL-73A SL-73B	1 1	None		Testing not required for vlvs.SL-73A, 73B; see Note 4.
X-30C X-30D	Main Steam Flow "B"	G-191167	C - Air or Nitrogen	See Comments	SL-73C SL-73D	1 1	None		Testing not required for vlvs. SL-73C, 73D; See Note 4.
X-30E X-30F	Recirc. Loop Pressure	G-191167	C - Air or Nitrogen	See Comments	SL-305A SL-305B	1 1	None		Testing not required for vlvs. SL-305A, 305B; see Note 4.
X-31A X-31B	Recirc. Pump Delta P	G-191167	C - Air or Nitrogen	See Comments	SL-62A SL-62B	1 1	None		Testing not required for vlvs. SL-62A, 62B; see Note 4.
X-31C X-31D	Recirc. Loop Flow	G-191167	C - Air or Nitrogen	See Comments	SL-64A SL-64B	1 1	None		Testing not required for vlvs. SL-64A, 64B; see Note 4.
X-31E X-31F	Recirc. Pump Seal Leak Detection/seal purge	G-191167 G-191159 Sh.5	C - Air or Nitrogen	See Comments	V-3-410A V-3-413A SL-2-7A SL-2-28A V-3-406	1 1	V-3-408A V-3-412A V-3-411A		Testing not req. for vlvs. SL-2-7A, SL-2-28A; see Note 4. Testing not req. for vlvs. 3-406,410A,411A, See Note 1. 408A
X-32A X-32B X-32F X-33A	Recirc. Pump Delta P/seal purge	G-191167 G-191159 Sh. 5	C - Air or Nitrogen	See Comments	SL-62C SL-62D V-3-407 V-3-410B V-3-413B	1 1	V-3-411B V-3-412B V-3-408B	408B →	Testing not required for vlvs. SL-62C, 62D;see Note 4.Testing not req. for vlvs 3-407,410B,411B;see Note 1
	CRD Pressure	G-191267	C - Air or Nitrogen	See Comments	SL-35	1	None		Testing not required for SL-35; See Note 4.
X-33B X-33C	HPCI Pressure	G-191169	C - Air or Nitrogen	See Comments	SL-37C SL-37D	3/4 3/4	None		Testing not required for vlvs. SL-37C, 37D; see Note 4.
X-33D	Spare	G-191148	A - Air	A - Air	None		None		None
X-33E X-33F	RCIC Pressure	G-191174	C - Air or Nitrogen	See Comments	SL-55C SL-55D	3/4 3/4	None		Testing not required for vlvs. SL-55C, 55D; see Note 4.
X-34A X-34B	Main Steam Flow "C"	G-191167	C - Air or Nitrogen	See Comments	SL-73E SL-73F	1 1	None		Testing not required for vlvs. SL-73E, 73F. See 4.

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-34C X-34D	Main Steam Flow "D"	G-191167	C - Air or Nitrogen	See Comments	SL-73G SL-73H	1 1	None		Testing not required for vlvs. SL-73G, 73H; see Note 4.
X-34E X-34F	Recirc. Loop Pressure	G-191167	C - Air or Nitrogen	See Comments	SL-97A SL-97B	1 1	None		Testing not required for vlvs. SL-97A,97B see Note 4.
X-35A	Tip Air Purge/ Flange Seal	G-191148	C- Air or Nitrogen	C/B	Check	1/2" tube/ 1½" flange	Solenoid	1/2"	Testing not required for tap; See Note 1.
X-35B	Spare	G-191148	B	A	None		None		Non-testable gasket
X-35C X-35D X-35E	Tip Tubes/Flange Seal	G-191148	C - Air or Nitrogen/ B	C/B	Tip Ball Valves	3/8" tube/ 1½" flange	None		Testing not required for tap; see Note 1.
X-36	Spare	G-191170	A - Air or Nitrogen	A Air					
[illegible]	CRF Insert	G-191170	None	See Comments	3-13-138 3-13-126 3-13-123 3-13-120	1 1 1 1	None		Testing not required for vlvs. 3-13-138, 126, 123, 120; see Relief Request D-3.
X-38	CRD Withdraw	G-191170	None	See Comments	3-13-127 3-13-122 3-13-120	1 1 1	None		Testing not required for vlvs. 3-13-127, 122, 120; see Relief Request D-3.
X-39A X-39B	Drywell Spray	G-191172	C - Air or Nitrogen	See Comments	10-31B 10-31A	12 12	10-26B 10-26A	12 12	Testing not required for vlvs. 10-31B, 31A, 26B,26A; see Note 3.
X-40A X-40B X-40C X-40D	Drywell Pressure	G-191172 G-191175	A - Air or Nitrogen	A - Air	None		None		See Note 4.
X-40XX (24 Prs)	Jet Pump Delta P	G-191267	C - Air or Nitrogen	See Comments	SL-23-XX	(48) - 1	None		See Note 4.
X-41	Recirc. Sample	G-191167	C - Air or Nitrogen	C - Air	FCV-39	3/4	FCV-40 V2-41	3/4 3/4	Testing not required for vlv. 2-41; see Note 1.
X-42	Standby Liq. Control	G-191167 G-191171 G-191267	C - Air or Nitrogen	See Comments	11-17	1-1/2	11-16 11-36	1-1/2 1	Testing not required for vlv. 11-36A. See Note 1. Testing not required for the system; See note 6 & 2.

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-43 X-44 X-45 X-46	Spares		A- Air	A - Air	None		None		None
X-47	Drywell air Comp. suction	G-191160 Sh4	C - Air or Nitrogen	C - Air	V-72-38A V-72-151	2 1	V-72-38B	2	Testing not required for vlv. 72-151; see Note 1.
X-48	Spare	G-191148 (D-13)							
X-49A X-49B	RCIC Delta P	G-191174	C - Air or Nitrogen	See Comments	SL-55A SL-55B	1 1	None		Testing not required for vlvs. SL-55A, 55B; see Note 4.
X-49C X-49D X-49E X-49F	Srv. Bellows Pressure	G-191167	A - Air	A - Air	None		None		See Note 4.
X-50A X-50B X-50C	CAD	VY-E-75-002	C - Air or Nitrogen	C - Air	VC-78 VC-80 VC-21 VC-26	3/4 3/4 3/4 3/4	VC-23	3/4	See Note 1 Testing not required for vlv. VC-21,78,80.
X-50D	Spare	G-191148	A - Air	A - Air	None		None		None
X-51A X-51B X-51C X-51D	Post Accident Sampling (Loop Selection Instrument)	G-191167	C - Air or Nitrogen	See Comments	SL-301C SL-301G SL-301F SL-301B	1 1 1 1	None		Testing not required for vlvs. SL-301C, 301G, 301F, 301B; see Note 4.
X-51E	Spare		A - Air	A - Air	None		None		None
X-51F	Jet Pump Delta P	G-191267	C - Air or Nitrogen	See Comments	SL-33	1	None		Testing not required for vlv. SL-33, see Note 4.
X-52A X-52B X-52C X-52D	Post Accident Sam. (Loop Selection Instrument)	G-191167	C - Air or Nitrogen	See Comments	SL-301A SL-301E SL-301H SL-301D	1 1 1 1	None		Testing not required for vlv. SL-301A, 301E, 301H, 301D; see Note 4.

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-52E X-52F	Drywell Pressure	G-191175	A - Air	A - Air	None		None		See Note 4.
X-9A	"A" Feedwater Bellows	G-191157	B - Air or Nitrogen	B - Air	None		None		Testing not required for tap; see Note 1.
X-9B	"B" Feedwater Bellows	G-191157	B - Air or Nitrogen	B - Air	None		None		Testing not required for tap; see Note 1.
X-11	HPCI Steam Bellows	G-191167	B - Air or Nitrogen	B - Air	None		None		Testing not required for tap; see Note 1.
X-12	RHR Bellows	G-191172	B - Air or Nitrogen	B - Air	None		None		Testing not required for tap; see Note 1.
X-13A X-13B	LPCI Bellows	G-191167	B - Air or Nitrogen	B - Air	None		None		Testing not required for tap; see Note 1.
X-14	RWCU Suction Bellows	G-191167	B - Air or Nitrogen	B - Air	None		None		Testing not required for tap; see Note 1.
X-16A X-16B	Core Spray Bellows	G-191167	B - Air or Nitrogen	B - Air	None		None		Testing not required for tap, see Note 1.
	Shear Lug Access Covers (A - H)	5920-336	B - Air or Nitrogen	B - Air	None		None		Testing not required for tap; see Note 1.

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-100A X-100B X-100C X-100D	Drywell Electrical		B - Air or Nitrogen	B - Nitrogen					Testing not required for tap; see Note 1.
X-101A X-101C X-101D	Drywell Electrical		B - Air or Nitrogen	B - Nitrogen					Testing not required for tap; see Note 1.
X-101B	Spare		A - Air	A - Air					Testing not required for tap; see Note 1.
X-102 X-103	Drywell Electrical		B - Air or Nitrogen	B - Nitrogen					Testing not required for tap; see Note 1.
X-104A X-104B X-104C	Drywell Electrical		B - Air or Nitrogen	B - Nitrogen					Testing not required for tap; see Note 1.
X-105A X-105B X-105C X-105D	Drywell Electrical		B - Air or Nitrogen	B - Nitrogen					Testing not required for tap; see Note 1.

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-200A X-200B	Torus Manway Torus Manway	G-191175	B - Air or Nitrogen	B - Air					Testing not required for tap; see Note 1.
X-201A thru X-201H	Vent - Torus to Drywell	G-191175	A - Air	Air					Part of Primary Containment; see X-5A thru H.
X-202A thru H,J,K	Vacuum Breaker Access Covers - Also X-5	G-191175	B - Air or Nitrogen	B - Air					See X - 5
X-203A thru 203F	Vent Line Vacuum Breaker Connection	G-191175	A - Air	A - Air					Part of Primary Containment; see X-5A thru H.
X-204	No Penetration								
X-205	CAD (RB to Torus Vent)	VY-E-75-002 G-191175	C - Air or Nitrogen	C - Air	16-19-11A 16-19-11B 16-20-22A 16-19-10 16-20-28 NG-12A/B NG-20	20 20 1 18 1 1 1	16-19-12A/B AC-20A AC-19B 16-19-9 AC-22B 16-20-20 NG-11A/B 16-19-23	20 1 1 18 1 1 1 6	Testing not required for vlvs. NG-20, 16-20-28, AC-20A, 19B, 22B; See Note 1. Valve 16-19-10 tested in the reverse direction; see Note 7.
X-206A thru 206F	Torus Water Level	G-191169 G-191175	A - Air or Nitrogen	See Comments	None		None		See Note 4.
X-207A thru 207H	Vent Line Drains		A - Air	A - Air	None		None		Part of Primary Containment
X-208A thru 208D	SRV Discharge to Torus	G-191167	None	None					Part of Containment System
X-209A	Torus Pressure	G-191175	A - Air or Nitrogen	See Comments	None	1	None		Testing not required for vlv. AC-100. See Note 4.
X-209B X-209C	Torus Water Temperature	G-191175	A	A					External temperature probes-no penetration
X-209D (X50A,B,C)	CAD	VY-E-75-002	A - Air or Nitrogen	A	None		None		See Note 4.

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
							20-84C/D	1.5"	
							20-85C/D	1.5"	
X-210A	RHR Return	G-191168 G-191169 G-191172 G-191177	C - Air or Nitrogen	See Comments	10-16B 10-34B 14- 5B 14-26B 23-62 20-319C 20-319D	4" 10" 3" 8" 4" 1 1/2" 1 1/2"	10-19D 10-19B 10-39B 10-160 23-25	4" 4" 12" 3/4" 4"	See Note 2.
X-210B	RHR Return	G-191172 G-191168 G-191174 G-191177	C - Air or Nitrogen	See Comments	10-16A 20-310A 20-310B 14-26A 14- 5A 13-29 10-34A	4" 1 1/2" 1 1/2" 8" 3" 2" 10"	10-19A 10-19C 13-27 10-39A 20-85A/B 20-84A/B	4" 4" 2" 12" 1.5" 1.5"	See Note 2.

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-211A X-211B	Torus Spray	G-191172	C - Air or Nitrogen	See Comments	10-38B 10-38A	4 4	10-39B 10-39A	12 12	Testing not required for vlvs., 10-38A,B,39A,B; see Note 3.
X-212	RCIC Turbine Exhaust	G-191174	C - Air or Nitrogen	See Comments	SSC-9 13-817	8 1	13-52A 13-50 13-818	8 8 1	Testing not req. for vlvs, 13-817, 52A,50,818,SSC-9 see Note 2.
X-213A X-213B	Torus Drain / Torus Drain Valves Flanges	G-191175	C - Air or Nitrogen	See Comments	20-400A 20-400B	1 1	20-402A/401A 20-401B/402B	1 1	Testing not req. for vlvs 20-400A, B,20-402A/401A, 20-401B/402B & flanges; see Note 2. Testing not required for taps; see Note 1.
X-214	Torus Electrical		B - Air or Nitrogen	B - Air					Testing not required for tap; See Note 1.
X-215	Torus Electrical	G-191175	A - Air or Nitrogen	A - Air					Not locally testable.
X-216	CAD	VY-E-75-002	C - Air or Nitrogen	C - Air	76-A 78-A	1 1	76-B	1	Testing not required for vlv. 78A; See Note 1.
X-217	Torus Pressure	G-191175	A - Air or Nitrogen	A - Air	None				Testing not required. See Note 4.
X-218	CAD & Atmosphere Control	G-191175 VY-E-75-002	C - Air or Nitrogen	C- Air	16-19-6B 16-19-7B VG-12B VG 9B	3 18 1 1	SB-6 SB-7 VG-17B VG-22B AC-21A	14 14 1 1 1	Valves SB-667 are tested in the reverse direction. See Note 7. Testing not required for vlvs. AC-21A,12B,17B. See Note 1.
X-219	Spare		A - Air	A - Air					None
X-220 (see: X50,A,B,C)	CAD	VY-E-75-002	C - Air or Nitrogen	C - Air	VG-21 VG-26	3/4 3/4	VG-23	3/4	Testing not required for vlv. VG-21; see Note 1.
X-221	HPCI Turbine Exhaust	G-191169	C - Air or Nitrogen	See Comments	SSC-12 23-842	20 1	23-65 23-843 23-63A	20 1 1	See Note 2.
X-222	HPCI Drain Pot	G-191169	C - Air or Nitrogen	See Comments	SSC-13	2	23-56 23-63B AO-106	2 1 3/8"	See Note 2.
X-223	RCIC Drain Pot	G-191174	C - Air or Nitrogen	See Comments	SSC-10	2	13-38 52B	2 3/4	See Note 2.
X-224A X-224B	RHR Suction	G-191172	C - Air or Nitrogen	See Comments	10-13-B,D 10-206A 10-13-A,C 10-206B	24 24			See Note 2.
X-225	HPCI Suction	G-191169	C - Air or Nitrogen	See Comments	23-58 23-153A	16 3/4"	23-57 23-59A	16 1	See Note 2.

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

Containment Penetration Number	System or Function	Reference Drawing Number	Appendix J Required Testing	VY Proposed Testing	First Isolation Valve (s)	Size (in)	Second Isolation Valve (s)	Size (in)	Comments
X-226A X-226B	Core Spray Suction	G-191168	C - Air or Nitrogen	See Comments	CS-7B, 6B CS-7A, 6A	12, 1 12, 1	8 A/B 16 A/B	12 4	See Note 2
X-227	RCIC Suction	G-191174	C - Air or Nitrogen	See Comments	13-41 13-143A	6 1	13-39 13-42A	6 1	See Note 2.

RELIEF REQUEST BASIS

Number: D-1

System: Feedwater

Valve: 2-28A, 2-28B

Penetration No.: X-9A, X-9B

Size: 16"

Function: Check Valve for Reverse Flow Isolation

Test Requirement: Appendix J, Type C

Basis for Relief: Type C testing of the inboard feedwater check valves is not required based on the following:

1. The closing of the outboard check valves is very reliable. The outboard valves will fail to close only if they are physically blocked by some foreign material or as a result of serious mechanical binding.

2. Even if the outboard valve fails to close, the inboard valve will remain water covered until all remaining feedwater has leaked through, providing a period of time to shut the motor-operated valves before there is any escape of containment atmosphere.

3. Even if the outboard valve fails to close, and the motor-operated valves are left open, system operating pressure greater than Pa can be maintained which will prevent leakage through the inboard valve out into the system.

4. VYNPC found that significant effort was required in replacing the outboard feedwater check valves. Both VYNPC and NRC agree that anticipated radiation exposures associated with replacing the inboard check valves far exceed the benefits of replacing these valves (ie ALARA) based on the outboard feedwater check valve experience.

Alternate Testing: None

RELIEF REQUEST BASIS

Number: D-2

System: MSIV's

Valve: 2-80A, 80B, 80C, 80D, 86A, 86B, 86C, 86D

Penetration No.: 7A, 7B, 7C, 7D

Size: 18"

Function: Main Steam Line Isolation

Testing Requirements: Appendix J, Type C

Basis for Relief: The design of the main steam isolation valves is such that testing between the inboard and outboard valves at 44 psi would lift the disc of the inboard valve.

Alternate Testing: Valves will be leak tested at 24 psi with an acceptance criteria of 11.5 scfh.

RELIEF REQUEST BASIS

Number: D-3

System: CRD

Valve: 3-13-120, 122, 123, 126, 127, 138

Penetration No.: X-37, X-38

Size: 1"

Function: Insert and Withdraw Control Rods

Testing Requirements: Appendix J, Type C

Basis for Relief: The CRD System is designed to reactor coolant pressure boundary criteria and continuously operates at reactor coolant pressure, which is orders of magnitude higher than post-accident containment pressure. Any system leakage would be identified during plant operation and subsequently repaired so that it can be relied upon to contain post-accident pressure should the need arise.

Alternate Testing: None