



VERMONT YANKEE NUCLEAR POWER CORPORATION

SEVENTY SEVEN GROVE STREET
RUTLAND, VERMONT 05701

2.C.2.1

REPLY TO: FVY 81-13

ENGINEERING OFFICE

1671 WORCESTER ROAD
FRAMINGHAM, MASSACHUSETTS 01701
TELEPHONE 617-872-8100

January 21, 1981

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Office of Nuclear Reactor Regulation

Reference: (a) License No. DPR-28 (Docket No. 50-271)
(b) Letter, VYND to USNRC, WVY 80-132 dated
September 19, 1980

Subject: Appendix J - Supplemental Information

Dear Sir:

Reference (b) forwarded Vermont Yankee's proposed local leak rate test program to address the requirements of Appendix J to 10CFR Part 50. The purpose of this letter is to forward the attached latest revision to that proposed program.

We trust that the attached information is acceptable; however, should you have any questions, please contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

R. L. Smith
Licensing Engineer

8101270746 p

VERMONT YANKEE - LOCAL LEAK TEST PROGRAM

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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)	Exceptions and 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 - Type I exemption on test Conn. valve 16-19-56
X-3	Drywell head flange	G-191175	B - Air or Nitrogen	B Air					Type IA exemption on test tap
X-4	Drywell head access hatch	G-191148	B - Air or Nitrogen	B Air					Type IA exemption on test tap
X-5 A thru H	Chk. vlv. covers vent from torus	G-191175	B - Air or Nitrogen	B Air					Type IA exemption on test tap
	Check valve shaft seals	G-191175	B - Air or Nitrogen	B Air					Type IA exemption on test tap
X-6	CRD Removal Hatch	G-191148	B - Air or Nitrogen	B Air					Type IA exemption on test tap
X-7A	"A" Steam line	G-191167	C - Air or Nitrogen	C * Air	2-80A	18	2-86A 2-83A	18 3/4	Type I exemption on test conn. vlv. 2-83A
	"A" Steam line bellows		B - Air or Nitrogen	B Air					Type IA exemption on test tap
X-7B	"B" Steam line	G-191167	C - Air or Nitrogen	C * Air	2-80B	18	2-86B 2-83B	18 3/4	Type I exemption on test conn. vlv. 2-83B
	"B" Steam line bellows		B - Air or Nitrogen	B Air					Type IA exemption on test tap
X-7C	"C" Steam line	G-191167	C - Air or Nitrogen	C * Air	2-80C	18	2-86C 2-83C	18 3/4	Type I exemption on test conn. vlv. 2-83C
	"C" Steam line bellows		B - Air or Nitrogen	B Air					Type IA exemption on test tap
X-7D	"D" Steam line	G-191167	C - Air or Nitrogen	C * Air	2-80D	18	2-86D 2-83D	18 3/4	Type I exemption on test conn. vlv. 2-83D
	"D" Steam line bellows		B - Air or Nitrogen	B Air					Type IA exemption on test tap
X-8	Main steam drain	G-191167	C - Air or Nitrogen	C Air	2-74	3	2-77 2-75	3 3/4	Type I exemption on test conn. vlv. 2-75

*Steam line isolation valves tested at reduced pressure of 24 psig; Acceptance criteria is 11.5 SCFH per valve (Tech. Spec. 4.7.A.4)

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X-9A	"A" Feedwater	G-191157 G-191167 G-191169	C - Air or Nitrogen	C Air See Exemption 8	2 - 28A	16	2-27A 2-94A	16 3/4	Exemption 8 Type 1 Exemption on V2-94A
X-9B	"B" Feedwater	G-191157 G-191167 G-191174 G-191178	C - Air or Nitrogen	C Air See Exemption 8	2 - 28B	16	2-96A 2-94B	16 3/4	Exemption 8 Type 1 Exemption on V2-94B
X-10	RCIC Steam supply	G-191167 G-191174	C - Air or Nitrogen	C Air	13 - 15	3	13-16 13-46A 13-15A/B	3 3/4 1	Type 1 exemption on test conn. vlv. 13-46A
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	Type 1 exemption on test conn. vlv. 23-27A
X-12	RHR - Shut. cool. supply	G-191172	C - Air or Nitrogen	Exempt	10 - 18	20	10-17 10-84	20 3/4	Type 2 exemption on system
X-13A	LPCI Injection	G-191167 G-191172	C - Air or Nitrogen	Exempt	10 - 46B	24	10-25B 10-78B	24 3/4	Type 2 exemption on system
X-13B					10 - 46A	24	10-25A 10-78A	24 3/4	
X-14	RWCU Suction	G-191167 G-191178	C - Air or Nitrogen	Exempt	12 - 15	4	12-18 12-16	4 3/4	Type 2 exemption on system
X-15	Spare	G-191148	A - Air	A Air					None
X-16A	Core Spray	G-191167 G-191168	C - Air or Nitrogen	Exempt	14-13B 14-30B	8 2	14-12B	8	Type 2 exemption for system
X-16B					14-13A 14-30A	8 2	14-12A	8	
X-17	RHR Head Spray	G-191167 G-191172	C - Air or Nitrogen	C Air	10-29 10-32	4 4	10-33 10-83	4 3/4	Type 1 exemption on test conn. vlv. 10-83
X-18	Drywell Floor Drain	G-191177 SH.1	C - Air or Nitrogen	C Air	20-82	3	20-82 20-79A	3 3/4	Type 1 exemption on test conn. vlv. 20-79A
X-19	Drywell Equip. drain	G-191177 SH.1	C - Air or Nitrogen	C Air	20-94	3	20-95 20-92A	3 3/4	Type 1 exemption on test conn. vlv. 20-92A
X-20	Spare	G-191148	A - Air	A - Air		6			None

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X-21	Service Air	G-191160	A - Air	A - Air	72-37B	2			Welded cap outside drywell
X-22	Inst. Air	G-191160	C - Air or Nitrogen	C - Air	72-89C 72-152	2	72-89B 72-103A 72-103B	2 2 2	Type 1 exemption on V72-152
X-23	Inlet RBCCW Outlet	G-191159	C - Air or Nitrogen	Exempt	70-113	8	None		Type 3 exemption for system
X-24					70-117	8	None		
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	Type 1 exemption on test conn. vlvs. VG-12A & VG-17A Type 7 exemption on 16-19-6A and 16-19-7A
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-20-19	18 2 1 1 3/4 1	- 16-19-9 - 16-19-23 - 16-19-53 - NG-11A/B - 16-20-20 - AC-22B	18 6 1 1 1 1	Type 1 exemption on test conn. vlv. NG-19, 16-20-30, AC-22B. Type 7 exemption on 16-19-8
X-27A	Core spray Instrument	G-191267 G-191168	C - Air or Nitrogen	Exempt	SL-25	1	None		Type 4 testing exemption
X-27B					SL-27	1			
X-27C	Core spray Delta P	G-191168	C - Air or Nitrogen	Exempt	SL-31A	1	None		Type 4 testing exemption
X-27D					SL-31B	1			
X-27E	HPCI Auto Isolation Signal	G-191169	C - Air or Nitrogen	Exempt	SL-37A	1	None		Type 4 testing exemption
X-27F					SL-37B	1			
X-28A	RV Press & Level	G-191267	C - Air or Nitrogen	Exempt	SL-19A	1	None		Type 4 testing exemption
X-28B	Reactor Vessel Level	G-191267	C - Air or Nitrogen	Exempt	SL-17A	1	None		Type 4 testing exemption
X-28C					SL-15A	1			
X-28D					SL-13A	1			
X-28E					SL-11	1			
X-28F	RV Head Leakage	G-191267	C - Air or Nitrogen	Exempt	SL-23	1			Type 4 testing exemption

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X-29A	Reactor Vessel Level	G-191267	C - Air or Nitrogen	Exempt	SL-19B	1	None	1	Type 4 testing exemption
X-29B					SL-29B	1			
X-29C					SL-17B	1			
X-29D					SL-15B	1			
X-30A	Main Steam Flow "A"	G-191167	C - Air or Nitrogen	Exempt	SL-73A	1	None	1	Type 4 testing exemption
X-30B					SL-73B	1			
X-30C	Main Steam Flow "B"	G-191167	C - Air or Nitrogen	Exempt	SL-73C	1	None	1	Type 4 testing exemption
X-30D					SL-73D	1			
X-30E	Recirc. Loop Pressure	G-191167	C - Air or Nitrogen	Exempt	SL-305A	1	None	1	Type 4 testing exemption
X-30F					SL-305B	1			
X-31A	Recirc. Pump Delta P	G-191167	C - Air or Nitrogen	Exempt	SL-62A	1	None	1	Type 4 testing exemption
X-31B					SL-62B	1			
X-31C	Recirc. Loop Flow	G-191167	C - Air or Nitrogen	Exempt	SL-64A	1	None	1	Type 4 testing exemption
X-31D					SL-64B	1			
X-31E	Recirc. Pump Seal Leak Detection	G-191167	C - Air or Nitrogen	Exempt	SL-2-7A	1	None	1	Type 4 testing exemption
X-31F					SL-2-28A	1			
X-32A	Recirc. Pump Delta P	G-191167	C - Air or Nitrogen	Exempt	SL-62C	1	None	1	Type 4 testing exemption
X-32B					SL-62D	1			
X-33A	CRD Pressure	G-191167	C - Air or Nitrogen	Exempt	SL-35	1	None	1	Type 4 testing exemption
X-33B	HPCI Pressure	G-191169	C - Air or Nitrogen	Exempt	SL-37C	3/4	None	3/4	Type 4 testing
X-33C					SL-37D	3/4			
X-33D	Spare		A - Air	A - Air	None		None		None
X-33E	RCIC Pressure	G-191174	C - Air or Nitrogen	Exempt	SL-55C	3/4	None	3/4	Type 4 testing exemption
X-33F					SL-55D	3/4			
X-34A	Main Steam Flow "C"	G-191167	C - Air or Nitrogen	Exempt	SL-73E	1	None	1	Type 4 testing exemption
X-34B					SL-73F	1			

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X-34C	Main Steam Flow "D"	G-191167	C - Air or Nitrogen	Exempt	SL-73C SL-73H	1 1	None		Type 4 testing exemption
X-34D									
X-34E	Recirc. Loop Pressure	G-191167	C - Air or Nitrogen	Exempt	SL-94A SL-94B	1 1	None		Type 4 testing exemption
X-34F									
X-35A	Tip Air Purge/Flange Seal		C/B	Exempt/B	Check	1/2" tube/ 1/2" flange	Solenoid	1/2"	Type 1A on test plug/ Type 4 testing exemption
X-35B	Spare		B	A	None		None		Non-testable gasket
X-35C									
X-35D	Tip Tubes/Flange Seal		C - Air or Nitrogen/B	Exempt/B	Tip Ball Valves	3/8" Tube/ 1/2" Flange	None		Type 4 testing / Test 1A on exemption / Test Plug
X-35E									
X-36	Spare	G-191170	A - Air or Nitrogen	A Air					
X-37	CRD Insert	G-191170	C - Air or Nitrogen	Exempt	3-13-138 3-13-126 3-13-123 3-13-120	1 1 1 1	None		Type 5 testing exemption
X-38	CRD Withdraw	G-191170	C - Air or Nitrogen	Exempt	3-13-127 3-13-122 3-13-120	1 1 1	None		Type 5 testing exemption
X-39A	Drywell Spray	G-191172	C - Air or Nitrogen	Exempt	10-31B	12	10-26B	12	Type 3 testing exemption
X-39B					10-31A	12	10-26A	12	
X-40A									
X-40B	Drywell Pressure	G-191172 G-191175	A - Air or Nitrogen	A - Air	None		None		Type 4 testing exemption
X-40C									
X-40D									
X-40XX (24 Prs)	Jet Pump Delta P	G-191267	C - Air or Nitrogen	Exempt	SL-23-XX	(48) - 1	None		Type 4 testing exemption
X-41	Recirc. Sample	G-191167	C - Air or Nitrogen	C - Air	FCV-39	3/4	FCV-40 V2-41	3/4 3/4	Type 1 exemption on test conn. vlv. V2-41
X-42	Standby Liq. Control	G-191167 G-191171 G-191267	C - Air or Nitrogen	Exempt	11-17	1-1/2	11-16 11-36	1-1/2 1	Type 1 exemption on test conn. vlv. 11-36A. Type 6 & 2 exemption on system

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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)	Exceptions and Comments
X-43	Spares		A - Air	A - Air	None		None		None
X-44									
X-45									
X-46									
X-47	Drywell air Comp. suction	G-191160	C - Air or Nitrogen	C - Air	V-72-38A V-72-151	2 1	V-72-38B	2	Type 1 exemption on test conn. vlv. V72-151
X-48	No Penetration								
X-49A	RCIC Delta P	G-191174	C - Air or Nitrogen	Exempt	SL-55C SL-55D	1 1	None		Type 4 testing exemption
X-49B									
X-49C	Srv. Bellows Pressure	G-191167	A - Air	A - Air	None		None		Type 4 testing exemption
X-49D									
X-49E									
X-49F									
X-50A	CAD	VY-E-75-002	C - Air or Nitrogen	C - Air	VG-21 VG-26	3/4 3/4	VG-23	3/4	Type 1 exemption on test conn. vlv. VG-21
X-50B									
X-50C									
X-50D	Spare		A - Air	A - Air	None		None		None
X-51A	Loop Selection Instrument	G-191167	C - Air or Nitrogen	Exempt	SL-301C	1	None		Type 4 testing exemption
X-51B					SL-301G	1			
X-51C					SL-301F	1			
X-51D					SL-301B	1			
X-51E	Spare		A - Air	A - Air	None		None		None
X-51F	Jet Pump Delta P	G-191267	C - Air or Nitrogen	Exempt	SL-33	1	None		Type 4 testing exemption
X-52A	Loop Selection Instrument	C-191167	C - Air or Nitrogen	Exempt	SL-301A	1	None		Type 4 testing exemption
X-52B					SL-301E	1			
X-52C					SL-301H	1			
X-52D					SL-301D	1			

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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)	Exceptions and Comments
X-52E X-52F	Drywell Pressure	G-191175	A - Air	A - Air	None		None		Type 4 testing exemption
X-9A	"A" Feedwater Bellows	G-191157	B - Air or Nitrogen	B - Air	None		None		Type IA exemption on Test Plugs
X-9B	"B" Feedwater Bellows	G-191157	B - Air or Nitrogen	B - Air	None		None		Type IA exemption on Test Plugs
X-11	HPCI Steam Bellows	G-191167	B - Air or Nitrogen	B - Air	None		None		Type IA exemption on Test Plug
X-12	RHR Bellows	G-191172	B - Air or Nitrogen	B - Air	None		None		Type IA exemption on Test Plug
X-13A X-13B	LPCI Bellows	G-191167	B - Air or Nitrogen	B - Air	None		None		Type IA exemption on Test Plug
X-14	RWCU Suction Bellows	G-191167	B - Air or Nitrogen	B - Air	None		None		Type IA exemption on Test Plug
X-16A X-16B	Core Spray Bellows	G-191167	B - Air or Nitrogen	B - Air	None		None		Type IA exemption on Test Plugs
	Shear Lug Access Covers (A - H)	5920-336	B- Air or Nitrogen	B - Air	None		None		Type IA exemption on Test Plugs

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X-200A	Torus Manway	G-191175	B - Air or Nitrogen	B - Air					Type 1A exemption on test plugs
X-200B	Torus Manway / Penetration								
X-201A thru X-201H	Vent - Torus to Drywell	G-191175	A - Air	Air					Part of Primary Containment See X-5A-H
X-202 A thru H J & K	Vacuum Breaker Access Covers Also X-5	G-191175	B - Air or Nitrogen	B - Air					See X-5
X-203 A thru F	Vent Line Vacuum Breaker Connection	G-191175	A - Air	A - Air					Part of Primary Containment See X-5A-H
X-204	No Penetration								
X-205	CAD	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	Type 1 exemptions on test tap vlvs: NG-20 16-20-28 AC-20A AC-19B AC-22B Type 7 exemption on 16-19-10
X-206 A thru F	Torus Water Level	G-191169 G-191175	A - Air or Nitrogen	Exempt	None				Type 4 testing exemption
X-207 A thru H	Vent Line Drains		A - Air	A - Air	None				Part of Primary Containment
X-208 A thru D	Serv. Discharge to Torus	G-191167	None	None					Part of Containment System
X-209A	Torus Pressure	G-191175	A - Air or Nitrogen	Exempt	AC-100	1	None		Type 4 testing exemption
X-209B	Torus Water Temperature	G-191175	A	A					External temperature probes - no penetration
X-209C									
X-209D (X50A, B, C)	CAD	VY-E-75-002	A - Air or Nitrogen	A	None				Type 4 testing exemption

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X-210A	FHR Return	G-191168 G-191169 G-191172 G-191177	C - Air or Nitrogen	Exempt	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"	Type 2 testing exemption
X-210B	RHR Return	G-191172 G-191168 G-191174 G-191177	C - Air or Nitrogen	Exempt	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	4" 4" 2" 12"	Type 2 testing exemption

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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)	Exceptions and Comments
X-211A	Torus Spray	G-191172	C - Air or Nitrogen	Exempt	10-38B	4	10-39B	12	Type 3 testing exemption
X-211B					10-38A	4	10-39A	12	
X-212	RCIC Turbine Exhaust	G-191174	C - Air or Nitrogen	Exempt	SSC-9 13-817	8 1	13-52A 13-50 13-818	8 8 1	Type 2 testing exemption
X-213A	Torus Drain / Flange Valves	G-191175	C - Air or Nitrogen	Exempt/ Exempt	20-400A	1	20-402A/401A	1	Type 1A exemption on flange test plugs. Type 7 exemption on valves and flanges.
X-213B					20-400B	1	20-401B/402B	1	
X-214	Torus Electrical		B - Air or Nitrogen	B - Air					Type 1A exemption on test plugs
X-215	TE-34	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	Type 1 exemption on test conn. vlv. 78-A
X-217	Torus Pressure	G-191175	A - Air or Nitrogen	A - Air	None				Type 4 testing exemption
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	Type 7 exemption on SB-6B & SB-7B Type 1 exemption on test conn. vlvs. AC-21A, VG-12B, VG-17B
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	Type 1 exemption on test conn. vlv. VG-21
X-221	HPCI Turbine Exhaust	G-191169	C - Air or Nitrogen	Exempt	SSC-12 23-842	20 1	23-65 23-843 23-63A	20 1 1	Type 2 testing exemption
X-222	HPCI Drain Pot	G-191169	C - Air or Nitrogen	Exempt	SSC-13	2	23-56 23-63B	2 1	Type 2 testing exemption
X-223	RCIC Drain Pot	G-191174	C - Air or Nitrogen	Exempt	SSG-10	2	13-38 52B	2 3/4	Type 2 testing exemption
X-224A	RHR Suction	C-191172	C - Air or Nitrogen	Exempt	10-13-B,D 10-206A	24			Type 2 testing exemption
X-224B					10-13 A,C 10-206B	24			
X-225	HPCI Suction	G-191169	C - Air or Nitrogen	Exempt	23-58 23-53A	16 1	23-57 23-59A	16 1	Type 2 testing exemption

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X-226A	Core Spray Suction	G-191168	C - Air or Nitrogen	Exempt	CS-7B, 6B	12, 1			Type 2 testing exemption
X-226B					CS-7A, 6A	12, 1			
X-227	RCIC Suction	G-191174	C - Air or Nitrogen	Exempt	13-41 13-143A	6 1	13-39 13-42A	6 1	Type 2 testing exemption