Entergy	CONDITION REPORT	CR-VTY-2010-01236

Originator: Fales,Neil
Originator Phone: 8024513057
Originator Site Group: VTY Eng P&C Codes Staff VTY
Operability Required: Y
Supervisor Name: LeFrancois,Mark P
Reportability Required: Y
Discovered Date: 03/23/2010 11:50
Initiated Date: 03/23/2010 11:58

Condition Description:

Errors identified while re-certifying BVY letter 05-027.

While performing a re-certification of BVY 05-027 (Vermont Yankee Nuclear Power Station License No. DPR-28 (Docket No. 50-271) Supplement to Relief Request RI-01) as part of the response to the NRC Demand For Information (DFI), several errors were found in Table 1 of this letter. The table lists the number of welds/pieces per reactor vessel internal component and was provided by Vermont Yankee to clarify the response to a question from the NRC. These errors did not end up in the final NRC safety evaluation for the relief request. The other data in the table was verified to be accurate.

This is an administrative legacy issue, not an operability concern. The initial Licensing position is that this is not material relative to the NRC approval of this relief request. The intended inspections are being performed by the BWRVIP Program as part of this relief request and are not relied upon for this table or affected by the errors.

Below is the list of errors:

- There are 2, not 3, Jet Pump Hidden Thermal Sleeve Welds per Jet Pump Assembly.
- There are 4, not 12, Jet Pump Riser Brace Welds per Jet Pump Assembly.
- There are 16, not 14, Jet Pump Mixer/Diffuser Welds per Jet Pump Assembly.
- There are 5, not 7, Core Spray Sparger Large Circ Welds per sparger. (This was later corrected in BVY 05-59.)
- The number of Miscellaneous Vessel Internal Attachments was listed as 12. By virtue of this being a catch all for the remainder of internal attachments that were not already mentioned elsewhere in the letter, the originator came up with a number of 19. It is not known exactly what was meant to be included in this category.

Immediate Action Description:

Notified the Manager of Licensing Programs (White Plains) with acting Manager of Licensing.

Suggested Action Description:

Determine if NRC notification is warranted considering low level of effect.

EQUIPMENT:

Tag Name	Tag Suffix Name	Component Code	Process System Code
RV-1-1A	EX/SR/MR	VESSEL	NB

REFERENCE ITEMS:

Type Code	Item Desc
OTHER	BVY letter 05-027
OTHER	BVY 05-59

TRENDING (For Reference Purposes Only):

Trend Type	Trend Code
AR	ESPC
REPORT WEIGHT	1
HEP FACTOR	H
KEYWORDS	KW-NRC
KEYWORDS	KW-ENGINEERING WORK PRACTICE
INPO BINNING	ENI

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Entergy

Entergy Nuclear Vermont Yankee, LLC
Entergy Nuclear Operations, Inc.
185 Old Ferry Road
Brattleboro, VT 05302-0500

October 1, 2003
BVY 03-89

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
Supplement 2 to Fourth-Interval Inservice Inspection (ISI) Program Plan - Submittal of Relief Request RI-01

On April 1, 2003, Vermont Yankee Nuclear Power Station (VY) submitted to the NRC a revised Inservice Inspection (ISI) Program[1] as required by 10CFR50.55a(a)(3)(i). The subject submittal contained a number of relief requests for NRC review and approval. The attached Relief Request has also been identified as warranting NRC review and approval. Accordingly, attached for your review and approval in parallel with our Fourth-Interval ISI Program Review is Relief Request RI-01 "Reactor Internals." This submittal requests to implement various BWRVIP Guidelines in lieu of select ASME Section XI requirements.

Attachment 1 identifies the commitments contained within this letter. Attachment 2 contains Relief Request RI-01.

If you have any questions on this transmittal, please contact Mr. Thomas B. Silko at (802) 258-4146.

Sincerely,

James M. DeVincintis
Manager, Licensing

Attachments

cc: USNRC Region I Administrator
USNRC Resident Inspector - VY
USNRC Project Manager - VY
Vermont Department of Public Service

[1] Reference VY Letter to USNRC, dated April 1, 2003, BVY 03-28, "Fourth-Interval Inservice Inspection Program Plan and Fourth-Interval Inservice Inspection Pressure Test Program and Request for Approval of ISI Relief Requests."

A047

Docket No. 50-271
BVY 03-89

Attachment 1

Vermont Yankee Nuclear Power Station

Supplement 2 to Fourth-Interval Inservice Inspection (ISI) Program Plan –
Submittal of Relief Request RI-01

List of Commitments

SUMMARY OF VERMONT YANKEE COMMITMENTS

BVY NO.: 03-89

The following table identifies commitments made in this document by Vermont Yankee. Any other actions discussed in the submittal represent intended or planned actions by Vermont Yankee. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager of any questions regarding this document or any associated commitments.

COMMITMENT	COMMITTED DATE OR "OUTAGE"
None	N/A

Docket No. 50-271
BVY 03-89

Attachment 2

Vermont Yankee Nuclear Power Station

Supplement 2 to Fourth-Interval Inservice Inspection (ISI) Program Plan –
Submittal of Relief Request RI-01

Relief Request RI-01

(6

LICENSEE/UTILITY NAME – Entergy Nuclear Operations, Inc.
PLANT NAME, UNIT – Vermont Yankee
10-YEAR INTERVAL – Fourth Interval
REQUEST FOR RELIEF No. RI-01

Proposed Alternative
In Accordance with 10 CFR 50.55a(a)(3)(i)

– Alternative Provides Acceptable Level of Quality and Safety –

1. **ASME Code Component(s) Affected**

ASME Section XI, Class 1, Examination Categories B-N-1 and B-N-2, Code Item Nos. B13.10, Vessel Interior, B13.20, Interior Attachments within Beltline Region, B13.30, Interior Attachments beyond Beltline Region, and B13.40, Core Support Structure

2. **Applicable Code Edition and Addenda**

1998 Edition with Addenda through 2000

3. **Applicable Code Requirements**

ASME Section XI requires the examination of components within the Reactor Pressure Vessel. These examinations are included in Table IWB-2500-1 Categories B-N-1 and B-N-2 and identified with the following item numbers:

B13.10 Examine accessible areas of the reactor vessel interior each period by the VT-3 method.

B13.20 Examine interior attachment welds within the beltline region each interval by the VT-1 method.

B13.30 Examine interior attachment welds beyond the beltline region each interval by the VT-3 method.

B13.40 Examine surfaces of the core support structure each interval by the VT-3 method.

These examinations are performed to assess the structural integrity of components within the boiling water reactor pressure vessel.

4. **Reason for Request**

To avoid unnecessary inspections and to conserve radiological dose, while still maintaining an adequate level of quality and safety for examination of the affected welds.

5. **Proposed Alternative**

In lieu of the requirements of ASME Section XI, 1998 Edition, 2000 Addenda, the proposed alternative described in the enclosure shall be used.

Vermont Yankee will examine components within the reactor vessel in accordance with BWRVIP Guideline requirements. The particular guidelines that are applicable to those components are:

BWRVIP-18 "BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines"
BWRVIP-25 "BWR Core Plate Inspection and Flaw Evaluation Guidelines"
BWRVIP-26 "BWR Top Guide Inspection and Flaw Evaluation Guidelines"
BWRVIP-38 "BWR Shroud Support Inspection and Flaw Evaluation Guidelines"
BWRVIP-41 "BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines"
BWRVIP-47 "BWR Lower Plenum Inspection and Flaw Evaluation Guidelines"
BWRVIP-48 "Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines"
BWRVIP-76 "BWR Core Shroud Inspection and Flaw Evaluation Guidelines"

The attached Table compares present ASME Category B-N-1 and B-N-2 requirements with the above current BWRVIP Guideline requirements applicable to Vermont Yankee.

In addition, the requirements of BWRVIP-94, "Program Implementation Guideline," will be followed. BWRVIP-94 states that where guidance in existing BWRVIP documents has been supplemented or revised by subsequent correspondence approved by the BWRVIP Executive committee, the most current approved guidance will be implemented. Therefore, the attached Table only represents a current comparison.

Basis for Use

BWRs now examine reactor internals in accordance with BWRVIP guidelines. These guidelines have been written to address the safety significant vessel internal components and to examine these components using appropriate methods and reexamination frequencies. The NRC has agreed with the BWRVIP approach in principal and has issued Safety Evaluations for these guidelines (see References below). Therefore, use of these guidelines, as an alternative to the subject Code requirements, provides an acceptable level of quality and safety and will not adversely impact the health and safety of the public.

6. Duration of Proposed Alternative

It is proposed to use the alternative for the duration of the Vermont Yankee Fourth Ten-Year Interval (September 1, 2003 through August 31, 2013).

7. References

1. Letter USNRC to BWRVIP, dated April 27, 1998, "Final Supplement to the Safety Evaluation of the BWRVIP, BWRVIP-07 Report"
2. Letter USNRC to BWRVIP, dated September 15, 1998, "Safety Evaluation of the BWRVIP, BWRVIP-06 Report"
3. Letter USNRC to BWRVIP, dated September 29, 1999, "Final Safety Evaluation of 'BWRVIP, BWR Top Guide Inspection and Flaw Evaluation Guidelines (BWRVIP-26),' EPRI Report TR-107285, December 1996"
4. Letter USNRC to BWRVIP, dated September 29, 1999, "Final Safety Evaluation of 'BWRVIP, BWR Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines (BWRVIP-48),' EPRI Report TR-108724"
5. Letter USNRC to BWRVIP, dated October 6, 1999, "Staff Reevaluation of Table 1 in the BWRVIP-07 Report"

6. Letter USNRC to BWRVIP, dated October 13, 1999, "Final Safety Evaluation of 'BWRVIP, BWR Lower Plenum Inspection and Flaw Evaluation Guidelines (BWRVIP-47),' EPRI Report TR-108727"
7. Letter USNRC to BWRVIP, dated December 2, 1999, "Final Safety Evaluation of BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines (BWRVIP-18)"
8. Letter USNRC to BWRVIP, dated December 19, 1999, "Final Safety Evaluation of BWRVIP, 'BWR Core Plate Inspection and Flaw Evaluation Guidelines (BWRVIP-25)' EPRI Report TR-107284, December 1996"
9. Letter USNRC to BWRVIP, dated July 24, 2000, "Final Safety Evaluation of the 'BWRVIP, BWR Shroud Support Inspection and Flaw Evaluation Guidelines (BWRVIP-38),' EPRI Report TR-108823"
10. Letter USNRC to BWRVIP, dated February 4, 2001, "Final Safety Evaluation of the 'BWRVIP, BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines (BWRVIP-41)'"
11. Letter USNRC to BWRVIP, dated August 20, 2001, "Final Safety Evaluation of the 'BWRVIP, Shroud Vertical Weld Inspection and Evaluation Guidelines (BWRVIP-63)

Comparison of ASME Category B-N-1 and B-N-2 Requirements With BWRVIP Guidance Requirements

ASME Item No. Table IWB-2500-1	Component	ASME Exam Scope	ASME Exam	ASME Frequency	Applicable BWRVIP Document	BWRVIP Exam Scope	BWRVIP Exam	BWRVIP Frequency
B13.10	Reactor Vessel Interior	Accessible Areas (Non-specific)	VT-3	Each period	BWRVIP-18, 25, 26, 38, 41, 47, 48, 76	Per VY Program Procedure PP 7027 See Attached Table 1		
B13.20	Interior Attachments Within Beltline – Riser Braces	Accessible Welds	VT-1	Each 10-year Interval	BWRVIP-48 Table 3-2	Riser Brace Attachment	EVT-1	100% in first 12 years, 25% during each subsequent 6 years
	Lower Surveillance Specimen Holder Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
B13.30	Interior Attachments Beyond Beltline – Steam Dryer Hold-down Brackets	Accessible Welds	VT-3	Each 10-year Interval	BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
	Guide Rod Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
	Steam Dryer Support Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	EVT-1	Each 10-year Interval
	Feedwater Sparger Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	EVT-1	Each 10-year Interval
	Core Spray Piping Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	EVT-1	Every 4 Refueling Cycles
	Upper and Middle Surveillance Specimen Holder Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
	Shroud Support (Weld H9)				BWRVIP-38 3.1.3.2, Figure 3-5	Weld H9	EVT-1 or UT	Maximum of 6 years for EVT-1, Maximum of 10 years for UT
	Shroud Support Legs (H12 Welds)	(Rarely Accessible)			BWRVIP-38 3.2.3	Not Required	Not Required	Not Required
B13.40	Integrally Welded Core Support Structure – Shroud Support	Accessible Surfaces	VT-3	Each 10-year Interval	BWRVIP-38 3.1.3.2, Figure 3-5	Welds H8, H9	EVT-1 or UT	Maximum 6 years for EVT-1, 10 years for UT
	Shroud				BWRVIP-76 2.2.1	Welds H1, H2	EVT-1 or UT	Maximum 10 years
					BWRVIP-76 Figure 3-3	Vertical, Ring Seg. Welds Below H2	EVT-1 or UT	Maximum 6 years for one-sided EVT-1, 10 years for UT
					BWRVIP-76 3.5	Tie-rod Repair	VT-3	All four within 10 years

NOTE: This Table provides only an overview of the requirements. For more details, refer to ASME Section XI, Table IWB-2500-1, and the appropriate BWRVIP document.

Table 1

Outage Year / Reactor Internal Component Outage	1995 RFO18	1996 RFO19	1998 RFO20	1999 RFO21	2001 RFO22	2002 RFO23	2004 RFO24	2005 RFO25	2007 RFO26	2008 RFO27	2010 RFO 28	2011 RFO29
Control Rod Drive Guide Tube Body Welds					EVT1 (4)		EVT1 (1)		EVT1	EVT-1 (IN)		
Control Rod Drive Guide Tube Lug and Pin					VT3		VT3	VT3	VT3	VT-3	VT3	
Core Plate Rim Hold-Down Bolts		VT3		VT3 (50%)	VT3 (50%)	VT-3 (50%)	VT-3 (50%)	UT				
Core Shroud Horizontal Welds (H1-H3)	UT						EVT1				EVT1	
Core Shroud Horizontal Welds (H4-H7)	UT											
Core Shroud Vertical Welds		UT/ET					EVT1				EVT1	
Core Shroud TG/CP Ring Segment Welds		UT/ET					EVT1				EVT1	
Core Shroud Flange Ring Segment Welds												
Core Shroud Tie-Rod Repair		VT3 (all)	VT3 (all)	VT3 (all)			VT3 (2)			VT3 (2)		
Core Shroud Support Welds (H8, H9)		UT/ET						UT or EVT1				
Core Shroud Support Access Hole Cover	*VT*	*VT*	*MVT1*	*EVT1*		*EVT1*		*EVT1*		*EVT1*		
Core Shroud Support Annulus Floor	*VT3*	*VT3*	*VT3*	*VT3*	*VT3*	*VT3*	*VT3*	*VT3*	*VT3*	*VT3*	*VT3*	
Core Spray Thermal Sleeve Welds (Hidden)								UT				
Core Spray Piping Welds (except P9)	*MVT1*	UT	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	
Core Spray P9 Welds								UT		UT		UT
Core Spray Sparger Large Circ Welds	CSVT1	CSVT1	MVT1		EVT1		EVT1		EVT1		EVT1	
Core Spray Sparger Nozzle Welds	CSVT1	CSVT1	VT3		VT1 (50%)		VT1 (50%)		VT1 (50%)		VT1 (50%)	
Core Spray Piping Brackets	*MVT1*	*MVT1*				EVT1				EVT1		
Core Spray Sparger Brackets	CSVT1	CSVT1	VT3			VT1		VT1		VT1		
Core Spray Sparger Tee-Box Repair (Old)	*VT3*	*VT3*	*VT3*	*VT3*				*VT3*				
Feedwater Sparger Tee Welds	MVT1		MVT1		VT1		VT1		VT1		VT1	
Feedwater Sparger End Bracket Attachment	MVT1		MVT1		VT1	EVT1	VT1		VT1		VT1	
Feedwater Sparger Piping and Brackets	VT3		VT3		VT3		VT3		VT3		VT3	
Feedwater Nozzle Inner Radii	UT				UT	UT (1)			UT			
Guide Rods						VT3						
Incore Dry Tubes	*MVT1 (3)*			*VT1,3 (2)*			*VT1,3 (2)*	*VT1,3 (5)*	*VT1,3 (5)*	*VT1,3 (5)*	*VT1,3 (5)*	
Integrally Welded Core Support Structures						VT3						
Jet Pump Beams			UT	UT (50%)		UT		UT				
Jet Pump Thermal Sleeve Welds (Hidden)								UT				UT (50%)
Jet Pump Riser Welds (RS-1, RS-2, RS-3)			UT		UT (flaws)		EVT-1 (flaws)		UTorEVT1 (50%)		EVT-1 (flaws)	
Jet Pump Riser Welds (RS-4, RS-5, RS-8)			MVT (50%)				EVT (50%)				EVT (25%)	
Jet Pump Riser Brace Welds	*VT (50%)*	*VT (50%)*	MVT (50%)				EVT (50%)				EVT (25%)	
Jet Pump Inlet Bolted Connection	*VT3 (50%)*	*VT3 (50%)*	VT3 (50%)				VT3 (50%)				VT3 (25%)	
Jet Pump Restrainer Wedges	*VT (50%)*	*VT (50%)*	VT (50%)		*VT1 (50%)*		VT1 (50%)		*VT1 (50%)*		VT1(25%-50%)	
Jet Pump Restrainer Setscrews	*VT (50%)*	*VT (50%)*	*VT (50%)*		*VT3 (50%)*		*VT3 (50%)*		*VT3 (50%)*		*VT3 (50%)*	
Jet Pump Mixer/Diffuser Welds (above shell)				UT (100%)								
Jet Pump Diffuser/Adapter Welds (below shell)				UT (100%)		UT (4 flaws)		EVT-1 (4 flaws)		UT or EVT1 (50%)		
Jet Pump Sensing Lines	*VT (50%)*	*VT (50%)*	*VT (50%)*		*VT3 (50%)*		*VT3 (50%)*		*VT3 (50%)*		*VT3 (50%)*	
Lower Plenum (CRD, Core Shroud Support)	WHEN ACCESSIBLE											
Lower Plenum (Core Plate, Incore, SLC)	*WHEN ACCESSIBLE*											
Miscellaneous Vessel Internal Attachments						EVT1,VT1,3						
Orificed Fuel Support Castings	*VT3*	*VT3*	*VT3*									
SLC Nozzle-to-Safe End Weld			EVT2*	EVT2*	EVT2*	PT		UT				

Outage Year	1995	1996	1998	1999	2001	2002	2004	2005	2007	2008	2010	2011
Reactor Internal Component / Outage	RFO18	RFO19	RFO20	RFO21	RFO22	RFO23	RFO24	RFO25	RFO26	RFO27	RFO 28	RFO29
Steam Dryer			*VT3*	*VT3 (flaws)*			*VT3*				*VT3*	
Steam Dryer Support Bracket			VT3,UT-flaw		VT3,UT-flaw							
Steam Separator/Shroud Head			*VT3*				*VT3*				*VT3*	
Steam Separator Hold-down bolts		*VT3*										
Top Guide Aligner Assemblies		*VT3 (2)*		VT1 (2)								
Top Guide Hold-down Assemblies		*VT3 (4)*		VT1 (2)		VT1 (2)		VT1 (2)		VT1 (2)		
Top Guide Bolts (Rim and Cover Plate)					*VT3*				*VT3*			
Top Guide Grid Beams	*VT*	*VT*	MVT1	VT1								
Vessel Cladding		UT (aut)				UT (man)						

Table Key

Standard Print	= Inspections mandated by ASME, BWRVIP, or NRC commitments
Italics	= Inspections recommended for Risk-to-Generation purposes
UT	= Ultrasonic Testing performed or planned
UT (aut or man)	= Either automated or manual Ultrasonic Testing
ET	= Eddy Current Testing performed or planned
PT	= Penetrant Testing performed or planned
VT	= Visual Testing performed or planned
EVT1	= EVT-1; Enhanced Visual Test to look for cracking; 1/2 mil wire resolution with cleaning assessment
EVT2*	= Enhanced Leakage Inspection (direct view of component during pressure test)
VT1	= VT-1; Visual Test to look for cracks, wear, corrosion, etc.; resolution required: 1/32" black line
VT3	= VT-3; Visual Test to determine general mechanical/structural condition; no resolution requirements
CSVT1 or MVT1	= CSVT-1 or MVT-1; Core Spray Visual Test or Modified VT-1, no longer a defined test method; 1 mil wire resolution
(IN)	= If necessary (to complete minimum number of inspections not performed in previous outage)
(all, number, %, or flaw)	= Perform inspection on all components, limited number (or percentage) of components, or just flawed components

Entergy

Entergy Nuclear Vermont Yankee, LLC
Entergy Nuclear Operations, Inc.
185 Old Ferry Road
Brattleboro, VT 05302-0500

December 23, 2003
BVY 03-120

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
Supplement to Relief Request RI-01

On October 1, 2003, Vermont Yankee (VY) submitted to the NRC Relief Request RI-01[1]. This submittal requested to implement various Boiling Water Reactor Vessel Internals Program (BWRVIP) Guidelines in lieu of select ASME Section XI requirements. Based upon discussions with the Staff, the table contained within Relief Request RI-01 has been modified to specifically identify (or correlate) the reactor vessel internal component with the corresponding Inspection Basis (e.g.; BWRVIP document number). The revised Table 1 is attached for your review in support of approval of Relief Request RI-01.

Attachment 1 identifies that there are no commitments contained within this letter. Attachment 2 contains a revised Table 1.

If you have any questions on this transmittal, please contact Mr. Thomas B. Silko at (802) 258-4146.

Sincerely,

James M. DeVincentis
Manager, Licensing

Attachments

cc: USNRC Region 1 Administrator
USNRC Resident Inspector - VY
USNRC Project Manager - VY
Vermont Department of Public Service

[1] Reference VY Letter to USNRC, dated October 1, 2003, BVY 03-89, "Supplement 2 to Fourth-Interval Inservice Inspection (ISI) Program Plan – Submittal of Relief Request RI-01."

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Docket No. 50-271
BVY 03-120

Attachment 1

Vermont Yankee Nuclear Power Station

Supplement to Relief Request RI-01

List of Commitments

(14)

SUMMARY OF VERMONT YANKEE COMMITMENTS

BVY NO.: 03-120

The following table identifies commitments made in this document by Vermont Yankee. Any other actions discussed in the submittal represent intended or planned actions by Vermont Yankee. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager of any questions regarding this document or any associated commitments.

COMMITMENT	COMMITTED DATE OR "OUTAGE"
None	N/A

Docket No. 50-271
BVY 03-120

Attachment 2

Vermont Yankee Nuclear Power Station

Supplement to Relief Request RI-01

Revised Table 1

Table 1 - Reactor Vessel Internals Inspection Overview

December 3, 2003 Outage Year / Reactor Internal Component / Outage	Inspection Basis	1995 RFO18	1996 RFO19	1998 RFO20	1999 RFO21	2001 RFO22	2002 RFO23	2004 RFO24	2005 RFO25	2007 RFO26	2008 RFO27	2010 RFO 28	2011 RFO29
Control Rod Drive Guide Tube Body Welds	BWRVIP-47, Table 3.2-1					EVT1 (4)		EVT1 (1)		EVT1 (4)	EVT1 (IN)		
Control Rod Drive Guide Tube Lug and Pin	BWRVIP-47, Table 3.2-1	VT3	VT3	VT3	VT3	VT3		VT3	VT3	VT3	VT-3	VT3	VT3
Core Plate Rim Hold-Down Bolts	BWRVIP-25, Table 3-2		VT3		VT3 (50%)	VT3 (50%)	VT3 (50%)	VT3 (50%)	UT				
Core Shroud Horizontal Welds (H1, H2, H3)	BWRVIP-76, Figure 2-3	UT						EVT1				EVT1	
Core Shroud Horizontal Welds (H4-H7)	BWRVIP-76, Section 3.2	UT											
Core Shroud Vertical Welds	BWRVIP-76, Figure 3-3		UT/ET					EVT1				EVT1	
Core Shroud TG Ring Segment Welds	BWRVIP-76, Section 3.4		UT/ET									EVT1	
Core Shroud CP Ring Segment Welds	BWRVIP-76, Section 3.4		UT/ET					EVT1					
Core Shroud Flange Ring Segment Welds	BWRVIP-76, Section 3.4												
Core Shroud Tie-Rod Repair	BWRVIP-76, Section 3.5		VT3 (all)	VT3 (all)	VT3 (all)			VT3 (2)			VT3 (2)		
Core Shroud Support Welds (H8, H9)	BWRVIP-38, Figures 3-4, 3-5		UT/ET						UT				
Core Shroud Support Access Hole Cover	GE SIL 462, Revision 1	VT1	VT1	MVT1	EVT1		EVT1		EVT1		EVT1		EVT1
Core Shroud Support Annulus Floor	Risk To Generation	VT3	VT3	VT3	VT3	VT3	VT3	VT3	VT3	VT3	VT3	VT3	VT3
Core Spray Thermal Sleeve Welds (Hidden)	BWRVIP-18, Section 3.2.4								UT				
Core Spray Piping Welds (except P9)	BWRVIP-18, Figure 3-3	VT1	UT	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1
Core Spray P9 Welds	BWRVIP-18, Section 3.2.4								UT		UT		UT
Core Spray Sparger Large Circ Welds	BWRVIP-18, Figure 3-4	CSVT1	CSVT1	MVT1		EVT1		EVT1		EVT1		EVT1	
Core Spray Sparger Nozzle Welds	BWRVIP-18, Figure 3-4	CSVT1	CSVT1	VT3		VT1 (50%)		VT1 (50%)		VT1 (50%)		VT1 (50%)	
Core Spray Piping Brackets	BWRVIP-18, Section 3.3.3	VT1	VT1				EVT1				EVT1		
Core Spray Sparger Brackets	BWRVIP-18, Section 3.3.3	CSVT1	CSVT1	VT3			VT1		VT1		VT1		VT1
Core Spray Sparger Tee-Box Repair (Old)	Risk To Generation	VT3	VT3	VT3	VT3				VT3				
Feedwater Sparger Tee Welds	NUREG 0619	VT1		MVT1		VT1		VT1		VT1		VT1	
Feedwater Sparger End Bracket Attachment	BWRVIP-48, Table 3-2	VT1		MVT1		VT1	EVT1	VT1		VT1		VT1	
Feedwater Sparger Piping and Brackets	NUREG 0619	VT3		VT3		VT3		VT3		VT3		VT3	
Guide Rods	Risk To Generation						VT3						
Incore Dry Tubes	SIL 409, Revision 2	MVT1 (3)			VT1,3 (2)			VT1,3 (2)	VT1,3 (3)	VT1,3 (4)	VT1,3 (3)	VT1,3 (4)	VT1,3 (3)
Integrally Welded Core Support Structures	ASME XI, Cat. B-N-2						VT3						
Jet Pump Beams	BWRVIP-41, Table 3.3-1	VT3 (50%)	VT3 (50%)	UT	UT (50%)		UT, VT-1		UT				
Jet Pump Thermal Sleeve Welds (Hidden)	BWRVIP-41, Table 3.3-1								UT				UT (50% IN)
Jet Pump Riser Welds (RS-1, RS-2, RS-3)	BWRVIP-41, Table 3.3-1			UT		UT (flaws)		EVT1(flaws)		UTorEVT1 (50%)		RVT1 (flaws)	
Jet Pump Riser Welds (RS-4, RS-5, RS-8, RS-9)	BWRVIP-41, Table 3.3-1	VT1 (50% -8,9)	VT1 (50% -8,9)	MVT1 (50%)				EVT1 (50%)				EVT1 (25%)	
Jet Pump Riser Brace Welds	BWRVIP-41, Table 3.3-1	VT1 (50%)	VT1 (50%)	MVT1 (50%)				EVT1 (50%)				EVT1 (25%)	
Jet Pump Inlet Bolted Connection	BWRVIP-41, Table 3.3-1			VT3 (50%)				VT3 (50%)				VT3 (25%)	
Jet Pump Restrainer Wedges	BWRVIP-41, Table 3.3-1	VT3 (50%)	VT3 (50%)	VT (50%)		VT1 (50%)		VT1 (50%)		VT1 (50%)		VT1(25%)	
Jet Pump Restrainer Setscrews	Risk To Generation	VT3 (50%)	VT3 (50%)	VT (50%)		VT3 (50%)		VT3 (50%)		VT3 (50%)		VT3 (50%)	
Jet Pump Mixer Weld MX-1	BWRVIP-41, Table 3.3-1				EVT1 (100%)								
Jet Pump Mixer/Diffuser Welds (above shelf)	BWRVIP-41, Table 3.3-1				UT (100%)								
Jet Pump Diffuser/Adapter Welds (below shelf)	Risk To Generation				UT (100%)		UT (4 flaws)		EVT1 (4 flaws)		UTorEVT1(50%)	ut	EVT1 (4 flaws)
Jet Pump Sensing Lines	Risk To Generation	VT3 (50%)		VT (50%)		VT3 (50%)		VT3 (50%)		VT3 (50%)		VT3 (50%)	
Lower Plenum (CRD, Core Shroud Support)	BWRVIP-47 NRC Correspondence					WHEN ACCESSIBLE							
Lower Plenum (Core Plate, Incore, SLC)	Risk To Generation					WHEN ACCESSIBLE							
Miscellaneous Vessel Internal Attachments	BWRVIP-48, Table 3-2						EVT1,VT1,3						EVT1,VT1,3
Orificed Fuel Support Castings	BWRVIP-47, Table 3.2-1	VT3	VT3	VT3									
SLC Nozzle-to-Safe End Weld	BWRVIP-27, Section 3.3.1			EVT2*	EVT2*	EVT2*	PT	UT					
Steam Dryer	SIL 644, Supplement 1			VT3	VT3 (flaws)			VT3				VT3	
Steam Dryer Support Bracket (at 215°)	BWRVIP-48, Table 3-2	VT3		VT3,UT(flaw)		VT3.UT(flaw)	EVT1						
Steam Separator/Shroud Head	Risk To Generation			VT3				VT3				VT3	
Steam Separator Hold-down bolts	Risk To Generation		VT3										
Top Guide Aligner Assemblies	BWRVIP-26, Table 3-2 and Calc.		VT1 (2)		VT1 (2)								
Top Guide Hold-down Assemblies	BWRVIP-26, Table 3-2		VT3 (4)		VT1 (2)		VT1 (2)		VT1 (2)		VT1 (2)		VT1 (2)
Top Guide Bolts (Rim and Cover Plate)	Risk To Generation					VT3				VT3			
Top Guide Grid Beams	BWRVIP-26, Section 3.2.2	VT	VT	MVT1	VT1								
Vessel Cladding	NRC Commitment		UT (sat)				UT (sat)						

Table Key

Standard Print	= Inspections mandated by ASME, BWRVIP, or NRC commitments
Italics	= Inspections recommended for Risk-To-Generation purposes
UT	= Ultrasonic Testing performed or planned
UT (aut or man)	= Either automated or manual Ultrasonic Testing
ET	= Eddy Current Testing performed or planned
VT	= Visual Testing performed or planned
EVT1	= EVT-1; Enhanced Visual Test to look for cracking; 1/2 mil wire resolution with cleaning assessment
EVT2*	= Enhanced Leakage Inspection (direct view of component during pressure test)
VT1	= VT-1; Visual Test to look for cracks, wear, corrosion, etc.; resolution required: 1/32" black line
VT3	= VT-3; Visual Test to determine general mechanical/structural condition; no resolution requirements
CSVT1 or MVT1	= CSVT-1 or MVT-1; Core Spray Visual Test or Modified VT-1, no longer a defined test method; 1 mil wire resolution
(IN)	= If necessary (to complete minimum number of inspections not performed in previous outage)
(all, number, %, or flaw)	= Perform inspection on all components, limited number (or percentage) of components, or just flawed components

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Entergy

Entergy Nuclear Vermont Yankee, LLC
Entergy Nuclear Operations, Inc.
185 Old Ferry Road
Brattleboro, VT 05302-0500

January 22, 2004
BVY 04-07

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
Supplement to Relief Request RI-01

On October 1, 2003, Vermont Yankee Nuclear Power Station (VY) submitted to the NRC "ISI Relief Request RI-01."[1] Relief Request RI-01 requested to implement various BWRVIP Guidelines in lieu of select ASME Section XI requirements. On December 23, 2003[2], a supplement to RI-01 was submitted to the NRC. This supplement revised the table contained within the Relief Request to specifically identify or correlate the reactor vessel internal component with the corresponding Inspection Basis (e.g.; BWRVIP document number). Based upon subsequent discussions with the Staff, Table 1 has been further refined to solely identify the items for which relief is sought. For example, items identified on the original Table with an inspection basis of "Risk to Generation" have been eliminated since relief from ASME is not being requested for these items. The revised Table 1 is attached for your review in support of approval of Relief Request RI-01.

Attachment 1 identifies that there are no commitments contained within this letter. Attachment 2 contains the revised Table 1.

If you have any questions on this transmittal, please contact Mr. Thomas B. Silko at (802) 258-4146.

Sincerely,

James M. DeVincentis
Manager, Licensing

Attachments

cc: USNRC Region 1 Administrator
USNRC Resident Inspector - VY
USNRC Project Manager - VY
Vermont Department of Public Service

[1] Reference VY Letter to USNRC, BVY 03-89, "Supplement 2 to Fourth-Interval Inservice Inspection (ISI) Program Plan – Submittal of Relief Request RI-01," dated October 1, 2003.

[2] Reference VY Letter to USNRC, BVY 03-120, "Supplement to Relief Request RI-01," dated December 23, 2003.

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Docket No. 50-271
BVY 04-07

Attachment 1

Vermont Yankee Nuclear Power Station

Supplement to Relief Request RI-01

List of Commitments

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SUMMARY OF VERMONT YANKEE COMMITMENTS

BVY NO.: 04-07

The following table identifies commitments made in this document by Vermont Yankee. Any other actions discussed in the submittal represent intended or planned actions by Vermont Yankee. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager of any questions regarding this document or any associated commitments.

COMMITMENT	COMMITTED DATE OR "OUTAGE"
None	N/A

Docket No. 50-271
BVY 04-07

Attachment 2

Vermont Yankee Nuclear Power Station

Supplement to Revised Relief Request ISI-09

Revised Relief Request ISI-09

Table 1 - Reactor Vessel Internals Inspection Overview

Outage Year / Reactor Internal Component / Outage	Inspection Basis	1995 RFO18	1996 RFO19	1998 RFO20	1999 RFO21	2001 RFO22	2003 RFO23	2004 RFO24	2005 RFO25	2007 RFO26	2008 RFO27	2010 RFO 28	2011 RFO29
Control Rod Drive Guide Tube Body Welds	BWRVIP-47, Table 3.2-1					EVT1 (4)		EVT1 (1)		EVT1 (4)	EVT1 (IN)		
Control Rod Drive Guide Tube Lug and Pin	BWRVIP-47, Table 3.2-1	*VT3*	*VT3*	VT3	VT3	VT3		VT3	VT3	VT3	VT-3	VT3	VT3
Core Plate Rim Hold-Down Bolts	BWRVIP-25, Table 3-2		VT3		VT3 (50%)	VT3 (50%)	VT3 (50%)	VT3 (50%)	UT				
Core Shroud Horizontal Welds (H1, H2, H3)	BWRVIP-76, Figure 2-3	UT						EVT1				EVT1	
Core Shroud Horizontal Welds (H4-H7)	BWRVIP-76, Section 3.2	UT											
Core Shroud Vertical Welds	BWRVIP-76, Figure 3-3		UT/ET					EVT1				EVT1	
Core Shroud TG Ring Segment Welds	BWRVIP-76, Section 3.4		UT/ET									EVT1	
Core Shroud CP Ring Segment Welds	BWRVIP-76, Section 3.4		UT/ET					EVT1					
Core Shroud Flange Ring Segment Welds	BWRVIP-76, Section 3.4												
Core Shroud Tie-Rod Repair	BWRVIP-76, Section 3.5		VT3 (all)	VT3 (all)	VT3 (all)			VT3 (2)			VT3 (2)		
Core Shroud Support Welds (H8, H9)	BWRVIP-38, Figures 3-4, 3-5		UT/ET						UT				
Core Spray Thermal Sleeve Welds (Hidden)	BWRVIP-18, Section 3.2.4								UT				
Core Spray Piping Welds (except P9)	BWRVIP-18, Figure 3-3	*VT1*	UT	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1	EVT1
Core Spray P9 Welds	BWRVIP-18, Section 3.2.4								UT		UT		UT
Core Spray Sparger Large Circ Welds	BWRVIP-18, Figure 3-4	CSVT1	CSVT1	MVT1		EVT1		EVT1		EVT1		EVT1	
Core Spray Sparger Nozzle Welds	BWRVIP-18, Figure 3-4	CSVT1	CSVT1	VT3		VT1 (50%)		VT1 (50%)		VT1 (50%)		VT1 (50%)	
Core Spray Piping Brackets	BWRVIP-18, Section 3.3.3	*VT1*	*VT1*				EVT1				EVT1		
Core Spray Sparger Brackets	BWRVIP-18, Section 3.3.3	CSVT1	CSVT1	VT3			VT1		VT1		VT1		VT1
Feedwater Sparger Tee Welds	NUREG 0619	VT1		MVT1		VT1		VT1		VT1		VT1	
Feedwater Sparger End Bracket Attachment	BWRVIP-48, Table 3-2	VT1		MVT1		VT1	EVT1	VT1		VT1		VT1	
Feedwater Sparger Piping and Brackets	NUREG 0619	VT3		VT3		VT3		VT3		VT3		VT3	
Jet Pump Beams	BWRVIP-41, Table 3.3-1	*VT3 (50%)*	*VT3 (50%)*	UT	UT (50%)		UT, VT-1		UT				
Jet Pump Thermal Sleeve Welds (Hidden)	BWRVIP-41, Table 3.3-1								UT				UT (50% IN)
Jet Pump Riser Welds (RS-1, RS-2, RS-3)	BWRVIP-41, Table 3.3-1			UT		UT (flaws)		EVT1(flaws)		UTorEVT1 (50%)		EVT1 (flaws)	
Jet Pump Riser Welds (RS-4, RS-5, RS-8, RS-9)	BWRVIP-41, Table 3.3-1	*VT1 (50% -8,9)*	*VT1 (50% -8,9)*	MVT1 (50%)				EVT1 (50%)				EVT1 (25%)	
Jet Pump Riser Brace Welds	BWRVIP-41, Table 3.3-1	*VT1 (50%)*	*VT1 (50%)*	MVT1 (50%)				EVT1 (50%)				EVT1 (25%)	
Jet Pump Inlet Bolted Connection	BWRVIP-41, Table 3.3-1			VT3 (50%)				VT3 (50%)				VT3 (25%)	
Jet Pump Restrainer Wedges	BWRVIP-41, Table 3.3-1	*VT3 (50%)*	*VT3 (50%)*	VT (50%)		*VT1 (50%)*		VT1 (50%)		*VT1 (50%)*		VT1(25%)	
Jet Pump Mixer Weld MX-1	BWRVIP-41, Table 3.3-1				EVT1 (100%)								
Jet Pump Mixer/Diffuser Welds (above shell)	BWRVIP-41, Table 3.3-1				UT (100%)								
Lower Plenum (CRD, Core Shroud Support)	BWRVIP-47 NRC Correspondence					WHEN ACCESSIBLE							
Miscellaneous Vessel Internal Attachments	BWRVIP-48, Table 3-2						EVT1,VT1,3						EVT1,VT1,3
Orificed Fuel Support Castings	BWRVIP-47, Table 3.2-1	*VT3*	*VT3*	*VT3*									
SLC Nozzle-to-Safe End Weld	BWRVIP-27, Section 3.3.1			EVT2*	EVT2*	EVT2*	PT	UT					
Steam Dryer Support Bracket (at 215°)	BWRVIP-48, Table 3-2	VT3		VT3,UT(flaw)		VT3,UT(flaw)	EVT1						
Top Guide Aligner Assemblies	BWRVIP-26, Table 3-2 and Calc.		*VT3 (2)*		VT1 (2)								
Top Guide Hold-down Assemblies	BWRVIP-26, Table 3-2		*VT3 (4)*		VT1 (2)		VT1 (2)		VT1 (2)		VT1 (2)		VT1 (2)
Top Guide Grid Beams	BWRVIP-26, Section 3.2.2	*VT*	*VT*	MVT1	VT1								

Table Key

- Standard Print = Inspections mandated by ASME, BWRVIP, or NRC commitments
- *Italics* = Inspections recommended for Risk-To-Generation purposes
- UT = Ultrasonic Testing performed or planned
- UT (aut or man) = Either automated or manual Ultrasonic Testing
- ET = Eddy Current Testing performed or planned
- VT = Visual Testing performed or planned
- EVT1 = EVT-1; Enhanced Visual Test to look for cracking; 1/2 mil wire resolution with cleaning assessment
- EVT2* = Enhanced Leakage Inspection (direct view of component during pressure test)
- VT1 = VT-1; Visual Test to look for cracks, wear, corrosion, etc.; resolution required: 1/32" black line
- VT3 = VT-3; Visual Test to determine general mechanical/structural condition; no resolution requirements
- CSVT1 or MVT1 = CSVT-1 or MVT-1; Core Spray Visual Test or Modified VT-1, no longer a defined test method; 1 mil wire resolution
- (IN) = If necessary (to complete minimum number of inspections not performed in previous outage)
- (all, number, %, or flaw) = Perform inspection on all components, limited number (or percentage) of components, or just flawed components

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(23)

March 31, 2005
BVY 05-27

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
Supplement to Relief Request RI-01

By letter dated October 1, 2003[1], as supplemented by letters dated December 23, 2003[2], and January 22, 2004[3], Vermont Yankee Nuclear Power Station (VY) submitted Relief Request RI-01. Relief Request RI-01 proposed to use various Boiling Water Reactor Vessel Internals Program guidelines as an alternative to certain requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code for Inservice Inspection of Reactor Pressure Vessel internal components.

On January 4, 2005[4], The NRC submitted a Request for Additional Information regarding RI-01. Accordingly, the attachment provides the response to request for additional information.

There are no commitments contained within this letter.

Please feel free to contact me at (802) 258-4236, if there are any questions regarding this subject.

Sincerely,

James M. DeVincentis
Manager, Licensing
Vermont Yankee Nuclear Power Station

cc: USNRC Region I Administrator
USNRC Resident Inspector - VY
USNRC Project Manager - VY
Vermont Department of Public Service

1 Reference VY Letter to USNRC, BVY 03-89, "Supplement 2 to Fourth-Interval Inservice Inspection (ISI) Program Plan – Submittal of Relief Request RI-01," dated October 1, 2003.
2 Reference VY Letter to USNRC, BVY 03-120, "Supplement to Relief Request RI-01," dated December 23, 2003.
3 Reference VY Letter to USNRC, BVY 04-07, "Supplement to Relief Request RI-01," dated January 22, 2004.
4 Reference USNRC Letter to VY, NVY 05-01, "Request for Additional Information - Relief Request RI-01 (TAC No. MC0960)," dated January 4, 2005.

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ATTACHMENT TO BVY 05-27

Supplement to Relief Request RI-01

ENTERGY NUCLEAR OPERATIONS, INC.
VERMONT YANKEE NUCLEAR POWER STATION
DOCKET NO. 50-271

On January 4, 2005[1], The NRC submitted a Request for Additional Information regarding RI-01. Accordingly, the attachment provides the response to request for additional information.

Question 1:

Relief request RI-01 includes the following statement as an all-inclusive technical basis for the proposed alternative inspections:

> The NRC has agreed with the BWRVIP approach in principal and has issued Safety Evaluations for these guidelines. Therefore, use of these guidelines, as an alternative to the subject Code requirements, provides an acceptable level of quality and safety and will not adversely impact the health and safety of the public.

The technical basis for the proposed alternative inspection of each component, or group of components, is not specified in the relief request. For each component, or group of components for which relief from the ASME Code is requested, discuss how the proposed alternative inspection method, scope of examination, inspection frequency, and acceptance criteria provide an acceptable level of quality and safety as compared to the ASME Code.

Response to Question 1:

The following paragraphs provide the requested inspection criteria discussion for each group of component based on Code Subsections. Each section includes several examples of components or welds that belong in each Code Subsection.

B13.10 Reactor Vessel Interior Accessible Areas B-N-1

The ASME Section XI Code requires a VT-3 inspection of reactor vessel interior surfaces made accessible every three and a third (3 1/3) years during each 10 year interval. This is a non-specific inspection requiring inspection of surfaces made accessible during refueling. The various BWRVIP Inspection and Evaluation guidelines require, as a minimum, a VT-3 inspection of reactor vessel interior components. Additionally, the BWRVIP guidelines require that many component welds and weld heat affected zones in this category be inspected by a VT-1, EVT-1, or UT. The BWRVIP inspection method meets (VT-3) or exceeds (VT-1, EVT-1, or UT) the inspection method requirements specified by the Code.

The Core Spray piping and sparger is used as an example for comparison between the Code and the BWRVIP inspection requirements.

BWR Core Spray Internals Inspection and Flaw Evaluation Guideline (BWRVIP-18)

- The Section XI Code requires a VT-3 each period (3 1/3 years) of each 10 year interval of the Core Spray internal piping and sparger accessible surfaces.
- The BWRVIP requires either an EVT-1of the core spray pipe creviced welds and weld heat affected zones each refuel outage (1 ½ year) along with 25% of the non creviced weld locations on a rotated basis or UT. If UT is performed on the creviced weld locations, then the frequency is every other

[1] Reference USNRC Letter to VY, NVY 05-01, "Request for Additional Information - Relief Request RI-01 (TAC No. MC0960)," dated January 4, 2005.

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outage (3 years). 50 % of the Core Spray sparger welds require a VT-1 inspection every other outage (3 years).

The BWRVIP inspection methods are superior to the Code inspection methods. The BWRVIP specifies EVT-1 and UT inspections to detect small tight cracks before component functionality is challenged. The BWRVIP inspections are directed to component welds and weld heat affected zones, where experience has shown IGSCC cracks will initiate. The BWRVIP specified EVT-1 and UT examination have superior crack detection and characterization capability as compared to the Code VT-3. The inspection of high susceptibility creviced weld locations every outage (visual EVT-1) or every other outage (UT) is superior in crack detection and inspection frequency to the VT-3 examination required every period. The 25% sampling ensure all welds are inspected in a 10 year interval. The BWRVIP inspection requirements for reactor vessel interior accessible areas provide an acceptable level of quality and safety as compared to the Code requirements by providing an equivalent or in most cases superior inspection methods. Additional examples of components in this category are:

- Top Guide (BWRVIP-26)
- Jet Pumps (BWRVIP-41)
- Control Rod Guide Tube and Fuel Support Castings (BWRVIP-47)

B13.20 Interior Attachments Within the Beltline (B-N-2)

- The ASME Code requires a VT-1 inspection of accessible reactor inside surface attachment welds each 10 year interval.

- The BWRVIP requires an EVT-1 inspection on the majority of attachment welds in the beltline region in the first 12 years and then 25% during each subsequent 6 years.

The Jet Pump Riser Brace inspection requirements are provided to show a comparison between the Code and the BWRVIP inspection requirements.

Jet Pump Riser Braces (BWRVIP-41)

- The Code requires a 100% VT-1 inspection of the Jet Pump riser brace-to- reactor vessel wall pad welds each 10 year interval.

- The BWRVIP requires an EVT-1 inspection of the Jet Pump Beam riser brace-to-reactor vessel wall pad welds the first 12 years and then 25% during each subsequent 6 years.

The Code VT-1 examination is conducted to detect discontinuities and imperfections on the surfaces of components, including such conditions as cracks, wear, corrosion, or erosion. The BWRVIP enhanced VT-1 (EVT-1) is conducted to detect discontinuities and imperfections on the surface of components, including fatigue cracks and very tight cracks characteristic of inter-granular stress corrosion cracking (IGSCC). General wear, corrosion, or erosion although generally not a concern for stainless steel as it is inherently tough, corrosion resistant material, however, the process of performing an EVT-1 inspection would detect such degradation mechanisms.

The Code VT-1 visual inspection method requires at a maximum distance of 2 feet a letter character with a height of 0.044 inches can be read. The BWRVIP EVT-1 is a visual inspection method where the equipment and environmental conditions are such that they can achieve a ½ mil (0.0005 inch) resolution on the inspection surface.

The ASME Code and the BWRVIP have the same flaw evaluation criteria for detected indications. Both criteria measure the observed surface indication and compare them against acceptable flaw sizes determined by ASME Section XI.

The BWRVIP inspection method of interior attachments within the reactor vessel beltline has superior flaw detection capability (0.0005" versus 0.044" resolution) compared to the Code. It is judged that the enhanced flaw detection capability of an EVT-1, with a less frequent inspection schedule and the same flaw evaluation criteria, results in the BWRVIP inspection requirement providing the same level of quality and safety to that provided by the ASME Code.

B13.30 Interior Attachment Beyond the Beltline Region (B-N-2)

The BWRVIP requires as a minimum the same VT-3 inspection method as the Code for interior attachment welds beyond the beltline region and in some cases specifies an enhanced visual inspection technique EVT-1.

As described in the table provide in BVY-03-89 Attachment 2 (Reference 1), the following components have the same VT-3 method of inspection, the same scope of inspection (accessible welds), the same inspection frequency (each 10 year interval) and ASME Section XI flaw evaluation criteria. Therefore, the level of quality and safety provided by the BWRVIP requirements are equivalent to that provide by the ASME Code. Examples of component attachment welds in this category are:

- Guide Rod Brackets (BWRVIP-48)
- Surveillance Specimen Holder Brackets (BWRVIP-48)

Additionally, there are interior attachment welds outside the beltline region that the BWRVIP requires an EVT-1 inspection instead of the Code required VT-3 inspection. The inspection frequency for EVT-1 is every 6 years. The Code VT-3 examination is conducted to detect component structural integrity by ensuring components general condition is acceptable. An enhanced EVT-1 is conducted to detect discontinuities and imperfections on the inspection surfaces, including such conditions as tight cracks caused by IGSCC. Therefore, with the EVT-1 inspection method, the same inspection scope (accessible welds), an increased inspection frequency (6 years instead of 10 years) and the same flaw evaluation criteria (Section XI), the level of quality and safety provided by the BWRVIP criteria is superior than that provided by the Code.

The Core Spray piping bracket-to-vessel attachment weld is used as an example for comparison between the Code and BWRVIP inspection requirements.

Vessel ID Attachment Weld Inspection and Flaw Evaluation (BWRVIP-48)

- The Code inspection requirement is a VT-3 inspection of each weld every 10 years.
- The BWRVIP inspection requirement for the Core Spray piping brackets attachment weld is each weld inspected every 6 years with an EVT-1.

The BWRVIP examination method EVT-1 has superior flaw detection and sizing capability, the inspection frequency is greater than the Code requirements and the same flaw evaluation criteria are used. Therefore the BWRVIP inspection criteria will provide a superior level of quality and safety as provided by the Code.

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B13.40 Integrally Welded Core Support Structure-Shroud Support (B-N-2)

- The Code requires a VT-3 of accessible surfaces each 10 year interval.
- The BWRVIP requires as a minimum the same inspection method VT-3 as the Code for integrally welded Core Support Structures or either an enhanced visual inspection technique EVT-1 or volumetric examination UT.

As described in the Table provide in BVY 03-89 Attachment 2, the following components have the same VT-3 method of inspection, the same scope of inspection (accessible surfaces), the same inspection frequency (each 10 year interval) and the same flaw evaluation criteria. Therefore the BWRVIP requirements provide a level of quality and safety equivalent to that provide by the ASME Code. An example of a component in this category is:

- Core Shroud Repair Tie-rods

The BWRVIP may also require either an EVT-1 or UT of core support structures. The core shroud is used as an example for comparison between the Code and BWRVIP inspection requirements.

BWR Core Shroud Inspection and Flaw Evaluation Guideline (BWRVIP-76)

- The Code requires a VT3 of accessible surfaces every 10 years.
- The BWRVIP requires an EVT-1 of each core shroud design reliant weld every 10 years or an ultrasonic examination every 6 years.

This BWRVIP examination methods (EVT-1 or UT) are superior to the Code required VT-3 for flaw detection and characterization. The BWRVIP inspection frequency is equivalent to or greater than the inspection frequency required by the Code. The superior flaw detection and characterization capability, with an equivalent or greater inspection frequency and the same flaw evaluation criteria, results in the BWRVIP criteria providing a level of quality and safety equivalent to or superior to that provided by the Code requirements.

Question 2:

The licensee should provide an explanation on the term "number" shown under "Table Key" in Table 1 of BVY 04-07, Attachment 2 of the submittal dated January 22, 2004. For example, in Table 1 under the column 2007, the planned inspection for Control Rod Drive Guide Tube Body Welds is EVTI (4). It is understood that 4 welds will be inspected for this component. However, there is no information on the total number of welds that exist in the subject component. Provide the total population of the welds for each component.

Response to Question 2:

The number following the inspection method listed in Table 1 of BVY 04-07, attachment 2 represent the number of components to be inspected that outage. This "number" does not represent the number of welds on each component. For example in 2007 "4" distinct control rod guide tube locations will be inspected. Each control rod guide tube location has 4 welds and a pin that are required to be inspected by BWRVIP-47, Table 3.2-1. Two of these four welds are examined by EVT-1 and the other two welds by

VT-3. Table 1 below identifies every component in the program and provides the total number of welds in each component.

TABLE 1

Reactor Internal Component	BWRVIP Reference Document	Number of Welds/Component or loop
Control Rod Drive Guide Tube Body Welds	BWRVIP-47, Table 3.2-1	2
Control Rod Drive Guide Tube Lug and Pin	BWRVIP-47, Table 3.2-1	2
Core Plate Rim Hold-Down Bolts	BWRVIP-25, Table 3-2	30 Bolts
Core Shroud Horizontal Welds (H1, H2, H3)	BWRVIP-76, Figure 2-3	3
Core Shroud Horizontal Welds (H4-H7)	BWRVIP-76, Section 3.2	4
Core Shroud Vertical Welds	BWRVIP-76, Figure 3-3	10
Core Shroud TG Ring Segment Welds	BWRVIP-76, Section 3.4	3
Core Shroud CP Ring Segment Welds	BWRVIP-76, Section 3.4	3
Core Shroud Flange Ring Segment Welds	BWRVIP-76, Section 3.4	3
Core Shroud Tie-Rod Repair	BWRVIP-76, Section 3.5	4 Tie Rods
Core Shroud Support Welds (H8, H9)	BWRVIP-38, Figures 3-4, 3-5	2
Core Spray Thermal Sleeve Welds (Hidden)	BWRVIP-18, Section 3.2.4	3 per loop (2 loops)
Core Spray Piping Welds (except P9)	BWRVIP-18, Figure 3-3	22 per loop (2 loops)
Core Spray P9 Welds	BWRVIP-18, Section 3.2.4	2 per loop (2 loops)
Core Spray Sparger Large Circ Welds	BWRVIP-18, Figure 3-4	1 per loop (4 loops)
Core Spray Sparger Nozzle Welds	BWRVIP-18, Figure 3-4	61 nozzles per loop (4 loops)
Core Spray Piping Brackets	BWRVIP-18, Section 3.3.3	2 per loop (2 loops)
Core Spray Sparger Brackets	BWRVIP-18, Section 3.3.3	6 per loop (2 loops)
Feedwater Sparger Tee Welds	NUREG 0619	2 per loop (4 loops)
Feedwater Sparger End Bracket Attachment	BWRVIP-48, Table 3-2	2 per loop (4 loops)
Feedwater Sparger Piping and Brackets	NUREG 0619	2 brackets per loop (4 loops)
Jet Pump Beams	BWRVIP-41, Table 3.3-1	20
Jet Pump Thermal Sleeve Welds (Hidden)	BWRVIP-41, Table 3.3-1	3 per Jet Pump (10 Jet Pumps)
Jet Pump Riser Welds (RS-1, RS-2, RS-3)	BWRVIP-41, Table 3.3-1	3 per Jet Pump (10 Jet Pumps)
Jet Pump Riser Welds (RS-4, RS-5, RS-8, RS-9)	BWRVIP-41, Table 3.3-1	8 per Jet Pump (10 Jet Pumps)

(30)

Jet Pump Riser Brace Welds	BWRVIP-41, Table 3.3-1	4 ~~12~~ per Jet Pump (10 Jet Pumps)
Jet Pump Inlet Bolted Connection	BWRVIP-41, Table 3.3-1	2 per Jet pump (10 Jet Pumps)
Jet Pump Restrainer Wedges	BWRVIP-41, Table 3.3-1	2 per Jet Pump (10 Jet Pumps)
Jet Pump Mixer Weld MX-1	BWRVIP-41, Table 3.3-1	2 per Jet Pump (10 Jet Pumps)
Jet Pump Mixer/Diffuser Welds (above shell)	BWRVIP-41, Table 3.3-1	~~14~~ 10 per Jet Pump (10 Jet Pumps)
Lower Plenum (CRD, Core Shroud Support)	BWRVIP-47	89 CRDs 14 shroud support legs
Miscellaneous Vessel Internal Attachments	BWRVIP-48, Table 3-2	12
Orificed Fuel Support Castings	BWRVIP-47, Table 3.2-1	89
SLC Nozzle-to-Safe End Weld	BWRVIP-27, Section 3.3.1	1
Steam Dryer Support Bracket	BWRVIP-48, Table 3-2	4
Top Guide Aligner Assemblies	BWRVIP-26, Table 3-2	4
Top Guide Hold-down Assemblies	BWRVIP-26, Table 3-2	4
Top Guide Grid Beams	BWRVIP-26, Section 3.2.2	24

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(31)

June 8, 2005
BVY 05-059

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
Revised Response to Request for Additional Information
Regarding Relief Request RI-01

By letter dated October 1, 2003[1], as supplemented by letters dated December 23, 2003[2], and January 22, 2004[3], Vermont Yankee Nuclear Power Station (VY) submitted Relief Request RI-01. Relief Request RI-01 proposed to use various Boiling Water Reactor Vessel Internals Program guidelines as an alternative to certain requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code for Inservice Inspection of Reactor Pressure Vessel internal components.

On January 4, 2005[4], The NRC submitted a Request for Additional Information regarding RI-01. On March 31, 2005[5], VY provided a response to the Staff's request. Following submittal of this response, VY has identified that several enhancements to our response are warranted. Accordingly, this letter and the attachment, provides the response to the request for additional information and replaces in its entirety, our letter submitted on March 31, 2005.

There are no regulatory commitments contained within this letter.

Please feel free to contact me at (802) 258-4236, if there are any questions regarding this submittal.

Sincerely,

James M. DeVincentis
Manager, Licensing
Vermont Yankee Nuclear Power Station

Attachment (1)

cc: USNRC Region 1 Administrator
USNRC Resident Inspector - VY
USNRC Project Manager - VY
Vermont Department of Public Service

1 Reference VY Letter to USNRC, BVY 03-89, "Supplement 2 to Fourth-Interval Inservice Inspection (ISI) Program Plan – Submittal of Relief Request RI-01," dated October 1, 2003.
2 Reference VY Letter to USNRC, BVY 03-120, "Supplement to Relief Request RI-01," dated December 23, 2003.
3 Reference VY Letter to USNRC, BVY 04-07, "Supplement to Relief Request RI-01," dated January 22, 2004.
4 Reference USNRC Letter to VY, NVY 05-01, "Request for Additional Information - Relief Request RI-01 (TAC No. MC0960)," dated January 4, 2005.
5 Reference VY Letter to USNRC, BVY 05-27, "Supplement to Relief Request RI-01," dated March 31, 2005.

A047

(32)

ATTACHMENT TO BVY 05-059

Revised Response to Request for Additional Information
Regarding Relief Request RI-01

ENTERGY NUCLEAR OPERATIONS, INC.
VERMONT YANKEE NUCLEAR POWER STATION
DOCKET NO. 50-271

On January 4, 2005[6], The NRC submitted a Request for Additional Information regarding RI-01. Accordingly, this attachment provides the response to the request for additional information.

Question 1:

Relief request RI-01 includes the following statement as an all-inclusive technical basis for the proposed alternative inspections:

> The NRC has agreed with the BWRVIP approach in principal and has issued Safety Evaluations for these guidelines. Therefore, use of these guidelines, as an alternative to the subject Code requirements, provides an acceptable level of quality and safety and will not adversely impact the health and safety of the public.

The technical basis for the proposed alternative inspection of each component, or group of components, is not specified in the relief request. For each component, or group of components for which relief from the ASME Code is requested, discuss how the proposed alternative inspection method, scope of examination, inspection frequency, and acceptance criteria provide an acceptable level of quality and safety as compared to the ASME Code.

Response to Question 1:

The following paragraphs provide the requested inspection criteria discussion for each group of component based on Code Subsections. Each section includes several examples of components or welds that belong in each Code Subsection.

B13.10 Reactor Vessel Interior Accessible Areas B-N-1

The ASME Section XI Code requires a VT-3 inspection of reactor vessel interior surfaces made accessible every three and a third (3 1/3) years during each 10 year interval. This is a non-specific inspection requiring inspection of surfaces made accessible during refueling. The various BWRVIP Inspection and Evaluation guidelines require, as a minimum, a VT-3 inspection of reactor vessel interior components. Additionally, the BWRVIP guidelines require that many component welds and weld heat affected zones in this category be inspected by a VT-1, EVT-1, or UT. The BWRVIP inspection method meets (VT-3) or exceeds (VT-1, EVT-1, or UT) the inspection method requirements specified by the Code.

The Core Spray piping and sparger is used as an example for comparison between the Code and the BWRVIP inspection requirements.

BWR Core Spray Internals Inspection and Flaw Evaluation Guideline (BWRVIP-18)

- The Section XI Code requires a VT-3 each period (3 1/3 years) of each 10 year interval of the Core Spray internal piping and sparger accessible surfaces.

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[6] Reference USNRC Letter to VY, NVY 05-01, "Request for Additional Information - Relief Request RI-01 (TAC No. MC0960)," dated January 4, 2005.

- The BWRVIP requires either an EVT-1 of the core spray pipe creviced welds and weld heat affected zones (HAZ) each cycle along with 25% of the non creviced weld locations on a rotated basis or UT. If UT is performed on the creviced weld locations, then the frequency is every other cycle. All prior cracked welds are inspected every cycle. 100% of the Core Spray sparger major welds require an EVT-1 inspection every two cycles along with 50% of the remaining sparger nozzle welds. 100% of the sparger bracket support welds are inspected by VT-1 every 2 cycles.

The BWRVIP inspection methods are superior to the Code inspection method. The BWRVIP specifies EVT-1 and UT inspections to detect small tight cracks before component functionality is challenged. The BWRVIP inspections are directed to component welds and HAZ, where experience has shown Intergranular Stress Corrosion Cracking (IGSCC) will occur. The BWRVIP specified EVT-1 and UT examination have superior crack detection and characterization capability as compared to the Code VT-3. The inspection of more susceptible creviced weld locations every outage (visual EVT-1) or every other outage (UT) is superior in crack detection and inspection frequency to the VT-3 examination required every period. The 25% sampling ensure all welds are inspected every four cycles. The BWRVIP inspection requirements for reactor vessel interior accessible areas provide an acceptable level of quality and safety as compared to the Code requirements by providing an equivalent or in most cases superior inspection methods. Additional examples of components in this category are:

- Top Guide (BWRVIP-26)
- Jet Pumps (BWRVIP-41)
- Control Rod Guide Tube and Fuel Support Castings (BWRVIP-47)

B13.20 Interior Attachments Within the Beltline Region (B-N-2)

- The ASME Code requires a VT-1 inspection of accessible reactor inside surface wall pad welds and HAZ each 10 year interval.

- The BWRVIP-48 document requires an EVT-1 baseline inspection on a majority of the vessel wall pad welds in the beltline region in the first 12 years and then 25% re-inspection during each subsequent 6 years. The only other welded attachment within the beltline region is the surveillance coupon lower attachment weld pad, which has the same requirements as the Code.

The Jet Pump Riser Brace inspection requirements are provided to show a comparison between the Code and the BWRVIP inspection requirements.

Jet Pump Riser Braces (BWRVIP-41)

- The Code requires a 100% VT-1 inspection of the Jet Pump riser brace-to-reactor vessel wall pad welds each 10 year interval.

- The BWRVIP requires an EVT-1 baseline inspection of the Jet Pump riser brace-to-reactor vessel wall pad welds the first 12 years and then 25% during each subsequent 6 years.

The Code VT-1 examination is conducted to detect discontinuities and imperfections on the surfaces of components, including such conditions as cracks, wear, corrosion, or erosion. The BWRVIP enhanced VT-1 (EVT-1) is conducted to detect discontinuities and imperfections on the surface of components, including fatigue cracks and very tight cracks characteristic of IGSCC. General wear, corrosion, or erosion although generally not a concern for stainless steel as it is inherently tough, corrosion resistant material, however, the process of performing an EVT-1 inspection would detect such degradation mechanisms.

The Code VT-1 visual inspection method requires that at a maximum distance of 2 feet, a letter character with a height of 0.044" can be read. The BWRVIP EVT-1 is a visual inspection method where the equipment and environmental conditions are such that they can achieve a ½ mil (0.0005 inch) resolution on the inspection surface.

The ASME Code and the BWRVIP have the same flaw evaluation criteria for detected indications. Both criteria measure the observed surface indication and compare them against acceptable flaw sizes determined by the ASME Section XI Code.

The BWRVIP inspection method of interior attachments within the reactor vessel beltline has superior flaw detection capability (0.0005" versus 0.044" resolution) compared to the Code. It is judged that the enhanced flaw detection capability of an EVT-1, with a less frequent inspection schedule and the same flaw evaluation criteria, results in the BWRVIP inspection requirement providing the same level of quality and safety to that provided by the ASME Code.

B13.30 Interior Attachments Beyond the Beltline Region (B-N-2)

The BWRVIP requires as a minimum, the same VT-3 inspection method as the Code for interior attachment welds beyond the beltline region and in some cases specifies an enhanced visual inspection technique (EVT-1).

As described in the table provided in BVY-03-89 Attachment 2 (Reference 1), the following components have the same VT-3 method of inspection, the same scope of inspection (accessible welds), the same inspection frequency (each 10 year interval) and ASME Section XI flaw evaluation criteria. Therefore, the level of quality and safety provided by the BWRVIP requirements are equivalent to that provided by the ASME Code. Examples of component attachment welds in this category are:

- Guide Rod Brackets (BWRVIP-48)
- Surveillance Specimen Holder Brackets upper attachment (BWRVIP-48)
- Steam Dryer hold-down (BWRVIP-48)

Additionally, there are interior attachment welds outside the beltline region that the BWRVIP requires an EVT-1 inspection instead of the Code required VT-3 inspection. The inspection frequency for EVT-1 is every 6 years or 10 years (furnace sensitized Inconel 182 weld pads). The Code VT-3 examination is conducted to detect component structural integrity by ensuring a components general condition is acceptable. An enhanced EVT-1 is conducted to detect discontinuities and imperfections on the inspection surfaces, including such conditions as tight cracks caused by IGSCC. Therefore, with the EVT-1 inspection method, the same inspection scope (accessible welds), an equivalent or increased inspection frequency (6 or 10 years compared to 10 years) and the same flaw evaluation criteria (Section XI), the level of quality and safety provided by the BWRVIP criteria is superior than that provided by the Code. Examples of component attachment welds in this category are:

- Steam Dryer Support (BWRVIP-48)
- Feedwater Bracket (BWRVIP-48)
- Core Spray Piping Brackets (BWRVIP-48)

The Core Spray piping bracket-to-vessel attachment weld is used as an example for comparison between the Code and BWRVIP inspection requirements.

Vessel ID Attachment Weld Inspection and Flaw Evaluation (BWRVIP-48)

- The Code inspection requirement is a VT-3 inspection of each weld every 10 years.
- The BWRVIP inspection requirement for the Core Spray piping bracket attachment welds and HAZ is 100% by EVT-1 every four refueling outages.

The BWRVIP examination method EVT-1 has superior flaw detection and sizing capability, the inspection frequency is greater than the Code requirements and the same flaw evaluation criteria are used. Therefore the BWRVIP inspection criteria will provide a superior level of quality and safety as compared to that provided by the Code.

B13.40 Integrally Welded Core Support Structure-Shroud Support (B-N-2)

- The Code requires a VT-3 of accessible surfaces each 10 year interval.
- The BWRVIP requires as a minimum, the same inspection method VT-3 as the Code for integrally welded Core Support Structures or either an enhanced visual inspection technique EVT-1 or volumetric examination UT.

As described in the Table provided in BVY 03-89 Attachment 2, the following components have the same VT-3 method of inspection, the same scope of inspection (accessible surfaces), the same inspection frequency (each 10 year interval) and the same flaw evaluation criteria. Therefore the BWRVIP requirements provide a level of quality and safety equivalent to that provide by the ASME Code. An example of a component in this category is:

- Core Shroud Repair Tie-rods

The BWRVIP may also require either an EVT-1 or UT of core support structures. The Core Shroud support is used as an example for comparison between the Code and BWRVIP inspection requirements.

Evaluations and Recommendations to Address Shroud Support Cracking (BWRVIP-104)

- The Code requires a VT3 of accessible surfaces every 10 years.
- The BWRVIP requires an EVT-1 visual examination, or ultrasonic examination, of both top and bottom surfaces of the shroud support welds every 10 years. If a one sided EVT-1 is performed the inspection frequency is every 6 years.

This BWRVIP examination methods (EVT-1 or UT) are superior to the Code required VT-3 for flaw detection and characterization. The BWRVIP inspection frequency is equivalent to or greater than the inspection frequency required by the Code. The superior flaw detection and characterization capability, with an equivalent or greater inspection frequency and the same flaw evaluation criteria, results in the BWRVIP criteria providing a level of quality and safety superior to that provided by the Code requirements.

Question 2:

The licensee should provide an explanation on the term "number" shown under "Table Key" in Table 1 of BVY 04-07, Attachment 2 of the submittal dated January 22, 2004. For example, in Table 1 under the column 2007, the planned inspection for Control Rod Drive Guide Tube Body Welds is EVTI (4). It is understood that 4 welds will be inspected for this component. However, there is no information on the total number of welds that exist in the subject component. Provide the total population of the welds for each component.

Response to Question 2:

The number following the inspection method listed in Table 1 of BVY 04-07, attachment 2, represents the number of components to be inspected that outage. This "number" does not represent the number of welds on each component. For example in 2007 "4" distinct control rod guide tube locations will be inspected. Each control rod guide tube location has 4 welds and a pin that are required to be inspected by BWRVIP-47, Table 3.2-1. Two of these four welds are examined by EVT-1 and the other two welds by VT-3. Table 1 below identifies every component in the program and provides the total number of welds in each component.

TABLE 1

Reactor Internal Component	BWRVIP or Industry Reference Document	Number of Welds/component or loop
Control Rod Drive Guide Tube Body Welds	BWRVIP-47, Table 3.2-1	2
Control Rod Drive Guide Tube Lug and Pin	BWRVIP-47, Table 3.2-1	2
Core Plate Rim Hold-Down Bolts	BWRVIP-25, Table 3-2	30 Bolts (2 non structural welds per bolt)
Core Shroud Horizontal Welds (H1, H2, H3)	BWRVIP-76, Figure 2-3	3
Core Shroud Horizontal Welds (H4-H7)	BWRVIP-76, Section 3.2	4
Core Shroud Vertical Welds	BWRVIP-76, Figure 3-3	10
Core Shroud Top Guide Ring Segment Welds	BWRVIP-76, Section 3.4	3
Core Shroud Core Plate Ring Segment Welds	BWRVIP-76, Section 3.4	3
Core Shroud Flange Ring Segment Welds	BWRVIP-76, Section 3.4	3
Core Shroud Tie-Rod Repair	BWRVIP-76, Section 3.5	4 Tie Rods (no welds)
Core Shroud Support Welds (H8, H9)	BWRVIP-38, Figures 3-4, 3-5	2
Core Spray Thermal Sleeve Welds (Hidden)	BWRVIP-18, Section 3.2.4	3 per loop (2 loops)
Core Spray Piping Welds (except P9)	BWRVIP-18, Figure 2-2	22 per loop (2 loops)
Core Spray P9 Welds	BWRVIP-18, Section 3.2.4	2 per loop (2 loops)
Core Spray Sparger Large Circ Welds	BWRVIP-18, Figure 2-4	5 per loop (4 loops)

Core Spray Sparger Nozzle Welds	BWRVIP-18, Figure 2-4	60 nozzles per loop (4 loops) Two (2) drain nozzles on two (2) lower spargers. Note 1
Core Spray Piping Brackets	BWRVIP-18, Section 3.3.3, BWRVIP-48 Table 3-2	2 per loop (2 loops) (6 welds per bracket)
Core Spray Sparger Brackets	BWRVIP-18, Section 3.3.3	12 brackets Note 3
Feedwater Sparger Tee Welds	NUREG 0619	2 per loop (4 loops) Note 4
Feedwater Sparger End Bracket Attachment	BWRVIP-48, Table 3-2	2 per loop (4 loops)
Feedwater Sparger Piping and Brackets	NUREG 0619	4 loops Note 5
Jet Pump Beams	BWRVIP-41, Table 3.3-1	20 (no welds)
Jet Pump Thermal Sleeve Welds (Hidden)	BWRVIP-41, Table 3.3-1	3 per Jet Pump (10 Jet Pumps)
Jet Pump Riser Welds (RS-1, RS-2, RS-3)	BWRVIP-41, Table 3.3-1	3 per Jet Pump (10 Jet Pumps)
Jet Pump Riser Welds (RS-4, RS-5, RS-8, RS-9)	BWRVIP-41, Table 3.3-1	8 per Jet Pump (10 Jet Pumps)
Jet Pump Riser Brace Welds	BWRVIP-41, Table 3.3-1	12 per Jet Pump (10 Jet Pumps)
Jet Pump Inlet Bolted Connection	BWRVIP-41, Table 3.3-1	2 per Jet pump (10 Jet Pumps) (no welds)
Jet Pump Restrainer Wedges	BWRVIP-41, Table 3.3-1	2 per Jet Pump (10 Jet Pumps) (no welds)
Jet Pump Mixer / Diffuser Welds	BWRVIP-41, Table 3.3-1	16 per Jet Pump (10 Jet Pumps)
Lower Plenum (CRD, Core Shroud Support)	BWRVIP-47	89 CRDs (Note 2) 14 shroud support legs (3 welds per leg)
Miscellaneous Vessel Internal Attachments	BWRVIP-48, Table 3-2	12
Orificed Fuel Support Castings	BWRVIP-47, Table 3.2-1	89 (no welds)
SLC Nozzle-to-Safe End Weld	BWRVIP-27, Section 3.3.1	1
Steam Dryer Support Brackets	BWRVIP-48, Table 3-2	4
Top Guide Aligner Assemblies	BWRVIP-26, Table 3-2	4 Note 6
Top Guide Hold-down Assemblies	BWRVIP-26, Table 3-2	4 (5 welds per assembly)
Top Guide Grid Beams	BWRVIP-26, Section 3.2.2	24 Note 7

Notes:

1- There are between 2 to 4 welds per nozzle depending on the nozzle configuration.
2- Each control rod drive housing has 1 weld connected to the vessel stub tube. There is also 1 weld between the stub tube and reactor vessel.
3- There are between 4 and 9 welds per bracket depending on the bracket configuration.
4- There is one inaccessible feedwater tee box weld located inside the bore of the feedwater RPV nozzle.
5- The feedwater spargers, spacer brackets, end brackets are examined by the VT-3 method. Each nozzle has one weld and each end bracket has approximately 15 welds.
6- Aligner assemblies have approximately 6 welds which are exempt from examination.
7- Grid beams are notched and interlocked without welds at each fuel cell location. The top guide rim and rim cover plate are welded sections connected together with rim hold down bolts. The rim hold-down bolts are seal welded. Beams have welded end attachments that are pinned and seal welded to rim and rim cover plates.

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(40)

August 1, 2005
BVY 05-071

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
Clarifications to Relief Request RI-01 Table

By letter dated October 1, 2003[1], as supplemented by letters dated December 23, 2003[2], January 22, 2004[3] and June 8, 2005[4], Vermont Yankee Nuclear Power Station (VY) submitted Relief Request RI-01. Relief Request RI-01 proposed to use various Boiling Water Reactor Vessel Internals Program guidelines as an alternative to certain requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code for Inservice Inspection of Reactor Pressure Vessel internal components.

Following discussion with your staff, VY is submitting a revised comparison table to correct a typographical error for one item and provide clarification to another. Accordingly, this letter and the attachment, provides a replacement table with the changes noted by revision bars

There are no regulatory commitments contained within this letter.

Please feel free to contact me at (802) 258-4236, if there are any questions regarding this submittal.

Sincerely,

for

James M. DeVincentis
Manager, Licensing
Vermont Yankee Nuclear Power Station

Attachment (1)

cc: USNRC Region 1 Administrator
USNRC Resident Inspector - VY
USNRC Project Manager - VY
Vermont Department of Public Service

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1 Reference VY Letter to USNRC, BVY 03-89, "Supplement 2 to Fourth-Interval Inservice Inspection (ISI) Program Plan – Submittal of Relief Request RI-01," dated October 1, 2003.

2 Reference VY Letter to USNRC, BVY 03-120, "Supplement to Relief Request RI-01," dated December 23, 2003.

3 Reference VY Letter to USNRC, BVY 04-07, "Supplement to Relief Request RI-01," dated January 22, 2004.

4 Reference VY Letter to USNRC, BVY 05-059, "Revised Response to Request for Additional Information Regarding Relief Request RI-01," dated June 8, 2005.

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ATTACHMENT TO BVY 05-071

Revised Comparison Table
Regarding Relief Request RI-01

ENTERGY NUCLEAR OPERATIONS, INC.
VERMONT YANKEE NUCLEAR POWER STATION
DOCKET NO. 50-271

Comparison of ASME Category B-N-1 and B-N-2 Requirements With BWRVIP Guidance Requirements (Note 1)

ASME Item No. Table IWB-2500-1	Component	ASME Exam Scope	ASME Exam	ASME Frequency	Applicable BWRVIP Document	BWRVIP Exam Scope	BWRVIP Exam	BWRVIP Frequency
B13.10	Reactor Vessel Interior	Accessible Areas (Non-specific)	VT-3	Each period	BWRVIP-18, 25, 26, 38, 41, 47, 48, 76	Per VY Program Procedure PP 7027 See Attached Table 1		
B13.20	Interior Attachments Within Beltline – Riser Braces	Accessible Welds	VT-1	Each 10-year Interval	BWRVIP-48 Table 3-2	Riser Brace Attachment	EVT-1	100% in first 12 years, 25% during each subsequent 6 years
	Lower Surveillance Specimen Holder Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	VT-1	Each 10-year Interval
B13.30	Interior Attachments Beyond Beltline – Steam Dryer Hold-down Brackets	Accessible Welds	VT-3	Each 10-year Interval	BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
	Guide Rod Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
	Steam Dryer Support Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	EVT-1	Each 10-year Interval
	Feedwater Sparger Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	EVT-1	Each 10-year Interval
	Core Spray Piping Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	EVT-1	Every 4 Refueling Cycles
	Upper and Middle Surveillance Specimen Holder Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
	Shroud Support (Weld H9)				BWRVIP-38 3.1.3.2, Figure 3-5	Weld H9	EVT-1 or UT	Maximum of 6 years for EVT-1, Maximum of 10 years for UT
	Shroud Support Legs (H12 Welds)	(Rarely Accessible)			BWRVIP-38 3.2.3	Not Required (Note 2)	Not Required (Note 2)	Not Required (Note 2)
B13.40	Integrally Welded Core Support Structure – Shroud Support	Accessible Surfaces	VT-3	Each 10-year Interval	BWRVIP-38 3.1.3.2, Figure 3-5	Welds H8, H9	EVT-1 or UT	Maximum 6 years for EVT-1, 10 years for UT
	Shroud				BWRVIP-76 2.2.1	Welds H1, H2	EVT-1 or UT	Maximum 10 years
					BWRVIP-76 Figure 3-3	Vertical, Ring Seg. Welds Below H2	EVT-1 or UT	Maximum 6 years for one-sided EVT-1, 10 years for UT
					BWRVIP-76 3.5	Tie-rod Repair	VT-3	All four within 10 years

NOTE 1: This Table provides only an overview of the requirements. For more details, refer to ASME Section XI, Table IWB-2500-1, and the appropriate BWRVIP document.

NOTE 2: Periodically VY will have access to the lower plenum welds due to maintenance activities not related to the inspection recommendations in the BWRVIP guidelines. In such cases, VY will perform a visual inspection of the shroud support leg welds to the extent practical. When inspection tooling and methodologies are developed that allows access to the lower plenum without disassembly beyond normal refueling activities, shroud support leg welds will be inspected with an appropriate NDE method. Results of inspections will be used to determine a re-inspection schedule. VY will adopt future inspection methods and schedules as they are developed and included into BWRVIP-38 and approved by the NRC staff.

(44)

September 19, 2005

Mr. Michael Kansler
President
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

SUBJECT: SAFETY EVALUATION OF RELIEF REQUEST RI-01 - VERMONT YANKEE NUCLEAR POWER STATION (TAC NO. MC0960)

Dear Mr. Kansler:

By letter dated October 1, 2003, as supplemented on December 23, 2003, January 22, 2004, and March 31, June 8, and August 1, 2005, Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. submitted Relief Request RI-01 for Vermont Yankee Nuclear Power Station (VYNPS). The relief request proposes to use various Boiling Water Reactor Vessels Internal Program guidelines as an alternative to certain requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) for inservice inspection (ISI) of reactor vessel internal (RVI) components. The subject relief request is for the fourth 10-year ISI interval at VYNPS, which began on September 1, 2003.

The Nuclear Regulatory Commission staff has completed its review of Relief Request RI-01 as documented in the enclosed Safety Evaluation (SE). Our SE concludes that the proposed alternative will ensure that the integrity of the RVI components is maintained with an acceptable level of quality and safety. Therefore, the proposed alternative is authorized pursuant to Section 50.55a(a)(3)(i) of Title 10 of the *Code of Federal Regulations* for the remainder of the fourth 10-year ISI interval.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this relief request remains applicable, including third-party review by the authorized Nuclear Inservice Inspector.

If you have any questions regarding this matter, please contact the VYNPS Project Manager, Mr. Richard B. Ennis, at (301) 415-1420.

Sincerely,

/RA/

Darrell J. Roberts, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosure: As stated

cc w/encl: See next page

(40).

If you have any questions regarding this matter, please contact the VYNPS Project Manager, Mr. Richard B. Ennis, at (301) 415-1420.

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(49)

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO RELIEF REQUEST RI-01

FOR THE FOURTH 10-YEAR INTERVAL OF THE INSERVICE INSPECTION PROGRAM

ENTERGY NUCLEAR VERMONT YANKEE, LLC

AND ENTERGY NUCLEAR OPERATIONS, INC.

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1.0 INTRODUCTION

By letter dated October 1, 2003, as supplemented on December 23, 2003, January 22, 2004, and March 31, June 8, and August 1, 2005, Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (the licensee) submitted Relief Request RI-01 for Vermont Yankee Nuclear Power Station (VYNPS). The relief request proposes to use various Boiling Water Reactor Vessels Internal Program (BWRVIP) guidelines as an alternative to certain requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) for inservice inspection (ISI) of reactor vessel internal (RVI) components. The subject relief request is for the fourth 10-year ISI interval at VYNPS, which began on September 1, 2003.

2.0 REGULATORY REQUIREMENTS

The ISI of the ASME Code Class 1, 2, and 3 components is to be performed in accordance with Section XI of the ASME Code and applicable edition and addenda as required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(g), except where specific written relief has been granted by the Nuclear Regulatory Commission (NRC) pursuant to 10 CFR 50.55a(g)(6)(i). Pursuant to 10 CFR 50.55a(a)(3), alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if the licensee demonstrates that: (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in the ASME Code, Section XI, "Rules for ISI of

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Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first ten-year interval, and subsequent intervals, comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b), 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The applicable ASME Code of record for the fourth ten-year ISI interval for VYNPS is the 1998 Edition with the 2000 Addenda of the ASME Code, Section XI. The fourth ten-year ISI interval began September 1, 2003, and ends August 31, 2013.

3.0 LICENSEE'S EVALUATION

3.1 Components for Which Relief is Requested

ASME Code, Section XI, Class 1, Examination Categories B-N-1 and B-N-2, Code Item Numbers B13.10, Vessel Interior, B13.20, Interior Attachments within Beltline Region, B13.30, Interior Attachments beyond Beltline Region, and B13.40, Core Support Structure.

3.2 Examination Requirements From Which Relief is Requested

ASME Code, Section XI requires the examination of certain RVI components. These examinations are included in Table IWB-2500-1, Categories B-N-1 and B-N-2, and identified with the following item numbers:

- B13.10 - Examine accessible areas of the reactor vessel interior each period by the VT-3 method.
- B13.20 - Examine interior attachment welds within the beltline region each interval by the VT-1 method.
- B13.30 - Examine interior attachment welds beyond the beltline region each interval by the VT-3 method.
- B13.40 - Examine surfaces of the core support structure each interval by the VT-3 method.

These examinations are performed to assess the structural integrity of the RVI components.

3.3 Licensee's Basis for Requesting Relief and Justification for Granting Relief

The licensee concluded that the alternative inspections (described below) will maintain an adequate level of quality and safety of the affected welds and will not adversely impact the health and safety of the public. As part of its justification for the relief, the licensee stated that boiling-water reactors (BWRs) now examine RVI components in accordance with BWRVIP guidelines. These guidelines have been written to address the safety-significant RVI components and to examine these components using appropriate methods and reexamination frequencies. The licensee also noted that the NRC has agreed with the BWRVIP approach, in principal, and has issued safety evaluations (SEs) for these guidelines. Note, "in principal" means that, for some reports, final SEs have been written, but the final BWRVIP acceptance

reports which incorporate these SEs may not have been issued. Relief from examinations in Table IWB-2500-1 of the ASME Code are requested pursuant to 10 CFR 50.55a(a)(3)(i).

3.4 Alternative Examination

In lieu of the requirements of ASME Code, Section XI, 1998 Edition through 2000 Addenda, the licensee proposed to examine the RVI components in accordance with BWRVIP guideline requirements. The particular guidelines that are applicable to the various RVI components are:

BWRVIP-18, "BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines"
BWRVIP-25, "BWR Core Plate Inspection and Flaw Evaluation Guidelines"
BWRVIP-26, "BWR Top Guide Inspection and Flaw Evaluation Guidelines"
BWRVIP-38, "BWR Shroud Support Inspection and Flaw Evaluation Guidelines"
BWRVIP-41, "BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines"
BWRVIP-47, "BWR Lower Plenum Inspection and Flaw Evaluation Guidelines"
BWRVIP-48, "Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines"
BWRVIP-76, "BWR Core Shroud Inspection and Flaw Evaluation Guidelines"

In addition to the BWRVIP reports noted above, the licensee identified NUREG-0619 "BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking," as the basis for its proposed alternative examinations for the feedwater sparger tee welds and the feedwater sparger piping and brackets.

In its October 1, 2003, submittal, the licensee included a comparison between the Category B-N-1 and B-N-2 inspection requirements in the 1998 Edition through 2000 Addenda of Section XI of the ASME Code and the inspection requirements given in the aforementioned BWRVIP documents. The licensee also provided information on the inspection methods, inspection frequencies, and the inspection sampling methods for various RVI components and subcomponents covered under the scope of this relief request. After conference calls between the NRC staff and the licensee on November 6, 2003, January 12, 2004, and July 13, 2005, the licensee concluded that the ASME Code, Section XI, Category B-N-1 and B-N-2 inspection requirements did not apply to some of the components and subcomponents listed in the original submittal. By letters dated December 23, 2003, January 22, 2004, and August 1, 2005, the licensee provided a final list of components and subcomponents covered under the scope of this relief request and identified the inspection requirements which constituted their proposed alternative to the ASME Code, Section XI, Category B-N-1 and B-N-2 inspection requirements. The licensee's proposed alternative for the components and subcomponents covered under the scope of this relief request is summarized in Attachment 1 of this SE.

The licensee also stated that it will follow the requirements of BWRVIP-94, "Program Implementation Guideline." BWRVIP-94 states that where guidance in existing BWRVIP documents has been supplemented or revised by subsequent correspondence approved by the BWRVIP Executive Committee, the most current approved guidance will be implemented.

4.0 NRC STAFF EVALUATION

The NRC staff reviewed the information provided by the licensee in its submittals regarding its proposed alternatives to the ASME Code ISI requirements and the technical bases for the licensee's proposed alternatives. The staff reviewed the status of each of the referenced BWRVIP guidance documents and the applicability of the information provided in NUREG-0619. The staff found all of the referenced BWRVIP reports (with the exception of the BWRVIP-76 report which is under staff review) to be acceptable, with any additional conditions associated with the implementation of the subject BWRVIP reports outlined in the corresponding staff SE for that report. The staff also confirmed the applicability of the information given in NUREG-0619 as supporting the licensee's proposed alternative for the feedwater sparger tee welds and the feedwater sparger piping and brackets. The staff did, however, identify some issues which required additional clarification by the licensee or which required the licensee to modify its proposed alternatives.

By a request for additional information dated January 4, 2005, the NRC staff requested that the licensee justify how the proposed alternative inspection method, scope of inspection, inspection frequency and acceptance criteria provide an acceptable level of quality and safety as compared to Section XI requirements of the ASME Code. In its response dated June 8, 2005, the licensee compared ASME Code, Section XI inspection requirements with the corresponding BWRVIP inspection guidelines for the RVI components and their subcomponents that are classified under the ASME Code, Section XI, Categories B-N-1 and B-N-2, Item Numbers B 13.10, B 13.20, B 13.30, and B.13.40. The licensee, as an example, provided additional information regarding the BWRVIP inspection requirements for four of the RVI components and their subcomponents (core spray piping, jet pump, top guide and control rod drive tube), representing each of the aforementioned ASME Code, Section XI category/item numbers. This additional information demonstrated that the proposed inspection guidelines would adequately identify the aging degradation of the RVI components in a timely manner, and the inspection guidelines would provide an acceptable level of quality and safety.

In a conference call on July 13, 2005, the NRC staff noted that the licensee's proposed alternative for the inspection of the H12 core shroud support leg welds was not consistent with the conditions imposed in the staff's SE for the BWRVIP-38 report. Specifically, the staff noted that, to be consistent with the staff's SE for the BWRVIP-38 report, the licensee's proposed alternative should have noted that the license would inspect the H12 core shroud support leg welds when appropriate inspection tooling and methodologies are developed. The licensee, in its response letter dated August 1, 2005, revised its proposed alternative to indicate that it will perform inspection on the H12 weld when appropriate inspection tooling and methodologies are developed.

Therefore, based on the information in the licensee's submittals, the NRC staff has confirmed that the licensee's proposed alternatives (as documented in the attachment to this SE) are consistent with the technical bases documented in NUREG-0619 and the BWRVIP reports cited in Section 3.0 of this SE.

Consistent with the determination that was made in the NRC staff's SEs which approved each of the cited BWRVIP reports (with the exception of BWRVIP-76), the BWRVIP inspection requirements (as supplemented by the NUREG-0619 requirements) incorporated into the licensee's proposed alternative will identify aging degradation of the RVI components in a timely

manner. Therefore, the staff has concluded that the implementation of the inspection requirements specified in the licensee's proposed alternative will ensure that the integrity of the RVI components will be maintained with an acceptable level of quality and safety.

It should be noted that the BWRVIP-76 report is currently under review by the NRC staff. Therefore, the licensee's proposed alternative inspection requirements for the core shroud subcomponents which rely on the technical basis established by the BWRVIP-76 report may need to be revised based on any conditions documented in the staff's final SE on BWRVIP-76. This will, however, be addressed as the licensee has stated it will follow the guidelines of the BWRVIP-94 report, which would require the licensee to address any conditions imposed on use of the BWRVIP-76 report resulting from the staff's final SE.

5.0 CONCLUSION

Based on the information provided in the licensee's submittals, the NRC staff concludes that the alternatives proposed in Relief Request RI-01, and as summarized in the attachment to this SE, will ensure that the integrity of the RVI components is maintained with an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the licensee's proposed alternative is authorized for the fourth 10-year ISI interval. All other requirements of the ASME Code, Section XI for which relief has not been specifically requested remain applicable, including third party review by the Authorized Nuclear Inservice Inspector. Any components that are not included in this relief request will continue to be inspected in accordance with the ASME Code Section XI requirements.

Principal Contributor: G. Cheruvenki

Date: September 19, 2005

ATTACHMENT 1

VYNPS Comparison of ASME Category B-N-1 and B-N-2 Requirements With BWRVIP Guidance Requirements [1]

ASME Item No. Table IWB-2500-1	Component	ASME Exam Scope	ASME Exam	ASME Frequency	Applicable BWRVIP Document	BWRVIP Exam Scope	BWRVIP Exam	BWRVIP Frequency
B13.10	Reactor Vessel Interior	Accessible Areas (Non-specific)	VT-3	Each period	BWRVIP-18, 25, 26, 38, 41, 47, 48, 76	Per VYNPS Program Procedure PP 7027 See the Licensee's supplement dated January 22, 2004		
B13.20	Interior Attachments Within Beltline – Riser Braces	Accessible Welds	VT-1	Each 10-year Interval	BWRVIP-48 Table 3-2	Riser Brace Attachment	EVT-1	100% in first 12 years, 25% during each subsequent 6 years
	Lower Surveillance Specimen Holder Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	VT-1	Each 10-year Interval
B13.30	Interior Attachments Beyond Beltline – Steam Dryer Hold-down Brackets	Accessible Welds	VT-3	Each 10-year Interval	BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
	Guide Rod Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
	Steam Dryer Support Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	EVT-1	Each 10-year Interval
	Feedwater Sparger Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	EVT-1	Each 10-year Interval
	Core Spray Piping Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	EVT-1	Every 4 Refueling Cycles
	Upper and Middle Surveillance Specimen Holder Brackets				BWRVIP-48 Table 3-2	Bracket Attachment	VT-3	Each 10-year Interval
	Shroud Support (Weld H9)				BWRVIP-38 3.1.3.2, Figure 3-5	Weld H9	EVT-1 or UT	Maximum of 6 years for EVT-1, Maximum of 10 years for UT
	Shroud Support Legs (H12 Welds)	(Rarely Accessible)			BWRVIP-38 3.2.3	Not Required Note 2	Not Required Note 2	Not Required Note 2

ASME Item No. Table IWB-2500-1	Component	ASME Exam Scope	ASME Exam	ASME Frequency	Applicable BWRVIP Document	BWRVIP Exam Scope	BWRVIP Exam	BWRVIP Frequency
B13.40	Integrally Welded Core Support Structure – Shroud Support	Accessible Surfaces	VT-3	Each 10-year Interval	BWRVIP-38 3.1.3.2, Figure 3-5	Welds H8, H9	EVT-1 or UT	Maximum 6 years for EVT-1, 10 years for UT
	Shroud				BWRVIP-76 2.2.1	Welds H1, H2	EVT-1 or UT	Maximum 10 years
					BWRVIP-76 Figure 3-3	Vertical and Ring Segment Welds Below H2	EVT-1 or UT	Maximum 6 years for one-sided EVT-1, 10 years for UT
					BWRVIP-76 3.5	Tie-rod Repair	VT-3	All four within 10 years

NOTES

1. This Table provides only an overview of the requirements. For more details, refer to ASME Code Section XI, Table IWB-2500-1, and the appropriate BWRVIP document(s).

2. Periodically, VYNPS will have access to the lower plenum welds due to maintenance activities not related to the inspection recommendations in the BWRVIP guidelines. In such cases, VYNPS will perform inspection of the shroud support leg welds to the extent practical. When inspection tooling and methodologies are developed that allows access to the lower plenum without disassembly beyond normal refueling activities, shroud support leg welds will be inspected with an appropriate nondestructive examination method. Results of inspections will be used to determine a re-inspection schedule. VYNPS will adopt future inspection methods and schedules as they are developed and included into the BWRVIP-38 report and approved by the NRC staff.