

# VERMONT YANKEE NUCLEAR POWER CORPORATION

185 Old Ferry Road, Brattleboro, VT 05301-7002  
(802) 257-5271

August 31, 1999

BVY 99-110

TAC MA 6437

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

- References:
- (a) Letter, USNRC to VYNPC, "Inspection Report No. 50-271/90-12," unnumbered, dated November 21, 1990, and Attachment B, "Vermont Yankee Drywell Topcoat Degradation (ECMB)."
  - (b) Letter, VYNPC to USNRC, "Vermont Yankee Response to NRC Request for Information Regarding Condition of Drywell Paint (Inspection Report 89-80)," BVY 89-69/VYV 89-124, dated July 1, 1989.
  - (c) Letter, USNRC to VYNPC, "Inspection Report No. 50-271/89-80," NRY 89-126, dated June 2, 1989.
  - (d) American Society of Mechanical Engineers (ASME) Section XI, Division 1, Subsection IWE, 1992 Edition and 1992 Addenda.

**Subject:** Vermont Yankee Nuclear Power Station  
License No. DPR-28 (Docket No. 50-271)  
Revision to Drywell Coating Inspection Commitments

In Reference (a) Region 1 inspectors closed an Unresolved Item regarding drywell coating degradation that was originally opened in Reference (c). The referenced inspection report contained an NRR safety evaluation that concurred with Vermont Yankee's (VY's) assertions in Reference (b) that paint debris would not be transported to the Emergency Core Cooling System (ECCS) suction strainers during a Loss of Coolant Accident (LOCA) in sufficient quantity to adversely affect ECCS system operability. In concluding the evaluation, the Staff stated: "NRR concurs with Vermont Yankee's paint consultant that surveillance of the drywell surfaces should be carefully performed each refueling outage and that all loose topcoat material should be removed by thorough scraping without damaging the primer." Furthermore, Reference (b) communicated VY's intent to employ metal scrapers (as recommended by VY's coating consultant) to assure complete removal of all loose coating material.

In 1998 VY began performing inspections in accordance with Reference (d), pursuant to a 1996 10CFR50.55a rule change that required licensees to adopt Reference (d) and complete the first-period scope of primary containment inservice examinations by September 9, 2001. Under 10CFR50.55a(b)(2)(x)(E), a general visual inspection of containment surfaces will be performed once every inspection period (~40 months) in addition to the Code-required VT-3 examinations completed once in each 10-year inspection interval. Removal of topcoat and primer material will be performed as necessary to aid in determining whether observed coating degradation is symptomatic of base-metal corrosion that could result in wall thinning and thereby compromise containment integrity. If the primer coat is removed to the metal substrate, a repair or touch-up coating will be applied. The purpose of this letter is to notify Region 1 of VY's intent to replace commitments made in Reference (b) and subsequently acknowledged in Reference (a) with the containment inspection criteria defined in 10CFR50.55a(b)(2)(vi) [as modified and supplemented by 10CFR50.55a(b)(2)(x)] and ASME Section XI, Subsection IWE.

Attachment

Since receipt of Reference (a) in 1990, VY has inspected the drywell coating and scraped off loose topcoat material each refueling outage. As of the Spring 1998 outage, approximately 75% of the topcoat in the heat-affected upper region of the drywell and approximately 23% of the drywell head topcoat had been removed. Contrary to statements made in Reference (b), VY has been using hard plastic scrapers instead of metal because they effectively remove all loose material while causing less damage to the inorganic zinc primer that provides corrosion resistance. During each consecutive outage, VY has seen a decreasing trend in delamination of the remaining paint, indicative of a reduction in the amount of loose material available to be transported to the suppression chamber (torus) in the event of a LOCA. Between 1996 and 1998, no more than 1-to-2% delamination of the remaining topcoat was observed; little or no degradation was found in the lower region of the drywell.

In addition, VY has replaced the Residual Heat Removal and Core Spray ECCS suction strainers with redesigned units that are sized to accommodate complete detachment of all remaining drywell and torus topcoat material without loss of ECCS suction, and has performed refined debris transport analyses that predict a smaller amount of transported material than originally assumed. Due to these actions, ECCS suction strainer clogging and resultant loss of ECCS safety functions during a LOCA as a result of paint debris accumulation are not considered credible. Therefore, discontinuing the once-per-outage inspection of drywell coating and scraping of loose material in favor of a once-per-period general visual inspection and as-needed repair, coupled with the ongoing VT-3 inspection program, is consistent with current plant design capabilities and satisfies the requirements of 10CFR50.55a(b)(2)(vi). Because both plant and regulatory conditions have changed, the ASME inspection criteria may now supersede the previously-committed measures and will provide an equivalent degree of coating verification.

If you have any questions regarding this submittal, please contact Mr. Wayne M. Limberger at (802) 258-4237.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

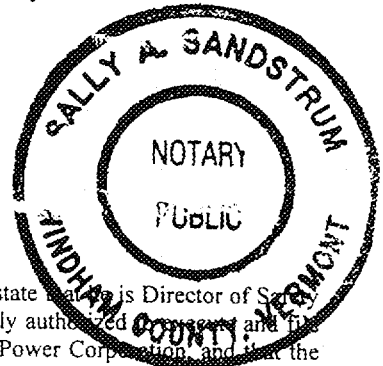
*Robert J. Wanczyk*

Robert J. Wanczyk  
Director of Safety and Regulatory Affairs

Attachment

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

STATE OF VERMONT     )  
                                  )ss  
WINDHAM COUNTY     )



Then personally appeared before me, Robert J. Wanczyk, who being duly sworn, did state that he is Director of Safety and Regulatory Affairs of Vermont Yankee Nuclear Power Corporation, that he is duly authorized to execute and sign the foregoing document in the name and on the behalf of Vermont Yankee Nuclear Power Corporation, and that the statements therein are true to the best of his knowledge and belief.

*Sally A. Sandstrum*  
Sally A. Sandstrum, Notary Public  
My Commission Expires February 10, 2003

Docket No. 50-271  
BVY 99-110

Attachment 1

Vermont Yankee Nuclear Power Station

Revision to Drywell Coating Inspection Commitments

Summary of Vermont Yankee Commitments

## SUMMARY OF VERMONT YANKEE COMMITMENTS

**BVY NO.: BVY 99-110**

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"
VY will continue to apply the provisions of 10CFR50.55a(b)(2)(vi), as modified and supplemented by 10CFR50.55a(b)(2)(x), to general visual inspection of primary containment surfaces.	1999 Refueling Outage and subsequent outages in accordance with ASME Section XI, Subsection IWE, as supplemented by 10CFR50.55a(b)(2) (x)(E).