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Christopher J. Wamser
Site Vice President

BVY 12-078

November 20, 2012

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

SUBJECT: Technical Specifications Proposed Change 297, Supplement 2
Response to Request for Additional Information
Vermont Yankee Nuclear Power Station
Docket No. 50-271
License No. DPR-28

REFERENCES:

1. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Technical Specification Proposed Change No. 297 Suppression Chamber-Drywell Leak Rate Test Surveillance Frequency Change," BVY 12-005, dated February 1, 2012

2. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Technical Specification Proposed Change No. 297, Supplement 1, Response to Request for Additional Information," BVY 12-055, dated August 7, 2012

Dear Sir or Madam:

In Reference 1, Entergy Nuclear Operations, Inc. (Entergy) submitted a request, as supplemented by Reference 2, for an amendment to the renewed facility operating license Technical Specifications (TS) for Vermont Yankee requesting a change to the TS related to the drywell to suppression chamber vacuum breakers. This letter provides supplemental information to address a request for additional information (RAI) received on November 1, 2012 and discussed on a teleconference held November 1, 2012.

Attachment 1 to this submittal provides Entergy's response to the RAI and Attachment 2 provides revised TS and TS Bases pages reflecting the changes proposed to address NRC questions. The TS Bases page is provided for information only.

This supplement to the original license amendment request does not change the scope or conclusions in the original application, nor does it change Entergy's determination of no significant hazards consideration.

There are no new regulatory commitments being made in this letter.

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NRR

Should you have any questions concerning this letter or require additional information, please contact Robert Wanczyk at 802-451-3166.

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 20, 2012.

Sincerely,

CJW/plc

Attachments: 1. Response to Request for Additional Information
2. Retyped Technical Specification and Bases Pages

cc: William M. Dean
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Attachment 1

Proposed Change 297, Supplement 2

Response to Request for Additional Information

Response to Request for Additional Information (RAI)

RAI

The proposed Technical Specification (TS) change would allow the drywell-to-suppression chamber leak rate surveillance test to be performed any time during an operating cycle (OC) of 18 months as opposed to performing the test during every refueling outage (RFO). The proposed change would therefore allow the test frequency to be revised from a current frequency of 18 months to anywhere up to 36 months. In case the test is not performed during an RFO, and the plant is brought to power, it could allow entering a MODE where containment integrity is required without having met the surveillance requirement (SR). This would be in conflict with SR 4.0.1 which states:

> ***SRs shall be met during the modes or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified frequency shall be failure to meet the LCO except as provided in SR 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.***

Please explain how the proposed TS change ensures that the SR is met consistently every 18 months.

Note that in Standard Technical Specification (STS) (NUREG-1433, Volume 1, Revision 3), the frequency for SR 3.6.1.1.2 is 18 months and has to be met in Modes 1, 2, and 3. The test frequency prevents from entering from MODE 5 to Mode 1, 2, or 3 without verifying containment integrity.

Response

Entergy agrees with this observation and proposes to revise the specified frequency of the drywell-to-suppression chamber leak rate test to once every 18 months, consistent with SR 3.6.1.1.2 in NUREG-1433 "Standard Technical Specifications General Electric Plants, BWR/4."

Attachment 2 provides revised TS and TS Bases pages reflecting this change.

Attachment 2

Proposed Change 297, Supplement 2

Retyped Technical Specification and Bases Pages

3.7 LIMITING CONDITIONS FOR OPERATION	4.7 SURVEILLANCE REQUIREMENTS
at normal cooldown rates if the torus water temperature exceeds 120°F.	
e. Minimum Water Volume - 68,000 cubic feet	
f. Maximum Water Volume - 70,000 cubic feet	
2. Primary containment integrity shall be maintained at all times when the reactor is critical or when the reactor water temperature is above 212°F and fuel is in the reactor vessel except while performing low power physics tests at atmospheric pressure at power levels not to exceed 5 Mw(t).	2. Primary Containment Surveillances a. The primary containment integrity shall be demonstrated as required by the Primary Containment Leakage Rate Testing Program (PCLRTP). b. Once every 18 months, a drywell to suppression chamber leak rate test shall demonstrate that with an initial differential pressure of not less than 1.0 psi, the differential pressure decay rate shall not exceed the equivalent of the leakage rate through a 1-inch orifice. Should there be two consecutive test failures the test frequency shall be changed to once every 9 months until two consecutive tests pass.
3. If a portion of a system that is considered to be an extension of primary containment is to be opened, isolate the affected penetration flow path by use of at least one closed and deactivated automatic valve, closed manual valve or blind flange.	3. (Blank)
4. Whenever primary containment integrity is required: a. The leakage rate from any one main steam isolation valve (MSIV) shall not exceed 62 scfh at 44 psig (Pa); b. The combined leakage rate from the main steam pathways shall not exceed 124 scfh at 44 psig (Pa); and c. The combined leakage rate from the secondary containment bypass pathways shall not exceed 5 scfh at 44 psig (Pa).	4. In accordance with the PCLRTP, verify that the following leakage rates are within acceptable limits: a. The leakage rate through each MSIV; b. The combined leakage rate for the main steam pathways; and c. The combined leakage rate for the secondary containment bypass pathways.

3.7 LIMITING CONDITIONS FOR OPERATION	4.7 SURVEILLANCE REQUIREMENTS
line is verified to be closed and conditions required by 3.7.D.2 are met.	
6. Pressure Suppression Chamber - Drywell Vacuum Breakers	6. Pressure Suppression Chamber - Drywell Vacuum Breakers
a. When primary containment is required, all suppression chamber - drywell vacuum breakers shall be operable except during testing and as stated in Specifications 3.7.A.6.b and c, below. Suppression chamber - drywell vacuum breakers shall be considered operable if:	a. Periodic Operability Tests Operability testing of the vacuum breakers shall be in accordance with Specification 4.6.E and within 12 hours after any discharge of steam to the suppression chamber from the safety/relief valves and within 12 hours following an operation that causes any of the vacuum breakers to open. Operability of the corresponding position switches and position indicators and alarms shall be verified monthly and following any maintenance.
(1) The valve is demonstrated to open fully with the applied force at all valve positions not exceeding that equivalent to 0.5 psi acting on the suppression chamber face of the valve disk.	b. Refueling Outage Test (1) All suppression chamber - drywell vacuum breaker position indication and alarm systems shall be calibrated and functionally tested.
(2) The valve can be closed by gravity, when released after being opened by remote or manual means, to within not greater than the equivalent of 0.05 inch at all points along the seal surface of the disk.	(2) Deleted

3.7 LIMITING CONDITIONS FOR OPERATION

(3) The position alarm system will annunciate in the control room if the valve opening exceeds the equivalent of 0.05 inch at all points along the seal surface of the disk.

b. Up to two (2) of the ten (10) suppression chamber - drywell vacuum breakers may be determined to be inoperable provided that they are secured, or known to be, in the closed position.

c. Reactor operation may continue for fifteen (15) days provided that at least one position alarm circuit for each vacuum breaker is operable and each suppression chamber - drywell vacuum breaker is physically verified to be closed immediately and daily thereafter.

7. Oxygen Concentration

a. The primary containment atmosphere shall be reduced to less than 4 percent oxygen by volume with nitrogen gas while in the RUN MODE during the time period:

i. From 24 hours after thermal power is greater than 15% rated thermal power following startup, to

4.7 SURVEILLANCE REQUIREMENTS

(3) Deleted

7. Oxygen Concentration

The primary containment oxygen concentration shall be measured and recorded on a weekly basis.

BASES: 4.7 (Cont'd)

Every 18 months, a leak rate test shall be performed to verify that significant leakage flow paths do not exist between the drywell and suppression chamber. The drywell pressure will be increased by at least 1 psi with respect to the suppression chamber pressure and held constant. The 2 psig set point will not be exceeded. The subsequent suppression chamber pressure transient (if any) will be monitored with a sensitive pressure gauge. If the drywell pressure cannot be increased by 1 psi over the suppression chamber pressure it would be because a significant leakage path exists; in this event the leakage source will be identified and eliminated before power operation is resumed. If the drywell pressure can be increased by 1 psi over the suppression chamber the rate of change of the suppression chamber pressure must not exceed a rate equivalent to the rate of leakage from the drywell through a 1-inch orifice. In the event the rate of change exceeds this value then the plant will be shut down, if operating, the source of leakage will be identified and addressed before power operation is resumed. Two consecutive test failures, however, would indicate unexpected primary containment degradation; in this event, increasing the frequency to once every 9 months is required until the situation is remedied as evidenced by passing two consecutive tests.

The drywell-suppression chamber vacuum breakers are exercised in accordance with Specification 4.6.E, following termination of discharge of steam into the suppression chamber from the safety/relief valves and following any operation that causes the vacuum breakers to open. This monitoring of valve operability is intended to assure that valve operability and position indication system performance does not degrade between refueling inspections. When a vacuum breaker valve is exercised through an opening-closing cycle, the position indicating lights are designed to function as follows:

Full Closed (Closed to $\leq$0.050" open)	2 White - On
Open (>0.050" open to full open)	2 White - Off

Experience has shown that a weekly measurement of the oxygen concentration in the primary containment assures adequate surveillance of the primary containment atmosphere.

B. and C. Standby Gas Treatment System and Secondary Containment System

Initiating reactor building isolation and operation of the standby gas treatment system to maintain at least a 0.15 inch of water vacuum within the secondary containment provides an adequate test of the operation of the reactor building isolation valves, leakage tightness of the reactor building, and performance of the standby gas treatment system. The testing of reactor building automatic ventilation system isolation valves in accordance with Technical Specification 4.6.E demonstrates the operability of these valves. In addition, functional testing of initiating sensors and associated trip channels demonstrates the capability for automatic actuation. Periodic testing gives sufficient confidence of reactor building integrity and standby gas treatment system performance capability.