Entergy

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October 14, 2008

BVY 08-071

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
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**References:** (a) NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," NVY 08-008, dated January 11, 2008
(b) Letter, VYNPS to USNRC, "Vermont Yankee Three Month Response to Generic Letter 2008-01," BVY 08-020, dated April 10, 2008
(c) Letter, USNRC to VYNPS, "Vermont Yankee Nuclear Power Station – RE: Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Proposed Alternative Course of Action (TAC NO. MD7891)

**Subject:** **Vermont Yankee Nuclear Power Station**
**License No. DPR-28 (Docket No. 50-271)**
**Vermont Yankee Nine-Month Response to Generic Letter 2008-01**

Dear Sir or Madam:

The Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01 dated January 11, 2008, to address the issue of gas accumulation in emergency core cooling, decay heat removal, and containment spray systems (Reference a). Reference (b) provided the three-month response for the Vermont Yankee Nuclear Power Station (VY).

The GL requested each licensee to submit a written response in accordance with 10 CFR 50.54(f) within nine months of the date of the GL to provide the following (summarized) information:

a. A description of the results of evaluations that were performed pursuant to the requested actions of the GL. This description should provide sufficient information to demonstrate that you are or will be in compliance with the quality assurance criteria in Sections III, V, XI, XVI, and XVII of Appendix B to 10 CFR Part 50 and the licensing basis and operating license, as those requirements apply to the subject systems of the GL.

b. A description of all corrective actions, including plant, programmatic, procedure, and licensing basis modifications that were determined necessary to assure compliance with these regulations.

c. A statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

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Attachment 1 to this letter contains the VY nine-month response to NRC GL 2008-01. Attachment 2 contains new regulatory commitments. The requested information is being provided pursuant the requirements of 10 CFR 50.54(f).

Entergy Nuclear Operation (ENO) is involved in industry activities which may impact the conclusions reached during this evaluation of VY relative to gas accumulation. These activities will be monitored to determine if additional changes to the VY licensing and design basis are needed or desired. The actions identified in this response will be refined as ENO and the nuclear industry identify processes and lessons-learned that can reduce the vulnerability to gas accumulation in ECCS systems.

If you have any questions or require additional information, please contact Mr. David Mannai at 802-451-3304.

I declare under the penalty of perjury that the foregoing information is true and correct. Executed on October 14, 2008.

Sincerely,

Ted A. Sullivan
Site Vice President
Vermont Yankee Nuclear Power Station

Attachments:
(1) Vermont Yankee Nine-Month Response to NRC Generic Letter 2008-01
(2) Regulatory Commitment List

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BVY 08-071
Docket No. 50-271

Attachment 1

Vermont Yankee Nuclear Power Station

Vermont Yankee Nine-Month Response to NRC Generic Letter 2008-01

Vermont Yankee Nuclear Power Station
Nine-Month Response to NRC Generic Letter 2008-01

This attachment contains the Entergy Nuclear Operations, Inc (ENO) Vermont Yankee Nuclear Power Station (VY) nine-month response to NRC Generic Letter (GL) 2008-01 "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," dated January 11, 2008 (Reference a). In GL 2008-01, the NRC requested "that each addressee evaluate its ECCS, DHR system, and containment spray system licensing basis, design, testing, and corrective actions to ensure that gas accumulation is maintained less than the amount that challenges operability of these systems, and that appropriate action is taken when conditions adverse to quality are identified."

This response includes VY's evaluation of the accessible portions of the subject systems. As committed in Reference (b) and accepted in Reference (c), VY will complete its evaluation of the inaccessible portions of these systems by startup from the 2008 RFO and will provide a supplement to this response within 90 days following startup but no later than January 30, 2009.

The following information is provided in this response;

a) A description of the results of evaluations that were performed pursuant to the requested actions (see Section A of this Attachment),

b) A description of the corrective actions determined necessary to assure compliance with the quality assurance criteria in Sections III, V, XI, XVI, and XVII of Appendix B to 10 CFR Part 50 and the licensing basis and operating license with respect to the subject systems (see Section B of this Attachment), and

c) A statement regarding which corrective actions have been completed, the schedule for the corrective actions not yet complete, and the basis for that schedule (see Section C of this Attachment).

The following systems were determined to be in the scope of GL 2008-01 for VY:

- High Pressure Coolant Injection (HPCI) System
- Core Spray (CS) System
- Residual Heat Remove (RHR) System
  - Low Pressure Coolant Injection (LPCI) mode
  - Containment Spray Cooling mode
  - Suppression Pool Cooling mode
  - Shutdown Cooling mode

Although the LPCI mode is the only RHR mode credited as a CSCS, VY's review included evaluation of piping associated with other operating modes of the RHR System (i.e., Containment Spray and Shutdown Cooling).

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It should be noted that there are related issues that the nuclear industry is currently considering with respect to the overall performance of these systems (e.g., GSI-193). Consistent with SECY 2008-108, resolution of these issues will be addressed independent of the GL and will not be addressed herein.

HPCI System (UFSAR Section 6.4.1)

The HPCI System is a single train system that consists of a steam turbine assembly driving a constant-flow pump assembly, system piping, valves, controls, and instrumentation.

The HPCI System is provided to assure that the reactor core is adequately cooled in the event of a small break in the nuclear system and loss of coolant which does not result in rapid depressurization of the reactor vessel simultaneous with a loss of normal auxiliary power. The HPCI System permits the reactor to be shut down while maintaining sufficient reactor vessel water inventory until the reactor vessel is depressurized. The HPCI System continues to operate until reactor vessel pressure is below the pressure at which LPCI or CS System operation maintain core cooling.

The HPCI System is designed to pump water into the reactor vessel for a wide range of pressures in the reactor vessel. Two sources of water are available. Initially, demineralized water from the Condensate Storage Tank (CST) is used. This provides reactor grade water to the reactor vessel for the case where the need for the HPCI System is rapidly satisfied. When water level in the CST drops below a preselected value, the water supply automatically shifts to the suppression pool. Water from either source is pumped into the reactor vessel via the feedwater line. Flow is distributed within the reactor vessel through the feedwater spargers to obtain mixing with the hot water or steam in the reactor pressure vessel.

During the suction swap, when the three suction Motor Operated Valves (MOVs) are all open for a short period of time, the water seal on the suction line in the torus and the check valve in the line to the CST form the primary containment isolation barrier. The water seal has been determined to remain effective for all accident conditions in which HPCI will be required to operate.

The HPCI pump assembly is located below the level of the CST and below the water level in the suppression pool to assure positive suction head to the pumps. Pump NPSH requirements are met by providing adequate suction head and adequate suction line size.

CS System (UFSAR Section 6.4.3)

The CS System consists of two independent loops. Each loop consists of one 100% capacity centrifugal water pump driven by an electric motor, a spray sparger in the reactor vessel above the core, piping and valves to convey water from the suppression pool to the sparger, and the associated controls and instrumentation.

The CS pumps are located in the Reactor Building below the water level in the suppression pool.

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The CS System provides protection to the core for a large break in the nuclear system when the Reactor Core Isolation Cooling (RCIC) and the HPCI Systems are unable to maintain reactor vessel water level. The RCIC system is not a CSCS System. The protection provided by the CS System also extends to a small break in which the RCIC and HPCI Systems are unable to maintain the reactor vessel water level and the Automatic Depressurization (ADS) System, that consists of relief valves that discharge to the suppression pool, has operated to lower the reactor vessel pressure so Low Pressure Coolant Injection (LPCI) mode of the RHR system and the CS System can provide core cooling.

When the CS System is actuated, water is taken from the suppression pool. Flow then passes through a normally open motor-operated pump suction valve which can be closed by a remote-manual switch from the Main Control Room to isolate the system from the suppression pool in case of a leak. This valve is located as close to the suppression pool as practical. CS suction can also be manually aligned to supply water from the CST. This is not credited for accident mitigation.

RHR System (UFSAR Section 6.4.4)

The RHR pumps are located in the Reactor Building below the water level in the suppression pool. The RHR System has various modes of operation that are discussed below.

The Low Pressure Coolant injection (LPCI) mode of the RHR System is credited as a CSCS. The four RHR pumps are aligned so two are assigned to inject water from the suppression pool into each reactor vessel recirculation system loop. Water is injected through the discharge side of the recirculation loop, through the jet pumps, into the lower plenum of the reactor vessel to flood the core from the bottom.

LPCI operation, in addition to the CS System, provides protection to the core for the case of a large break in the nuclear system when the RCIC and the HPCI Systems are unable to maintain reactor vessel water level.

Protection provided by LPCI also extends to a small break in which the RCIC and HPCI Systems are unable to maintain the reactor vessel water level, and the ADS has operated to lower the reactor vessel pressure so that LPCI and CS Systems can start to provide core cooling.

When the system is actuated, water is taken from the suppression pool. Water flows through normally open motor-operated pump suction valves which can be closed by remote-manual switches from the Main Control Room to isolate the system from the suppression pool in case of a leak.

The Containment Spray Cooling mode of RHR takes suction from the suppression pool and injects flow into spray headers in the drywell and suppression chamber. This mode of operation is designed to reduce containment pressure and temperature following a

loss of coolant accident by cooling the non-condensable gasses and condensing any steam that may be present.

The Suppression Pool Cooling mode provides cooling for the suppression pool so that condensation of the steam resulting from the blow-down following a loss-of-coolant accident is assured. System operation in this mode is required to maintain containment and suppression pool pressure and temperature within design limits following a significant heat addition to the suppression pool.

The Shutdown Cooling mode of RHR takes suction from the reactor vessel via the "A" loop of the Reactor Recirculation system, passes it through the RHR heat exchanger and returns flow to the reactor through the recirculation lines. This mode of operation is designed to remove sensible and decay heat from the reactor during shutdown.

## A. EVALUATION RESULTS

Licensing Basis Evaluation

The VY licensing basis was reviewed with respect to gas accumulation in water filled Core Standby Cooling Systems (CSCS) systems (i.e., HPCI, RHR and CS as well as other decay heat removal and containment spray systems). This review included the Updated Final Safety Analysis Report (UFSAR), the Technical Specification (TS) and associated Bases, the Technical Requirements Manual (TRM) and associated Bases, the Facility Operating License (FOL) Conditions and regulatory commitments contained in responses to NRC generic communications.

VY was licensed to the 1967 Atomic Energy Commission Draft General Design Criteria (GDC) as detailed in VY UFSAR Appendix F and UFSAR Table 1.7.7. These Criteria include a number of specific criteria applicable to CSCS design, capability, inspection and testing requirements (referred to as Emergency Core Cooling Systems in the Draft AEC GDC).

The UFSAR Table 1.7.7 provides a reference to the applicable UFSAR sections that document how the GDC are addressed in the VY design.

A review of the UFSAR did not identify any specific requirements related to gas accumulation in the CSCS systems, however from the system descriptions it is evident that the CSCS systems are assumed to be water filled. No specific void size discussion or acceptance criterion was identified.

The VY TS (Appendix A to the Facility Operating License) includes the following limiting conditions for operation (LCO) and surveillance requirements (SR) that address gas accumulation:

- LCO 3.5.I, "Maintenance of Filled Discharge Pipe" states "Whenever core spray subsystems, LPCI subsystem, HPCI or RCIC are required to be operable, the discharge piping from the pump discharge of these systems to the last block valve shall be filled."

- SR 4.5.I, "Maintenance of Filled Discharge Pipe" states "The following surveillance requirements shall be adhered to to assure that the discharge piping of the core spray subsystems, LPCI subsystem, HPCI and RCIC are filled".
    - SR 4.5.I.1 Every month and prior to the testing of the LPCI subsystem and core spray subsystem, the discharge piping of these systems shall be vented from the high point and water flow observed.
    - SR 4.5.I.2 Following any period where the LPCI subsystem or core spray subsystems have not been required to be operable, the discharge piping of the inoperable system shall be vented from the high point prior to the return of the system to service.
    - SR 4.5.I.3 Whenever the HPCI or RCIC system is lined up to take suction from the torus, the discharge piping of the HPCI and RCIC shall be vented from the high point of the system and water flow observed on a monthly basis.

The bases for SR 4.5.I states "Observation of water flowing from the discharge line high point vent as required by Specification 4.5.I assures that the Core Cooling Subsystems will not experience water hammer damage when any of the pumps are started. Core Spray Subsystems and LPCI Subsystems will also be vented through a discharge line high point vent following a return from an inoperable status to assure that the system is "solid" and ready for operation."

VY's Engineering evaluation identified a number of vulnerabilities with CSCS suction and discharge piping (discussed later). CSCS suction piping is not currently addressed in the TS.

Based on this, VY will include a commitment to submit to the NRC proposed changes to the VY TS based on the final, approved version of the Technical Specifications Task Force (TSTF) Traveler for unacceptable gas accumulation in ECCS systems, adjusted as needed to account for plant-specific VY design and licensing basis. This will be submitted within 90 days following NRC publication of the Notice of Approval of the TSTF Traveler in the Federal Register.

VY's TRM and associated Bases were reviewed and no specific requirements related to gas accumulation in CSCS systems was identified. No changes to the TRM were identified.

VY's FOL, DPR-28, and associated License Conditions were reviewed and no specific requirements related to gas accumulation in CSCS systems was identified. No changes to the FOL were identified.

No specific regulatory commitments were identified with respect to gas accumulation within the CSCS systems in responses to NRC generic communications.

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Nine-Month Response to NRC Generic Letter 2008-01

Design Evaluation

The VY design basis was reviewed with respect to gas accumulation in the subject systems. This review included Design Basis Documents (DBDs), Calculations, Engineering Evaluations and procedures.

VY's review of the design basis revealed design requirements relating to the following:

1) Surveillance requirements for ensuring discharge piping are periodically vented to ensure piping is full of water.

   The VY TS provide surveillance requirements for the HPCI, RHR and CS discharge piping. RHR and CS piping is vented monthly and following out of service periods. Venting of the HPCI system is not performed monthly due to the elevation of the normal water source (i.e., CST). Venting of HPCI is required when the system is aligned to the suppression pool.

2) Requirements to have keep-fill systems for the RHR and CS systems that are provided to ensure that the system piping remains full of water.

   The RHR and CS systems are provided with pressurizing lines from the non-safety related Condensate Demineralizer (CD) system. The HPCI system is maintained water filled by the CST.

3) Statements about the HPCI system's elevation with respect to the elevation of the CST that ensures a water seal is provided for containment integrity.

   The VY design accounts for realignment of the HPCI system from the normal water source (i.e., CST) to the suppression chamber. The design ensures that a water seal is maintained as motor operated valves change position for this realignment. This ensures the piping remains water filled, suction is not lost due to vortexing and that primary containment is maintained.

4) Statements on modes of operation (e.g., RHR Containment Spray) that include empty sections of pipe (i.e., where the systems inject into the containment).

   The portions of systems where they inject into the reactor vessel through spray nozzles or spargers have the potential for having air voids.

5) Statements about how the specific GDC are met and applied to the station design.

   There are a number of GDC applicable to the design, operation and testing of the subject systems. The Design Basis Documents discuss the applicable GDC and provide a discussion about how they are addressed by the VY design.

6) Mission times for system operations.

   The design provides requirements for pump start times, system initiation times and time to rated flow requirements. Surveillance procedures verify these requirements.

Although it is clear that the design called for the systems to be water filled, VY's review did not identify any specific design requirements relating to acceptable void size for the subject systems.

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System Walkdowns

To assess the condition of the systems for vulnerabilities relating to gas accumulation, the isometric drawings for each system were reviewed. The accessible horizontal lines were identified, measured for slope, and the results documented in the engineering summary report. The slope measurements accounted for instrument inaccuracies, with and without insulation on the piping. The potential air void sizes were calculated and compared against the calculated void acceptance criteria on the pump suction and discharge. Ultrasonic Tests to detect air were performed on piping configuration that was suspect of containing an air void. Horizontal pipe sections, that contain pipe slopes that have the potential to have a void that exceeds the acceptance criteria, were evaluated. There were no pipe sections where the void size, based on pipe slope measurements, exceeded the void acceptance criteria.

The horizontal lines originate from the CST in the underground pipe trench and run through the Reactor Building into the pump rooms. Also they run from the suppression pool suction to the pump suction and from the pump discharge, through the Reactor Building, where they enter the primary containment through a penetration. Inaccessible pipe runs in the steam tunnel and primary containment were not included in the evaluated scope.

The engineering report contains photos of each horizontal pipe run, the slope/elevation values, valves contained within the pipe run, and location of high point vents. The horizontal lines on the pump discharge that return to the suppression pool (min flow test lines) were not measured past the first closed isolation valve based on the suppression pool being opened to atmosphere and no water hammer could occur.

The susceptible portions of each system were evaluated to determine if additional corrective action is required. Acceptable void sizes were determined using available industry information and the evaluations are documented in Reference (d).

The following summarizes the piping configurations where additional corrective action was deemed necessary.

1. HPCI System suction piping (single train)

   The HPCI System suction piping has an inverted "U" section that does not have an installed vent. The piping was subject to a UT inspection and a void identified. The void was determined to exceed void size acceptance criteria. An operability evaluation was completed and the system was determined to be operable.

   A commitment to implement a modification during refueling outage (RFO) No. 27, scheduled for Fall 2008, to add a vent valve to the suction piping, is included in this letter.

2. HPCI System pump discharge piping (single train)

   The HPCI System pump discharge piping has an inverted "U" near Flow Element FE-80 that does not have an installed vent. A UT was performed and the pipe was found to be full of water. This section of pipe is within the boundary for the

periodic system flow test so any trapped air would be flushed out of the system. The issue identified is when the system is drained for maintenance, this section may not be filled following maintenance.

Based on this, the vulnerability was not considered an operability concern based on the void being normally flushed through the system.

A commitment to implement a modification during refueling outage (RFO) No. 28, scheduled for Spring 2010, to add vent valves on both sides of the orifice, is included in this letter.

3. CS System suction piping (both trains)

   The CS System suction piping has an inverted "U" that does not have an installed vent. A UT exam verified that the suction piping for both systems was full of water so there were no operability concerns. The issue identified is when the suppression pool is drained and refilled, gas could be captured in the piping. Draining the suppression pool is not scheduled to occur before RFO 28. These suction paths are routinely flushed when the system pumps are run for their periodic TS surveillances. Based on this, the vulnerability was not considered an operability concern.

   A commitment to implement a modification during refueling outage (RFO) No. 28, scheduled for Spring 2010, to add vent valves on both sides of the orifice, is included in this letter.

4. RHR System suction piping (both trains).

   The RHR System suction piping has an inverted "U" in the piping that does not have an installed vent. A UT exam verified that the suctions piping for both systems were full of water so there were no operability concerns. The vulnerability is primarily a concern should the suppression pool be drained and refilled. These suction paths are routinely flushed when the system pumps are run for their periodic TS surveillances.

   Based on this, the vulnerability was not considered an operability concern and therefore a modification will be implemented during RFO No. 28 currently scheduled for the Spring of 2010.

5. RHR System LPCI injection piping (both trains).

   The RHR LPCI injection piping includes a vertical pipe below injection valves RHR-27A/B. The valves are exercised for the periodic surveillance procedure so any trapped air would be vented. The issue identified is when the RHR system is drained for maintenance the potential to trap air in the piping below the isolation valve exists. The potential unvented volume and void size was determined to be less that the discharge void size acceptance criteria.

Based on this, the vulnerability was not considered an operability concern and therefore a modification will be implemented during RFO No. 28 currently scheduled for the Spring of 2010.

Acceptance Criteria

A review of the current Licensing basis, design basis and surveillance procedures did not identify any existing acceptance criteria for void size in the subject systems.

Acceptance criteria used to evaluate the acceptability of the voids, identified during this assessment, was based on industry and BWR Owners Group guidance and is documented in Reference (d).

Testing Evaluation

VY procedures that perform the TS required venting do not currently document and initiate corrective action if air is noted during the venting operation.

VY procedures for venting and filling the HPCI system limit venting to when the system is aligned to the suppression pool and when maintenance is performed on the system. Periodic venting is not currently required or performed. This is based on the relative elevation of the normal suction source (i.e., the CST). Based on this ENO will enhance the applicable procedure to provide for periodic venting of the HPCI system suction and discharge piping. The periodicity will be established based on the results of the venting operations.

VY procedures for venting and filling the CS and RHR system piping provide for venting the discharge piping monthly, in accordance with the TS, and following maintenance activities. Currently vents are not installed on the CS and RHR suction piping and are planned for installation during RFO 28. Following installation of the vents, procedures for periodic venting of the CS and RHR suction piping will be performed. The periodicity will be established based on the results of the venting operations.

VY procedures for establishing shutdown cooling during an outage period provide for venting and filling the applicable piping prior to putting the system in service.

Based on the above review of testing requirements, VY will develop administrative controls for capturing the results of venting operations, evaluating operability and trending the results. This will include as required, entry into the CR process if air is present during venting operations, notification of the Shift Manager, trending of venting results, acceptance criteria and evaluation of impact of venting results on system operability. The amount of air vented will not exceed the calculated suction and discharge acceptance criteria.

Corrective Actions Evaluation

Findings that were identified during this evaluation were entered into the VY Corrective Action Program (CAP).

VY has not historically entered routine gas venting results into the CAP. The need to do this will be assessed as part of the development of improved administrative controls associated with capturing and trending the results of periodic venting operations.

## B. DESCRIPTION OF NECESSARY CORRECTIVE ACTIONS

VY will implement the following actions to assure compliance with the applicable regulations:

1) Install a vent on HPCI suction piping and revise HPCI surveillance procedure to include periodic venting of HPCI suction piping prior to startup from RFO 27.
2) Install vents on HPCI discharge piping and revise surveillance procedures to include the additional periodic venting prior to startup from RFO 28.
3) Install vents on CS suction piping and revise surveillance procedures to include the additional periodic venting prior to startup from RFO 28.
4) Install vents on RHR suction piping and revise surveillance procedures to include the additional periodic venting prior to startup from RFO 28.
5) Install vents on RHR LPCI injection piping and revise surveillance procedures to include the additional periodic venting prior to startup from RFO 28.
6) Develop administrative controls for capturing the results of venting operations of HPCI, CS and RHR systems, evaluating operability and trending the results. This will include:

    - Entry into the CR process if air is present during venting operations
    - Notification of the Shift Manager
    - Trending of venting results
    - Acceptance criteria
    - Evaluation of impact of venting results on system operability

7) Submit, to the NRC, proposed changes to the VY TS based on the final, approved version of the Technical Specifications Task Force (TSTF) Traveler for unacceptable gas accumulation in ECCS systems, adjusted as needed to account for plant-specific VY design and licensing basis. This will be submitted within 90 days following NRC publication of the Notice of Approval of the TSTF Traveler in the Federal Register.

## C. SCHEDULE FOR COMPLETION

The schedule for completion of corrective actions is provided in Section B. This schedule provides for addressing the vulnerability identified in the HPCI system during RFO 27 scheduled for the Fall of 2008. This was considered appropriate because an actual air void was identified that could challenge system operability. Other system modifications are planned to be resolved during RFO 28, scheduled for the Spring of 2010. This is considered appropriate since field UT measurements confirmed that the system was full of water, the vulnerability is related to a maintenance activity and the air void is in a section of piping that is flushed during periodic system surveillance testing. The programmatic tracking and trending administrative controls will be developed by July 2009. This provides time for Entergy to work as a Fleet to ensure that there is a consistent approach to monitoring gas accumulation in the subject systems. VY's schedule for TS improvements will be based on the industry effort to develop and obtain NRC approval of a TSTF.

## CONCLUSION

VY has evaluated the accessible portions of those VY systems that perform the functions described in this GL and has concluded that these systems remain Operable, as defined in the VY TS. VY found nothing that would challenge the operability of the inaccessible piping that will be evaluated during the 2008 RFO.

VY's review identified corrective action necessary to ensure conformance to the applicable GDC, as stated in the UFSAR and the deviations have been entered into the Corrective Action Program (CAP) for tracking and final resolution.

Additional enhancements identified during the review that are not documented in this letter have been entered into the CAP for consideration.

As committed in Reference (b) and accepted in Reference (c), VY will complete its evaluation of the inaccessible portions of these systems by startup from the 2008 RFO and will provide a supplement to this response within 90 days following startup, but no later than January 30, 2009.

## REFERENCES

a) NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal and Containment Spray Systems," NVY 08-008, dated January 11, 2008

b) Letter, ENO to USNRC, "Vermont Yankee Three Month Response to Generic Letter 2008-001," BVY 08-020, dated April 20, 2008

c) Letter, USNRC to ENO, "Vermont Yankee Nuclear Power Station – RE: Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," Proposed Alternative Course of Action (TAC NO. MD7891)

d) Vermont Yankee Engineering Report VY-RPT-08-0025

BVY 08-071
Docket No. 50-271

Attachment 2

Vermont Yankee Nuclear Power Station

Regulatory Commitment List

***Vermont Yankee Nuclear Power Station***
***Response to Generic Letter 2008-01***
***List of Regulatory Commitments***

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

| COMMITMENT | TYPE (Check one) | | SCHEDULED COMPLETION DATE |
|---|---|---|---|
| | ONE-TIME ACTION | CONTINUING COMPLIANCE | |
| Install a vent on HPCI suction piping and revise HPCI applicable procedures to include periodic venting of HPCI suction piping. | X | | RFO 27 |
| Install vents on HPCI discharge piping, CS suction piping, RHR suction piping and RHR LPCI injection piping and revise applicable procedures to include periodic venting. | X | | RFO 28 |
| Develop administrative controls for capturing the results of venting operations, on HPCI, CS and RHR systems, entering results into the corrective action program, evaluating operability and trending the results. | | X | July 2009 |
| Submit, to the NRC, proposed changes to the VY TS based on the final, approved version of the Technical Specifications Task Force (TSTF) Traveler for unacceptable gas accumulation in ECCS systems, adjusted as needed to account for plant-specific VY design and licensing basis. | X | | Within 90 days following NRC publication of the Notice of Approval of the TSTF Traveler in the Federal Register |