



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

April 19, 2013

Christopher Recchia
Commissioner
State of Vermont
Department of Public Service
112 State Street
Montpelier, VT 05620-2601

Dear Commissioner Recchia:

Thank you for your letter dated March 21, 2013, regarding your concerns related to the reactor building ventilation system at Vermont Yankee. Your letter lists six topics and inquires how the NRC evaluated those topics when reviewing Vermont Yankee's license renewal application. The license renewal review conducted by the NRC focuses on the licensee's programs to manage age-related degradation of certain passive, long-lived systems, structures, and components. The passive, long-lived portions of the reactor building ventilation system were reviewed during license renewal. Specifically, the reactor building blow-out panels are included in the licensee's structures monitoring aging management program. The NRC review concluded that the licensee's program would adequately ensure that the aging effects of the reactor building ventilation system would be appropriately managed.

However, the majority of the topics you listed are assessed through the NRC's reactor oversight process, which is the NRC's ongoing inspection and oversight program that verifies the licensee's compliance with NRC regulations. They would not be part of our review of Vermont Yankee's application for license renewal. As of the date of this letter, the licensee's root cause analysis for this incident has not been completed. However, the NRC has completed its initial review of this incident and I would like to provide you the results to date.

Below are our responses to the six topics you raised in your letter.

- 1) The integrity of the electrical, mechanical and physical components of the air intake/exhaust system, including those components associated with secondary containment;

The resident inspectors frequently review the condition of plant components as well as the maintenance performed on them against the requirements of Title 10 of the Code of Federal Regulations. Secondary containment and the safety-related air exhaust system associated with it, called standby gas treatment, are periodically inspected to ensure they are capable of performing their functions under both normal and accident conditions. We reviewed our periodic inspection results for the past five years and noted that there have been no findings associated with these systems.

- 2) the adequacy of the design of the air intake/exhaust system, including that associated with secondary containment;

The adequacy of the design is constantly reviewed to ensure conformance with the requirements in Title 10 of the Code of Federal Regulations by NRC inspectors as part of the reactor oversight process. This review is ongoing whenever the plant is operating. Specifically, the safety design requirements of the safety-related air exhaust system (standby gas treatment) are to maintain a negative pressure in secondary containment and filter the air to keep offsite dose low, while the non-safety-related reactor building ventilation system is required to isolate during an accident. In accordance with Vermont Yankee's Technical Specifications, secondary containment is required to be maintained at a negative pressure while the plant is operating or while moving spent fuel. At the time of this event, there were no requirements for secondary containment to be at a negative pressure. Blow-out panels are also included in the design to protect the physical integrity of secondary containment from internal overpressure conditions, such as those anticipated during tornado force winds. The blow-out panels worked as designed in this case.

- 3) Vermont Yankee's procedures for: (i) operating the air intake/exhaust system, including that used for secondary containment, and (ii) detecting and responding to an abnormal condition;

The NRC will review the licensee's procedures for operating the reactor building ventilation system as part of the review of the licensee's root cause analysis. The response to the second part of your question is included in our response to question 6 below.

- 4) the physical integrity of components in the air intake systems at Vermont Yankee including the blow-out panels and associated hardware of the components involved in this incident (eye-bolts, wire ropes, etc.);

The blow-out panels did work as designed to relieve a high pressure condition in secondary containment. The wire ropes and eye-bolts on the panel did not keep it attached to the building; however the purpose of attaching a wire retaining rope to the blow-out panel is to prevent a potential occupational injury. Therefore, the failure of the wire rope did not impact plant safety. Additionally, there were no occupational injuries from this incident. The licensee has entered the issue with the blow-out panel restraints into the corrective action program in order to prevent recurrence.

- 5) the adequacy of the design of the blow-out panels and associated hardware (eye-bolts, wire ropes, etc.), including any discussion involving more recent designs of such components;

As mentioned above, plant design requirements are frequently reviewed against Title 10 of the Code of Federal Regulations by NRC inspectors through the reactor oversight process. Specifically, the design requirements of the blow-out panels are to relieve an internal overpressure in secondary containment. The

blow-out panels functioned as designed. As noted above, the licensee is evaluating the failure of the blow-out panel restraints.

- 6) Vermont Yankee's procedures for responding to incidents like the one involving the blown-out panel.

NRC inspectors reviewed Vermont Yankee's actions in response to this incident. The NRC determined that the licensee took appropriate action in accordance with its procedures, which included postponing movement of fuel until a negative pressure in secondary containment could be re-established and placing a continuous air monitor at the opening that would alarm if there was high airborne contamination near it (which did not occur).

The NRC will continue to monitor and assess the licensee's performance to ensure the protection of public health and safety and the environment. The results of our initial inspection of this incident will be documented in the first quarter integrated inspection report, to be issued on or before May 15. This report will be provided to you via listserv. A subsequent report will contain the results of our review of the licensee's root cause analysis for this issue. Should you have any additional questions or would like to further discuss this issue; you may contact me at 610-337-5299 or Doug Tiff, Regional State Liaison Officer at 610-337-6918.

Sincerely,

A handwritten signature in black ink, appearing to read 'W M Dean', with a long horizontal flourish extending to the right.

William M. Dean
Regional Administrator