

August 16, 2006

Mr. Michael Kansler
President
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601-1839

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF
VERMONT YANKEE NUCLEAR POWER STATION LICENSE RENEWAL
APPLICATION

Dear Mr. Kansler:

By letter dated January 25, 2006, as supplemented by letter dated March 15, 2006, the U.S. Nuclear Regulatory Commission (NRC) received the Entergy Nuclear Operations, Inc., application for renewal of Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station (VYNPS). The NRC staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review. Specifically, the enclosed requests for additional information are from Section 2.2, "Plant Level Scoping Results," and Section 2.3.3, "Auxiliary Systems," of the VYNPS license renewal application.

Based on discussions with Mr. Jim DeVincentis of your staff, a mutually agreeable date for your response is within 30 days of the date of this letter. If you have any questions regarding this letter or if circumstances result in your need to revise the response date, please contact me at 301-415-4053 or by e-mail at jgr@nrc.gov.

Sincerely,

/RA/

Jonathan Rowley, Project Manager
License Renewal Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosure:
Requests for Additional Information

cc w/encl: See next page

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Letter to Michael Kansler from Jonathan Rowley dated August 16, 2006

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VERMONT YANKEE NUCLEAR POWER STATION LICENSE RENEWAL
APPLICATION

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VERMONT YANKEE NUCLEAR POWER STATION
LICENSE RENEWAL APPLICATION
REQUESTS FOR ADDITIONAL INFORMATION (RAIs)

RAI 2.2-1

Table 2.2-4 of the license renewal application (LRA) identifies “Structures Not within the Scope of License Renewal.” This table identifies the “Office Building (administration and service buildings)” as not within the scope of license renewal (See page 2.2-10 of the LRA). The table identifies two updated final safety analysis report (UFSAR) sections as references for the office building. UFSAR Section 12.2.1.1.3 is an appropriate reference that identifies the administration building as a seismic Class II structure. However, the second UFSAR Section 12.2.3 is actually for the turbine building and not the administration or service building. Clarify and correct the reference to Section 12.2.3 in Table 2.2-4.

RAI 2.2-3

The pressure regulator and turbine generator control system is described in UFSAR Section 7.11. The purpose of the turbine generator control system is to control steam flow and pressure to the turbine and to protect the turbine from overpressure or excessive speed. The turbine generator controls work in conjunction with the “nuclear steam system” controls to maintain essentially constant reactor pressure and limit reactor transients during load variations. The LRA does not address the nuclear steam system, nor does it appear to refer to UFSAR Section 7.11 in the text. Clarify whether the nuclear steam system is included in the scope of license renewal, or explain the basis for its exclusion.

RAI 2.3.3.2a-1

License renewal drawing LRA-G-191159-SH-01-0, at location H-12, depicts pipe section 2"-SW-566C within the scope of license renewal. Upstream from where 2"-SW-566C enters the reactor building from the outside, there is no drawing continuation to depict the license renewal boundary. Provide information for the continuation of 2"-SW-566C to the license renewal boundary and justify the boundary locations with respect to the applicable requirements of 10 CFR 54.4(a).

RAI 2.3.3.2a-2

License renewal drawing LRA-G-191159-SH-01-0, at location H-11, drawing note 16 indicates pipe section 4"-SW-567 and its supports on the reactor building alternate cooling supply piping (where the vacuum breakers tie in) are seismic Class II for structural integrity. This pipe section from valve 23D through valves RBAC-1A, 1B, 1C and 1D is not shown within the scope of license renewal. Failure of this pipe section could have an adverse effect on the intended pressure boundary function for the service water piping. Provide additional information about why this section of pipe and components are not shown within the scope of license renewal and justify the boundary locations with respect to the applicable requirements of 10 CFR 54.4(a).

ENCLOSURE

RAI 2.3.3.2a-3

License renewal drawing LRA-G-191159-SH-01-0, at location D-5, depicts the license renewal boundary on the downstream side of flow control valve (FCV)-104-17A. The pipe section from FCV-104-17A to the safety class boundary designation flag located at valve 171A and to the intake screens is shown not within the scope of license renewal. Similarly, the pipe section from FCV-104-17 B, C, D, and E to valves 17B, C, D and E and to the intake screens is also shown not within the scope of license renewal. Failure of these sections of pipe could have an adverse effect on the intended pressure boundary function for the service water piping. Provide additional information about why these sections of pipe and components are not shown within the scope of license renewal and justify the boundary locations with respect to the applicable requirements of 10 CFR 54.4(a).

RAI 2.3.3.2a-4

License renewal drawing LRA-G-191159-SH-02-0, at location G-6, depicts a license renewal boundary flag at the tee of pipe sections 2"-SW-566D and 8"-SW-34. There are no highlighted pipes or components on 2"-SW-566D or 8"-SW-34. Clarify which portions of pipe and components are and are not bounded by the aforementioned boundary flag and justify the boundary locations with respect to the applicable requirements of 10 CFR 54.4(a).

RAI 2.3.3.3-1

License renewal drawing LRA-G-191159-SH-03-0, at location P-10 at valve 29 shows a section of pipe within the scope of license renewal. This section of pipe is the reactor building closed-cooling water (RBCCW) return to the alternate cooling system. However, a drawing continuation is not provided. Provide information for the continuation of this pipe section to the license renewal boundary and justify the boundary locations with respect to the applicable requirements of 10 CFR 54.4(a).

RAI 2.3.3.5a-1

License renewal drawing G-191173, Sheet 1, at location H-5 shows a section of pipe within the scope of license renewal. The section of pipe includes check valve V-30 and a "penetration at concrete wall," with changes in seismic classifications at each end. The section of pipe is isolated from all other in-scope piping and is not in an in-scope flow path. Piping upstream of V-30 (8"-FPC-24, 6"FPC-24, and 8"FPC-34) contains two normally closed valves (V-28 and V-53) and is not shown within the scope of license renewal. Piping downstream of V-30 (4"-FPC-24 and 4"-FPC-25) is also not shown within the scope of license renewal. Failure of these sections of piping could have an adverse effect on the intended pressure boundary function for the fuel pool cooling piping. Provide information to justify exclusion from the scope of license renewal the piping from valves V-28 and V-53 to valve V-30 and from the reactor well diffusers to the current license renewal boundary at the penetration upstream of valve V-30.

RAI 2.3.3.6-1

License renewal drawing, LRA-G-191162, Sheet 2, provides information about the emergency diesel generators, diesel-driven fire pump, and house heating boiler systems, supported by the

fuel oil (FO) system. However, the drawing does not provide sufficient information about the John Deere diesel system, also supported by the FO system. For example, more information is required regarding the transfer system between the 75,000-gallon fuel oil storage tank and the day tanks for the two John Deere diesels and single fire pump diesel, which are required to provide an intended function for 10 CFR 54.4 (a)(3) in support of the fire protection regulation (10 CFR 50.48). The LRA text states only that a 500-gallon portable tank is used to transport fuel oil to the diesel day tanks. Typical components subject to aging management review (AMR) for diesels like the day tank, strainer, etc., for the John Deere diesel are not covered. Provide the FO system drawings and describe the John Deere diesel system. Explain the relationship between the John Deere diesel and the FO systems and clarify what the AMR tables should include in both Sections 2.3.3.6 and 2.3.3.12. Also, provide information for the license renewal boundary that justifies its location with respect to the applicable requirements of 10 CFR 54.4(a).

RAI 2.3.3.11-1

License renewal drawing LRA-VY-E-75-002-0, at location K-13 at penetration X209D to the H₂/O₂ analyzers, shows a section of pipe within the scope of license renewal. However, this same section of pipe on drawing LRA-G-191165-0, at location E-16 from penetration X209D through the continuation to drawing LRA-VY-E-75-002-0, is not shown within the scope of license renewal. Confirm whether this section of pipe is within the scope of license renewal, or if not, justify its exclusion.

RAI 2.3.3.11-2

License renewal drawing LRA-VY-E-75-002-0, at location J-9 shows a pipe section, including valve NG-16 to pipe section 20"-AC-13 within the scope of license renewal. However, this same section of pipe on drawing LRA-G-191175-SH-01-0, at location K-10 is not shown within the scope of license renewal. Confirm whether this section of pipe is within the scope of license renewal, or if not, justify its exclusion.

RAI 2.3.3.11-3

License renewal drawing LRA-VY-E-75-002-0, at location G-7 provides a continuation from valve VG-77 to drawing LRA-G-191165-0 (at location B-17) that is within the scope of license renewal. However, the license renewal boundary could not be located on drawing LRA-G-191165-0 (at location B-17). Provide additional information for the continuation of this pipe section to the license renewal boundary and justify the boundary locations with respect to the applicable requirements of 10 CFR 54.4(a).

RAI 2.3.3.11-4

License renewal drawing LRA-VY-E-75-002-0, at location J-8 shows a pipe section downstream of valve VG-30A within the scope of license renewal. A drawing continuation to the license renewal boundary is not provided. Provide additional information for the continuation of this pipe section to the license renewal boundary and justify the boundary locations with respect to the applicable requirements of 10 CFR 54.4(a).

RAI 2.3.3.11-5

License renewal drawing LRA-VY-191165-0, at location I-15 provides a continuation of a pipe section from the H₂/O₂ analyzers to drawing LRA-VY-E-75-002-0 that is within the scope of license renewal. However, the license renewal boundary could not be located on drawing LRA-VY-E-75-002-0. Provide additional information for the continuation of this pipe section to the license renewal boundary and justify the boundary locations with respect to the applicable requirements of 10 CFR 54.4(a).

RAI 2.3.3.11-6

License renewal drawing LRA-VY-191165-0, at location C-12 provides continuations to drawing LRA-G-191267 (at locations H-12 and H-5) for two pipe lines from the post accident sampling panel that are within the scope of license renewal. The license renewal boundary could not be located on LRA-G-191267-SH-01-0. Provide additional information for the continuation of these pipe sections to the license renewal boundary and justify the boundary locations with respect to the applicable requirements of 10 CFR 54.4(a).

RAI 2.3.3.13k-1

License renewal drawing LRA-G-191178-SH-01-0, at location D-4, shows the common elbow differential flow element upstream piping and high side instrument lines connected to flow transmitters FT-12-1A and FT-12-1B not in the scope of license renewal. A failure of the flow element upstream reactor water cleanup (RWCU) piping or common high side instrument line could prevent the flow transmitters from detecting a high flow condition and the subsequent auto isolation of the RWCU isolation valves. The UFSAR states that the high flow auto closure of the RWCU isolation valves prevents excessive loss of reactor coolant and reduces the amount of radioactive material released from the nuclear system caused by an RWCU line break. This line break isolation feature is necessary to support equipment qualification for high-energy line break analyses. Confirm whether the RWCU high flow auto isolation will occur when negative differential pressure is caused by either failure of the flow element upstream piping or the common high side instrument line. If not, explain why the flow element upstream piping and the common high side instrument lines are not shown in the scope of license renewal on the above drawing.