

March 30, 2006

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
ENTERGY NUCLEAR VERMONT YANKEE,)	Docket No. 50-271-OLA
LLC and ENTERGY NUCLEAR)	
OPERATIONS, INC.)	ASLBP No. 04-832-02-OLA
)	
(Vermont Yankee Nuclear Power Station))	

NRC STAFF'S ANSWER TO NEW ENGLAND COALITION'S BRIEF
ON THE LEGAL SCOPE OF NEW ENGLAND COALITION CONTENTION 4

INTRODUCTION

On March 21, 2006, New England Coalition ("NEC") filed "New England Coalition's Brief on the Legal Scope of [NEC] Contention 4" ("NEC's Brief"), concerning the legal and regulatory seismic standard that applies to the alternate cooling system ("ACS") cooling tower cell at the Vermont Yankee Nuclear Power Station ("Vermont Yankee") under its extended power uprate ("EPU") application. In accordance with the Licensing Board's "Order (Supplemental Schedule)" dated March 14, 2006, as modified by Orders dated March 23 and March 28, 2006,¹ the NRC Staff ("Staff") hereby files its response to NEC's Brief.

For the reasons set forth below, the Staff submits that NEC's Brief fails to comply with the Licensing Board's Order requiring NEC to specify the legal and regulatory standard that applies to NEC Contention 4, and identify the specific portions of that standard which NEC contends have not been satisfied. Accordingly, the Staff respectfully submits that NEC should be required to file a further brief in response to the Board's Order, and that other parties should be afforded an opportunity to respond thereto.

¹ See "Order (Granting [NEC] Motion for Enlargement of Time Related to NEC Contention 4 . . .)," dated March 23, 2006; "Order (Granting NRC Staff's Unopposed Motion for Extension of Time)," dated March 28, 2006.

BACKGROUND

On September 21, 2005, NEC filed a request for admission of its revised Contention 4,² following the Licensing Board's dismissal of NEC's initial Contention 4 on grounds of mootness.³ On December 2, 2005, the Licensing Board issued its decision in LBP-05-32, admitting revised NEC Contention 4.⁴ As modified by the Board, NEC Contention 4 asserts:

The Entergy Vermont Yankee [ENVY] license application (including all supplements) for an extended power uprate of 20% over rated capacity is not in conformance with the plant specific original licensing basis and/or 10 CFR Part 50, Appendix S, paragraph I(a), and/or 10 CFR Part 100, Appendix A, because it does not provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that the Vermont Yankee Nuclear Power Station Alternate Cooling System [ACS] in its entirety, in its actual physical condition (or in the actual physical condition ENVY will effectuate prior to commencing operation at EPU), will be able to withstand the effects of an earthquake and other natural phenomena without loss of capability to perform its safety functions in service at the requested increased plant power level.⁵

Following the Licensing Board's admission of revised NEC Contention 4, a dispute arose between the parties as to the factual scope of the contention. See Tr. 728-30, 765. On March 10, 2006, the Licensing Board issued an oral decision, ruling that the factual scope of NEC Contention 4 "is limited to the specific deficiencies alleged by NEC's expert, Dr. Ross B. Landsman, as they relate to the seismic and structural condition of the cooling tower and two

² See "New England Coalition's Request for Leave to File A New Contention" ("NEC Request"), dated September 21, 2005.

³ *Entergy Nuclear Vermont Yankee L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-05-24, 62 NRC 429 (2005).

⁴ See *Entergy Nuclear Vermont Yankee L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-05-32, 62 NRC 813 (2005).

⁵ LBP-05-32, 62 NRC at 827; emphasis added. The language concerning the applicable legal and regulatory standard (emphasized in the text above), had appeared *verbatim* in the contention as filed by NEC. See NEC Request at 1.

safety-related cooling tower cells of the [ACS] system, as analyzed in the ABS Report”; this decision was memorialized in a Memorandum and Order issued on March 24, 2006.⁶

During a prehearing conference call held on January 24, 2006, the Licensing Board observed that NEC had not clearly identified the legal and regulatory standard which should be applied to the issues raised in NEC Contention 4; the Board directed the parties to file briefs addressing this question, taking into consideration the Board’s ruling on the factual scope of the contention. Tr. 820-22. Specifically, the Licensing Board directed as follows:

NEC Contention 4 alleges that certain deficiencies in the license application render the application “not in conformance with the plant specific original licensing basis and/or 10 C.F.R. Part 50, [Appendix S,] paragraph I(a), and/or 10 C.F.R. Part 100, Appendix A.” . . . NEC shall submit a statement or brief . . . that identifies which of these three legal standards are allegedly not satisfied with regard to each of the deficiencies asserted by NEC. This statement or brief should also specify with more particularity, which provisions of the legal standards are allegedly not satisfied, e.g., which part of Appendix A of Part 100 or which part of the plant specific licensing basis are not met.⁷

NEC filed its brief in response to the Licensing Board’s Order on March 21, 2006. Therein, rather than identify which of the three legal standards cited in its contention are applicable, it asserts instead that “all” of those standards apply – and it asserts that other legal standards also apply “that are not enumerated in the text of the contention but which are included in the bases argued for admission of the contention.” NEC’s Brief at 3.⁸ Moreover, contrary to the Licensing Board’s Order, NEC fails to identify any specific portions of those standards which it contends are not satisfied by the EPU application. See *id.*, at 3-9.

⁶ See *Entergy Nuclear Vermont Yankee L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), “Memorandum and Order (Clarifying the Factual Scope of NEC Contention 4 and Denying Untimely Motion for Enlargement of Time to File Reply Brief),” unpublished (March 24, 2006), at 1, *citing* Tr. 820-22. *Cf. id.*, slip op. at 6.

⁷ “Order (Supplemental Schedule),” dated March 14, 2006, at 1-2; *cf.* Tr. 734-35, 788-92.

⁸ NEC also refers to “NEC Contention 9” and unspecified portions of certain unidentified pleadings which it filed in this proceeding. See NEC’s Brief at 3. NEC’s reference to NEC Contention 9 appears to be a typographical error, as no such contention has been filed; further, its reference to unspecified statements in other pleadings is overly vague and should be disregarded.

DISCUSSION

The Staff issued its Final Safety Evaluation (“SE”) for the Vermont Yankee EPU amendment on March 2, 2006.⁹ As noted therein, the Atomic Energy Commission (“AEC”) issued the construction permit for the Vermont Yankee Nuclear Power Station on December 11, 1967. SE § 1.2, at 1. A low power operating license for the facility was issued on March 21, 1972, and a full power operating license was issued on February 28, 1973. *Id.*¹⁰ The ACS was designed and implemented during “during the original plant licensing.” *Id.* at 2.¹¹

As further stated in the SE, “the plant was designed and constructed based on the proposed General Design Criteria (GDC) published by the AEC in the *Federal Register* . . . on July 11, 1967.”¹² The SE notes that the AEC published the final rule adding Appendix A to 10 C.F.R. Part 50, “General Design Criteria for Nuclear Power Plants” (the “final GDC”) on February 20, 1971.¹³ However, the SE indicates that the Commission’s publication of the final GDC did not affect the applicability of the proposed GDC (the “Draft GDC”) to the Vermont

⁹ “Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Amendment No. 229 to Facility Operating License No. DPR-28, Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc., Vermont Yankee Nuclear Power Station, Docket No. 50-271” (Mar. 2, 2006) (ADAMS Accession No. ML060050028 (non-proprietary version).

¹⁰ See “Vermont Yankee Nuclear Power Corp., Notice of Issuance of Facility Operating License,” 37 Fed. Reg. 6345 (Mar. 28, 1972) (ADAMS Accession No. ML011620261); “Vermont Yankee Nuclear Power Corp., Notice of Issuance of Amendment to Facility Operating License,” 38 Fed. Reg. 6313 (Mar. 8, 1973) (ADAMS Accession No. ML011580230).

¹¹ The SE further observes, *inter alia*, that “[t]he ACS is not classified as an engineered safeguards system and is not designed to accept the consequences of a design basis loss-of-coolant accident (LOCA). It is also not designed to meet single failure criteria. . . . The ACS is designed to provide adequate heat removal for these [specified] postulated events to achieve and maintain safe shutdown when the normal SW system (i.e., pumping from the Connecticut River) is lost.” SE § 1.2, at 2.

¹² SE § 1.2 at 1, referring to “Licensing of Production and Utilization Facilities, General Design Criteria for Nuclear Power Plant Construction Permits,” 32 Fed. Reg. 10,213 (July 11, 1967).

¹³ See “Part 50 – Licensing of Production and Utilization Facilities, General Design Criteria for Nuclear Power Plants,” 36 Fed. Reg. 3255 (Feb. 20, 1971).

Yankee construction permit, and did not establish different criteria for the Vermont Yankee operating license. In this regard, the SE states:

Differences between the draft GDC and final GDC included a consolidation from 70 to 64 criteria. As discussed in the NRC Staff Requirements Memorandum for SECY-92-223, dated September 18, 1992 ([ADAMS] Accession No. ML003763736), the Commission decided not to apply the final GDC to plants with construction permits issued prior to May 21, 1971. At the time of promulgation of Appendix A to 10 CFR Part 50, the Commission stressed that the final GDC were not new requirements and were promulgated to more clearly articulate the licensing requirements and practice in effect at that time. Each plant licensed before the final GDC were formally adopted was evaluated on a plant-specific basis, determined to be safe, and licensed by the Commission.

SE § 1.2, at 1; emphasis added.

As the above discussion indicates, the “plant specific original licensing basis” for the facility, which is referred to in NEC Contention 4, was established by the Draft GDCs. While NEC refers to “the original licensing basis” for the facility (NEC’s Brief at 4), it fails to identify which (if any) of the Draft GDCs established the seismic standard for the ACS. Further, while NEC elsewhere refers to two of the Draft GDCs in particular *i.e.*, Draft GDC 2¹⁴ and Draft

¹⁴ Draft GDC 2 states as follows:

Those systems and components of reactor facilities which are essential to the prevention of accidents which could affect the public health and safety or to mitigation of their consequences shall be designed, fabricated, and erected to performance standards that will enable the facility to withstand, without loss of the capability to protect the public, the additional forces that might be imposed by natural phenomena such as earthquakes, tornadoes, flooding conditions, winds, ice, and other local site effects. The design bases so established shall reflect:

(a) Appropriate consideration of the most severe of these natural phenomena that have been recorded for the site and the surrounding area and (b) an appropriate margin for withstanding forces greater than those recorded to reflect uncertainties about the historical data and their suitability as a basis for design.

32 Fed. Reg. at 10,215. The Applicant has previously described the regulatory requirements for the Vermont Yankee service water systems, including the ACS, indicating that draft GDC-2 applies. See “Design Basis Document for Service Water Systems,” Rev. 1 (Feb. 4, 2004), § 2.2.1.1 at 13. NEC

(continued...)

GDC 19,¹⁵ it fails to state that either of these draft GDCs established the seismic licensing basis for the ACS at the facility. See NEC's Brief at 7, 8. Further, NEC appears to argue that other draft GDCs, or some unspecified Final GDCs – or, "both Draft and General Design Criteria" – may apply. *Id.* at 8; emphasis added. These assertions fail to comply with the Licensing Board's Order requiring it to specify which standard it contends has been violated by the EPU application with respect to the ACS, and which specific portion of the applicable regulatory standard has not been satisfied.

Similarly, NEC asserts that 10 C.F.R. Part 100, Appendix A may (or may not) establish the regulatory standard for the Vermont Yankee ACS, stating that either the original licensing basis "and/or 10 C.F.R. Part 100, Appendix A," and/or some other standard, may apply.¹⁶ NEC's Brief at 7-8; emphasis added. These statements, like NEC's statements concerning the original licensing basis, fail to comply with the Licensing Board's Order.

Finally, NEC asserts that 10 C.F.R. Part 50, Appendix S may (or may not) apply, again using the term "and/or" in referring to this regulation. *Id.* at 7. In addition, NEC cites "selected applicable sections" of 10 C.F.R. Part 50, Appendix S. *Id.* However, NEC fails to indicate whether it contends that these "selected" provisions are the only portions of Appendix S that

¹⁴(...continued)
appears to cite a prior version of this document, but does not discuss this issue. See NEC Brief at 4 n.5.

¹⁵ Draft GDC 19 requires that "Protection systems shall be designed for high functional reliability and in-service testability commensurate with the safety functions to be performed. 32 Fed. Reg. at 10,216; emphasis added. It is unclear why NEC contends that Draft GDC 19 applies to NEC Contention 4, inasmuch as the ACS is not designated as a "protection system" at the facility. See Vermont Yankee UFSAR § 7.1.1 ("Protection Systems"), at 7.1-3 of 10.

¹⁶ It is unclear why NEC contends that Appendix A to 10 C.F.R. Part 100 may apply. Appendix A was published in the *Federal Register* on November 13, 1973, and became effective on December 13, 1973 – after both the construction permit and operating license had been issued for Vermont Yankee. In this regard, the Applicant has previously stated, "In response to discussions with the NRC staff regarding VYNPS' licensing basis relative to seismic criteria, VY confirms that VYNPS was licensed prior to Appendix A to 10CFR 100 becoming effective. Consequently, Appendix A to 10CFR100 is not part of VYNPS' licensing basis." Letter from Jay K. Thayer (Entergy) to Document control desk (NRC), dated November 7, 2003 (ADAMS Accession No. ML0414901280), at 1.

apply to the ACS or whether some other, unspecified portions of the regulation apply. These statements, like NEC's statements concerning other standards discussed above, fail to comply with the Licensing Board's Order.¹⁷

Moreover, it is unclear whether NEC believes that the original licensing basis for the ACS has been supplanted by some other regulatory standard due to the EPU application. If NEC contends that the original licensing basis does not apply, it has failed to provide any support for that view – and it has altogether failed to address the relevant considerations enunciated in the Licensing Board's prior decision in *Entergy Nuclear Vermont Yankee L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-04-28, 60 NRC 548, 564-66 (2004) (rejecting State Contention 3).

Significantly, in LBP-04-28, the Licensing Board rejected the State's assertion that "because Entergy is voluntarily asking for a change to its design or current licensing basis, Entergy should be required to meet current, more restrictive licensing requirements on matters that are 'directly related' to the proposed change." *Id.* at 564. *Id.* at 565; footnote omitted.¹⁸

¹⁷ NEC fails to explain why it believes this regulation may apply to the ACS, at all. Appendix S to 10 C.F.R. Part 50 was adopted on December 11, 1996. See "Reactor Site Criteria Including Seismic and Earthquake Engineering Criteria for Nuclear Power Plants," 61 Fed. Reg. 65,157, 65,173 (Dec. 11, 1996). As discussed in the "General Information" section of Appendix S, that Appendix "applies to applicants for a design certification or combined license pursuant to [10 C.F.R.] Part 52 . . . or a construction permit or operating license pursuant to [10 C.F.R.] Part 50 . . . on or after January 10, 1997." Further, the General Information section indicates that Appendix S does not apply to "an operating license applicant or holder whose construction permit was issued prior to January 10, 1997"

¹⁸ The Board cited section 5.1.4 of NRC Regulatory Guide ("RG") 1.183, noting as follows:

"[Under RG 1.183] prior design bases that are unrelated to the use of the AST or are unaffected by the AST, may continue as the facility's design basis." In short, if there is an "incompatibility," it is permissible to review and apply the current more restrictive standards, but if the other systems are "unrelated" or "unaffected" it is impermissible."²¹

²¹ We reject the State's argument that the backfit rule, which prohibits the NRC from ratcheting regulatory standards on a licensee, does not apply simply because the licensee has voluntarily requested an amendment to its license. . . . Here, Entergy has requested one change

(continued...)

The Licensing Board considered the requirements of the backfit rule, 10 C.F.R. § 50.109,¹⁹ and concluded that new or different regulatory standards cannot be applied to a proposed license amendment unless there is an “unacceptable inconsistency” between the proposed amendment and the existing design and licensing basis. As the Board observed:

The "incompatibility" standard is a strict one. Under the backfit rule, the NRC is prohibited from imposing new or amended licensing standards on existing licensees except under limited circumstances, such as where the NRC does a "systematic and documented analysis" and determines "that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that the direct and indirect costs of the implementation for that facility are justified." 10 C.F.R. § 50.109(a)(2), (3). In contrast, the incompatibility standard is not a cost-benefit analysis. Nor can it be used to impose more stringent requirements merely because they seem like a "good idea" or are somehow "linked" or "related" to the proposed amendment. Instead, incompatibility requires that there be an unacceptable inconsistency between the proposed license amendment and other parts of the licensee's current design and licensing basis, such that approving the amendment must be conditioned on updating the relevant portion of the design or licensing basis in order to protect public safety and health.

¹⁸(...continued)

(an EPU) and the State wants to impose another (modern seismic standards). The first is voluntary, the second is not.

¹⁹ 10 C.F.R. § 50.109 specifies the circumstances under which backfitting may (or must) be required, and the necessary findings and procedural steps which must occur before backfit requirements may be imposed. The rule defines “backfitting,” in pertinent part, as follows:

(a)(1) Backfitting is defined as the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission rules or the imposition of a regulatory staff position interpreting the Commission rules that is either new or different from a previously applicable staff position after:

-
- (ii) Six months before the date of docketing of the operating license application for the facility for facilities having construction permits issued before October 21, 1985; or
- (iii) The date of issuance of the operating license for the facility for facilities having operating licenses;

Id., 60 NRC at 566.²⁰ The Licensing Board then rejected the State's argument that newer, more stringent seismic standards should be applied to the EPU application:

Likewise, with regard to the seismic issues raised by the State, we see no incompatibility. We recognize that there is a relationship between granting a credit for containment overpressure and seismic standards. Containment overpressure is dependent on the integrity of the containment system, which in turn is dependent on its ability to withstand seismic events. But a relationship is not an incompatibility. The Vermont Yankee plant is already subject to stringent seismic and structural standards and the State has offered nothing to suggest an incompatibility between them and the proposed license amendment. Absent such an incompatibility, State Contention 3 is not admissible.

Id. at 567; footnote omitted, emphasis added. These considerations are nowhere addressed in NEC's Brief.

In sum, NEC's Brief fails to clarify which regulatory standard it contends has not been satisfied by the EPU application.²¹ The Staff believes that NEC should be required to file a further brief, in which it clearly delineates which regulatory or legal standard it believes is violated by the EPU application with respect to the Vermont Yankee ACS. Further, if NEC believes that some regulatory standard other than the original licensing basis applies to the ACS, it should identify the grounds for that assertion and address the considerations stated in LBP-04-28.

²⁰ Applying the incompatibility standard to State Contention 3, the Board rejected this portion of the contention as violative of 10 C.F.R. §§ 50.109 and 2.335, in that the State had "not proffered any basis to support the proposition that Entergy's application for containment overpressure credit is incompatible with its current design and licensing basis relating to single failure." LBP-04-28, 60 NRC at 566.

²¹ NEC also cites 10 C.F.R. § 50.9(a). NEC Brief at 8-9. That regulation, however, pertains to the obligation of applicants and licensees to submit information which is complete and accurate in all material respects; it does not establish seismic requirements.

CONCLUSION

For the reasons set forth above, the Staff submits that NEC has failed to identify the regulatory or legal standard which it contends applies to the factual issues raised in NEC Contention 4, and it has not identified the specific portions of that standard which it believes are applicable here. Accordingly, the Staff respectfully submits that NEC should be required to submit a further brief in response to the Board's Order, and that other parties should be afforded an opportunity to respond thereto.

Respectfully submitted,

/RA/

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Dated at Rockville, Maryland
this 30th day of March, 2006

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S ANSWER TO NEW ENGLAND COALITION'S BRIEF ON THE LEGAL SCOPE OF NEW ENGLAND COALITION CONTENTION 4, in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class; or as indicated by an asterisk (*), by deposit in the Nuclear Regulatory Commission's internal mail system; and by e-mail as indicated by a double asterisk (**), this 30th day of March, 2005.

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