

July 15, 2008

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
ENTERGY NUCLEAR VERMONT YANKEE, LLC	)	Docket No. 50-271-LR
AND ENTERGY NUCLEAR OPERATIONS, INC.	)	
	)	ASLBP No. 06-849-03-LR
(Vermont Yankee Nuclear Power Station)	)	

NRC STAFF'S REPLY BRIEF

In accordance with the Board's June 27, 2008 Order (Regarding the Briefing of Certain Legal Issues) ("June 27 Order"), the staff of the U.S. Nuclear Regulatory Commission ("Staff") hereby responds to briefs filed by New England Coalition, Inc. ("NEC"), the Vermont Department of Public Service ("DPS") and Entergy on July 9, 2008.

DISCUSSION

I. Issues 1A & 1B

DPS's and NEC's briefs contain misstatements which the Staff believes must be corrected. First, DPS misstates the Staff's position in this proceeding by asserting that: "[t]he current position of the NRC Staff and Entergy is that although admittedly new CUFen analyses will have to be conducted, neither those analyses nor the details of how those analyses will be conducted are a legitimate part of the LRA hearing." DPS Brief at 2. Not only does DPS provide no basis or citation for its assertion, it is contrary to the record. The Staff did not oppose admission of NEC's Contentions 2A and 2B. See NRC Staff Answer to NEC Motion to File a Timely New or Amended Contention (Aug. 6, 2007); NRC Staff Answer to NEC Motion to File a Timely New or Amended Contention

(Oct. 1, 2007); NRC Staff Answer to NEC Motion to File Timely New or Amended Contention 2A (Metal Fatigue) (Apr. 10, 2008) (arguing that NEC's contention was moot in part and thus should be amended). Thus, the Staff has not maintained that environmentally adjusted cumulative usage factor ("CUFen") analyses may not be the subject of a contention in this proceeding.

Second, in support of its argument that the Staff's interpretation of 10 C.F.R. § 54.21(c)(1) violates § 189(a) of the Atomic Energy Act ("AEA") by depriving intervenors of the opportunity to challenge TLAA demonstrations, NEC incorrectly states that "intervenors have no recourse in enforcement petitions under 10 C.F.R. § 2.206 if an applicant violates a "licensing commitment" to complete or correct analyses to project a TLAA because the NRC does not consider commitments to be legally binding or enforceable." NEC Brief at 5. This statement is incorrect for a number of reasons. It is factually incorrect in this case because Entergy has not simply committed to perform CUFen analyses. Rather, the Staff plans to impose a license *condition* requiring Entergy to complete CUFen analyses (see Staff Exh. 1 at 1-12, 4-43). This license condition *is* legally binding and thus could be the subject of a § 2.206 enforcement petition. Furthermore, the commitments Entergy has made in its license renewal application will be part of Vermont Yankee's current licensing basis ("CLB") and will, therefore, be enforceable both by the Commission and "any person" under § 2.206. See 10 C.F.R. § 54.3 (defining current licensing basis as including licensee commitments made in licensing correspondence and licensee commitments documented in NRC safety evaluations); *Private Fuel Storage LLC* (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 21 (2003) (stating that commitments that are part of a facility's CLB are enforceable even though they do not take the form of formal license conditions); Nuclear Power Plant License Renewal, Final Rule, 56 Fed. Reg. 64,943, 64,946 (Dec.

13, 1991) (“The licensing basis for a nuclear power plant during the renewal term will consist of the [CLB] and any new commitments to monitor, manage, and correct age related degradation . . . .”). Thus, NEC’s statement is both factually and legally incorrect and therefore does not lend support to its assertion that the Staff’s interpretation of § 54.21(c)(1) violates § 189(a) of the AEA.

In addition to factual and legal misstatements, NEC’s and DPS’s briefs reflect a misunderstanding of the definition of TLAA in § 54.3. As defined for purposes of Part 54, TLAAAs “[i]nvolve time-limited assumptions defined by the *current* operating term” and “are contained or incorporated by references in the CLB.” 10 C.F.R. § 54.3.<sup>1</sup> As Entergy correctly notes, environmentally assisted fatigue (“EAF”) is not part of Vermont Yankee’s CLB and thus does not meet the definition of TLAA. See Entergy’s Answers to Licensing Board Questions (July 9, 2008) (“Entergy Brief”) at 3. License renewal applicants consider the effect of EAF on cumulative usage factor (“CUF”) calculations not because the Commission’s regulations or the ASME Code requires it,<sup>2</sup> but because, in closing out generic safety issue (“GSI”)-190 “Fatigue Evaluation of Metal Components for 60-Year Plant Life,” the Staff concluded that “licensees are to address the effects of the coolant environment on component fatigue life as *aging management programs* are

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<sup>1</sup> “*Time-limited aging analyses*, for purposes of this part, are those licensee calculations and analyses that: (1) involve systems, structures, and components within the scope of license renewal, as delineated in § 54.4(a); (2) Consider the effects of aging; (3) involve time-limited assumptions defined by the current operating term, for example, 40 years; (4) were determined to be relevant by the licensee in making a safety determination; (5) involve conclusions or provide the basis for conclusions related to the capability of the system, structure, and component to perform its intended function, as delineated in § 54.4(b); and (6) are contained or incorporated by reference in the CLB.” 10 C.F.R. § 54.3.

<sup>2</sup> See ASME Boiler & Pressure Vessel Code, Section III, Subsection NCA (Staff Exh. D) at xxviii.

formulated in support of license renewal.” Memorandum from A. Thadani to W. Travers, Closeout of Generic Safety Issue 190, “Fatigue Evaluation of Metal Components for 60-Year Plant Life” (Dec. 26, 1999) (Entergy Exh. E2-03) (“Thadani Memo”) (emphasis added). Thus, analysis of EAF is not a TLAA. Rather, it is an effect of aging that Staff guidance *recommends* license renewal applicants consider when developing aging management programs.<sup>3</sup>

Due perhaps to this misunderstanding of the definition of TLAA and mistaken belief that CUFen analyses are TLAAAs as defined by § 54.3, NEC and DPS incorrectly argue that allowing Entergy to perform CUFen analyses after license renewal violates § 54.21(c)(1) and § 54.29. Completion of CUFen analyses after issuance of a renewed license is not contrary to the Commission’s regulations because CUFen analyses are not TLAAAs as defined in § 54.3. Moreover, Entergy is relying upon § 54.21(c)(1)(iii), which requires no analysis. See NRC Staff’s Brief in Response to Board Order (July 9, 2008) (“Staff Brief”) at 5. Consequently, there is no support for NEC’s and DPS’s assertions that a license condition requiring Entergy to perform CUFen analyses after receiving a renewed licenses violates the Commission’s regulations in §§ 54.21(c)(1) and 54.29 or § 189(a) of the AEA.

II. Issue 2

NEC argues that an aging management plan (“AMP”) stating it is “based on” NRC guidance is insufficient for purposes of Part 54 because the regulations require that

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<sup>3</sup> As NEC so vigorously argues, staff guidance does not establish legally binding regulatory requirements. See NEC Brief at 10. Thus, NUREG-1800 simply says applicants “*should* address” as opposed to “*must* address” EAF when formulating aging management programs.

licensees “demonstrate” their programs are adequate to manage aging. NEC Brief at 8. NEC and DPS assert that in order to be adequate, an AMP must be specific enough so that an intervenor can understand and evaluate its content. See NEC Brief at 8; DPS Brief at 11. Furthermore, NEC argues that the Staff must defend the validity of its guidance documents if they are challenged. NEC Brief at 10.

While an applicant must “demonstrate” that the effects of aging will be adequately managed, the regulation does not indicate what may or may not be an acceptable “demonstration.”<sup>4</sup> Thus, guidance documents, while not legally binding,<sup>5</sup> are instructive in reviewing the adequacy of a license application and determining whether it meets regulatory requirements. See *Carolina Power & Light Co. & North Caroling Eastern Municipal Power Agency* (Shearon Harris Nuclear Power Plant), LBP-86-11, 23 NRC 294, 368 (1986) (stating guidance such as NUREGs are treated “as evidence of legitimate means for complying with regulatory requirements”) (internal citations omitted).

Furthermore, the Commission has stated that guidance documents created by the Staff to “assist in compliance with applicable regulations, [are] entitled to special

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<sup>4</sup> DPS misstates the Staff’s position as “no definitive finding is required for VY . . . all that is required is the assertion of a promise to take certain steps, not spelled out in any detail, that if done properly, will result in adequate protection of health and safety of the public.” DPS Brief at 9. This is not the Staff’s position. As previously stated and as indicated herein, a certain amount of detail in the application is not required. For purposes of demonstrating that the effects of aging will be adequately managed, it is sufficient for applicants to state that a program is “based on” or is “comparable to” programs described in Staff guidance. See Staff Response at 7-14; *infra* p. 6. Nevertheless, through on-site audits of licensee documents, the Staff verifies that programs described by the applicant as “comparable to” or “based on” programs described in Staff guidance are in fact consistent with Staff guidance. See Staff Response at 14 & n.20. Thus, contrary to DPS’s assertion, stating a program is “based on” Staff guidance documents, does not defer necessary safety findings. See DPS Brief at 9.

<sup>5</sup> See NEC Brief at 10; Entergy Brief at 10 (internal citations omitted).

weight.” Entergy Brief at 10 (citing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001)). GALL “has been referenced in numerous license renewal applications (LRA) as a basis for aging management reviews to satisfy the regulatory criteria contained in 10 CFR Part 54.” GALL, Rev. 1, Vol. 1 at 2. Moreover, as the Staff previously noted, GALL Rev. 0 states that “[a]n applicant *may reference the GALL report* in its license renewal application to *demonstrate* that the program at the applicant’s facility corresponds to those reviewed and approved by GALL . . . .” Staff Brief at 13 (citing GALL Rev. 0, Vol. 1 at iii) (emphasis added).<sup>6</sup> Thus, a reference to staff guidance in an application is clearly sufficient for purposes of a demonstration required by Part 54 and provides intervenors sufficient information.

Moreover, guidance documents that are “consistent with the regulations and [are] at least implicitly endorsed by the Commission [are] entitled to correspondingly *special weight*.” *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 290 (1988), *review declined*, CLI-88-11, 28 NRC 603 (1988) (emphasis added). In addition, the fact that the license renewal guidance documents, including GALL, were created at the Commission’s direction to improve the predictability, consistency, and efficiency of license renewal reviews and were subject to extensive public and industry scrutiny, cannot be ignored. See Staff Brief at 10-12; Entergy Brief at 10-12.<sup>7</sup> Thus, it is appropriate to afford Staff license renewal guidance documents

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<sup>6</sup> See also GALL, Rev. 1, Vol. 1 at 3-4 (stating that GALL includes one acceptable way to adequately manage aging and states that “[a]n applicant *may reference the GALL Report in a license renewal application to demonstrate* that the programs at the applicant’s facility correspond to those reviewed and approved in the GALL Report”) (emphasis added).

<sup>7</sup> In addition, the ACRS also approved the license renewal guidance documents. See (continued. . .)

special weight.

Despite this special weight, Staff license renewal guidance documents may still be challenged by intervenors. See NEC Brief at 11 (citing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-4, 57 NRC 69, 92 (2003)). If the Staff's guidance "is called into question during the course of litigation," then the "Staff is required to demonstrate the validity of its guidance . . . ." *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), ALAB-698, 16 NRC 1290, 1299 (1982), *rev'd in part on other grounds*, CLI-83-22, 18 NRC 299 (1983).<sup>8</sup> However, the validity of the Staff's guidance documents has not been raised by an admitted contention.<sup>9</sup> See Entergy Brief at 8. Furthermore, NEC, not the Staff, has the burden to come forward

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(. . .continued)

Letter from George E. Apostolakis, Chairman, ACRS to Chairman Meserve (Apr. 13, 2001) (ADAMS Accession No. ML011150278) (stating "[t]he license renewal guidance documents should be approved for issuance.").

<sup>8</sup> See also *Vermont Yankee Nuclear Power Station* (Vermont Yankee Nuclear Power Station), CLI-74-40, 8 AEC 809, 811 (1974) (the Commission observed "that the Appeal Board correctly required the regulatory staff to bear the burden of supporting Safety Guide 7, *once its validity was called into question*") (emphasis added).

<sup>9</sup> In this case, the admitted contentions focus on the adequacy of Entergy's aging management programs related to flow accelerated corrosion, the stream dryer, and metal fatigue. Furthermore, contrary to DPS's assertion, this is not an operating license proceeding; the scope and purpose of a license renewal proceeding is more limited. Compare DPS Brief at 8-9 (stating "this is an operating license proceeding subject to all the requirements applicable to operating license proceedings" and the Commission "has not loosened the Atomic Energy Act obligation to make definitive findings on all safety issues") with 56 Fed. Reg. at 64,945 ("It is not necessary for the Commission to review each renewal application against standards and criteria that apply to newer plants or future plants in order to ensure that operation during the period of extended operation is not inimical to the public health and safety."); Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461, 22,464 (May 8, 1995) (stating "with the exception of age-related degradation unique to license renewal and possibly a few other issues related to safety only during the period of extended operation of nuclear power plants, the regulatory process is adequate to ensure that the licensing bases of all currently operating plants provides and maintains an acceptable level of safety . . .").

with evidence as to why the Staff's guidance is invalid. See *Louisiana Power & Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1093 (1983) (quoting *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331, 345 (1973) ("where . . . one of the other parties contends that, for a specific reason . . . the permit or license should be denied, that party has the *burden of going forward* with evidence to buttress that contention.") (emphasis in original)). Neither NEC nor DPS has pointed to any particular part of the Staff's guidance as invalid nor have they offered any explanation as to why the Staff's guidance is invalid. Taking issue with the fact that Entergy's license renewal application states that it is "based on" and "comparable to" Staff guidance does not render any part of the Staff's guidance invalid. Therefore, the Staff has not been presented with a reason or need to defend the validity of its license renewal review documents in this proceeding.



CONCLUSION

As explained above and previously in the Staff's Brief, a license condition requiring Entergy to complete two CUFen calculations at least two years prior to the period of extended operation is not inconsistent with either § 54.21(c)(1) or § 54.29. Entergy's application provides an adequate description of aging management programs by stating that the program is "comparable to" and "based on" the relevant sections of NUREG-1801 or EPRI NSAC-202L, and the validity of the Staff's guidance has not been called into question.

Respectfully submitted,

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Dated at Rockville, Maryland  
this 15h day of July, 2008

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NUCLEAR REGULATORY COMMISSION

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(Vermont Yankee Nuclear Power Station) )

CERTIFICATE OF SERVICE

I hereby certify that copies of the "NRC STAFF'S REPLY BRIEF" in the above-captioned proceeding have been served on the following by electronic mail with copies by deposit in the NRC's internal mail system or, as indicated by an asterisk, by electronic mail, with copies by U.S. mail, first class, this 15th day of July, 2008.

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