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UNITED STATES
NUCLEAR REGULATORY COMMISSION

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)	)	

NEW ENGLAND COALITION, INC.
SUPPLEMENTAL PREHEARING REPLY BRIEF

New England Coalition, Inc. ("NEC") submits this supplemental prehearing reply brief pursuant to the Board's Order of June 27, 2008.[1]

I. ISSUES 1A AND 1B

In Entergy's and the NRC Staff's view of the License Renewal process, an applicant need never include an analysis to project a TLAA to the end of the period of extended operation in the License Renewal Application (LRA), pursuant to 10 CFR § 54.21(c)(1)(ii). The licensee may instead make a generally stated "commitment" to perform this analysis as an aging management plan pursuant to 10 CFR § 54.21(c)(1)(iii) after license renewal is approved. This commitment to project the TLAA need not specify details of the methodology the applicant will employ, and can constitute the applicant's entire proposed "aging management plan." There is no place for public participation or the Atomic Safety and Licensing Board in this process; the NRC Staff will perform all substantive review of the analysis that may fully constitute a licensee's "aging management plan" after the close of any Board proceedings. Moreover, the NRC Staff does not consider "commitments" legally binding or enforceable under 10 CFR § 2.206. As the

[1] Licensing Board Order (Regarding the Briefing of Certain Legal Issues) (June 27, 2008).

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State of Vermont has aptly observed, the Staff does not propose to eliminate review of safety analyses; it just wants to eliminate the role of the public and the Board in that review.

The Atomic Energy Act (AEA) mandates the public participation Entergy and the NRC Staff would foreclose; the NRC may not exclude a material public-safety related issue from consideration by the Atomic Safety and Licensing Board at the request of an interested person. *See, Union of Concerned Scientists v. United States Nuclear Regulatory Commission*, 735 F.2d 1437 (D.C. Cir. 1984). Entergy's and the NRC Staff's arguments are without merit.

A. ENTERGY'S CUFEN ANALYSES ARE TO PROJECT A METAL FATIGUE TLAA TO THE END OF THE PERIOD OF EXTENDED OPERATION, PURSUANT TO 10 CFR § 54.21(c)(1)(ii).

Entergy's CUFen analyses are a TLAA demonstration meant to substitute for the management of aging due to metal fatigue through inspection, repair and replacement of components; as such, it must be included in the license renewal application (LRA) pursuant to 10 CFR 54.21(c)(1)(ii). Entergy performed the CUFen analyses to project the CUF calculations that are part of Vermont Yankee's current licensing basis (CLB) to the end of the period of extended operations. The CUFen analyses are intended to demonstrate that a metal fatigue "aging management plan" involving component inspection, repair and replacement is unnecessary. If the CUFen analyses fail to demonstrate that vulnerable Vermont Yankee components will meet acceptance criteria through the end of the renewed license term, Entergy is required to amend its LRA to specifically describe the scope, method and frequency of a proposed inspection and maintenance program. 10 CFR § 54.21(c)(1). NEC would then be entitled to review and evaluate this program pursuant to its Contention 2, now stayed by Board Order pending resolution of Contentions 2A and 2B.

Entergy contends that its CUFen analyses are not a projection of a TLAA. This is incorrect. The CUFen analyses project CUF calculations, which are a TLAA incorporated in Vermont Yankee's CLB. Entergy's LRA states the following:

> Fatigue evaluations were preformed in the design of the VYNPS Class 1 components designed in accordance with the requirements specified in ASME Section III. The fatigue evaluations are contained in analyses and stress reports, and because they are based on a number of transient cycles assumed for a 40-year plant life, these evaluations are considered TLAA.

LRA § 4.3-1; *See also,* Exhibit NEC-JH_62, NRC Summary of Telephone Conference Call Held on August 20, 2007, Concerning the Vermont Yankee Nuclear Power Station License Renewal Application at Enclosure 2 ("Fatigue analyses based on a set of design transients and on the life of the plant are treated as TLAAs.").

The NRC Staff's explanation of its treatment of the CUFen reanalyses makes clear that the Staff's position elevates form over substance. It also underscores NEC's argument that the Staff's view of § 54.21(c)(1) renders § 54.21(c)(1)(ii) superfluous. The Staff claims that it did not change its interpretation of § 54.21(c)(1) between August 2007 and May 2008. Rather, Entergy changed its view of which section of § 54.21(c)(1) applies to the CUFen analyses: "Entergy temporarily indicated that it would rely on § 54.21(c)(ii), before ultimately relying upon § 54.21(c)(1)(iii)." NRC Staff's Brief in Response to Board Order at 4. The NRC's regulations should not and do not allow an applicant to alter the Staff's treatment of a safety analysis by citing to subsection (iii) instead of subsection (ii). Moreover, why would any applicant choose to include a TLAA projection in its LRA pursuant to § 54.21(c)(ii) if it can postpone NRC review of that analysis until after the close of any ASLB proceedings just by citing to § 54.21(c)(1)(iii) instead? NEC submits that the answer to this question is never. Entergy's strategy in the Indian Point license renewal proceeding, discussed in NEC's Rebuttal Statement of Position at 6, bears this out. *See,* Exhibit NEC-JH_67. Entergy initially characterized its CUFen analysis as a TLAA

demonstration under § 54.21(c)(ii) because that is what it is – it is an analysis to project the CUF TLAA to the end of the period of extended operation.

B. ENTERGY'S CUFEN ANALYSES ARE NOT AN AGING MANAGEMENT PLAN SUBJECT TO 10 CFR § 54.21(c)(1)(iii).

Both Entergy and the NRC Staff contend that the CUFen analyses are a component of a Fatigue Monitoring Program ("FMP"), consistent with GALL Section X.M1. Entergy and the Staff further contend that the FMP is an "aging management plan" that satisfies the requirements of 10 CFR § 54.21(c)(1)(iii). These arguments misconstrue both the relationship of the CUFen analyses to the FMP and the meaning of § 54.21(c)(1).

The CUFen analyses are not a component of the FMP. The FMP is a program implemented during the license renewal period that tracks the number of transients for selected reactor coolant system components to confirm the validity of the CUFen TLAA analyses completed pursuant to §§ 54.21(c)(1)(ii) or 54.21(c)(1)(i). As explained in Entergy's LRA:

> The Fatigue Monitoring Program (FMP) tracks actual plant transients and evaluates these against the design transients. . . . "[T]he FMP will ensure that the number of transient cycles experienced by the plant remain within the analyzed numbers of cycles and hence, the component CUFs remain below the values calculated in the fatigue evaluations.

LRA Amendment 31, Attachment 1.

The FMP does not satisfy the requirements of 10 CFR § 54.21(c)(1)(iii). As explained in this and NEC's prior briefing, § 54.21(c)(1)(iii) requires the applicant to "demonstrate that . . . [t]he effects of aging . . . will be adequately managed for the period of extended operation" in the event that "the applicant cannot or chooses not to justify or extend an existing time-limited aging analysis." 10 CFR § 54.21(c)(1); Nuclear Regulatory Commission, Nuclear Power Plant License Renewal; Revisions, Final Rule, 60 FR 22461-01, 22480 (May 8, 1995). The FMP serves to confirm the justification or projection of a TLAA. The demonstration required by § 54.21(c)(1)(iii) substitutes for the validation or projection of a TLAA, and should consist of a

program of component inspection, repair and replacement that specifies scope, method and frequency.

C. NEC CONTESTS ENTERGY'S AND THE NRC STAFF'S INTERPRETATION OF NRC REGULATIONS, NOT THE REGULATIONS THEMSELVES.

Both Entergy and the NRC Staff contend that NEC's argument that § 54.21(c) requires an applicant to perform analyses to justify or project a TLAA before a license is issued is an attack on NRC regulations that contravenes 10 CFR § 2.335(a). NEC contests the interpretation of the regulations, not the regulations themselves. If the NRC's guidance concerning Fatigue Monitoring Programs published in GALL Section X.M1 can be interpreted to permit a licensee to complete a TLAA justification or projection after a renewed license is issued, then this guidance is inconsistent with the plain language, structure and intent of §§ 54.21(c) and 54.29(a) discussed in this and NEC's prior briefing. An intervenor may contest the validity of NRC guidance, including the GALL report, in a license renewal proceeding.

D. THE NRC'S REVIEW OF ENTERGY'S CUFEN CALCULATIONS FOR THE FEEDWATER NOZZLE AND RECIRCULATION NOZZLE WOULD NOT BE "MINISTERIAL."

The NRC Staff suggests that its post-licensing review of Entergy's CUFen calculations for the recirculation outlet and core spray nozzles using the same method Entergy used to calculate CUFen for the feedwater nozzle would be ministerial and therefore consistent with NRC precedent defining the proper scope of post-licensing resolution by the Staff. The Staff analogizes its review of the CUFen calculations to post-licensing review that was approved in *In the Matter of Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation)*, CLI-00-13, 52 N.R.C. 23, 34 (2000). In that case, the Commission sanctioned post-license Staff review of certain licensee contracts, provided that they conformed to an ASLB-approved form contract. The Commission stated:

> To reconcile post-hearing verification of a license condition by the NRC Staff with cases like *Union of Concerned Scientists, Shoreham,* and *Indian Point Station*, we must insist that the condition be precisely drawn so that the verification of compliance becomes a largely ministerial rather than an adjudicatory act – that is, the Staff verification efforts should be able to verify compliance without having to make overly complex judgments on whether a particular contract provision conforms, as a legal or factual matter, to promises [the licensee] has made.
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> * * *
>
> In short, evaluating whether contract provisions in fact function as intended is not merely a ministerial act; it calls for legal judgment. We think the Board went too far in putting evaluation of the legal effectiveness of service agreements into the hands of the NRC Staff without itself reviewing a sample service contract.

Id.

The Staff's analogy is inapposite. As the record in this proceeding to date demonstrates, Entergy's CUFen analyses are complex and there is room for the exercise of discretion even in the application of a preapproved methodology. The Staff's review of the CUFen calculations cannot be reasonably compared to its review of service agreements to determine whether they conform to a template contract. In addition, if Entergy finds that CUFen for the recirculation outlet or core spray nozzles exceeds the acceptance criteria, its TLAA demonstration has failed. In this case, it must revert to an aging management program consisting of inspection, repair and replacement. NEC has the right to evaluate this plan pursuant to its Contention 2. The CUFen calculations for the core spray and recirculation outlet nozzles therefore cannot take place after the close of ASLB proceedings. Entergy must complete its TLAA demonstration before the license is granted.

II. ISSUE 2

Even if § 54.21(c) does allow an applicant to perform analyses to project a TLAA after a license is issued as an aging management plan pursuant to § 54.21(c)(1)(iii), the applicant is still required to provide enough detail about how it intends to conduct this analysis in the LRA so as

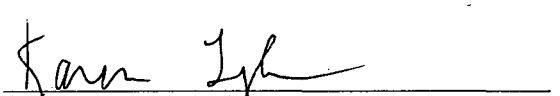
to allow the NRC Staff and intervenors to evaluate whether the analyses will provide reasonable assurance of public safety. If insufficient detail is provided, the NRC will not have enough information to find reasonable assurance of public safety and would be arbitrary and capricious in approving the license renewal. Alternatively, the NRC must postpone its substantive review of the analyses and its finding of reasonable assurance until after a license is issued, thereby illegally curtailing intervenors' rights to a hearing before the ASLB on all issues material to the licensing decision, and violating NRC precedent holding that "the mechanism of post-hearing resolution must not be employed to obviate the basic findings prerequisite to an operating license." *In the Matter of Consolidated Edison Company of New York, Inc. (Indian Point Station, Unit No. 2)*, CLI-74-23, 7 A.E.C. 947, 950-52 (1974).

An applicant could not provide sufficient information about many TLAA methodologies without actually performing the analysis and making it available for review by the NRC Staff and intervenors. This is certainly true in the case of Entergy's CUFen analyses -- the record in this case to date demonstrates that the CUFen methodology is highly complex and its application allows for substantial "wiggle room" on the part of the analyst. NEC could not fully evaluate Entergy's methodology without reviewing Entergy's actual analyses, as well as substantial additional information regarding inputs and assumptions. The record in this case also demonstrates the value of public participation in the ASLB process. Since NEC filed its Contentions 2, 2A and 2B, the NRC has reexamined and changed its policies regarding at least one issue raised by NEC – the use of a simplified Green's function method to calculate CUF values. *See,* Exhibits NEC-JH_23, NEC-JH_24. Intervenor participation in this proceeding led the NRC to more closely scrutinize a previously approved method and reject it. Entergy's and the NRC Staff's interpretation of NRC regulations would short circuit this valuable process and facilitate a more superficial examination of important public safety issues.

* * *

In summary, 10 CFR §§ 54.21(c)(1) and 54.29(a) together require that Entergy's LRA must include either an analysis justifying or projecting its CUF TLAA, **or** an aging management plan involving component inspection, repair and replacement, and specifying scope, method and frequency. Entergy has chosen to perform analyses to project its CUF TLAA pursuant to § 54.21(c)(1). It must complete this analysis prior to the close of ASLB proceeding and issuance of a renewed license. It cannot complete analyses for the core spray and recirculation outlet nozzles pursuant to a license condition, or correct any flaws in its CUFen methodology pursuant to a licensing commitment. If Entergy's CUFen analyses fail to demonstrate that the components it evaluated will satisfy acceptance criteria through the end of the period of extended operation, Entergy must propose an aging management plan. NEC would then be entitled to review this plan pursuant to its Contention 2.

July 15, 2008 New England Coalition, Inc.

by: 

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NUCLEAR REGULATORY COMMISSION

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and Entergy Nuclear Operations, Inc.	)	ASLBP No. 06-849-03-LR
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(Vermont Yankee Nuclear Power Station)	)	

CERTIFICATE OF SERVICE

I, Christina Nielsen, hereby certify that copies of NEW ENGLAND COALITION, INC.'S SUPPLEMENTAL PREHEARING REPLY BRIEF in the above-captioned proceeding were served on the persons listed below, by U.S. Mail, first class, postage prepaid; and, where indicated by an e-mail address below, by electronic mail, on the 15th of July, 2008.

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