

July 9, 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 BRIEF IN REPOSE TO BOARD ORDER

In accordance with the Board's June 27 Order (Regarding the Briefing of Certain Legal Issues) ("June 27 Order"), the staff of the US Nuclear Regulatory Commission ("Staff") hereby responds to the legal questions posed by the Board. The two legal issues were: (1) Performance of time-limited aging analyses ("TLAA") subsequent to issuance of license renewal and (2) reference to NUREGs in demonstrating that effects of aging will be managed.

BACKGROUND

The Board asked the parties to brief two issues related to performance of TLAA's subsequent to the issuance of a license renewal. In providing the basis for its request, the Board stated that the Staff changed its interpretation of § 54.21(c)(1)¹ between August 2007 and May 2008. See June 27 Order at 2-3. The Staff, however, has not changed its position on what is required by § 54.21(c)(1). Instead, Entergy's approach

¹ Section 54.21(c)(1) allows license renewal applicants to address TLAA's within the scope of license renewal by demonstrating one of the following: (i) The analyses remain valid for the period of extended operation; (ii) The analyses have been projected to the end of the period of extended operation; or (iii) The effects of aging on the intended function(s) will be adequately managed for the period of extended operation.

to satisfying the requirements of § 54.21(c)(1) has not been clear throughout this proceeding. This lack of clarity as to Entergy's approach may have led to confusion both as to the Staff's interpretation of § 54.21(c) and to which subsection Entergy seeks to satisfy. For example, in its June 27 Order, the Board questioned whether Entergy ever characterized its proposal as an aging management program under § 54.21(c)(1)(iii). *Id.* at n.3. However, in admitting NEC Contention 2 the Board noted: "Entergy itself has stated that it is relying on subsection (iii) of this regulation [§ 54.21(c)(1)] (i.e. the requirement to *demonstrate* that the effects of aging *will* be adequately managed) in the case of environmentally assisted fatigue."² Thus, before addressing the Board's questions, it is necessary to address this confusion.

On July 6, 2006, Entergy submitted Commitment 27 which stated that "[f]or each location that may exceed a CUF of 1.0 when considering environmental effects, VYNPS will implement one or more of the following options: (1) further refinement . . . (2) management of affected locations by an inspection program . . . (3) repair or replacement of the affected locations."³ Then, on July 3, 2007, Entergy revised Commitment 27 to state that it would select one of the aforementioned options "[a]t least two years prior to entering the period of extended operation."⁴ On July 30, 2007, in response to a Staff request for additional information ("RAI") about the July 3, 2007 amendments to Commitment 27, Entergy stated that it intended to comply with

² *Entergy Nuclear Vermont Yankee, LLC & Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 186 (2006) (emphasis in original).

³ Vermont Yankee License Renewal Application Amendment 33, ADAMS Accession No. ML0619202840.

⁴ Vermont Yankee License Renewal Application Amendment 27, ADAMS Accession No. ML0719002031.

Commitment 27 “by demonstrating, through the implementation of Option 1 [further refinement], that the cumulative usage factors (CUF) of the most fatigue sensitive locations are less than 1.0 throughout the license renewal period, considering both mechanical and environmental effects.”⁵

Entergy’s statement in its July 30 response indicated that it intended to rely on 10 C.F.R. § 54.21(c)(1)(ii), not (iii). Thus, at the time of the August 20, 2007 conference call between members of the NRC license renewal staff and Entergy representatives (see Exh. NEC-JH_62) the Staff understood that Entergy intended to comply with (ii). Therefore, when the Staff stated that Entergy “must demonstrate in its LRA that its environmentally-assisted metal fatigue analysis has been completed, and cannot rely on a commitment to complete this analysis prior to entering the period of extended operation,” it was explaining what is required to satisfy § 54.21(c)(1)(ii) not (iii). See *id.*

Between submitting its July 30 RAI response and submitting License Renewal Application Amendment 31 on September 17, 2007 (Staff Exh. 22), Entergy changed course again. In Amendment 31, Entergy stated that an assessment of the impact of the reactor water environment on critical components will be part of its fatigue monitoring program (“FMP”), inclusion of an assessment of the impact of the reactor water environment on critical components makes its FMP consistent with NUREG-1801 Section X.M1 (Staff Exh. 7 at 6-7), and thus the effects of aging will be adequately managed in accordance with 10 C.F.R. § 54.21(c)(1)(iii). See Staff Exh. 22 at Attachment 1. Based on Amendment 31, the Staff reviewed Entergy’s license

⁵ Vermont Yankee License Renewal Application Amendment 28, ADAMS Accession No. ML0721408470.

renewal application for compliance with § 54.21(c)(1)(iii). See Staff Exh. 1 at 4-43.

Therefore the Staff did not change its interpretation of § 54.21(c)(1). Instead, Entergy temporarily indicated that it would rely on § 54.21(c)(ii), before ultimately relying upon § 54.21(c)(1)(iii).

DISCUSSION

I. Response to Issues 1A & AB

A. Response to Issue 1A

The Board asked whether “a license condition that requires performance of certain CUFen TLAA⁶ after the license renewal is issued” complies with § 54.21(c). Section 54.21 provides:

Each application must contain the following information:

...

(c) An evaluation of time-limited aging analyses.

(1) A list of time-limited aging analyses, as defined in § 54.3, must be provided. The applicant shall demonstrate that—

(i) The analyses remain valid for the period of extended operation

(ii) The analyses have been projected to the end of the period of extended operation; *or*

(iii) The effects of aging on the intended function(s) *will be* adequately managed for the period of extended operation.

(emphasis added).

To satisfy § 54.21(c)(1), the applicant must assess and list TLAA⁶s and demonstrate compliance with (i), (ii), or (iii). If a license renewal applicant chooses to demonstrate that its analyses remain valid for 60 years pursuant to § 54.21(c)(1)(i), its application must demonstrate that existing analyses are valid for 60 years. If an applicant selects (ii), its application must demonstrate that its analyses have been

⁶ TLAA for purposes of license renewal is defined in § 54.3.

projected to 60 years, such that no further analysis or management is necessary. If the applicant “cannot or chooses not to justify or extend an existing TLAA,” its application must list TLAAAs and demonstrate that the effects of aging *will be* adequately managed for the period of extended operation pursuant to § 54.21(c)(1)(iii).⁷ In other words, under (iii) the applicant can properly demonstrate that aging effects associated with the TLAA will be adequately managed by aging management programs. Moreover, unlike (i) and (ii), the word “analysis” does not even appear in (iii). Applicants selecting (iii) are not required to perform, include, or demonstrate the adequacy of their analyses in their applications.

Issuance of a renewed license with a condition requiring performance of certain TLAA CUFens prior to the period of extended operation is consistent with § 54.21(c)(1)(iii) and does not render §54.21(c)(1)(ii) superfluous.⁸ The plain language of the regulation and its subsections makes clear that a demonstration in the application that a TLAA is either good for 60 years or has been projected to 60 years is only required if the applicant selects § 54.21(c)(1)(i) or (ii). Applicants selecting either (i) or (ii) rest on existing or an extension of existing TLAA analyses alone. Therefore a license condition for an applicant relying on (i) or (ii) to perform TLAA evaluations later would be contrary to § 54.21(c)(1).

⁷ Nuclear Power Plant License Renewal; Revisions, Final Rule, 60 Fed. Reg. 22,461, 22,480 (May 8, 1995).

⁸ The Commission clearly and directly addressed and accepted the use of “new commitments to monitor, manage, and correct age-related degradation unique to license renewal” Nuclear Power Plant License Renewal, Final Rule, 56 Fed. Reg. 64,943, 64,946 (Dec. 13, 1991). The Commission reaffirmed this position when it revised Part 54 in 1995. See 60 Fed. Reg. at 22473. If the Commission finds commitments acceptable, surely a license condition is acceptable as well.

However, applicants selecting the (iii) option are not required to demonstrate that their existing TLAA analysis is either good for 60 years or the analysis has been projected to 60 years. No analysis is required by (iii). Moreover, if such analyses existed there would be no need for (iii). Applicants who select (iii) rest not on analyses but on a demonstration that aging effects will be adequately managed.⁹ Otherwise adding (iii) to the regulations would have been meaningless.

One way for applicants to make the demonstration required by § 54.21(c)(1)(iii) is to implement a fatigue monitoring program consistent with the program described in GALL Section X.M1 Metal Fatigue of Reactor Coolant Pressure Boundary (Staff Exh. 7 at X M-1 to X M-2). In describing the elements of an acceptable aging management program (“AMP”) for monitoring metal fatigue in Section X.M1, the NRC explained the purpose of corrective actions, stating that an acceptable AMP for metal fatigue will be one that:

[p]rovides for corrective actions to prevent the usage factor from exceeding the design code limit during the period of extended operation. *Acceptable corrective actions include repair of the component, replacement of the component, and a more rigorous analysis of the component to demonstrate that the design code limit will not be exceeded during the extended period of operation.*

Id. (emphasis added). Thus, additional analyses as a corrective action (and license conditions to perform analyses as a corrective action) are treated no differently than

⁹ This is consistent with the definition of TLAA in § 54.3. The definition of TLAA does not suggest that license renewal applications must contain TLAA analyses or that applicants must demonstrate the adequacy of an existing TLAA or a TLAA projected to the end of the period of extended operation. Rather, it defines which existing TLAAs are within the scope of license renewal and thus must be considered by license renewal applicants.

repair or replacement.¹⁰ For a component that will not meet its acceptance criteria during the period of extended operation, the program described in the application may provide for, as corrective action, additional analysis, then, should the analysis not meet the acceptance criteria, provide for repair or replacement of the component.

Alternatively, the program could directly select analysis, repair, or replacement alone. These are all corrective actions under an aging management program. Accordingly, a license condition to perform additional analysis prior to the period of extended operation as part of an aging management program is absolutely consistent with § 54.21(c)(1)(iii) and does not render § 54.21(c)(1)(i) or (ii) mere surplusage. Rather, reading § 54.21(c)(1) to require that applicants demonstrate the adequacy of all their analyses in their applications would render § 54.21(c)(1)(iii) meaningless, precluding licensees from being allowed to manage the effects of aging by repair, replacement, or additional more rigorous analysis, as the regulation clearly allows. It would also force applicants to perform analyses and make a demonstration not required by the Commission's regulations.

B. Response to Issue 1B

The Board asked whether it is "legally permissible under 10 C.F.R. § 54.29 to issue a license renewal even though certain TLAA's have not been performed." June 27 Order at 3. Section 54.29 provides that the Commission may issue a renewed license if it finds that:

- (a) Actions have been identified and have been or *will be* taken with

¹⁰ As a corrective action, Entergy has performed more rigorous analyses of critical components and submitted them to the Staff. See e.g. Vermont Yankee License Renewal Application Amendments 31 (Staff Exh. 22), 33 (Staff Exh. 8), and 34 (Entergy Exh. E2-28).

respect to matters identified in paragraphs (a)(1) and (a)(2) of this section, such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB These matters are:

. . . .
(2) time-limited aging analyses that have been identified to require review under § 54.21(c).

(emphasis added).

Accordingly, a renewed license may be issued if there is reasonable assurance that actions *will* be taken to ensure continued compliance with the CLB. Because license conditions are binding requirements, license conditions can provide reasonable assurance that actions necessary for compliance with Commission regulations will be taken.¹¹ Entergy is relying upon § 54.21(c)(1)(iii). Entergy has appropriately identified TLAAAs and is demonstrating that aging effects will be adequately managed in lieu of relying on an existing analyses or analyses projected to the end of the period of extended operation. The proposed license condition will ensure that actions will be taken to ensure that the effects of aging will be adequately managed and is thus consistent with § 54.29.¹²

¹¹ See 56 Fed. Reg. at 64,943 (Commission accepting the use of licensee commitments to monitor, manage, and correct age-related degradation). See also *Private Fuel Storage LLC* (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 29-30 (2000) (“PFS”) (stating that “license conditions can be an acceptable method for providing reasonable assurance of financial qualifications under 10 C.F.R. Part 72” and noting that the material issue for compliance with 10 C.F.R. § 72.22(e) is whether the applicant will have adequate funds not whether it already has them).

¹² See *supra* note 8. Furthermore, Commission law supports the proposition that license conditions requiring post-licensing verification are acceptable. See *PFS*, CLI-00-13, 52 NRC at 34. In *PFS*, the Commission required the applicant produce a sample contract of the type it would use to satisfy its financial assurance commitments so that the intervenor could challenge it and, through the hearing process, a sample contract could be approved by the Board for the Staff to use in verifying the applicant’s compliance with its post-licensing commitments. The license condition at issue here requires that Entergy perform confirmatory calculations for the core spray and reactor recirculation outlet nozzles using the same method it used for the feedwater nozzle. See Staff Exh. 1 at 43. Entergy’s calculation for the feedwater nozzle is thus like the sample (continued. . .)

C. Public Scrutiny and Due Process

To the extent that NEC claims that allowing an applicant to select § 54.21(c)(1)(iii) instead of (i) or (ii) “would ‘frustrate public scrutiny of TLAA methodology,’”¹³ is an attack on the Commission’s regulation and thus contravenes 10 C.F.R. § 2.335(a)¹⁴ which prohibits attacks on the Commission’s regulations in the absence of a waiver of § 2.335(a) by the Commission.¹⁵

Furthermore, an applicant’s reliance on § 54.21(c)(1)(iii) does not preclude members of the public from scrutinizing and challenging the adequacy of the licensee’s demonstration that the effects of aging will be adequately managed. As this case illustrates, NEC first challenged the adequacy of Entergy’s plan to manage aging in accordance with § 54.21(c)(1)(iii) generally. Then, through Contentions 2A and 2B, NEC mounted a specific challenge to a portion of Entergy’s aging management plan—corrective actions—by taking issue with the method Entergy used to refine its CUFen analysis of critical components. Moreover, there has been no showing that due process, as a matter of law, requires that an agency require actual testing and analyses prior to

(. . .continued)

contract in *PFS*. Through its contentions, NEC has challenged the method Entergy’s for calculation CUFens.

¹³ See June 27 Order at 3 (quoting New England Coalition Inc. Initial Statement of Position (Apr. 28, 2008) at 19.

¹⁴ Section 2.335(a) prohibits challenges to the Commission’s regulations in any adjudicatory subject to Part 2 unless a party to the proceeding requests and receives pursuant to § 2.335(b) a waiver of § 2.335(a) on the basis of special circumstances with respect to the subject matter of the particular proceeding such that the rule, regulation, or subsection thereof does not serve the purposes for which it was adopted.

¹⁵ See *Entergy Nuclear Vermont Yankee, LLC & Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 383 (2007).

issuing a license.

II. Staff Response to Issue 2

The second legal issue the Board requested that the parties brief involves applicants referencing NUREGs to demonstrate that aging will be adequately managed.

Specifically, the Board asked the parties:

Does a renewal application that contains a short written description of an aging management program that lacks content or details but instead states that it is “comparable to” and “based on” the relevant section of NUREG-1801 or EPRI NSAC-202L, “demonstrate that the effects of aging will be adequately managed” as required by 10 C.F.R. §§ 54.21(a)(3) and 54.21(c)(1)(iii)?

June 27 Order at 5.

An application that contains a short written description of an AMP stating that it is “comparable to” and “based on” NRC guidance documents, is sufficient to “demonstrate that the effects of aging will be adequately managed” as required by 10 C.F.R.

§§ 54.21(a)(3) and 54.21(c)(1)(iii). Computational methods and details are not required to demonstrate regulatory compliance. There is no regulatory requirement regarding the amount of detail that the applicant must include in describing its Aging Management Programs. Rather, § 54.21(a)(3) and § 54.21(c)(1)(iii) simply require that applicants “demonstrate” that the effects of aging will be “adequately managed.” As discussed below, the NRC has provided licensees with guidance on how to make the required demonstrations. Entergy’s approach is consistent with that guidance.

B. Staff Guidance

The Staff has issued a number of license renewal guidance documents including

GALL, SRP-LR,¹⁶ and Regulatory Guide 1.188.¹⁷ At their inception, the Staff recommended and the Commission approved the approach to “focus staff review guidance in [the] standard review plan on areas where existing programs should be augmented . . . to provide credit for existing programs for license renewal.”

Memorandum from Annette L. Vietti-Cook, Secretary to William D. Travers, Executive Director of Operations, Staff Requirements-SECY-99-148-Credit for Existing Programs for License Renewal (Aug. 27, 1999) (ADAMS Accession No. ML003751930). At this time, the Commission directed the “Staff to proceed with the development of the Generic Aging Lessons Learned (GALL) report and the license renewal Standard Review Plan (SRP) and regulatory guide” and to “seek stakeholders’ participation.” *Id.* See also NUREG -1739, *Analysis of Public Comments on the Improved License Renewal Guidance Documents* (Apr. 2001)¹⁸; Transcript, United States of America Nuclear

¹⁶ NUREG-1800, Rev. 1, *Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants* (“SRP-LR”) (Sept. 2005).

¹⁷ Standard Format and Content for Applications To Renew Nuclear Power Plant Operating Licenses (July 2001) (ADAMS Accession No. ML012010322).

¹⁸ For example, NUREG-1739 includes comments from industry representatives regarding the level of detail required to be in an application. In response, the Staff stated that

an applicant who references GALL in a license renewal application would be expected to verify that the programs relied on for a specific structures or components is bounded by the program evaluated in GALL, in order to use GALL as a reference for an acceptable program in the same way that topical reports are used as references for accepted programs. The staff review would intend to use GALL to focus on the areas where further evaluation is recommended or a plant-specific aging management program is proposed. By referencing the GALL, the staff expects that an applicant would decrease the volume of the application and the level of effort required for the staff review. The references along with exceptions to the GALL report may be in tables, footnotes to tables, or in a separate section in the front or the back of the application.

(continued. . .)

Regulatory Commission, Office of the Secretary, Briefing on License Renewal Aging Lessons Learned (GALL) Report, Standard review Plan (SRP), and Regulatory Guide (Dec. 4, 2000) (ADAMS Accession No. ML003775462). On August 3, 2001 the GALL Report Rev 0, SRP-LR, and Regulatory Guide 1.188 were released to the public. Issuance, Availability of Regulatory Guide, Standard Review Plan, and Generic Aging Lessons Learned (GALL) Report, 66 Fed. Reg. 40,750 (Aug. 3, 2001).

The Commission has recognized that license renewal guidance documents “serve to enhance the predictability, consistency, and efficiency of the NRC reviews of license renewal applications.” SECY-01-0074, Approval to Publish Generic License Renewal Guidance Documents (July 2, 2001) (ADAMS Accession No. ML011860200). Accordingly, GALL provides important guidance concerning the preparation and review of license renewal applications.¹⁹ In GALL Rev. 0 at iii, the NRC stated that GALL:

contains the staff’s generic evaluation of the existing plant programs and documents the technical basis for determining where existing programs are adequate without modification and where existing programs should be augmented for the extended period of operation. The evaluation results documented in the GALL report indicate that many of the existing programs are adequate to manage the aging effects for particular structures or components for license renewal without change. The GALL report also contains recommendations on specific areas for which existing programs should be augmented for license renewal. *An 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*

(. . .continued)

NUREG-1739 at Table C: Disposition of Written Public Comments, Comment NMC-2, Item C.3.14.

¹⁹ The first edition of GALL was published in 2001. See NUREG-1801, *Generic Aging Lessons Learned (GALL) Report*, Rev. 0 (July 2001) (“GALL Rev. 0”). Since that time, one revision of GALL has been released. See NUREG-1801, *Generic Aging Lessons Learned (GALL) Rev. 1* (Sept. 2005).

and approved in the GALL report and that no further staff review is required.

(emphasis added).

Likewise the SRP provides guidance as to the question of acceptability of the statement that the aging management plan is “comparable to” and “based on” the relevant section of GALL, the SRP-LR at 3.0.1 states that:

[i]f an applicant takes credit for a program in the GALL Report, it is incumbent on the applicant to ensure that the plant program contains all the elements of the referenced GALL Report program. In addition, the conditions at the plant must be bounded by the conditions for which the GALL Report program was evaluated. The above verifications must be documented on-site in an auditable form. The applicant should include a certification in the license renewal application that the verifications have been completed and are documented on-site in an auditable form.

Therefore, a written description of an AMP stating that it is “comparable to” or “based on” NRC guidance documents is acceptable.

In the context of Flow Accelerated Corrosion, the NRC Guidance documents reference the Electric Power Research Institute (EPRI) guidelines in the Nuclear Safety Analysis Center (NSAC)-202L-R2 for an effective flow-accelerated corrosion (FAC) program. See GALL, Rev. 1, Vol. 2 at XI M-61. The Vermont Yankee FAC AMP also references the EPRI Report and states that the program is consistent with GALL. See LRA at Appendix B-47. Similarly, the Vermont Yankee FMP references GALL and has been found to be consistent with GALL. See Staff Exh. 1 at 3-75. As discussed above, this is sufficient to “demonstrate” that the effects of aging will be “adequately managed.”

C. Audit Programs Provide Assurance that AMPs are Adequate

Applicants do not need to provide a detailed explanation or description of an AMP in their applications because the Staff verifies the consistency of licensee AMPs with Staff guidance through audits.²⁰ Thus, when a licensee states that its program “will be identical to the existing program,” is “comparable” to the program described in GALL, is “based on” EPRI Report NSAC-202L-R2, and includes “(a) an evaluation to determine critical locations, (b) initial operational inspections to determine the extent of thinning at these locations, and (c) follow-up inspections to confirm predications, or repair or replace components as necessary,” that is sufficient for the purposes of Part 54. See June 27 Order at 4-5.

The Staff has audited Entergy’s FAC and other AMPs and found Entergy’s approach to be consistent with the approved regulatory guidance. See Audit and Review Report for Plant Aging Management Programs at B 3.0.1.2. Therefore, the applicant’s FAC program to manage the aging effects of FAC is adequate.

²⁰ “An audit and review is conducted at the applicant’s facility to evaluate those AMRs or AMPs that the applicant claims to be consistent with the GALL Report. An audit also includes technical assessments of exceptions or enhancements to the GALL Report AMP program elements. Reviews are performed to address those AMRs or AMPs related to emergent issues, stated to be not consistent with the GALL Report, or based on an NRC-approved precedent (e.g., AMRs and AMPs addressed in an NRC SER of a previous LRA). As a result of the criteria established in 10 CFR Part 54, and the guidance provided in SRP-LR, GALL Report, Regulatory Guide 1.188, and the applicant’s exceptions and/or enhancements to a GALL Report AMP” NUREG-1800, at Section 3.0.1.

CONCLUSION

As explained above, the NRC Staff has not changed its interpretation of § 54.21(c)(1) and Entergy is relying upon § 54.21(c)(1)(iii). With regard to Issues 1A and 1B, the 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) or 54.29. With regard to Issue 2, Entergy's application has demonstrated that the effects of aging will be adequately managed by providing a written description that states its AMP is "comparable to" and "based on" the relevant section of NUREG-1801 or EPRI NSAC-202L.

Respectfully submitted,

/RA/

Lloyd B. Subin
Counsel for NRC Staff

/RA/

Mary C. Baty
Counsel for NRC Staff

Dated at Rockville, Maryland
this 9th day of July, 2008

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-LR
LLC, and ENTERGY NUCLEAR)
OPERATIONS, INC.) ASLBP No. 06-849-03-LR
)
(Vermont Yankee Nuclear Power Station))

CERTIFICATE OF SERVICE

I hereby certify that copies of the "NRC STAFF'S BRIEF IN RESPONSE TO BOARD ORDER" 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 9th day of July, 2008.

Alex S. Karlin, Chair
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: ask2@nrc.gov

Office of the Secretary
Attn: Rulemakings and Adjudications Staff
Mail Stop: O-16G4
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: hearingdocket@nrc.gov

William H. Reed*
Administrative Judge
Atomic Safety and Licensing Board
1819 Edgewood Lane
Charlottesville, VA 22902
E-mail: whrcville@embarqmail.com

Marcia Carpentier, Law Clerk
Atomic Safety and Licensing Board
Mail Stop: T-3F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: mxc7@nrc.gov

Richard E. Wardwell
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: rew@nrc.gov

Lauren Bregman, Law Clerk
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Mail Stop: T-3 F23
Washington, D.C. 20555-0001
E-mail: lauren.bregman@nrc.gov

Office of Commission Appellate
Adjudication
Mail Stop: O-16G4
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: OCAAmail@nrc.gov

Peter C.L. Roth, Esq*
Office of the Attorney General
33 Capitol Street
Concord, NH 3301
E-mail: peter.roth@doj.nh.gov

Ronald A. Shems, Esq.*
Karen Tyler, Esq.
Shems Dunkiel Kassel & Saunders, PLLC
91 College Street
Burlington, VT 05401
E-mail: rshems@sdkslaw.com
Ktyler@sdkslaw.com

David R. Lewis, Esq.*
Matias F. Travieso-Diaz, Esq
Elina Teplinsky, Esq
Blake J. Nelson, Esq
Pillsbury Winthrop Shaw Pittman LLP
2300 N Street, NW
Washington, DC 20037-1128
E-mail: david.lewis@pillsburylaw.com
matias.travieso-diaz@pillsburylaw.com
elina.teplinsky@pillsburylaw.com
blake.nelson@pillsburylaw.com

Diane Curran*
Harmon, Curran, Spielberg, & Eisenberg, LLP
1726 M Street N.W., Suite 600
Washington, D.C. 20036
E-mail: dcurran@harmoncurran.com

Anthony Z. Roisman, Esq.*
National Legal Scholars Law Firm
84 East Thetford Rd.
Lyme, NH 03768
E-mail: aroisman@nationallegalscholars.com

Sarah Hofmann, Esq.*
Director of Public Advocacy
Department of Public Service
112 State Street - Drawer 20
Montpelier, VT 05620-2601
E-mail: sarah.hofmann@state.vt.us

Matthew Brock*
Assistant Attorney General, Chief
Environmental Protection Division
Office of the Attorney General
One Ashburton Place, 18th Floor
Boston, MA 02108
E-mail: matthew.brock@state.ma.us

/RA/

Mary C. Baty
Counsel for NRC Staff