RAS M-445

September 14, 2010

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)	)	

ENTERGY'S ANSWER OPPOSING NEW ENGLAND COALITION'S MOTION TO REOPEN

I. INTRODUCTION

Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. ("Entergy") hereby oppose the New England Coalition's Motion to Reopen the Hearing and For the Admission of New Contentions (Aug. 20, 2010) ("Motion"). The New England Coalition's ("NEC") Motion does not satisfy the standards for reopening a proceeding; and its proposed contention is untimely, fails to meet the standards for a late contention, and fails to meet the standards for an admissible contention. As the attached Declaration of Norman L. Rademacher and Roger B. Rucker in Support of Entergy's Answer Opposing New England Coalition's Motion to Reopen (Sept. 14, 2010) ("Entergy Decl.") demonstrates, there is no genuine issue of material fact in dispute.

As discussed in this Answer, the Commission does not look with favor on new contentions filed after the initial deadline, which in this case passed in May 2006 – over four years ago – because if intervenors could add new contentions after the initial deadline at their convenience, there would simply be no end to NRC licensing proceedings. Here, NEC's Motion is truly an eleventh hour request that, if granted, could significantly delay the completion of this

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proceeding on Entergy's Application to renew the operating license for the Vermont Yankee Nuclear Power Station ("VYNPS") ("Application"). That Application was submitted in January 2006, and consequently, this proceeding is now in its fifth year. The NRC Staff's review in this proceeding was completed in February 2008 – two and a half years ago; and the hearings on the timely contentions were completed in July 2008. The Commission has remanded this proceeding to the Board "for the limited purpose of giving NEC the opportunity to submit a revised contention 2." Entergy Nuclear Vermont Yankee, L.L.C. (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 N.R.C. __, slip op. at 69 (July 8, 2010) ("CLI-10-17"). NEC, however, is now seeking to restart the adjudicatory process on a completely different issue.

Because attempts to add further contentions late in a proceeding are disfavored, the Commission imposes a heavy burden on a party seeking to reopen a proceeding to add new contentions. Such a party is required to demonstrate, with evidentiary support, that its Motion is timely, raises a significant safety issue, and would likely change the outcome of the proceeding. If it meets all three prongs of this test, it is further required to demonstrate that the admission of its contention is warranted based on a balancing of a number of factors, which include the extent to which issues would be expanded and the proceeding delayed. Of course, it must also show that its contention meets the standards for admissibility. Entergy respectfully submits that NEC's Motion fails to meet every one of these tests.

In particular, NEC's Motion and proposed contention simply ignore relevant aging management programs in the Application that address the issue which NEC now so extremely belatedly attempts to raise. NEC's proposed contention alleges

> Applicant has not demonstrated adequate aging management review and/or time-limited aging analysis nor does the applicant have in place an adequate aging management program to address the effects of moist or wet environments on buried, below grade, underground, or hard-to-access safety-related electrical

cables, thus the applicant does not comply with NRC regulation (10 CFR §54.21 (a) and guidance and/or provide adequate assurance of protection of public health and safety (54.29(a).

NEC Motion at 8. Entergy's Application includes a specific program to manage the effects of aging on inaccessible cables that may be exposed to such an environment, and this program is consistent with the recommendations of the NRC Staff. Because NEC makes no real attempt to address the provisions of this program, it fails to demonstrate the existence of a significant issue – or for that matter, any admissible contention.

Further, NEC could have challenged the adequacy of this program at the outset of the proceeding, but it did not, and the time for a timely challenge has now long since passed. The Commission's Statement of Policy on the Conduct of Adjudicatory Proceedings, CLI-98-12, 48 N.R.C. 18 (1998), provides that "applicants for a license are . . . entitled to a prompt resolution of disputes concerning their applications." 48 N.R.C. at 19. Here, both the Commission's rules of practice and fundamental fairness dictate that this proceeding be brought to a close.

II. BACKGROUND

A. License Renewal Requirements

Under NRC rules, a license renewal application must include an integrated plant assessment ("IPA") demonstrating that, with respect to those structures and components subject to aging management review,[1] the effects of aging will be adequately managed so that intended functions will be maintained consistent with the current licensing basis ("CLB") during the

[1] Pursuant to 10 C.F.R. § 54.4, the plant systems, structures and components ("SSCs") within the scope of the rule are (1) safety-related SSCs, (2) non-safety related SSCs whose failure could prevent safety-related SSCs from performing their intended functions, and (3) SSCs relied on in safety analyses or plant evaluations to perform functions that demonstrate compliance with certain NRC rules governing fire protection, environmental qualification, pressurized thermal shock, anticipated transients without scam, and station blackout. With respect to these SSCs, the structures and components subject to aging management review are those that (1) perform an intended function without moving parts or without a change in configuration or property, and (2) that are not subject to replacement based on a qualified life or specified time period (i.e., only passive, long lived structures). 10 C.F.R. § 54.21(a)(1)(i)-(ii).

period of extended operation. 10 C.F.R. § 54.21(a)(3). In addition, the IPA must list time-limited aging analyses ("TLAA")[2] and demonstrate that:

> (i) The analyses remain valid for the period of extended operation;
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> (ii) The analyses have been projected to the end of the period of extended operation; or
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> (iii) The effects of aging on the intended function(s) will be adequately managed for the period of extended operation.

10 C.F.R. § 54.21(c)(1).

The NRC Staff has prepared the Generic Aging Lessons Learned ("GALL") Report[3] to identify generic aging management programs ("AMP") that the Staff has determined to be acceptable, based on experience and analyses. AmerGen Energy Co. et al., LLC (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 N.R.C. 461, 467 (2008). An applicant may reference the GALL Report to demonstrate that the programs at the applicant's facility correspond to those reviewed and approved therein. Id. at 468. Use of an AMP consistent with the GALL Report constitutes reasonable assurance that the targeted aging effect will be adequately managed during the renewal period. Id. See also CLI-10-17 at 44.

> The GALL Report provides that one way a license renewal applicant may demonstrate that an AMP will effectively manage the effects of aging during the period of extended operation is by stating that a program is "consistent with" or "based on" the GALL Report.

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[2] TLAAs are defined as "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 functions, as delineated in § 54.4(b); and

(6) Are contained or incorporated by reference in the CLB."

10 C.F.R. § 54.3(a). Thus, TLAAs are analyses contained in the CLB, and not some new analysis produced for license renewal. See CLI-10-17 at 41

[3] NUREG-1801, Generic Aging Lessons Learned (GALL) Report (Rev. 1, Sept. 2005).

CLI-10-17 at 45 (emphasis in original) (footnote omitted).[4]

Similarly, the GALL Report contains certain aging management programs (in Chapter X of the Report) that an applicant may reference to manage the aging effects associated with a TLAA under 10 C.F.R. § 54.21(c)(1)(iii). Id. at 21. A commitment to implement an AMP that the NRC deems consistent with the GALL Report constitutes one acceptable method for compliance with 10 C.F.R. § 54.21(c)(1)(iii). Id. at 44.

B. TLAAs and AMPs Applicable to Cable

Pursuant to 10 C.F.R. § 50.49, safety-related and certain other electric equipment (including cable) located in a harsh environment is subject to testing and analysis requirements to demonstrate its environmental qualification.[5] Where specific electric components covered by this rule are qualified for the life of the plant, the existing calculations and analyses that are part of the CLB demonstrating such environmental qualification constitute TLAAs. Section X.E1 of the GALL Report describes an acceptable program for managing the aging affects associated with these TLAAs (i.e., addressing electric components that are environmentally qualified under 10 C.F.R. § 50.49 for the life of the plant).

The environmental qualification requirements in 10 C.F.R. § 50.49, however, do not apply to equipment located in a mild environment. 10 C.F.R. § 50.49(c). A mild environment is an environment that would at no time be significantly more severe than the environments that

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[4] Referencing a program described in the GALL Report does not insulate a program from being challenged at hearing. CLI-10-17 at 47.

[5] 10 C.F.R. § 50.49 requires holders of operating licenses to environmentally qualify safety-related electrical equipment, non-safety related electrical equipment whose failure could prevent accomplishment of safety functions, and certain post-accident monitoring equipment to demonstrate that it will remain functional under the environmental conditions (including design basis accident conditions) to which it may be exposed over its installed life. The conditions include submergence if equipment is subject to being submerged. 10 C.F.R. § 50.49(e)(6). Such environmental qualification must be demonstrated by testing and/or analysis. 10 C.F.R. § 50.49(f).

would occur during normal plant operations, including anticipated operational occurrences. Id. For electrical equipment located in mild environments, compliance with the environmental design provisions of General Design Criterion ("GDC") 4 are generally achieved and demonstrated by proper incorporation of all relevant environmental conditions into the design process, including the equipment specification. NUREG-0800, Standard Review Plan (Rev. 3, Mar. 2007) at 3.11-2. In addition, 10 C.F.R. § 50.49 may not apply to certain equipment within the scope of 10 C.F.R. § 54.4(a)(3). Therefore, there are electric components that are subject to aging management review which are not addressed by the environmental qualification requirements in 10 C.F.R. § 50.49.

The GALL Report describes several AMPs that may be applied to manage effects of aging on electric components not subject to 10 C.F.R. § 50.49 (which Entergy refers to as "non-EQ"). In particular, Section XI.E1 of the GALL Report provides a program for managing "Electric Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements." This program applies to cables and connections whose configuration is such that most (if not all) of the cables and connections in adverse localized environments are accessible. See GALL Report at XI.E-1. The program requires inspection of representative samples of such cables and connections.[6]

In addition, Section XI.E3 of the GALL Report provides an acceptable program for managing the effects of aging on "Inaccessible Medium-Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements." This program applies to inaccessible (in conduit or directly buried) medium-voltage cables within the scope of license renewal that are

[6] A separate program, in Section XI.E2 of the GALL Report, applies to high-range-radiation and neutron flux monitoring instrumentation cables in addition to other cables used in high voltage, low-level signal applications that are sensitive to reduction in insulation resistance.

exposed to significant moisture (defined as periodic exposure to moisture that lasts for more than a few days, such as standing water). As explained in this Section, when an energized medium-voltage cable (2 kV to 35 kV) is exposed to wet conditions, water treeing or a decrease in dielectric strength of the conductor insulation can occur, which can potentially lead to electrical failure.[7] Id. at XI.E-7. This recommended AMP calls for both periodic actions to prevent cable exposure to significant moisture (such as inspecting for water collection in cable manholes, and draining water as needed) and testing at least every ten years (with the first test to be completed before the period of extended operation). Id. at XI.E-7 to XI.E-8. The testing must be a proven method for detecting deterioration of the insulation system due to wetting, such as power factor, partial discharge, or polarization index, or other testing that is state-of-the-art at the time the test is performed. Id. at XI.E-7.

Entergy's Application commits to implement these GALL programs, making no exceptions. The Application, at App. B, § B.1.10,[8] commits to implement a program for "Environmental Qualification of Electric Components" that is consistent with GALL AMP X.E1. The Application, at App. B, § B.1.19,[9] commits to implement a program for "Non-EQ Cable and Connections" that is consistent with GALL AMP X1.E1. The Application, at App. B, § B.1.17,[10] commits to implement a program for "Non-EQ Inaccessible Medium-Voltage Cable"

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[7] High-voltage (>35 kV) power cables and connections are not included in this generic program because they have unique, specialized constructions and must be evaluated on an application specific basis. GALL Report at VI.A-1. VYNPS does not have any inaccessible, high voltage cable subject to aging management review.

[8] See also Application, App. A, § A.2.1.10, providing a description of this program to be included in the Supplement to the Updated Final Safety Analysis Report ("UFSAR").

[9] See also Application, App. A, § A.2.1.21, providing a description of this program to be included in the UFSAR Supplement.

[10] See also Application, App. A, § A.2.1.19, providing a description of this program to be included in the UFSAR Supplement.

that is consistent with GALL AMP XI.E3.[11] The Application also includes a program managing the effects of aging on Non-EQ instrumentation circuits, consistent with the GALL AMP XI.E2. Application, App. B, § B.1.18.

The Non-EQ Inaccessible Medium-Voltage Cable Program at VYNPS is a new program. Application at B-61; Entergy Decl., Exh. C, Att. 1 at 3. Entergy has committed to implement this program by March 21, 2012.[12]

While Section XI.E3 of the current GALL Report applies only to medium-voltage cable, based on operating experience indicating the potential for moisture-induced deterioration of the insulation to occur in the 2 kV to 35 kV range (see GALL Report at XI.E-7, XI.E-9), it provides that "[a]s additional operating experience is obtained, lessons learned can be used to adjust the program, as needed." GALL Report at XI.E-9. Both the NRC and industry have continued to monitor operating experience, not just for license renewal but also in connection with the

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[11] An amendment to the Application in July 2006 added some further detail to these AMPs, but did not change their consistency with the GALL Report. See Letter from T. Sullivan to Document Control Desk, "License Renewal Application, Amendment 5" (July 14, 2006) (ADAMS ML062010226). In particular, this amendment revised the Program Description for the "Non-EQ Inaccessible Medium-Voltage Cable" program in App. B, § B.1.17, by

(1) Adding: "VYNPS inspection for water accumulation in manholes is conducted in accordance with a plant procedure. An evaluation per the Corrective Action Process will be used to determine the need to revise manhole inspection frequency based on inspection results;"

(2) Revising the last sentence to state: "The specific type of test to be performed will be determined prior to the initial test and is to be a proven test for detecting deterioration of the insulation system due to wetting as described in EPRI TR-1 03834-P1 -2, or other testing that is state-of-the-art at the time the test is performed;" and

(3) Stating that medium-voltage cables include cables with operating voltage level from 2kV to 35kV.

Id., Attachment 1 at 2, 5. In addition, the discussion of Operating Experience was expanded. Id. at 12.

This Amendment also revised other sections of the Application, including B.1.10 to provide more information on EQ Component Reanalysis Attributes, B.1.18, and B.1.19.

As discussed later in this Answer, VYNPS has more recently amended the "Non-EQ Inaccessible Medium-Voltage Cable" program in § B.1.17 to include low-voltage cable. Letter from M. Colomb to Document Control Desk, "License Renewal Application Supplemental Information" (Sept. 3, 2010), provided as Exhibit C to the Entergy Declaration. Attachment 1 to that letter shows the provisions in sections A.2.1.19 and B.1.17 as currently amended.

[12] NUREG-1907, Safety Evaluation Report Related to the License Renewal of Vermont Yankee Nuclear Power Station (May 2008) at 3-22.

performance monitoring required of all operating plants by the NRC's maintenance rule. See 10 C.F.R. § 50.65(a)(1).

In 2007, the NRC issued Generic Letter 2007-01, informing licensees of failures that had occurred in inaccessible cable subject to wetted environments and requesting that the licensees provide a history of inaccessible power cable failures for all cables within the scope of the maintenance rule, as well as a description of inspection, testing and monitoring programs used to detect degradation of inaccessible cables. Generic Letter 2007-01, Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients (Feb. 7, 2007) (ADAMS ML070360665). The NRC Staff summarized the results of the responses to the Generic Letter in a report in late 2008. "Generic Letter 2007, 'Inaccessible or Underground Power Cable Failures That Disable Accident Mitigation Systems or Cause Plant Transients': Summary Report" (Nov. 12, 2008) (ADAMS ML082760385). Based on its review, the NRC Staff perceived a trend in cable failures, with exposure to water being the predominant contributing factor. Id. at 26. The NRC Staff therefore recommended that licensees have a program for using available diagnostic cable testing methods to assess cable condition and also make reasonable provisions to keep cables dry. Id. In addition, the Staff indicated that it planned to take several actions, including issuing a Regulatory Guide (which at that time the Staff expected to issue by December 2009) identifying the essential elements of a cable monitoring program. Id. at 27.

The NRC Staff's recommendations based on its review of the Generic Letter 2007-01 responses prompted a number of activities in 2009, continuing into 2010. First, the NRC Staff and the industry have each been working on developing guidance on an appropriate cable monitoring program for operating plants (irrespective of license renewal). This includes

Brookhaven National Laboratories' preparation for the NRC of NUREG/CR-7000, "Essential Elements of a Cable Monitoring Program" (Jan. 2010) and EPRI Report 1020805, "Plant Support Engineering: Aging Management Program Guidance for Medium-Voltage Cable Systems for Nuclear Power Plants" (June 2010) – both referenced in NEC's Motion at 6 – as well as the NRC Staff's issuance of Draft Regulatory Guide DG-1240, "Condition Monitoring Program for Electric Cables in Nuclear Power Plants" (June 2010).

Second, although the NRC Regulatory Guide had not yet been issued, Entergy proceeded to develop a fleet procedure, EN-DC-346, "Cable Monitoring Program," which it issued on December 31, 2009, as indicated in the NRC Inspection Report on which the NEC Motion is ostensibly based.[13] As an initial step taken before this program was even issued, VYNPS performed an inspection of underground cable access points on November 28, 2009 to assess the conditions of cables and supports and determine if there was water intrusion. Insp. Rpt. at 20. As discussed in the NRC Inspection Report, VYNPS identified portions of certain safety-related cable that were submerged. Id.

As discussed in the NRC Inspection Report, the specifications for these cables indicated that they are suitable for both wet and dry conditions. Id. However, after consulting with its specialists, the NRC concluded that these specifications do not include continuously submerged conditions. Id. The NRC therefore determined that VYNPS had not complied with 10 C.F.R. Part 50, Appendix B, Criterion III, "Design Control," because the cables had not been selected for suitability in the submerged environment. Id. at 21.

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[13] See Vermont Yankee Nuclear Power Station, NRC Inspection Report 05000271/2010002 (May 10, 2010), Encl. at 20 (ADAMS ML101300363) ("Insp. Rpt.")

The NRC treated this occurrence as a non-cited violation because it "was of very low safety significance" and was entered into Entergy's corrective action system.[14] Id. The NRC observed that the cables "were still fully capable of performing their design functions." Id.

Third, the NRC reconsidered whether GALL Program XI.E3 should be limited to medium-voltage cable because the operating experience received in response to Generic Letter 2007-01 reflected some low-voltage cable failures. Consequently, in a draft revision to the GALL Report, released with track changes in April 2010, the Staff proposed modifying GALL XI.E3 to apply to both medium- and low-voltage ($\geq$480 V) non-EQ inaccessible cable.[15] Although VYNPS has not observed any failures in low-voltage cable, in light of the NRC Staff's proposed revision to the GALL Report, VYNPS modified its Non-EQ Inaccessible Medium-Voltage Cable AMP on September 3, 2010, enhancing that program to include low-voltage (480 V to 2 kV) cables. Entergy Decl., Exh. C.

C. Statement of Case

On January 25, 2006, Entergy submitted its Application for the renewal of the VYNPS operating license. As discussed above, from the outset, the Application included aging management programs addressing cable in a manner entirely consistent with the GALL Report.

A Notice of Opportunity for Hearing was published on March 27, 2006, requiring any hearing requests and contentions to be submitted within sixty days. 71 Fed. Reg. 15,220 (Mar. 27, 2006). On May 26, 2006, NEC (as well as the Vermont Department of Public Service) petitioned to intervene and proposed a number of contentions, none of which challenged the

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[14] The Inspection Report did fault VYNPS for not pumping the manholes dry more expeditiously, but also found that Entergy had addressed this issue not only by dewatering the affected manholes but by developing a frequency for subsequent pump downs. Insp. Rpt. at 20.

[15] Preliminary Draft GALL Report for April Web Post (Track Change Version) (ADAMS ML101190153) at XI.E3-1 to XI.E3-4.

programs for managing cable. The Atomic Safety and Licensing Board ("Board") granted these petitions on September 22, 2006, and admitted certain contentions for hearing. LBP-06-20, 64 N.R.C. 131 (2006).

Following the admission of the parties and contentions, the Board issued an Initial Scheduling Order (Nov. 17, 2006) governing this proceeding. That Order provides that a motion to admit a new contention shall be deemed timely if it is filed within thirty days of the date in which the new and material information on which it is based first becomes available. Initial Scheduling Order at 7. The 30-day requirement was the timeframe specifically advocated by NEC. See Prehearing Teleconference Transcript ("Tr.") at 484 (Nov. 1, 2006).

The NRC Staff reviewed the Application and documented its review in a Safety Evaluation Report initially issued with confirmatory items on March 30, 2007.[16] This Safety Evaluation Report included, inter alia, the results of the Staff's review of the Environmental Qualification of Electric Components Program, as well as the program for managing inaccessible medium-voltage cable not subject to environmental qualification requirements. SER with Confirmatory Items, §§ 3.0.3.1.1, 3.0.3.1.3. None of the confirmatory items related to the programs managing the effects of aging on electrical components, including cable. See id., § 1.6. NEC did not seek to raise any new contentions at this juncture.

The NRC Staff issued its final Safety Evaluation Report on February 25, 2008 (ADAMS ML080560462),[17] which was later published as NUREG-1907 in May 2008.[18] The results of the NRC Staff's review of the Environmental Qualification of Electric Components Program, as well

[16] Safety Evaluation Report With Confirmatory Items Related to the License Renewal of Vermont Yankee Nuclear Power Station, Docket No. 50-271 (March 2007) ADAMS Accession No. ML070890638 ("SER with Confirmatory Items").

[17] See Letter from L. Subin to ASLB (Feb. 26, 2008) (ADAMS ML08570653).

[18] NUREG-1907, Safety Evaluation Report Related to the License Renewal of Vermont Yankee Nuclear Power Station (May 2008), ADAMS Accession Nos. ML081430057 (Vol. 1) and ML081430109 (Vol. 2).

as the program for managing inaccessible medium-voltage cable not subject to environmental qualification requirements, were again reflected in this document. SER, §§ 3.0.3.1.1, 3.0.3.1.3. Again, NEC did not seek to raise any new contentions challenging this information.

Thereafter, the Board held an evidentiary hearing on July 24-28, 2008 on the NEC contentions remaining in dispute, and issued a Partial Initial Decision and a Full Initial Decision on November 24, 2008, and July 23, 2009, respectively. LBP-08-25, 68 N.R.C. 763 (2008); LBP-09-9, 70 N.R.C. 41 (2009).

On March 2, 2010, while the appeals in this proceeding were before the Commission, NEC submitted to the NRC Staff a 10 C.F.R. § 2.206 petition relating to the presence of tritium in groundwater. At the same time, NEC submitted a letter to the Commission requesting that action on the pending appeals be stayed.

On July 8, 2010, the Commission issued its decision on the appeals. CLI-10-17. Because there had been confusion about whether certain fatigue calculations challenged in NEC Contention 2 were a TLAA or part of an AMP (id. at 51-56), the Commission remanded the proceeding to the Board "for the limited purpose of giving NEC the opportunity to submit a revised contention 2." Id. at 55-56, 69.

The Commission also denied NEC's stay request. Id. at 9-10, 69. The Commission found that the grounds for NEC's stay request had nothing to do with the issue on appeal and were not specifically keyed to license renewal. Id. at 9. The Commission observed that during the pendency of the remand, "NEC and Vermont are free to submit a motion to reopen the record pursuant to 10 C.F.R. § 2.326, should they seek to address any genuinely new issues related to the license renewal application that previously could not have been raised." Id. at 10 n.37 (emphasis in original).

Following the remand, the Board issued a scheduling order requiring any revised fatigue contention to be submitted by August 20, 2010. Order (Setting Schedule for Remand Filings) (July 12, 2010). The Order also required that any motion to reopen be filed by August 20.

On August 20, 2010, NEC filed its current Motion. NEC has decided not to submit a revised contention challenging the Fatigue Monitoring Program. Motion at 4. However, NEC moves the Board to reopen the record pursuant to 10 C.F.R. § 2.236 to admit a totally new, entirely unrelated contention concerning to the effects of moist or wet environments on inaccessible safety-related electrical cables. Id. at 4-5, 8.

D. Applicable Legal Standards

The NRC does not look with favor on amended or new contentions filed after the initial filing. Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 N.R.C. 631, 638 (2004). As the Commission has repeatedly stressed,

> [O]ur contention admissibility and timeliness rules require a high level of discipline and preparation by petitioners "who must examine the publicly available material and set forth their claims and the support for their claims at the outset." There simply would be "no end to NRC licensing proceedings if petitioners could disregard our timeliness requirements" and add new contentions at their convenience during the course of a proceeding based on information that could have formed the basis for a timely contention at the outset of the proceeding. Our expanding adjudicatory docket makes it critically important that parties comply with our pleading requirements and that the Board enforce those requirements.

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 N.R.C. 235, 271-72 (2009) (citations omitted).

Where, as here, the adjudicatory record has been closed, the Commission's rules specify that a motion to reopen that record to consider additional evidence will not be granted unless the following criteria are satisfied:

1) The motion must be timely. However, an exceptionally grave issue may be considered in the discretion of the presiding officer even if untimely presented;

2) The motion must address a significant safety or environmental issue; and

3) The motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.

10 C.F.R. § 2.326(a). Further, under the NRC rules,

> The motion must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) of this section have been satisfied. Affidavits must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised. Evidence contained in affidavits must meet the admissibility standards of this subpart. Each of the criteria must be separately addressed, with a specific explanation of why it has been met. When multiple allegations are involved, the movant must identify with particularity each issue it seeks to litigate and specify the factual and/or technical bases which it believes support the claim that this issue meets the criteria in paragraph (a) of this section.

10 C.F.R. § 2.326(b). As discussed later, NEC has not met any of these standards and requirements.

The Commission has repeatedly emphasized that "[t]he burden of satisfying the reopening requirements is a heavy one." Oyster Creek, CLI-09-7, 69 N.R.C. at 287 (citing Louisiana Power & Light Co. (Waterford Steam Electric Station, Unit 3), CLI-86-1, 23 N.R.C. 1, 5 (1986)). "[P]roponents of a reopening motion bear the burden of meeting all of [these] requirements." Id. (citing Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-90-10, 32 N.R.C. 218, 221 (1990)). "Bare assertions and speculation . . . do not supply the requisite support." Id. (citing Amergen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 N.R.C. 658, 674 (2008). Similarly, "[a] 'mere showing' of a possible violation is not enough." Id. (citing Oyster Creek, CLI-08-28, 68 N.R.C. at 670).

Moreover, where as here a motion to reopen relates to a contention not previously in controversy among the parties, it must also satisfy the requirements for nontimely contentions in § 2.309(c). 10 C.F.R. § 2.326(d).[19] Section 2.309(c) provides that non-timely contentions will not be entertained absent a determination by the Board that the contentions should be admitted based upon a balancing of the following factors:

> (i) Good cause, if any, for the failure to file on time;
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> (ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
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> (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;
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> (iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
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> (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
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> (vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;
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> (vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and
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> (viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

10 C.F.R. § 2.309(c)(1).

In keeping with the Commission's disfavor of contentions after the initial filing, these factors are "stringent." Oyster Creek, CLI-09-7, 69 N.R.C. at 260, citing Florida Power & Light Co. et al. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2, et al.), CLI-06-21, 64 N.R.C. 30, 33 (2006). "Late petitioners properly have a substantial burden in justifying their tardiness."

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[19] See also Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 3), CLI-09-05, 69 N.R.C. 115, 125 (2009); Oyster Creek, CLI-08-28, 68 N.R.C. at 668.

Nuclear Fuel Services, Inc. (West Valley Reprocessing Plant), CLI-75-4, 1 N.R.C. 273, 275 (1975).

Commission case law places most importance on whether the petitioner has demonstrated sufficient good cause for the untimely filing. Tennessee Valley Authority (Watts Bar Nuclear Plant, Unit 2), CLI-10-12, 71 N.R.C. __, slip op at 4 (Mar. 26, 2010) ("CLI-10-12"); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-00-02, 51 N.R.C. 77, 79 (2000); Millstone, CLI-09-05, 69 N.R.C. at 125. Indeed, failure to demonstrate good cause requires the petitioner to make a "compelling" showing with respect to the other factors. Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-04, 37 N.R.C. 156, 165 (1993). In other words,

> A petitioner's showing must be highly persuasive; it would be a rare case where [the Commission] would excuse a non-timely petition absent good cause.

Watts Bar, CLI-10-12 at 4 (footnote omitted). As discussed later, NEC has not shown good cause for its filing, and a balance of the lateness factors weighs against admitting this late-filed contention.

Finally, any new contention must also satisfy the standards for admissibility in 10 C.F.R. § 2.309(f)(1). These standards too are to be enforced rigorously. "If any one . . . is not met, a contention must be rejected." Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 N.R.C. 149, 155 (1991) (citation omitted); USEC Inc. (American Centrifuge Plant), CLI-06-9, 63 N.R.C. 433, 437 (2006) ("These requirements are deliberately strict, and we will reject any contention that does not satisfy the requirements." (footnotes omitted)). A licensing board is not to overlook a deficiency in a contention or assume the existence of missing information. Palo Verde, CLI-91-12, 34 N.R.C. at 155; Oyster Creek, CLI-09-7, 69 N.R.C. at 260 (the contention admissibility rules "require the petitioner (not the

board) to supply all of the required elements for a valid intervention petition" (emphasis added)). As discussed below, NEC also fails to meet these requirements.

III. NEC'S MOTION SHOULD BE DENIED

A. NEC Fails to Meet the Standards for a Motion to Reopen in 10 C.F.R. § 2.326

NEC's Motion clearly fails to satisfy the standards for reopening in 10 C.F.R. § 2.326. It is not supported by an affidavit that meets the requirements in 10 C.F.R. § 2.326(b), and it fails to meet all three of the requirements in 10 C.F.R. § 2.326(a)(1)-(3). Each of these failures by itself demands denial of the Motion.

1. Mr. Blanch's Declaration Does Not Address the Standards for Reopening

The Declaration and Affidavit of Paul Blanch (Aug. 20, 2010) ("Blanch Decl.") does not satisfy 10 C.F.R. § 2.326(b). That Section requires a supporting affidavit to separately address each of the criteria in Section 2.326(a) and provide a specific explanation of why each has been met. Mr. Blanch's Declaration does not even mention the relevant criteria, let alone provide a specific explanation why each has been met. Nor does Mr. Blanch's Declaration provide factual or technical bases sufficient to satisfy the criteria in Section 2.326(a). This defect is alone sufficient grounds to reject the Motion to reopen. Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 N.R.C. 62, 76 (1992), citing Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-89-1, 29 N.R.C. 89, 93-94 (1989).

2. The Motion is Not Timely

Neither Mr. Blanch's Declaration nor NEC's motion demonstrates that the motion is timely, as required by Section 2.326(a)(1). The only information that Mr. Blanch claims is new is the NRC's May 10, 2010 Inspection Report (Blanch Decl.,¶ 18), and the NEC Motion too appears to base its claim of timeliness solely on this Inspection Report (NEC Motion at 5).

Referring to an inspection report issued three and a half months ago does not make NEC's Motion timely. To the contrary, the Board's Initial Scheduling Order governing this proceeding specifically requires that, to be considered timely, a new contention must be filed within thirty days of the date in which the new and material information on which it is based first becomes available. Initial Scheduling Order (Nov. 17, 2006) at 7. Neither NEC nor Mr. Blanch provides any good reason why this contention could not have been raised within the timeframe specified by the Initial Scheduling Order (a timeframe that NEC specifically requested – see Tr. 484).

Moreover, the May 10, 2010 Inspection Report does not in fact relate to or support the issues that Mr. Blanch seeks to raise in his Declaration, and therefore cannot supply good cause for the Motion even if three and a half months were accepted as timely. Indeed, nowhere in Mr. Blanch's Declaration is there any explanation of how this Inspection Report supports his claims or demonstrates any deficiency in the aging management programs described in the Application.

In this respect, Mr. Blanch's Declaration appears to raise three claims regarding the Application: (1) that his "diligent review" found no TLAA or AMP addressing inaccessible, safety-related cable (Blanch Decl. at ¶ 22); (2) that VYNPS has not proposed any methodology to preclude or detect submergence of medium-voltage cables (id. at ¶ 28); and (3) the majority of cables are low-voltage (id. at ¶ 29). Putting aside their lack of basis (which will be addressed later in this Answer), none of these claims is predicated on or supported by the Inspection Report. The first two claims are simply assertions that the Application omits relevant TLAAs and aging management programs, and as such could have been raised when the Application was filed.

Likewise, the NRC Inspection Report does not provide any basis for expanding the Non-EQ Inaccessible Cable Program to include low-voltage cables. The NRC Inspection Report does

not provide any information indicating that low-voltage cables are susceptible to failure. In contrast, the operating experience that has led the NRC Staff to conclude that the GALL program for non-EQ inaccessible cable should be expanded to encompass cable with a voltage greater than or equal to 480V was summarized in the November 12, 2008 Summary Report on GL 2007-01 – nearly two years ago – and the NRC Staff's conclusion in this regard was indicated by the draft revision to the GALL Report made available in April. (In any event, this aspect of NEC's Motion is now moot because VYNPS has expanded its AMP to encompass low-voltage cables).

The NEC Motion provides some additional claims regarding timeliness, but these are not supported by Mr. Blanch's Declaration as required by 10 C.F.R. § 2.326(b). Moreover, these claims too have no real relationship to the NRC Inspection Report, suggesting that NEC is simply using that Report as a pretext for raising issues that could have been asserted at the outset of this proceeding.

In particular, NEC states that its contention "is based on the fact that the applicant has recently discovered safety related electrical cables, not qualified for wet conditions, submerged in water, thus providing a challenge . . . nowhere contemplated in the license renewal application." NEC Motion at 9. See also NEC Motion at 13 (describing the exposure of cables to wetting as "newly discovered."). Certainly, NEC and Mr. Blanch cannot claim in good faith that they were unaware that inaccessible cable may be exposed to wet conditions, including submergence, because the GALL Program, "Inaccessible Medium-Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualifications Requirements" (GALL Section XI.E3), which the Application adopts, specifically describes this condition. Indeed, this is the specific condition that the GALL program and the corresponding AMP in the LRA (B.1.17) are intended to address.

In this regard, Section XI.E3 of the GALL Report states, "some cables may be exposed to condensation and wetting in inaccessible locations, such as conduits, cable trenches, cable troughs, duct banks, underground vaults, or direct buried installations." GALL Report at XI.E-7. It states:

> [I]f duct bank conduit has low points in the routing, there could be potential for long-term submergence at these low points. In addition, concrete raceways may crack due to soil settling over a long period of time and manhole covers may not be watertight. Additionally, in certain areas, the water table is high in seasonal cycles and therefore, the raceways may get refilled soon after purging.

Id. (emphasis added). It further states:

> This program applies to inaccessible (e.g., in conduit or direct buried) medium-voltage cables within the scope of license renewal that are exposed to significant moisture simultaneously with significant voltage. Significant moisture is defined as periodic exposures to moisture that last more than a few days (e.g., cable in standing water).

Id. at XI.E-8 (emphasis added). In sum, the potential for inaccessible cable to be exposed to water, including submergence, has been apparent from the outset of this proceeding. This information is not new.

Nor can either NEC or Mr. Blanch claim that they were unaware that such cable might not be subject to environmental qualification requirements or might be exposed to localized conditions more severe than the specified service environment for the cable. GALL Program XI.E3 specifically applies to cable that is not subject to the environmental qualification requirements in 10 C.F.R. § 50.49, and specifically explains:

> Since they are not subject to the environmental qualification requirements of 10 CFR 50.49, the electrical cables covered by this aging management program are either not exposed to harsh accident conditions or are not required to remain functional during or following an accident to which they are exposed.

Id. at XI.E-7. The GALL program specifically explains that "[w]hen an energized medium-voltage cable (2kV to 35kV) is exposed to wet conditions for which it is not designed,"

degradation potentially leading to failure could occur. Id. (emphasis added). The whole purpose of the program is to manage the effects of aging on cable exposed to "adverse localized environment," which is defined as follows:

> An adverse localized environment is a condition in a limited plant area that is significantly more severe than the specified service environment for the cable.

Id. (emphasis added). Thus, this too is not new.

For the same reasons, NEC cannot claim that the Inspection Report is new information showing that an AMP is needed. The GALL Report (available when the Application was filed) already indicates the need.

The NEC Motion also asserts (again without required support in Mr. Blanch's Declaration) that a reading of the Inspection Report will show that the AMP in the Application is not adequate to prevent repetition of submergence or detect wetted conditions elsewhere, and that VYNPS employees were not adequately instructed to determine the significance of non-qualified cable subject to wetted conditions. NEC Motion at 17. These unsupported claims appear to be based on NEC's erroneous assertion that the AMP in the license renewal application is "a simple continuance" of existing programs. Id. at 22. This assertion ignores the statement in the Application that the Non-EQ Inaccessible Medium-Voltage Cable Program is a new program. Application at B-61; Entergy Decl., Exh. C, Att. 1 at 3. As reflected in Entergy's Commitment List, Entergy has committed to implement this program by March 21, 2012. See note 12, supra.

3. NEC Does Not Demonstrate the Existence of A Significant Issue

Neither Mr. Blanch's Declaration nor NEC's Motion demonstrates that a significant safety issue exists. While Mr. Blanch asserts that failures of safety-related cables may result in

accidents and loss of safety-related equipment (Blanch Decl. at ¶¶ 25-26), "binding case law establishes that a movant who seeks to reopen the record does not show the existence of a significant safety issue merely by showing that a plant component 'perform[s] safety functions and thus ha[s] safety significance.'" Oyster Creek, CLI-08-28, 68 N.R.C. at 672 (emphasis in original) (footnote omitted). Here, Mr. Blanch essentially ignores the aging management programs contained in the Application that manage the effects of aging on cables to provide reasonable assurance that they will perform their intended functions. He ignores the fact that the VYNPS AMPs are based on, and consistent with, those recommended in the GALL Report, which the Commission has held constitutes reasonable assurance that the targeted aging effect will be adequately managed during the renewal period. Oyster Creek, CLI-08-23, 68 N.R.C. at 468 (2008); Vermont Yankee, CLI-10-17 at 44.

Mr. Blanch does assert that "[i]n its description of its aging management program, Vermont Yankee has not proposed any methodology to precluded [sic] or detect the submergence of Medium Voltage Cables" (Blanch Decl. at ¶ 28), but this assertion simply ignores relevant provisions in the AMP. The Program Description for the Non-EQ Inaccessible Medium-Voltage Cable Program, as well as GALL AMP XI.E3 on which it is based and with which it is consistent, explicitly states:

> In this program, periodic actions will be taken to prevent cables from being exposed to significant moisture, such as inspecting for water collection in cable manholes and conduit, and draining water, as needed.

Entergy Decl., Exh. C, Att. 1 at 2. See also GALL Report at XI.E-7. The Program Description further states that the

> VYNPS inspection for water accumulation in manholes is conducted in accordance with a plant procedure. An evaluation per the Corrective Action Process will be used to determine the need to revise manhole inspection frequency based on inspection results.

Entergy Decl., Exh. C, Att. 1 at 2. Thus, the Application commits to inspections to detect submergence, use of the results to adjust inspection frequency, and draining where necessary. Moreover, because the GALL Report concludes that these actions cannot assure that non-EQ inaccessible cable will not be exposed to water, as a further measure to provide reasonable assurance that a cable will perform its intended function, this AMP specifically requires tests to evaluate the condition of the conductor insulation. See GALL Report at XI.E-7. Mr. Blanch does not provide any information indicating any deficiency in these measures, and therefore does not demonstrate that there is any significant issue with respect to the adequacy of the program to provide reasonable assurance that non-EQ inaccessible cable will continue to perform its intended function.

The discussion of safety significance in the NEC Motion is even more cursory and insubstantial than the discussion in Mr. Blanch's Declaration. NEC merely quotes 10 C.F.R. § 2.326(a)(2) and asserts that "[f]or all of the good reasons evidenced the foregoing, the Board must find that this is a significant safety issue." NEC Motion at 6. Such a conclusory assertion certainly does not meet the high burden required to reopen a closed record at the eleventh hour.

Further, none of the "foregoing" discussion in the NEC Motion, which consists of a reference to the NRC Inspection Report and quotations from an EPRI Guidance Document and NUREG/CR-7000 (see NEC Motion at 5-6), supports this conclusory assertion. The NRC Inspection Report on which NEC's new contention is supposedly based does not support the existence of a significant issue. Rather, the Inspection Report specifically states:

> The finding was determined to be of very low safety significance (Green) because it was a design or qualification deficiency which was confirmed to have not resulted in a loss of operability or functionality. Specifically, the continuously submerged cables . . . were still fully capable of performing their design functions.

Insp. Rpt. at 21 (emphasis added). Although NEC's Motion later quotes the same language from the Inspection Report (Motion at 11), NEC does not dispute the Staff's "very low safety significance" finding (and Mr. Blanch ignores it altogether). The absence of such a dispute belies any claim that there is any issue of any safety significance here. See Oyster Creek, CLI-09-7, 69 N.R.C. at 288-90 (finding no significant safety issue where the motion to reopen failed to dispute an NRC Staff Inspection Report's lack of any safety significant findings). Further, the quotes from the EPRI Guidance and NUREG/CR-7000, which are guidance on monitoring programs at existing plants under their current licenses, merely indicate that cables are important components and regulatory attention to their reliability and need for monitoring throughout their installed life has been increasing. See NEC Motion at 6. Neither of these quotations indicates any significant concern with the adequacy of the aging management programs endorsed in the GALL Report.[20]

In sum, the NEC Motion and Mr. Blanch's Declaration do not demonstrate the existence of a significant safety issue. For this same reason, they also fail to show that there is an "exceptionally grave" issue that might allow the untimeliness of NEC's Motion to be overlooked. See 10 C.F.R. § 2.326(a)(1).

4. NEC Does Not Show that a Materially Different Result Would Be Likely

Finally, neither Mr. Blanch's Declaration nor NEC's Motion demonstrates that a materially different result would be likely had the newly proffered evidence been considered initially, as required by 10 C.F.R. § 2.326(a)(3). Mr. Blanch not only makes no mention of this criterion – contrary to 10 C.F.R. § 2.326(b), which requires a supporting affidavit to include a

[20] See, e.g., Blanch Decl. at ¶ 33 ("Analysis of the reported cable failures also indicated a trend toward early cable failures occurring prior to the end of the original 40-year license period. These data prompted the NRC to consider whether '. . . licenses should have a program for using available diagnostic testing methods to assess cable condition.'") (citing NRC/CR-7000, emphasis added).

specific explanation of why it has been met – but also provides no information anywhere in his Declaration from which any argument on this criterion can be gleaned.

NEC's Motion is equally deficient. NEC merely asserts that "it is reasonable to assume, based on the weight of the evidence and the safety significance of the issue, that . . . the Board would have rejected Entergy's LRA. . . ." NEC Motion at 7. As the Commission has held, such "bare assertions and speculation" do not provide the support required for a movant to meet its burden of demonstrating that the motion should be granted. Oyster Creek, CLI-08-28, 68 N.R.C. at 674. In Oyster Creek, the Commission found that the criterion in 10 C.F.R. § 2.326(a)(3) was not satisfied by an expert's claims that deficiencies were "likely" or "probabl[e]." Id. Here, NEC's assumption, unsupported by any expert opinion or technical analysis, is clearly inadequate. Moreover, in light of the Commission's holding that use of an AMP consistent with the GALL Report constitutes reasonable assurance that the targeted aging effect will be adequately managed during the renewal period (Oyster Creek, CLI-08-23, 68 N.R.C. at 467; Vermont Yankee, CLI-10-17 at 44-45), NEC's unsupported "assumption" is particularly inappropriate.

The Commission has long required that the evidence supplied in support of a motion to reopen a record to admit a new contention "'must be strong enough, in light of any opposing filings, to avoid summary disposition.'" Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-05-12, 61 N.R.C. 345, 350 (2005), quoting Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-138, 6 A.E.C. 520, 523-24 (1973). This means that "'no reopening of the evidentiary hearing will be required if the [documents] submitted in response to the motion demonstrate that there is no genuine unresolved issue of fact.'" Id. (quoting Vermont Yankee, ALAB-138, 6 A.E.C. at 523-24).

Here, the Declaration of Norman L. Rademacher and Roger B. Rucker provided in support of this Answer demonstrates that there is no genuine issue of material fact in dispute. In particular, this Declaration shows:

- The Application includes an AMP for Non-EQ Inaccessible Medium-Voltage Cable that is based on and consistent with the GALL Report. Entergy Decl., ¶¶ 4-5.
- The Non-EQ Inaccessible Medium-Voltage Cable Program is specifically designed to manage the potential effects of wetting, including submergence, on inaccessible cable that is not subject to the environmental qualification requirements of 10 C.F.R. § 50.49. Id., ¶ 6.
- The Non-EQ Inaccessible Medium-Voltage Cable Program requires periodic actions to prevent cables from being exposed to significant moisture, such as inspecting for water collection in cable manholes, and draining water as needed. These inspections will occur at least once every two years but, if significant water is detected, an evaluation per the Corrective Action Process will be used to determine the need to revise manhole inspection frequency based on inspection results. Id., ¶ 7.
- The Non-EQ Inaccessible Medium-Voltage Cable Program also requires testing to provide an indication of the condition of the cable insulation, thereby providing further assurance that this cable will perform its intended function even if it is exposed to significant water. This testing must be a proven method for detecting deterioration of the insulation system due to wetting, such as power factor, partial discharge, or polarization index, or other testing that is state-of-the-art at the time the test is performed. Id., ¶¶ 8-9.
- The Non-EQ Inaccessible Medium-Voltage Cable has been enhanced so that it now also applies to low-voltage (480V to 2kV) cable as well. Id., ¶ 10.
- Cable with voltages below 480V are not included in the Non-EQ Inaccessible Medium-Voltage Cable Program, because the operating experience across all operating units has not indicated any significant frequency of water induced failure. This reflects the fact that degradation of cable insulation is a function of both the voltage and the presence of water (i.e., the voltage level contributes to the degradation). Id., ¶ 11.

- VYNPS does not have any inaccessible, high-voltage cable subject to aging management review. Id., ¶ 12.
- The only TLAAs applicable to cable at VYNPS are the calculations and analyses performed pursuant to 10 C.F.R. § 50.49 to environmentally qualify certain electric equipment within the scope of that rule for the life of the plant. These TLAAs are properly identified in Section 4.1 of the Application, and Section 4.4 of the Application identifies the VYNPS "Environmental Qualification of Electric Components" as managing the aging effects on electrical components subject to 10 C.F.R. § 50.49, thus addressing these TLAAs as permitted by 10 C.F.R. § 54.21(c)(1)(iii). Id., ¶ 14.
- The VYNPS "Environmental Qualification of Electric Components" Program is based on and consistent with the GALL Report. Id., ¶ 15.
- The discovery of the water in certain VYNPS manholes containing safety-related cable does not indicate any deficiency in the Non-EQ Inaccessible Medium-Voltage Cable Program, because it is a new program that had not yet been implemented at the time the water was discovered. Id., ¶ 20.
- A "Cable Reliability Program" that Entergy issued on December 31, 2009, is a fleet procedure that Entergy put in place to address the NRC Staff's recommendations that existing licensees should have an electrical cable monitoring program. This program is not the Non-EQ Inaccessible Medium-Voltage Cable Program. Id., ¶ 21.
- The discovery of water in the VYNPS manholes containing safety-related cable does not indicate any deficiency in the Cable Reliability Program, because the discovery occurred at the end of November, 2009, and the Cable Reliability Program was issued at the end of December, 2009. Obviously a program put in place at the end of December would not have prevented accumulation of water in the manholes in November. Id., ¶¶ 21-22.
- The corrective action that VYNPS took in response to the discovery of water in the manholes included developing a frequency for subsequent pumping, so that the conditions to which the cables will be exposed will remain consistent with the cable specifications. Id., ¶ 23.
- VYNPS employees responsible for the Cable Reliability Program have now received instruction on the new Cable Reliability Program. Similarly, VYNPS employees

responsible for new license renewal aging management programs will receive appropriate training on these programs before they are implemented. Id., ¶ 24.

None of these facts are disputed by NEC. Accordingly, NEC's Motion does not establish that a materially different result is likely.

B. NEC's Motion Does Not Satisfy the Lateness Factors in 10 CFR § 2.309(c)(1)

For the same reasons that NEC's Motion is untimely under 10 C.F.R. § 2.326(a)(1), it fails to satisfy the factor in 10 C.F.R. § 2.309(c)(1)(i) by showing good cause for the failure to file on time. Good cause has long been interpreted to mean that the information on which the proposed new contention is based was not previously available. Millstone, CLI-09-05, 69 N.R.C. at 125-26. "In addressing the good-cause factor, a petitioner must explain not only why it failed to file within the time required, but also why it did not file as soon thereafter as possible." Westinghouse Electric Corp. (Nuclear Fuel Export License for Czech Republic – Temelin Nuclear Power Plants), CLI-94-7, 39 N.R.C. 322, 329 (1994) (emphasis added). The petitioner must establish that (1) the information is new and could not have been presented earlier, and (2) the petitioner acted promptly after learning of the new information. Comanche Peak, CLI-92-12, 36 N.R.C. at 69-73.

Here, as discussed previously, NEC claims that its contention is based on new information in the NRC's May 10, 2010 Inspection Report, but that report had been available for about three and a half months when NEC filed its Motion. The Initial Scheduling Order in this proceeding specifically provides that, to be considered timely, a new contention must be filed within thirty days of the date in which the new and material information on which it is based first becomes available. Initial Scheduling Order (Nov. 17, 2006) at 7. Therefore, even if one were to accept NEC's claim that its new contention is based on this Inspection Report, NEC would

still have failed to demonstrate that it brought its contention in a timely manner once it became aware of the Inspection Report.

NEC argues that, when this Inspection Report was published, it was still waiting for the Commission decision on the petitions for review (NEC Motion at 5), but that provides no excuse for failing to file a motion to reopen or new contention promptly after learning of new information. Certainly, the Commission's decision did not excuse NEC from the timeliness requirements. Rather, the Commission made it clear that any new contention has to be filed pursuant to 10 C.F.R. § 2.326 (and thus satisfy its timeliness requirements) and has to address "genuinely new issues." CLI-10-17 at 10 n.37 (emphasis in original).

Likewise, NEC's claim that it diligently pursued additional evidence, even if true, provides no excuse for its lack of timeliness. If NEC thinks that the May 10, 2010 Inspection Report provides a basis for its new contention, it was obligated to file such a contention within 30 days of that Report, and not to sit on its hands hoping for something more.

Moreover, as previously discussed, when one scrutinizes NEC's claims closely, it is clear that they are not really based on new information in the NRC Inspection Report, but in fact are based on information that has been available for years. In particular, the fact that safety-related cables not subject to the environmental qualifications requirements in 10 C.F.R. § 50.49 might be subject to wet conditions, including submergence, has been reflected in the Application from its initial filing in January 2006 – over four years ago – and was reflected in the GALL Report, Revision 1 of which was issued over five years ago. NEC's claims that this information is "newly discovered" and "nowhere contemplated in the license renewal application" (NEC Motion at 9, 13) are simply unfounded.

Because it has failed to demonstrate good cause, NEC is required to make a "compelling" showing with respect to the other lateness factors in Section 2.309(c)(1). Watts Bar, CLI-10-12 at 4; Comanche Peak, CLI-93-04, 37 N.R.C. at 165. NEC fails to do so. Indeed, NEC addressed most of the factors with one or two sentence conclusory assertions. See NEC Motion at 23-24. Moreover, the most important of these factors in fact weigh against NEC.[21]

In particular Factor (vii) – the extent to which the petitioner's participation will broaden the issues or delay the proceeding – weighs heavily against NEC. Here, granting NEC's Motion would result in the establishment of an entirely new adjudication, commencing more than four years after the filing of the Application and two years after completion of the NRC Staff's review. Obviously, it would broaden the issues because there are currently no other adjudicatory issues before the Board. Clearly, starting another hearing to litigate a new contention at the very late hour would delay issuance of the renewed license by months. Comanche Peak, CLI-93-04, 37 N.R.C. at 167 ("It is manifest to us that the grant of an intervention petition at this very late hour . . . will perforce broaden the now non-existent adjudicatory issues and delay conclusion of the proceeding.") (citation omitted).

Further, Factor (viii) – the extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record – weighs against NEC. NEC's claim that it brings "well-researched fact based argument and the service of a highly experience [sic] expert" (NEC Motion at 24) are belied by the lack of substance and quality in the NEC Motion and

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[21] Under the former 10 C.F.R. § 2.714(a)(1), five factors were to be balanced to determine whether a late filed contention could be admitted into a proceeding. Pacific Gas & Elec. Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-1, 67 N.R.C. 1, 3 (2008). If good cause is not shown, a compelling showing had to be made on the other four factors. Id. In this analysis, factors (iii), the extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record, and (v), the extent to which petitioner's participation will broaden the issues or delay the proceeding, are given more weight than factors (ii) and (iv), the availability of other means whereby the petitioner's interest will be protected and the extent to which petitioner's interest will be represented by existing parties, respectively. Id.

supporting Declaration. NEC's ability to contribute to a sound record is belied by Mr. Blanch's inability to identify the relevant TLAA and AMP based on his "diligent review" (Blanch Decl. at ¶ 22). NEC's and Mr. Blanch's apparent unawareness that cable not subject to the environmental qualification requirements of 10 C.F.R. § 50.49 might be exposed to water (see NEC Motion at 9, 13), when this fact is clearly indicated in both the Application and the GALL Report, belies an ability to contribute to this proceeding. It is belied by NEC's and Mr. Blanch's failure to make any meaningful attempt to address the aging management programs in the Application or identify any deficiencies in those programs. It is also belied by the fact that much of Mr. Blanch's Declaration merely repeats verbatim several paragraphs from the Executive Summary of NUREG/CR-7000 (compare Blanch Decl. at ¶¶ 31-33 with NUREG/CR-7000 at xi) without any meaningful discussion or recognition of the focus of that Report.

Moreover, while Mr. Blanch is obviously an experienced engineer, his Declaration does not identify any special expertise with cable monitoring programs. It provides no discussion of the relevant operating experience, such as that summarized in the Summary Report on Generic Letter 2007-01. Neither NEC nor Mr. Blanch make any attempt to summarize the testimony that they would provide, as is required to address this factor. See Watts Bar, CLI-10-12, 71 N.R.C. __, slip op. at 10-11; Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-704, 16 N.R.C. 1725, 1730 (1982) ("When a petitioner addresses this criterion it should set out with as much particularity as possible the precise issues it plans to cover, its prospective witnesses, and summarize their proposed testimony."); accord Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-88-12, 28 N.R.C. 605, 611 (1988). The vague assertions that NEC devotes to this factor (NEC Motion at 24) are insufficient. Comanche Peak, CLI-93-04, 37 N.R.C. at 166.

The other factors in 10 C.F.R. § 2.309(f)(1) are less important (see, e.g., Diablo Canyon, CLI-08-1, 67 N.R.C. at 3; Comanche Peak, CLI-93-04, 37 N.R.C. at 165), and therefore cannot outweigh NEC's failure to demonstrate good cause or meet factors (vii) and (viii). Having failed to establish good cause and to make a compelling showing on two of the (most important) remaining seven factors, the balance of the lateness factors in 10 C.F.R. § 2.309(f)(1) weigh against admission of NEC's late contention. See Watts Bar, CLI-10-12 at 11.

C. NEC's Contention Does Not Meet the Standards of Admissibility in 10 CFR § 2.309(f)(1)

A party seeking to reopen a closed record to raise a new matter faces an "elevated burden to lay a proper foundation for its claim." Oyster Creek, CLI-08-28, 68 N.R.C. at 668. "Commission practice holds that the standard for admitting a new contention after the record is closed is higher than for an ordinary late-filed contention." Id. In this case, NEC's proposed contention would not meet even the ordinary standards for admitting a contention.

First, NEC's proposed contention does not meet the specificity requirement in 10 C.F.R. § 2.309(f)(1)(i). "'Specificity'" is the "'hallmark'" of the Commission's contention admissibility rules. Calvert Cliffs, CLI-06-21, 64 N.R.C. at 34, citing Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Units 1, 2, and 3), CLI-00-18, 52 N.R.C. 129, 132 (2000). The proposed contention (set forth in the NEC Motion at 8) does not specify why the VYNPS aging management program for Non-EQ inaccessible cable is inadequate. Further, it refers to a TLAA (id.), but does not specify what TLAA is being challenged or why it is inadequate.

Second, NEC's proposed contention does not meet the requirement in 10 C.F.R. § 2.309(f)(1)(ii) that it be supported by an explanation of its basis. The NEC Motion attempts to meet this requirement by quoting the NRC's May 10, 2010 Inspection Report (see NEC Motion

at 10-13), but it provides no explanation of how this Inspection Report provides a basis for its contention.

As previously discussed, the NRC Inspection Report identifies a non-cited violation of 10 C.F.R. Part 50, App. B, Criterion III, "Design Control," based on the Staff's conclusion that the design specification for those cables was not sufficient for cables subject to submergence. See Insp. Rpt. at 20-21. This design-related finding does not indicate any deficiency in the VYNPS aging management program for non-EQ inaccessible cable because that AMP is specifically intended to apply to cables that may be exposed to moisture, including submergence, that is "more severe than the specified service environment for the cable." GALL Report at XI E-7. The NRC Inspection Report does not identify any deficiency in this AMP.

Further, the presence of water detected by the inspections that VYNPS conducted in November 2009 do not indicate any deficiency in the AMP for non-EQ inaccessible cable because the AMP is a new program that VYNPS committed to implement in 2012 – i.e., the measures to inspect and drain manholes described in the AMP were not yet in effect in November 2009. And, while VYNPS began implementing a Cable Reliability Program at the end of December 2009 in response to the NRC Staff's recommendation that existing licensees initiate such programs, obviously a program put in place at the end of December would not have prevented accumulation of water in the manholes in November.

The NRC Inspection Report also provides no basis to question the sufficiency of the program that VYNPS describes in its Application to address cables that are environmentally qualified under 10 C.F.R. § 50.49. The cables discussed in the NRC Inspection Report are located in a mild environment (as defined by the NRC rules), and therefore are not subject to the provisions of 10 C.F.R. § 50.49. Because cables located in mild environments are not subject to

the testing and analysis requirements in 10 C.F.R. § 50.49, but instead generally achieve compliance with the environmental design provisions of GDC 4 by incorporation of relevant environmental conditions into the design process, including the equipment specifications (see NUREG-0800 at 3.11-2), there is no TLAA applicable to such cable.[22] The AMPs for non-EQ cable exist for this very reason (i.e., because there is long-lived cable not subject to the requirements of 10 C.F.R. § 50.49). In contrast, safety-related cable located in harsh environments (i.e., subject to design basis accident conditions) and qualified for forty years or the life of the plant is subject to a TLAA (the specific calculations and analyses qualifying such cable in accordance with 10 C.F.R. § 50.49). As permitted by 10 C.F.R. § 54.21(c)(1)(iii), the Application has addressed this TLAA by committing to a specific program to manage the effects of aging on electric equipment subject to 10 C.F.R. § 50.49 (see Application at App. B, § B.1.10). This program is consistent with the GALL Report, and neither NEC nor Mr. Blanch provide any basis on which to dispute its adequacy.

Third, NEC does not meet the requirements in 10 C.F.R. §§ 2.309(f)(1)(iii) and (v) to demonstrate that its contention is within the scope of this proceeding and material to the findings that the NRC must make. While NEC purports to challenge the AMPs in the Application as inadequate or non-existent, the NRC Inspection Report on which NEC asserts its contention is based identifies a design issue (whether the specification for certain cable was appropriate for its environment) not within the scope of the proceeding. As the Commission's rules make clear, a license renewal applicant's compliance with its CLB is not within the scope of this proceeding. 10 C.F.R. § 54.30(b). Likewise, the EPRI Guidance and NUREG/CR-7000 to which NEC refers relate to the potential need for a cable monitoring program during the initial term of existing

[22] Perhaps NEC and Mr. Blanch do not understand that TLAAs are analyses contained in the CLB, and not some new analysis produced for license renewal. See 10 C.F.R. § 54.3(a); CLI-10-17 at 41.

licenses. And in its discussion of its contention, NEC seems to be questioning VYNPS' current compliance with the NRC's Maintenance rule and Environmental Qualification rule, not the adequacy of the AMPs in the Application. See NEC Motion at 9. None of these topics are within the scope of the license renewal rule or material to the findings that the NRC must make. See 10 C.F.R. § 54.30.[23]

Finally, NEC does not meet the requirement in 10 C.F.R. § 2.309(f)(1)(vi) to provide sufficient information to demonstrate a genuine material dispute with the Application. This rule requires that the information must include specific references to the portions of the Application that petitioner disputes and the supporting reasons for each dispute; or if the petitioner believes that the application fails to contain information on a relevant matter, the identification of each failure and the supporting reasons for petitioner's belief. 10 C.F.R. § 2.309(f)(1)(vi). Here, NEC and Mr. Blanch essentially ignore the aging management programs in the Application.

For example, NEC's contention alleges that VYNPS has not demonstrated an adequate TLAA to address the effects of wet environments on inaccessible cables (see NEC Motion at 8); and NEC repeats Mr. Blanch's claims that a "diligent review" did not reveal a TLAA (id. at 19), and that a complete and accurate TLAA would take into account the effects of submergence (id. at 19-20). Neither NEC nor Mr. Blanch provide any discussion of Section 4.1 of the Application, which identifies environmental qualification analyses of electric components as TLAAs, or Section 4.4 of the Application, which identifies the VYNPS Environmental

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[23] See also Florida Power & Light Co. (Turkey Point Units 3 and 4), CLI-01-17, 54 N.R.C. 3, 7 (2001) ("License renewal reviews are not intended to 'duplicate the Commission's ongoing reviews of operating reactors.'"); Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 N.R.C. at 22 ("with respect to license renewal, under the governing regulations in 10 CFR Part 54, the review of license renewal applications is confined to matters relevant to the extended period of operation requested by the applicant."); Millstone, CLI-04-36, 60 N.R.C. at 638 ("a license renewal proceeding is not the proper forum for the NRC to consider operational issues. If [a petitioner] has information supporting its claim [concerning operational issues], its remedy would not be a narrowly focused license renewal hearing, but a citizen's petition under 10 C.F.R. § 2.206.").

Qualification of Electric Components Program (Application, at App. B, § B.1.10) as managing the aging effects on electrical components subject to 10 C.F.R. § 50.49, thus addressing these TLAAs as permitted by 10 C.F.R. § 54.21(c)(1)(iii). Similarly, neither NEC nor Mr. Blanch provide any discussion of this AMP in Section B.1.10 of Appendix B. Thus, NEC fails to address and demonstrate any genuine dispute with these portions of the Application.

Further, neither NEC nor Mr. Blanch identify any omission from the program in Section B.1.10, or reason for believing that there is some omission. As is clear from Section X.E1 of the GALL Report, on which the AMP in Section B.1.10 of the Application is based and with which it is consistent, the scope of this TLAA and program addresses electric components that are subject to 10 C.F.R. § 50.49. See GALL Report at X.E-1 ("10 CFR 50.49 defines the scope of components to be included. . ."). As is clear both from the GALL Report and 10 C.F.R. § 50.49, the electric components subject to 10 C.F.R. § 50.49 are those subject to a harsh environment (GALL Report at X.E-1; 10 C.F.R. § 50.49(c)), and the environmental qualification testing of these components is specifically required to consider submergence (10 C.F.R. § 50.49(e)(6)). Neither NEC nor Mr. Blanch provide any meaningful discussion of these requirements.

Similarly, neither NEC nor Mr. Blanch make any meaningful attempt to address and discuss the Non-EQ Inaccessible Medium-Voltage Cable Program in App. B, § B.1.17 of the Application, or GALL AMP XI.E3 on which it is based. NEC and Mr. Blanch assert that the program description does not include any methodology to preclude or detect the submergence of medium-voltage cables (NEC Motion at 20; Blanch Decl. at ¶ 28), but as previously observed, this claim simply ignores the provisions in the AMP addressing these very points:

> In this program, periodic actions will be taken to prevent cables from being exposed to significant moisture, such as inspecting for water collection in cable manholes and conduit, and draining water, as needed.

Entergy Decl., Exh. C, Att. 1 at 2.

> VYNPS inspection for water accumulation is conducted in accordance with a plant procedure. An evaluation per the Corrective Action Process will be used to determine the need to revise manhole frequency based on inspection results.

Id. Thus, NEC has failed to address or demonstrate any genuine, material dispute with these provisions in the Application.

Similarly, NEC and Mr. Blanch fail to address or identify any deficiency in the testing that is required under the AMP to determine the condition of the cable insulation. See Entergy Decl., Exh. C, Att. 1 at 2-3; GALL Report, § XI.E3. As the GALL Report explains, this testing is required because it may not be possible to assure that inaccessible cable will not be exposed to water. See GALL Report at XI.E-7. Neither NEC nor Mr. Blanch address this testing or provide any explanation why it is inadequate (i.e., why it will not provide reasonable assurance that inaccessible cable will continue to perform its intended function).

In particular, the discussion on pages 11 and 12 of Mr. Blanch's Declaration (parroted in the NEC Motion at 21) does not relate to or address the specific types of testing required by the Non-EQ Inaccessible Medium-Voltage Cable Program. Mr. Blanch's Declaration quotes verbatim from the Executive Summary of NUREG/CR-7000, which states that in-service testing of safety-related systems can demonstrate the function of the cables under test conditions but does not provide specific information on the status of cable aging degradation processes nor the physical integrity and dielectric strength of its insulation and jacket materials. Blanch Decl. ¶ 32, quoting NUREG/CR-7000 at xi. This discussion relates to in-service testing conducted under current operating licenses. In contrast, the Non-EQ Inaccessible Medium-Voltage Cable Program requires testing that will "provide an indication of the condition of the conductor insulation." Entergy Decl., Exh. C, Att. 1 at 2. "The specific type of test to be performed . . . is

to be a proven test for detecting deterioration of the insulation system due to wetting as described in EPRI TR-103834-P1-2, or other testing that is state-of-the-art at the time the test is performed." Id.; see also GALL Report at XI.E-7. The GALL Report indicates that this type of testing as described in EPRI TR-103834-P1-2 includes "power factor, partial discharge, or polarization index" testing. GALL Report at XI.E-7. NUREG/CR-7000 in fact identifies these tests as methods that may be used to monitor the condition of insulation. See NUREG/CR-7000 at 3-4 to 3-7. Neither NEC nor Mr. Blanch address the specific testing required by the AMP, or explain why it is inadequate. Thus, NEC provides no information demonstrating a genuine material dispute with the testing specified in the Application.

Finally, the assertion by Mr. Blanch and NEC that there are low-voltage cables does not raise any genuine, material dispute with the Application. First, neither Mr. Blanch nor NEC identified any operating experience indicating that low-voltage cables are susceptible to failure as a result of exposure to wetted conditions. In any event, this issue is moot, because the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program has been expanded to include low-voltage cable as recommended by the NRC Staff's draft revision to the GALL Report. Entergy Decl., Exh. C.

IV. CONCLUSION

As discussed above, NEC's Motion fails to satisfy any of the standards for reopening a proceeding to admit a new contention. NEC's Motion is not properly supported and fails to demonstrate an issue that is timely, significant, or likely to result in a materially different result. Similarly, NEC fails to demonstrate good cause for its untimeliness, and at this very late stage of the proceeding, the potential for expansion and delay coupled with NEC's failure to show any real ability to contribute to the record weigh decisively against admitting a late contention.

Finally, NEC does not even meet the normal standards for admitting a contention, and in essence, simply ignores the relevant portions of the Application. For all of the reasons stated above, NEC's Motion should be denied.

Respectfully submitted,

David R. Lewis
Matias F. Travieso-Diaz
PILLSBURY WINTHROP SHAW PITTMAN LLP
2300 N Street, NW
Washington, DC 20037-1128
Tel. (202) 663-8000

Counsel for Entergy

Dated: September 14, 2010

September 14, 2010

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)	)	

DECLARATION OF NORMAN L. RADEMACHER AND ROGER B. RUCKER IN SUPPORT OF ENTERGY'S ANSWER OPPOSING NEW ENGLAND COALITION'S MOTION TO REOPEN

Norman L. Rademacher (NLR) and Roger B. Rucker (RBR), under penalty of perjury, depose and state as follows:

1. (NLR) I am the Director of Engineering at the Vermont Yankee Nuclear Power Station ("VYNPS"). In this capacity, I am responsible for engineering and design activities at VYNPS and am familiar with the Vermont Yankee License Renewal Application ("LRA") and the associated aging management programs. A statement of my professional qualifications is attached as Exhibit A to this declaration.

2. (RBR) I am an electrical engineering consultant providing services to Entergy's License Renewal Services Division. In this capacity, I provide support to Entergy in developing aging management programs for electrical components, responding to NRC requests for additional information and other license renewal related reviews, and assisting with the implementation of these programs. A statement of my professional qualifications is attached as Exhibit B to this declaration.

3. The purpose of this declaration is to support Entergy's Answer Opposing New England Coalition's Motion to Reopen. In particular, we will respond to certain claims made in New England Coalition's Motion to Reopen the Hearing and for the Admission of New Contentions (Aug. 20, 2010) ("Motion"), and in the Declaration and Affidavit of Paul Blanch ("Blanch Decl."), which the New England Coalition ("NEC") submitted in connection with the Motion. We have personal knowledge of the matters stated herein.

4. NEC's contention that VYNPS does not have an adequate aging management program ("AMP") to address the effects of moist or wet environments on buried, below grade, underground, or hard-to-access safety-related cables (Motion at 8) is incorrect. The LRA for VYNPS includes an AMP for "Non-EQ Inaccessible Medium-Voltage Cable." This program is described in Appendix B of the LRA, in Section B.1.17, as amended by VYNPS letters dated

July 14, 2006[1] and September 3, 2010.[2] Attachment 1 to the September 3, 2010 letter, provided as Exhibit C to this declaration, shows the provisions in section B.1.17 as currently amended. To the extent NEC's contention may be asserting that this program needs to be "in place" (i.e., already implemented) (see Motion at 8), it is inconsistent with the license renewal rules at 10 CFR 54.21(a)(3), which require a demonstration that the effects of aging "will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation." As reflected in the Safety Evaluation Report Related to License Renewal of Vermont Yankee Nuclear Power Station, VYNPS has committed to implement the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program by March 21, 2012. NUREG-1907 at 3-22.

5. The VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program is based on and consistent with Section XI.E3 of the GALL Report.[3] It takes no exceptions to the GALL Report. The NRC Staff has reviewed the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program, as documented in the Safety Evaluation Report Related to License Renewal of Vermont Yankee Nuclear Power Station, has found all elements consistent with the GALL Report, and has concluded that VYNPS has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the current licensing basis ("CLB") for the period of extended operation, as required by 10 CFR § 54.21(a)(3). NUREG-1907 at 3-17 to 3-22.

6. Mr. Blanch states that an effective AMP would take into account the potential physical degradation effects of submergence in water on those electric cables and components which are susceptible to flooding but which have not been environmentally qualified. Blanch Decl., ¶ 22. The VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program is specifically designed to manage the potential effects of wetting, including submergence, on inaccessible cable that is not subject to the environmental qualification requirements of 10 C.F.R. § 50.49. As reflected in Section XI.E3 of the GALL Report, on which the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program is based and with which it is consistent, the program applies to inaccessible (e.g., in conduit or directly buried) cables within the scope of license renewal that are exposed to significant moisture (defined as periodic exposure to moisture that lasts for more than a few days, such as standing water). That same section specifically identifies water treeing or a decrease in the dielectric strength of the conductor insulation, potentially leading to electrical failure, as the degradation effects that can occur.

7. Mr. Blanch states that Vermont Yankee has not proposed any methodology to preclude or detect the submergence of medium-voltage cables. Blanch Decl., ¶ 22. This statement is incorrect. The VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program requires periodic actions to prevent cables from being exposed to significant moisture (such as inspecting for water collection in cable manholes, and draining water as needed). As indicated in Section A.2.1.19 (the Supplement to the VYNPS Updated Final Safety Analysis Report), these

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[1] Letter from T. Sullivan to Document Control Desk, "License Renewal Application, Amendment 5" (July 14, 2006) (ADAMS ML062010226).

[2] Letter from M. Colomb to Document Control Desk, "License Renewal Application Supplemental Information" (Sept. 3, 2010).

[3] NUREG-1801, Generic Aging Lessons Learned (GALL) Report (Rev. 1, Sept. 2005).

inspections will occur at least once every two years. See Exh. B, Att. 1 at 2. As indicated in Section B.1.17 of the LRA, if significant water is detected, an evaluation per the Corrective Action Process will be used to determine the need to revise manhole inspection frequency based on inspection results. Id.

8. Moreover, consistent with the GALL Report, the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program includes, in addition to the preventive actions, testing to provide an indication of the condition of the cable insulation. This testing provides further assurance that this cable will perform its intended function even if it is exposed to significant water.

9. Mr. Blanch quotes statements from the Executive Summary of NUREG/CR-7000 to the effect that in-service testing of cable does not provide specific information on the status of cable aging degradation processes nor the physical integrity and dielectric strength of its insulation and jacket material. Blanch Decl., ¶¶ 32-33. This statement does not relate or apply to the types of testing that are specified by the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program and Section XI.E3 of the GALL Report. The in-service testing to which NUREG/CR-7000 refers is testing of the end devices, such as pumps or valves, which are served by the cables. Consistent with the GALL Report, the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program requires use of a proven method for detecting deterioration of the insulation system due to wetting, such as power factor, partial discharge, or polarization index, or other testing that is state-of-the-art at the time the test is performed. The types of tests specified in the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program are in fact identified in NUREG/CR-7000 as tests that have the ability to indicate the condition of the cable insulation. See NUREG/CR-7000 at 3-4 to 3-8.

10. Mr. Blanch states that the majority of cables at Vermont Yankee are low-voltage as defined by GALL. The September 3, 2010 amendment to the LRA enhanced the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program so that it now also applies to low-voltage (480V to 2kV) cable as well.[4] It should be noted that a review of VYNPS operating experience has not identified any failure of low-voltage cable exposed to water at VYNPS.

11. Cable with voltages below 480V (typically, instrumentation and control cables) are not included in the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program, because the operating experience across all operating units has not indicated any significant frequency of water-induced failure. This reflects the fact that degradation of cable insulation is generally a function of both the voltage and the presence of water (i.e., the voltage level contributes to the degradation).

12. High-voltage (>35 kV) power cables and connections are not included in the aging management program recommended by Section XI.E3 of the GALL Report for non-EQ inaccessible cable because they have unique, specialized constructions and must be evaluated on an application specific basis. GALL Report at VI.A-1. VYNPS does not have any inaccessible, high-voltage cable subject to aging management review.

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[4] The September 3, 2010 amendment did not change the name of the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program, because that would have entailed numerous changes through out the LRA and correspondence.

13. Although NEC's proposed contention only addresses inaccessible cable subject to wet environments, it should be noted that the LRA also includes a "Non-EQ Cable and Connections" Program (in Appendix B of the LRA at § B.1.19) that manages the effects of aging on the non-EQ cable that is subject to aging management review. This program is not limited to medium-voltage cable, is based on and consistent with section X1.E1 of the GALL Report, and has been reviewed and approved by the NRC Staff (NUREG-1907 at 3-26 to 3-30).

14. Mr. Blanch appears to suggest that there is some Time-Limited Aging Analysis (TLAA) missing from the LRA applicable to below-grade, buried, underground, or otherwise inaccessible safety-related cable. Blanch Decl., ¶ 22. This suggestion is incorrect. A TLAA is defined in the NRC's license renewal regulations at 10 C.F.R. § 52.3(a) as:

> . . . 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 functions, as delineated in § 54.4(b); and
>
> (6) Are contained or incorporated by reference in the CLB.

As this definition in the NRC rules indicates, TLAAs are existing calculations and analyses that are part of the CLB, and not some new calculations or analyses performed for license renewal as Mr. Blanch seems to assume. The only TLAAs applicable to cable at VYNPS are calculations and analyses demonstrating pursuant to 10 C.F.R. § 50.49 that certain electric components located in a harsh environment (and thus within the scope of 10 C.F.R. § 50.49(b)) are environmentally qualified for the life of the plant. These TLAAs are properly identified in Section 4.1 of the LRA, and Section 4.4 of the LRA identifies the VYNPS "Environmental Qualification of Electric Components" Program (in Appendix B of the LRA, § B.1.10) as managing the aging effects on electrical components with such EQ analyses, thus addressing these TLAAs as permitted by 10 C.F.R. § 54.21(c)(1)(iii). There are no TLAAs other than the EQ analyses applicable to cable. Therefore, there is no TLAA, including any TLAA for cable, that has not been properly evaluated in the LRA.

15. The VYNPS Environmental Qualification of Electric Components Program in section B.1.10 of the LRA is based on and consistent with Section X.E1 of the GALL Report. The VYNPS program has been reviewed by the NRC Staff, who found all program elements consistent with the GALL Report and concluded that VYNPS has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained consistent with the CLB for the period of extended operation, as required by 10 C.F.R. § 54.21(a)(3). NUREG-1907 at 3-11 to 3-14.

16. The NRC's May 10, 2010 Inspection Report, to which Mr. Blanch and the NEC Motion refer, was an inspection related to the current VYNPS license and not an inspection associated with the VYNPS license renewal application or license renewal activities. The license renewal aging management programs for cables are new programs that VYNPS committed to implement no later than March 21, 2012, and they had not been implemented at the time of this inspection. Consequently, the NRC's May 10, 2010 Inspection Report does not reflect on the adequacy or effectiveness of any license renewal programs for cable.

17. To the extent NEC's Motion may be implying that the Inspection Report indicates a violation of 10 C.F.R. §§ 50.49 and 50.65 (see NEC Motion at 9), it is incorrect. The NRC Inspection Report identifies a non-cited violation of very low safety significance of 10 C.F.R. Part 50, Appendix B, Criterion III, "Design Control," because certain cables had not been selected for suitability in a submerged environment. These cables were located in a mild environment and were therefore not subject to environmental qualification under 10 C.F.R. § 50.49. The Inspection Report gives no indication that the condition was related to compliance with 10 C.F.R. §§ 50.49 or 50.65.

18. Safety-related cable located in a mild environment must still be designed to accommodate the effects of and be compatible with the environment to which it is exposed, but compliance with this requirement is generally met by specifying appropriate service conditions when such equipment is procured. The cable on which the non-cited violation was based had been procured for use in wet and dry conditions. After consulting with NRC specialists, the inspectors determined that wet and dry conditions do not include submergence, and therefore issued a non-cited violation of 10 C.F.R. Part 50, Appendix B, Criterion III "Design Control," because the cables had not been selected for suitability for the submerged environment in which they were found.

19. In response to this non-cited violation, VYNPS dewatered the manholes in which the cables in questions were located. VYNPS also developed a frequency for subsequent pumping, so that the conditions to which the cables will be exposed will remain consistent with the cable specifications.

20. The discovery of the water in certain manholes containing safety-related cable does not indicate any deficiency in the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program for license renewal. As the LRA indicates, it is a new program, and therefore not a continuance of existing programs, as the NEC Motion inaccurately asserts (Motion at 22). As reflected in the NRC Staff's Safety Evaluation Report, VYNPS has committed to implement this program by March 21, 2012. NUREG-1907, Vol. 2 at 3-22. Consequently, the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program was not in place on November 28, 2009, when VYNPS inspected underground access points to assess the condition of cables and to determine if there was evidence of water intrusion.

21. As noted in the May 10, 2010 Inspection Report, Entergy issued EN-DC-346, "Cable Reliability Program" on December 31, 2009. This is a fleet procedure that Entergy put in place proactively to address an NRC Staff concern that existing reactor licensees should enhance their electric cable monitoring programs. Therefore, the Cable Reliability Program discussed in the Inspection Report is not the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program,

although VYNPS expects to integrate these programs, so that the Cable Reliability Program will be used to meet license renewal commitments when the Non-EQ Inaccessible Medium-Voltage Cable Program is implemented.

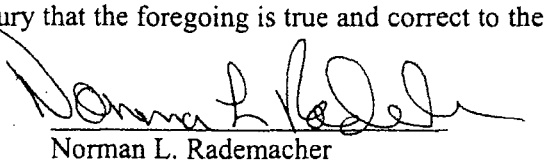
22. The discovery of water during VYNPS' inspections of underground cable access points on November 28, 2009 does not indicate any deficiency in EN-DC-346, because that Cable Reliability Program had not yet been issued. Obviously a program put in place at the end of December would not have prevented accumulation of water in the manholes in November.

23. The NRC Inspection Report found that VYNPS did not implement timely corrective actions to address the submerged cables that VYNPS had identified in its November 28, 2009 inspections of underground cable access points. While this finding does not relate to actions under the Non-EQ Inaccessible Medium-Voltage Cable Program, the corrective action that VYNPS took in response to the discovery of water in the manholes included developing a pumping frequency, so that the conditions to which the cables will be exposed will remain consistent with the cable specifications.

24. The NEC Motion alleges that the NRC Inspection Report shows that VYNPS employees were not adequately instructed to enable them to determine the significance of finding non-qualified safety-related cables in a flooded environment. NEC Motion at 17. The Inspection Report does not make any finding regarding the instruction of VYNPS employees. Moreover, the non-cited violation in the NRC Inspection Report was determined by the NRC Staff to be "of very low safety significance." The NRC Inspection Report found that the cables "were still fully capable of performing their design functions." It should be noted that EN-DC-346 specifically provides for training on the new Cable Reliability Program, but that program had not yet been issued when water was discovered in the manholes, so VYNPS employees had not yet received this training when they initially responded to the discovery of water in the manholes. VYNPS employees responsible for the Cable Reliability Program have now received instruction on the new Cable Reliability Program. Employees responsible for the new license renewal AMPs will receive appropriate training on those AMPs before they are implemented.

25. Based on our review, it is our opinion that (1) the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program is an adequate program that will manage the effects of aging on inaccessible non-EQ medium- and low-voltage cables subject to aging management review in a manner providing reasonable assurance that such cable will continue to perform its intended function in accordance with the CLB during the period of extend operation; (2) that NEC and Mr. Blanch have not raised any genuine dispute with this program or any other portions of the LRA; and (3) that NEC and Mr. Blanch have not raised any significant safety issue.

We declare under penalty of perjury that the foregoing is true and correct to the best of our knowledge and belief.



Norman L. Rademacher

Roger B. Rucker

Executed on this 14th day of September, 2010.

We declare under penalty of perjury that the foregoing is true and correct to the best of our knowledge and belief.

Norman L. Rademacher

Roger B. Rucker

Executed on this 14th day of September, 2010.

Exhibit A

Norman L. Rademacher

SUMMARY

Senior nuclear leader with outstanding business leadership skills in developing and implementing initiatives to improve performance, foster teamwork and process management. Strong engineering, operations, licensing, QA, project management skills, including training, critical thinking and change management. Previously licensed SRO.

Professional Experience

Engineering Director **September 2006 to Present**

Directed the Engineering organization for Entergy's Vermont Yankee station. Implemented a dry fuel storage facility and completing a license renewal application for the station. Helped lead improved capacity factor performance, reduced outage time and best three cycle performance in stations history. Improved station performance to excellent.

NSA Director **August 2005 to September 2006**

Directed the Corrective Action, Security, Emergency Planning, Quality Assurance, Licensing organizations for Entergy's Vermont Yankee station. Implemented 20% power up-rate. Improved station operational performance to exemplary.

Decommissioning Project Manager with NCN inc. **May 2003 to August 2005**

Directed the remaining Decommissioning work plan ($50 million) at Yankee Rowe through final status survey. Implemented the work activities for the project team and contractors in a cost effective manner (saving over $2.8 million), consistent with the overall schedule and environmental requirements.

- Initiated and innovative new work control to facilitate effective work means and meet schedule.

Site Quality Assurance Manger with NAC International inc. **January 200 1 to April 2003**

Developed, and implemented the onsite QA program for NAC Yankee Rowe Nuclear Power Station for the "pool-to-pad" contract that included operating the spent fuel pool and other operational duties as wll as building the NAC casks, moving and storing the fuel on the fuel storage pad-a first-of-a-kind project requiring key developmental thinking and planning skills.

- Initiated inventive means to accomplish training and preoperational testing to meet schedule.

Senior Consultant with MDM inc: **November 1999 to December 2000**

Provided licensing services to Vermont Yankee Nuclear Power station for the FSAR accuracy project, evaluating new regulatory guidance and incorporating changes in the business process to meet regulatory requirements.

- Developed the loading design criteria for a critical core wedge design saving schedule and over S200k.

Corporate Quality Assurance Manger with Niagara Mohawk **1998 - 1999**

Implemented the Quality Assurance Program at Nine Mile Point Units 1 and 2. Providing nuclear division performance assessment, vendor quality audits. quality inspection, and non-destructive testing services.

- Initiated and completed an innovative new vendor quality assurance business parenting agreement with Duke Energy Services to reduce vendor quality costs. Objective of 10% cost reduction achieved.
- Substantially reduced department costs ($200K) while improving assessment functions, trending, and QA coverage at the site.
- A member of the Rochester Gas and Electric Nuclear Safety Review Board (reported to Board of Directors)

Plant Manager with Niagara Mohawk **1995 - 1998**

Managed the Nine Mile Point Unit 1 generation business unit. Led the 330 person. $52 million /year. Operations, Chemistry. Technical Support, Radiation Protection, Outage Management and Maintenance organizations.

- Improved plant performance to achieve one of the best four-year net average capacity factor of 83 %.
- Achieved improvement in the INPO (industry rating agency) site performance rating.
- Substantially reduced normal plant expenses while reducing human performance errors and strengthened standards of performance.

Operation Manager with Niagara Mohawk **1992 - 1995**
Lead the nuclear operations department at Nine Mile Point Unit 1 directing daily operations, in-service testing reactor engineering and operations planning.

- Achieved a rating of I in operations for the NRC Systematic Assessment of Licensee Performance.
- Provided leadership to substantially reduce outage length by twenty days from previous outages.
- Improved operational effectiveness of the unit by reducing human caused operational events.

Technical Manager with Niagara Mohawk **1992 - 1992**
Directed the reliability improvement of Nine Mile Point Unit 1 by evaluating and integrating appropriate modifications and maintenance activities.

- Implemented an effective System Engineering Program. Result: substantially reduced plant trips using a new scram reduction program; improved the reliability of the plant turbine generator system and reduced plant thermal losses.

Executive Assistant to the Executive Vice President - Nuclear with Niagara Mohawk **1989 – 1992**
Assisted the Executive Vice President in administration of the Nuclear Division. Interfaced with other corporate officers and departments for nuclear activities on behalf of the Executive VP. .

- Worked with department heads to restore: Nine Mile Point Unit 1 to operation.

Director Nuclear Regulatory Compliance with Niagara Mohawk **1986 - 1989**
Managed the Site Compliance Department. which was responsible for commitment tracking, day-to-day interface with the NRC residents, LER preparation, surveillance test tracking, corrective action tracking.

- Created technical specification compliance (PM/ST) matrix to ensure schedule compliance.

Unit 2 Quality Assurance Program Manager with Niagara Mohawk **1986 - 1988**
Responsible for budget/decisions on QA involvement on modifications and outages. Assigned as Site Operations Review Committee representative for QA. Coordinated activities with Engineering, Procurement and maintenance for the Nuclear QA Operations Group.

- Resolved any outage component problems to reduce schedule impacts that required QA assistance.

Nuclear Design Coordinator/Nuclear Licensing Engineer with Niagara Mohawk **1974 -1986**
Responsible for NRC licensing approval of the Unit 2 design. Direct control of the licensing effort with the NRC. Responsible for testimony at ACRS and other regulatory hearings. Wrote the Nine Mile Point Unit Two Final Safety Analysis Report. Prepared licensing documents for submittal to NRC.

- Obtained the plant operating license in 1986 on schedule and within budget.

EDUCATION

B.S., Marine Nuclear Science, State University of New York, Maritime College, Bronx, NY (1974)
MBA, LeMoyne College, Syracuse. NY (2001)

SPECIAL TRAINING

Senior Reactor Operator License (expired)
Third Assistant Engineers License (Unlimited Horsepower Steam and Motor - expired)
INPO Senior Nuclear Managers Course 1994
INPO Human Performance Course 1998
Dale Carnegie
MARC Training (Human Relations - Union Negotiation Course)

PUBLICATIONS

"Probabilistic Assessment of Class 9 Accidents for Environmental Impacts" (ANS meeting Nov. 1984)
"A Model to Reduce the Radiological Consequences of a Design Basis LOCA" (ANS meeting, Nov, 1985)

SPECIAL AWARDS

INPO SRO Peer Evaluator for Limerick (1993)
INPO In-house Peer (1998)

Entergy

RESUME

Roger B. Rucker, P.E.

EDUCATION

B.S., Electrical Engineering, University of Arkansas, 1990

EXPERIENCE

09/2006 - Present | Iepson Consulting Enterprises – License Renewal Electrical Lead

- Responsible for preparation and review of Electrical, Instrumentation and Control (EIC) Aging Management Reviews, EIC Aging Management Program Report, and EQ TLAA Reports for the Indian Point, Cooper, and Waterford 3 License Renewal Projects. Responsible for supporting and reviewing the EIC portions of the Scoping Report, the OE Report, and the LRA for Indian Point and Cooper.
- Support License Renewal Implementation Activities for Pilgrim, Fitzpatrick, Palisades, Indian Point, and Arkansas Nuclear One, with the focus on developing and implementing electrical inspections associated with GALL XI.E1, E2, E3, E4, and E6..
- Support NRC audits for Fitzpatrick and Indian Point, and resolve auditor comments as assigned.
- Taiwan Power: Developed and presented training material for implementation of license renewal aging management programs for electrical components
- Attend NRC and Industry meetings as assigned.
- Support Entergy license renewal project activities as assigned.

07/2010 – 08/2010 | Iepson Consulting Enterprises – Palo Verde

- Performed site walk downs and prepared results report to support EQ program environment update.

10/2009 - Present | Iepson Consulting Enterprises – Southern Nuclear (Hatch)

- Developed site procedure, and performed inspections for the insulated cables and connections program (GALL XI.E1).

03/2009 - 04/2009 | Iepson Consulting Enterprises – Korea Plant Services

- Developed training material, and presented training material for license renewal and aging management of electrical components.

09/2008 - 12/2008 | Iepson Consulting Enterprises – Entergy Operations, Inc.
Arkansas Nuclear One – Design Engineering

- Prepared and reviewed instrument loop uncertainty calculations associated with the replacement of the data acquisition hardware for the Safety Parameter Display System (SPDS) computer.

07/2008 - 10/2008 | Iepson Consulting Enterprises – Entergy Operations, Inc.
Arkansas Nuclear One – Design Engineering

- Developed the modification package for the replacement of the Unit 1 Startup Boiler control system. The project included providing details for design development including purchase of material, control system software integration, field installation and testing.

12/2007 - 05/2008 | EXCEL Services Corporation – Beaver Valley Technical Consultant

- Provided support for the NRC review of the Beaver Valley LRA including NRC Audits and RAI responses.

08/2005 - 05/2008 | EXCEL Services Corporation – Technical Consultant

- Provided support in various activities including developing proposals for projects including license renewal, reviewing miscellaneous documents, and developing white papers for various clients.

06/2005 - 09/2007 | EXCEL Services Corporation – Beaver Valley LR Project Manager

- Responsible for overall performance of the project from the conceptual through the developmental, and implementation phases. Also acted as the primary point of contact for problem resolution and as the "lead" of the Project Team.
- Ensure the project safely achieves the project deliverables within the approved scope, cost, and schedule. Review and approve project and contract budgets for adequacy, completeness, and other requirements and assuring that required future year budgets and project budget revisions are initiated as required.
- Ensure proper review and approval of project documents for clarity and completeness. Examples include contracts, requisitions, task authorizations, and other similar project guidance documents as needed.
- Responsible for selecting and assigning project personnel, and ensuring project personnel are trained and qualified.

07/2002 - 06/2005 | Entergy Nuclear - License Renewal Sr. Electrical Engineering Lead

- Responsible for preparation and review of Electrical, Instrumentation and Control Aging Management Reviews and EQ TLAA Reports for the ANO2, DC Cook, Pilgrim, Vermont Yankee, and Fitzpatrick License Renewal Projects.
- Review and direct work of Electrical Engineers assigned to various License Renewal projects.
- Responsible Lead for developing the ANO-2 and Vermont Yankee OE review reports.

01/2000 - 07/2002 | Entergy Operations Inc., Arkansas Nuclear One – Sr. Lead Startup Engineer, ANO-2 Steam Generator Replacement and Power Uprate Projects.

- Night-Shift Test Lead for Power Uprate Startup: provided approval for proceeding to the next planned power plateau, provided coordination between operations, reactor engineering, design engineering, and startup test group, dispositioned test deficiencies associated with the startup, and provided the morning turnover/status report to the restart team and plant management.
- Responsible for control systems and plant transients testing associated with Steam Generator Replacement and Power Uprate startup activities.
- Developed test procedures (work plans) as required to implement the required control system and plant transient testing.

Roger B. Rucker, P.E.

09/1996 - 12/1999	Entergy Operations Inc., Arkansas Nuclear One – Senior Engineer, Minor Modifications • Developed, Implemented, and Tested Design Changes for various Unit 1 and 2 systems, including ANO-1 ICS, ANO-2 FW Control, ANO-2 Iso-phase, and various Chemistry Upgrades. • Provided support for various modifications as the Post-Modification Test Engineer.
01/1991 - 09/1996	Entergy Operations Inc., Arkansas Nuclear One – Engineer I to Senior Engineer, EIC Design Engineering • Project Manager for several plant modifications. • Developed Design Changes for various Unit 1 and 2 systems, including Plant Computer Replacement, CAPS Upgrade, ANO-1 ICCMDS, ANO-1 Digital Feed Pump Control, ANO-2 Digital Feedwater Control, and ANO-2 TSI. • Developed Testing Work Plans for several design packages while assigned to Plant Modification and Startup for three outages.
CERTIFICATIONS	• Professional Engineer; Registered in Arkansas • Master Electrician, Licensed in Arkansas
PROFESSIONAL AFFILIATIONS	• Member, Institute of Electrical and Electronic Engineers (IEEE) • Member NEI Medium Voltage Underground Cable Task Force • Member NEI License Renewal Electrical Working Group (LREWG) • Member EPRI Cable User Group

Exhibit C

Entergy Nuclear Operations, Inc.
Vermont Yankee
320 Governor Hunt Rd
Vernon, VT 05354
Tel 802-257 7711

Michael J Colomb
Site Vice President

September 3, 2010

BVY 10-050

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: License Renewal Application Supplemental Information
Vermont Yankee Nuclear Power Station
Docket No. 50-271
License No. DPR-28

REFERENCES:
1. Letter, Entergy to USNRC, "Vermont Yankee Nuclear Power Station, License No. DPR-28, License Renewal Application," BVY 06-09, dated January 25, 2006.

Dear Sir or Madam:

On January 25, 2006, Entergy Nuclear Operations, Inc. and Entergy Nuclear Vermont Yankee, LLC (Entergy) submitted the License Renewal Application (LRA) for the Vermont Yankee Nuclear Power Station (VYNPS) as indicated by Reference 1.

This letter provides supplemental information to the LRA to address issues that have been discussed in industry correspondence concerning the possibility of non-EQ inaccessible cables failing in the presence of water intrusion. Entergy has completed a review of relevant operating experience and addressed it as discussed in Attachment 1 of this letter.

New regulatory commitments to implement related aging management activities have been entered into the VYNPS License Renewal Commitment List, Revision 10 (Attachment 2).

Should you have any questions or require additional information concerning this submittal, please contact Mr. Robert Wanczyk at 802-451-3166.

I declare under penalty of perjury, that the foregoing is true and correct.

Executed on September 3, 2010.

Sincerely,

[MJC/PLC]

Attachments: 1. License Renewal Application Supplemental Information
2. License Renewal Commitment List, Revision 10

cc: Mr. Eric J. Leeds, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
One White Flint North 13H16M
11555 Rockville Pike
Rockville, MD 20852-2738

Mr. William Dean, Regional Administrator
U.S. Nuclear Regulatory Commission, Region 1
475 Allendale Road
King of Prussia, PA 19406-1415

Mr. Robert Kuntz, Senior Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North 11F1
11555 Rockville Pike
Rockville, MD 20852-2738

Mr. James S. Kim, Project Manager
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

USNRC Resident Inspector
Entergy Nuclear Vermont Yankee, LLC
320 Governor Hunt Road
Vernon, Vermont 05354

Mr. David O'Brien, Commissioner
VT Department of Public Service
112 State Street – Drawer 20
Montpelier, Vermont 05620-2601

Attachment 1

Vermont Yankee Nuclear Power Station
License No. DPR-28 (Docket No. 50-271)

License Renewal Application

Supplemental Information

Vermont Yankee Nuclear Power Station
License Renewal Application - Supplemental Information

Background

Due to industry correspondence regarding inaccessible cables, Vermont Yankee Nuclear Power Station (VYNPS) is providing the following information enhancing its aging management program for non-EQ inaccessible medium-voltage cables to include low-voltage (480 V to 2 kV) cables.

The NRC staff has concluded that inaccessible low-voltage cables (480 V to 2 kV cables that are subject to aging management review for license renewal) potentially exposed to significant moisture should be included in an aging management program (AMP) specifically to address the effects of moisture on the cables.

VYNPS responded to Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures That Disable Accident Mitigation Systems or Cause Plant Transients" in a letter dated April 30, 2007 (ADAMS Accession Number ML071290055). In the letter, VYNPS reported that no failures were found during a review of plant operating experience involving low-voltage inaccessible cables.

VYNPS operating experience since the response to GL 2007-01 on April 30, 2007 until August 25, 2010 was researched in the Corrective Action Program database. VYNPS has experienced no age-related failures of inaccessible low-voltage cables that are subject to aging management review subsequent to the response to GL 2007-01.

VYNPS has also reviewed the information provided in the industry responses to GL 2007-01, recent NRC and Electric Power Research Institute guidance documents, and recent industry/NRC meetings on this topic. In light of the NRC Staff's conclusion, VYNPS is expanding the scope of the B.1.17 (Non-EQ Inaccessible Medium-Voltage Cable) aging management program to include in-scope, inaccessible, low-voltage cables.

VYNPS Revision to Inaccessible Cable Program

VYNPS will expand the scope of the program described in License Renewal Application (LRA) Section B.1.17 (Non-EQ Inaccessible Medium-Voltage Cable) to include inaccessible low-voltage (480 V to 2kV) cables that are subject to aging management review. The parameters monitored or inspected, as required by the program, are changed to include inaccessible low-voltage cables that are subject to aging management review. Inaccessible low-voltage (480 V to 2kV) cables will be tested for degradation of the cable insulation at least once every 10 years. Inspections for water in manholes containing in-scope inaccessible low-voltage (480 V to 2kV) cables will be performed at least once every two years. A proven, commercially available test will be used for detecting deterioration of the insulation system for inaccessible low-voltage cables (480 V to 2 kV) potentially exposed to significant moisture.

In addition, LRA Sections A.2.1.19 (Non-EQ Inaccessible Medium-Voltage Cable Program) and B.1.17 (Non-EQ Inaccessible Medium-Voltage Cable) are revised to delete the criterion of "exposure to significant voltage" (system voltage for more than 25% of the time) associated with in-scope inaccessible medium-voltage (2 kV to 35 kV) cables. Section B.1.17 is revised to note that the VYNPS Non-EQ Inaccessible Medium-Voltage Cable Program will be based on and consistent with the program described in NUREG-1801, Section XI.E3.

The changes are presented as strikeout text deleted, and underlined text added.

A.2.1.19 Non-EQ Inaccessible Medium-Voltage Cable Program

In the Non-EQ Inaccessible Medium-Voltage Cable Program, in-scope medium-voltage cables, not designed for, but exposed to significant moisture ~~and voltage~~ are tested at least once every ten years to provide an indication of the condition of the conductor insulation. The specific test performed is a proven test for detecting deterioration of the insulation system due to wetting, such as power factor, partial discharge, polarization index, or other testing that is state-of-the-art at the time the test is performed. Significant moisture is defined as periodic exposures that last more than a few days. ~~Significant voltage exposure is defined as being subjected to system voltage for more than 25% of the time.~~

Inspections for water collection in cable manholes and conduit containing in-scope inaccessible low-voltage and medium-voltage cables will occur at least once every two years.

Inaccessible low-voltage cables (cables with operating voltage from 480 V to 2 kV) that are subject to aging management review are included in this program. Inaccessible low-voltage cables will be tested for degradation of the cable insulation prior to the period of extended operation and at least once every 10 years thereafter. A proven, commercially available test will be used for detecting deterioration of the insulation system for inaccessible low-voltage cables potentially exposed to significant moisture.

B.1.17 Non-EQ Inaccessible Medium-Voltage Cable

Program Description

The Non-EQ Inaccessible Medium-Voltage Cable Program at VYNPS will be based on and consistent with ~~comparable to~~ the program described in NUREG-1801, Section XI.E3, Inaccessible Medium-voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements.

VYNPS inspection for water accumulation in manholes is conducted in accordance with a plant procedure. An evaluation per the Corrective Action Process will be used to determine the need to revise manhole inspection frequency based on inspection results.

Medium voltage cables include cables with operating voltage level from 2kV to 35kV. Low-voltage cables include cables with operating voltage ranging from 480 V to 2 kV.

In this program, periodic actions will be taken to prevent cables from being exposed to significant moisture, such as inspecting for water collection in cable manholes and conduit, and draining water, as needed. In scope medium-voltage cables exposed to significant moisture ~~and voltage~~ will be tested to provide an indication of the condition of the conductor insulation. The specific type of test to be performed will be determined prior to the initial test and is to be a proven test for detecting deterioration of the insulation system due to wetting as described in EPRI TR-103834-P1-2, or other testing that is state-of-the-art at the time the test is performed.

Inaccessible low-voltage cables (cables with operating voltage from 480 V to 2 kV) that are subject to aging management review are included in this program. Inaccessible low-voltage cables will be tested for degradation of the cable insulation prior to the period of extended

operation and at least once every 10 years thereafter. A proven, commercially available test will be used for detecting deterioration of the insulation system for inaccessible low-voltage cables potentially exposed to significant moisture.

The program will be initiated prior to the period of extended operation.

NUREG-1801 Consistency

The program attributes of the Non-EQ Inaccessible Medium-Voltage Cable Program at VYNPS will be consistent with the program attributes described in NUREG-1801, Section XI.E3, Inaccessible Medium-Voltage Cables Not Subject To 10 CFR 50.49 Environmental Qualification Requirements.

Exceptions to NUREG-1801

None.

Enhancements

~~None~~ This program includes inaccessible low-voltage cables (480 V to 2 kV) that are subject to aging management review.

Operating Experience

This ~~The~~ program is a new aging management program based on the program description in NUREG-1801, which in turn is based on relevant industry operating experience. As such, this program will provide reasonable assurance that effects of aging will be managed such that applicable components will continue to perform their intended functions consistent with the current licensing basis for the period of extended operation. As additional operating experience is obtained, lessons learned can be used to adjust the program, as needed.

Commitment

License renewal commitment #13 is revised to augment the aging management program for Non-EQ Inaccessible Medium-Voltage Cables (underlined text is added):

> Implement the Non-EQ Inaccessible Medium-Voltage Cable Program as described in LRA Section B.1.17.
>
> Inspections for water accumulation in manholes containing in-scope inaccessible low-voltage and medium-voltage cables will be performed at least once every two years.
>
> Inaccessible low-voltage cables (480 V to 2 kV) that are subject to aging management review are included in this program. Inaccessible low-voltage cables will be tested for degradation of the cable insulation prior to the period of extended operation and at least once every 10 years thereafter. A proven, commercially available test will be used for detecting deterioration due to wetting of the insulation system for inaccessible low-voltage cables.

Attachment 2

Vermont Yankee Nuclear Power Station
License No. DPR-28 (Docket No. 50-271)

License Renewal Application

License Renewal Commitment List
Revision 10

VERMONT YANKEE NUCLEAR POWER STATION
LICENSE RENEWAL COMMITMENT LIST
REVISION 10

During the development and review of the Vermont Yankee Nuclear Power Station License Renewal Application, Entergy made commitments to provide aging management programs to manage the effects of aging on structures and components during the extended period of operation. The following table lists these license renewal commitments, along with the implementation schedule and the source of the commitment.

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
1	Guidance for performing examinations of buried piping will be enhanced to specify that coating degradation and corrosion are attributes to be evaluated.	March 21, 2012	BVY 06-009	B.1.1 Audit Items 5 & 130
2	Fifteen (15) percent of the top guide locations will be inspected using enhanced visual inspection technique, EVT-1, within the first 18 years of the period of extended operation, with at least one-third of the inspections to be completed within the first 6 years and at least two-thirds within the first 12 years of the period of extended operation. Locations selected for examination will be areas that have exceeded the neutron fluence threshold.	As stated in the commitment	BVY 06-009	B.1.7 Audit Item 14
3	The Diesel Fuel Monitoring Program will be enhanced to ensure ultrasonic thickness measurement of the fuel oil storage and fire pump diesel storage (day) tank bottom surfaces will be performed every 10 years during tank cleaning and inspection.	March 21, 2012	BVY 06-009 BVY 07-018	B.1.9 and regional inspection
4	The Diesel Fuel Monitoring Program will be enhanced to specify UT measurements of the fuel oil storage and fire pump diesel storage (day) tank bottom surfaces will have acceptance criterion ≥ 60% Tnom.	March 21, 2012	BVY 06-009 BVY 07-018	B.1.9 and regional inspection

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
5	The Fatigue Monitoring Program will be modified to require periodic update of cumulative fatigue usage factors (CUFs), or to require update of CUFs if the number of accumulated cycles approaches the number assumed in the design calculation.	March 21, 2012	BVY 06-009	B.1.11
6	A computerized monitoring program (e.g., FatiguePro) will be used to directly determine cumulative fatigue usage factors (CUFs) for locations of interest.	March 21, 2012	BVY 06-009	B.1.11
7	The allowable number of effective transients will be established for monitored transients. This will allow quantitative projection of future margin.	March 21, 2012	BVY 06-009	B.1.11
8	Procedures will be enhanced to specify that fire damper frames in fire barriers will be inspected for corrosion. Acceptance criteria will be enhanced to verify no significant corrosion.	March 21, 2012	BVY 06-009	B.1.12.1 Audit Items 35, 151, 152, 153 and 159
9	Procedures will be enhanced to state that the diesel engine sub-systems (including the fuel supply line) will be observed while the pump is running. Acceptance criteria will be enhanced to verify that the diesel engine did not exhibit signs of degradation while it was running; such as fuel oil, lube oil, coolant, or exhaust gas leakage.	March 21, 2012	BVY 06-009	B.1.12.1 Audit Items 33, 150 & 155

VERMONT YANKEE NUCLEAR POWER STATION
LICENSE RENEWAL COMMITMENT LIST
REVISION 10

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
10	Fire Water System Program procedures will be enhanced to specify that in accordance with NFPA 25 (2002 edition), Section 5.3.1.1.1, when sprinklers have been in place for 50 years a representative sample of sprinkler heads will be submitted to a recognized testing laboratory for field service testing. This sampling will be repeated every 10 years.	March 21, 2012	BVY 06-009	B.1.12.2
11	The Fire Water System Program will be enhanced to specify that wall thickness evaluations of fire protection piping will be performed on system components using non-intrusive techniques (e.g., volumetric testing) to identify evidence of loss of material due to corrosion. These inspections will be performed before the end of the current operating term and during the period of extended operation. Results of the initial evaluations will be used to determine the appropriate inspection interval to ensure aging effects are identified prior to loss of intended function.	March 21, 2012	BVY 06-009	B.1.12.2 Audit Items 37 & 41
12	Implement the Heat Exchanger Monitoring Program as described in LRA Section B.1.14.	March 21, 2012	BVY 06-009	B.1.14

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
13	Implement the Non-EQ Inaccessible Medium-Voltage Cable Program as described in LRA Section B.1.17. Inspections for water accumulation in manholes containing in-scope inaccessible low-voltage and medium-voltage cables will be performed at least once every two years. Inaccessible low-voltage cables (480 V to 2 kV) that are subject to aging management review are included in this program. Inaccessible low-voltage cables will be tested for degradation of the cable insulation prior to the period of extended operation and at least once every 10 years thereafter. A proven, commercially available test will be used for detecting deterioration due to wetting of the insulation system for inaccessible low-voltage cables.	March 21, 2012	BVY 06-009 BVY 10-050	B.1.17
14	Implement the Non-EQ Instrumentation Circuits Test Review Program as described in LRA Section B.1.18.	March 21, 2012	BVY 06-009	B.1.18
15	Implement the Non-EQ Insulated Cables and Connections Program as described in LRA Section B.1.19.	March 21, 2012	BVY 06-009	B.1.19
16	Implement the One-Time Inspection Program as described in LRA Section B.1.21.	March 21, 2012	BVY 06-009 BVY 07-009	B.1.21 Audit Items 239, 240, 330, 331
17	Enhance the Periodic Surveillance and Preventive Maintenance Program to assure that the effects of aging will be managed as described in LRA Section B.1.22.	March 21, 2012	BVY 06-009	B.1.22 Audit Item 377

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
18	Enhance the Reactor Vessel Surveillance Program to proceduralize the data analysis, acceptance criteria, and corrective actions described in the program description in LRA Section B.1.24.	March 21, 2012	BVY 06-009	B.1.24
19	Implement the Selective Leaching Program as described in LRA Section B.1.25.	March 21, 2012	BVY 06-009	B.1.25
20	Enhance the Structures Monitoring Program to specify that process facility crane rails and girders, condensate storage tank (CST) enclosure, CO_2 tank enclosure, N_2 tank enclosure and restraining wall, CST pipe trench, diesel generator cable trench, fuel oil pump house, service water pipe trench, man-way seals and gaskets, and hatch seals and gaskets are included in the program.	March 21, 2012	BVY 06-009	B.1.27.2 Audit Item 377
21	Guidance for performing structural examinations of wood to identify loss of material, cracking, and change in material properties will be added to the Structures Monitoring Program.	March 21, 2012	BVY 06-009	B.1.27.2
22	Guidance for performing structural examinations of elastomers (seals and gaskets) to identify cracking and change in material properties (cracking when manually flexed) will be enhanced in the Structures Monitoring Program procedure.	March 21, 2012	BVY 06-009	B.1.27.2
23	Guidance for performing structural examinations of PVC cooling tower fill to identify cracking and change in material properties will be added to the Structures Monitoring Program procedure.	March 21, 2012	BVY 06-009	B.1.27.2

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
24	System walkdown guidance documents will be enhanced to perform periodic system engineer inspections of systems in scope and subject to aging management review for license renewal in accordance with 10 CFR 54.4 (a)(1) and (a)(3). Inspections shall include areas surrounding the subject systems to identify hazards to those systems. Inspections of nearby systems that could impact the subject system will include SSCs that are in scope and subject to aging management review for license renewal in accordance with 10 CFR 54.4 (a)(2).	March 21, 2012	BVY 06-009	B.1.28 Audit Items 187, 188 & 190
25	Implement the Thermal Aging and Neutron Irradiation Embrittlement of Cast Austenitic Stainless Steel (CASS) Program as described in LRA Section B.1.29.	March 21, 2012	BVY 06-009	B.1.29
26	Procedures will be enhanced to flush the John Deere Diesel Generator cooling water system and replace the coolant and coolant conditioner every three years.	March 21, 2012	BVY 06-009	B.1.30.1 Audit Items 84 & 164

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
27	At least 2 years prior to entering the period of extended operation, for the locations identified in NUREG/CR-6260 for BWRs of the VY vintage, VY will refine our current fatigue analyses to include the effects of reactor water environment and verify that the cumulative usage factors (CUFs) are less than 1. This includes applying the appropriate Fen factors to valid CUFs determined in accordance with one of the following: 1. For locations, including NUREG/CR-6260 locations, with existing fatigue analysis valid for the period of extended operation, use the existing CUF to determine the environmentally adjusted CUF. 2. More limiting VY-specific locations with a valid CUF may be added in addition to the NUREG/CR-6260 locations. 3. Representative CUF values from other plants, adjusted to or enveloping the VY plant specific external loads may be used if demonstrated applicable to VY. 4. An analysis using an NRC-approved version of the ASME code or NRC-approved alternative (e.g., NRC-approved code case) may be performed to determine a valid CUF. During the period of extended operation, VY may also use one of the following options for fatigue management if ongoing monitoring indicates a potential for a condition outside the analysis bounds noted above: 1) Update and/or refine the affected analyses described above. 2) Implement an inspection program that has been reviewed and approved by the NRC (e.g., periodic nondestructive examination of the affected locations at inspection intervals to be determined by a method acceptable to the NRC). 3) Repair or replace the affected locations before exceeding a CUF of 1.0.	March 21, 2012 March 21, 2010 for performing a fatigue analysis that addresses the effects of reactor coolant environment on fatigue (in accordance with an NRC approved version of the ASME Code)	BVY-06-058	4.3.3 Audit Items 29, 107 & 318

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
28	Revise program procedures to indicate that the Instrument Air Program will maintain instrument air quality in accordance with ISA S7.3	March 21, 2012	BVY 06-009	B.1.16 Audit Item 47
29	VYNPS will perform one of the following: 1. Install core plate wedges, or, 2. Complete a plant-specific analysis to determine acceptance criteria for continued inspection of core plate hold down bolting in accordance with BWRVIP-25 and submit the inspection plan and analysis to the NRC two years prior to the period of extended operation for NRC review and approval.	March 21, 2012	BVY 06-009	B.1.7 Audit Item 9
30	Revise System Walkdown Program to specify CO2 system inspections every 6 months.	March 21, 2012	BVY 06-009	B.1.28 Audit Items 30, 141, 146 & 298
31	Revise Fire Water System Program to specify annual fire hydrant gasket inspections and flow tests.	March 21, 2012	BVY 06-009	B.1.12.2 Audit Items 39 & 40
32	Implement the Metal Enclosed Bus Program. Details are provided in a LRA Amendment 16, Attachment 3 and LRA Amendment 23, 7.	March 21, 2012	BVY 06-058 BVY 07-003 BVY 06-091	Audit Item 97

VERMONT YANKEE NUCLEAR POWER STATION
LICENSE RENEWAL COMMITMENT LIST
REVISION 10

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
33	Include within the Structures Monitoring Program provisions that will ensure an engineering evaluation is made on a periodic basis (at least once every five years) of groundwater samples to assess aggressiveness of groundwater to concrete. Samples will be monitored for sulfates, pH and chlorides.	March 21, 2012	BVY 06-009	B.1.27 Audit Item 77 RAI 3.5-7
34	Implement the Bolting Integrity Program. Details are provided in a LRA Amendment 16, Attachment 2 and LRA Amendment 23, Attachment 5.	March 21, 2012	BVY 06-058 BVY 07-003 BVY 06-091	Audit Items 198, 216, 218, 237, 331 & 333
35	Provide within the System Walkdown Training Program a process to document biennial refresher training of Engineers to demonstrate inclusion of the methodology for aging management of plant equipment as described in EPRI Aging Assessment Field Guide or comparable instructional guide.	March 21, 2012	BVY 06-058	Audit Item 384
36	If technology to inspect the hidden jet pump thermal sleeve and core spray thermal sleeve welds has not been developed and approved by the NRC at least two years prior to the period of extended operation, VYNPS will initiate plant-specific action to resolve this issue. That plant specific action may be justification that the welds do not require inspection.	March 21, 2010	BVY06-058	Audit Item 12
37	Continue inspections in accordance with the Steam Dryer Monitoring Program, Revision 3 in the event that the BWRVIP-139 is not approved prior to the period of extended operation.	March 21, 2010	BVY 06-079	Audit Item 204

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
38	The BWRVIP-116 report which was approved by the Staff will be implemented at VYNPS with the conditions documented in Sections 3 and 4 of the Staff's final SE dated March 1, 2006, for the BWRVIP-116 report.	March 21, 2012	BVY 06-088	Response to RAI B.1.24-1
39	If the VYNPS standby capsule is removed form the reactor vessel without the intent to test it, the capsule will be stored in a manner which maintains it in a condition which would permit its future use, including during the period of extended operation, if necessary.	March 21, 2012	BVY 06-088	Response to RAI B.1.24-2
40	This Commitment has been deleted and replaced with Commitment 43.	N/A	BVY 07-018	N/A
41	This Commitment has been deleted and replaced with Commitment 43.	N/A	BVY 07-018	N/A
42	Implement the Bolted Cable Connections Program. Details are provided in LRA Amendment 23, attachment 7.	March 21, 2012	BVY 07-003 BVY 07-018	Response to: RAI 3.6.2.2-N-01 LRA Sections: 3.6.2.1 A.2.1.39 B.1.33 Table 3.6.1 Table 3.6.2-1
43	Establish and implement a program that will require testing of the two 13.8 kV cables from the two Vernon Hydro Station 13.8 kV switchgear buses to the 13.8 kV / 69 kV step up transformers before the period of extended operation and at least once every 10 years after the initial test.	March 21, 2012	BVY 07-009 BVY 07-018	Am. 24 Response to: RAIs 3.6.2.2-N-08-2 3.6.2.2-N-08-4

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
44	Guidance for performing examinations of buried piping will be revised to include the following. "A focused inspection will be performed within the first 10 years of the period of extended operation, unless an opportunistic inspection (or an inspection via a method that allows an assessment of pipe condition without excavation) occurs within this ten-year period."	March 21, 2012	BVY 07-018	Regional inspection
45	Enhance the Service Water Integrity Program to require a periodic visual inspection of the RHRSW pump motor cooling coil internal surface for loss of material.	March 21, 2012	BVY 07-018	Regional inspection
46	Enhance the Diesel Fuel Monitoring Program to specify that fuel oil in the fire pump diesel storage (day) tank will be analyzed according to ASTM D975-02 and for particulates per ASTM D2276. Also, fuel oil in the John Deere diesel storage tank will be analyzed for particulates per ASTM D2276.	March 21, 2012	BVY 07-018	Regional inspection
47	Enhance the Diesel Fuel Monitoring Program to specify that fuel oil in the common portable fuel oil storage tank will be analyzed according to ASTM D975-02, per ASTM D2276 for particulates, and ASTM D1796 for water and sediment.	March 21, 2012	BVY 07-018	Regional inspection
48	Perform an internal inspection of the underground Service Water piping before entering the period of extended operation.	March 21, 2012	BVY 07-018	Regional inspection
49	Revise station procedures to specify fire hydrant hose testing, inspection, and replacement, if necessary, in accordance with NFPA code specifications for fire hydrant hoses.	March 21, 2012	BVY 07-009	Audit Item 38

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
50	During the period of extended operation, review the Vernon Dam owner FERC required report(s) at a minimum of every five years to confirm that the Vernon Dam owner is performing the required FERC inspections. Document deficiencies in the Entergy Corrective Actions Program and evaluate operability as described in BVY 96-043 and BVY 97-043 if it is determined that the required inspections are not being performed.	March 21, 2012	BVY 06-009 BVY 07-047	RAI 3.6.2.2.N-08-1
51	Entergy will perform an evaluation of operating experience at extended power uprate (EPU) levels prior to the period of extended operation to ensure that operating experience at EPU levels is properly addressed by the aging management programs. The evaluation will include Vermont Yankee (VY) and other BWR plants operating at EPU levels.	March 21, 2012	BVY 08-008	N/A

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)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "Entergy's Answer Opposing New England Coalition's Motion to Reopen," dated September 14, 2010, were served on the persons listed below by deposit in the U.S. Mail, first class, postage prepaid, and where indicated by an asterisk by electronic mail, this 14th day of September, 2010.

*Administrative Judge
Alex S. Karlin, Esq., Chairman
Atomic Safety and Licensing Board
Mail Stop T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Alex.Karlin@nrc.gov

*Administrative Judge
Dr. Richard E. Wardwell
Atomic Safety and Licensing Board
Mail Stop T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Richard.Wardwell@nrc.gov

*Administrative Judge
William H. Reed
1819 Edgewood Lane
Charlottesville, VA 22902
whrcville@embarqmail.com

Atomic Safety and Licensing Board
Mail Stop T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

*Secretary
Att'n: Rulemakings and Adjudications Staff
Mail Stop O-16 C1
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
hearingdocket@nrc.gov

*Office of Commission Appellate Adjudication
Mail Stop O-16 C1
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
OCAAmail@nrc.gov

*Lloyd Subin, Esq.
*Susan L. Uttal, Esq.
*Maxwell C. Smith, Esq.
*Mary B. Spencer, Esq.
Office of the General Counsel
Mail Stop O-15-D21
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
lloyd.subin@nrc.gov; susan.uttal@nrc.gov;
maxwell.smith@nrc.gov; Mary.Spencer@nrc.gov

*Raymond Shadis
New England Coalition
Post Office Box 98
Edgecomb, ME 04556
shadis@prexar.com

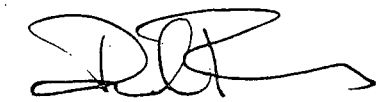
*Sarah Hofmann, Esq.
Director of Public Advocacy
Department of Public Service
112 State Street – Drawer 20
Montpelier, VT 05620-2601
Sarah.hofmann@state.vt.us

*Anthony Z. Roisman, Esq.
National Legal Scholars Law Firm
84 East Thetford Road
Lyme, NH 03768
aroisman@nationallegalscholars.com

* Matthew Brock, Esq.
Assistant Attorney General
Office of the Attorney General
One Ashburton Place, 18th Floor
Boston, MA 02108
Matthew.Brock@state.ma.us

*Peter L. Roth, Esq.
Office of the New Hampshire Attorney General
33 Capitol Street
Concord, NH 03301
Peter.roth@doj.nh.gov

*Ann Hove, Law Clerk
Atomic Safety and Licensing Board Panel
Mail Stop: T-3F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ann.hove@nrc.gov



David R. Lewis