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BVY 06-096
TAC No. MC 9668

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

Reference:
1. Letter, Entergy to USNRC, "Vermont Yankee Nuclear Power Station, License No. DPR-28, License Renewal Application," BVY 06-009, dated January 25, 2006.
2. Letter, USNRC to VYNPS, "Requests for Additional Information for the Review of Vermont Yankee Nuclear Power Station License Renewal Application", NVY 06-125, dated September 11, 2006.

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
License Renewal Application, Amendment No. 17

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. NRC requested additional information (Reference 2) concerning the Vernon Hydro Station and associated components for inter-connection to VYNPS. The VYNPS response is contained in Attachment 1 to this letter.

NRC Commitments 40 and 41 have been included in Revision 3 of the License Renewal Commitment List enclosed as Attachment 2.

Should you have any questions concerning this letter, please contact Mr. James M. DeVincentis at (802) 258-4236.

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

Executed on October 20, 2006.

Sincerely,

Chris Wa____ for
TAS per telecon 10/20/06

Ted A. Sullivan
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Vermont Yankee Nuclear Power Station

Attachments (2)
cc: See next page

A117

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Attachment 1

Vermont Yankee Nuclear Power Station

License Renewal Application

Amendment 17

(8 pages)

VYNPS License Renewal Application, Amendment No. 17
Response to Requests for Additional Information
Section 3.6

RAI 3.6.2.2-N-08-1

The applicant responded to the staff's Request for Additional Information (RAI) 3.6.2.2-N-08 in a letter dated July 14, 2006, "License Renewal Application, Amendment 4." In the letter the applicant stated:

> "Entergy, consistent with the Peach Bottom precedent, credited the [Federal Energy Regulatory Commission] FERC dam inspection program to manage the effects of aging on civil and structural elements of the [Vernon Hydroelectric Station] VHS"

A FERC letter to the previous owner of the VHS, New England Power Company (currently owned by TransCanada Hydro Northeast Inc.), dated August 6, 1997 states: "By letter dated June 26, 1997, you requested an exemption from filing an Independent Consultant's Safety Inspection Report under Part 12, Subpart D, of the Commission's Regulations ..." and "... I am granting your request for an exemption from the Part 12, Subpart D requirements for submittal of an Independent Consultant's Safety Inspection Report.

As the exemption is only on the filing of an Independent Consultant's Safety Inspection Report under Part 12, Subpart D, describe specific reports, and describe any corrective actions that have been taken as a result of the inspection reports – as they pertain to the VHS in accordance with 10 CFR 54.21(a)(3).

RAI 3.6.2.2-N-08-1 Response

The results of FERC inspections are documented in Part 12 consultant safety inspection reports and in operation reports. Based on information from the FERC web site (http://elibrary.ferc.gov), the last independent consultant's safety inspection report was submitted following an inspection conducted during May 1992. This is consistent with the 1997 FERC letter referenced in this RAI that granted an exemption from the Part 12, Subpart D requirements for an independent consultant's safety inspection. The FERC web site indicates that the three most recent operation reports were filed in 1999, 2002, and 2005.

As indicated on the FERC web site, these FERC inspection reports are classified as critical energy infrastructure information. As such, access to the content of the reports is limited to individuals who have executed a nondisclosure agreement with FERC. Entergy is unable to provide information from the FERC reports to a third party. However, the NRC as a government agency can obtain the reports from FERC.

In a letter from Christopher Grimes to Douglas Walters, dated May 5, 1999, the NRC staff addressed the issue of crediting FERC-required inspection and maintenance programs for dam aging management. The letter is included as an attachment to NEI

95-10, Revision 6, issued in June 2005. Regarding resolution of this issue, the Grimes letter[1] states,

> "It is the staff's opinion that dam inspection and maintenance programs under the jurisdiction of FERC or the Army Corps of Engineers, continued through the period of the license renewal, will be adequate for the purpose of aging management."

As also noted in the Grimes letter,

> "The NRC relies on FERC to perform safety inspections of dams for which the NRC is responsible under this Federal dam safety program...In order to credit the inspection programs performed under FERC oversight, and to provide the demonstration required by 54.21(a)(3), a license renewal applicant should indicate that its dam is under FERC jurisdiction and that its inspection and maintenance program is in conformance to FERC requirements."

Entergy, consistent with the Grimes letter and the Peach Bottom license renewal precedent, credited the FERC dam inspection program to manage the effects of aging on civil and structural elements of the Vernon Hydroelectric Station [VHS].

Integrated Plant Assessment for Electrical SSCs

In letter dated July 14, 2006, "License Renewal Application, Amendment 4," the applicant stated that no aging effects require management for VHS based on independent generators and power transmission circuits. The Statements of Considerations for 10 CFR Part 54 clearly states that redundancy can not be used to preclude aging effects of in-scope passive long-lived electrical components. In order for the staff to further evaluate the VHS issue, please provide the following additional information:

RAI 3.6.2.2-N-08-2

Electrical components for the VHS include 2 black-start turbine generators, cables and buses for power transmission, instrumentation and control components and their associated cables and connections. The audit team found that there is an aging management program (AMP) for underground cables from Vernon tie breaker routed to Vermont Yankee. However, there appears to be no AMPs for electrical components from the tie breaker to VHS generators. Please describe how aging effects on the rest of the electrical components will be managed during the period of extended operation.

[1] Letter Christopher L. Grimes, USNRC to Douglas J. Walter, NEI, "License Renewal Issue No. 98-0100, 'Crediting FERC-Required Inspection and Maintenance Programs for Dam Aging Management,'" May 5, 1999.

RAI 3.6.2.2-N-08-2 Response

VHS redundancy versus required redundancy

The Statement of Considerations for 10 CFR Part 54 (SOC) clearly states that crediting ***regulatory required*** redundancy as a surrogate for an aging management program is inappropriate.

> "Further, the Commission believes that crediting a ***regulatory requirement (i.e., redundancy)*** [emphasis added] as a surrogate for an aging management program to ensure a system's intended function exploits the Commission's defense-in-depth philosophy." [SOC, Section V. Public Response to Specific Questions]

Entergy agrees that it is inappropriate to generically exclude in-scope passive long-lived electrical components from aging management review based solely on ***required*** redundancy. However, the multiple generators and circuits associated with the VHS constitute a unique configuration different than that addressed by the ***required*** redundancy discussion in the SOC. That is, the VHS design incorporates redundancy that is ***not required*** by regulations.

Continuous operation versus standby service

Unlike many typical SBO alternate AC sources, the VHS and portions of the VHS switchyard associated with the SBO alternate AC source are operating continuously. Most SBO alternate AC sources, such as diesel generators or gas turbine generators, operate in standby service. The fact that the generators and associated electrical circuits are operating is verification that they remain capable of performing their license renewal intended functions under CLB conditions.

As these components are also necessary for VHS to provide power to the town of Vernon, highly reliable service is dictated by state regulatory agencies responsible for public utilities.

Aging management requirements

The inherent design redundancy coupled with the fact that the VHS is normally operating assures that no single failure due to the effects of aging can prevent the VHS from fulfilling its license renewal intended function of maintaining greater than 95% availability. Because of this unique configuration, the fact that the generators and associated electrical circuits are operating is verification that they remain capable of performing their license renewal intended functions under CLB conditions.

To ensure that the SBO alternate AC source remains capable of performing its intended function of maintaining greater than 95% availability, the following administrative limit applies to VYNPS.

> The VHS provides power to VYNPS through the Vernon tie. If the Vernon Tie ever becomes unavailable, due to unavailability of the VHS or other reasons, the reactor must be shut down within 15 days unless the Vernon Tie is returned to service or a basis for maintaining continued operation is written and approved. If

the Vernon Tie cannot be returned to service within 15 days, within the next 24 hours VYNPS must submit a report to the NRC in accordance with 10CFR50.4 outlining the reason for the unavailability, corrective actions being taken to restore the Vernon Tie, compensatory actions in place to provide AC power for Appendix R alternate shutdown fire scenarios, and the time required to make the Vernon Tie available. This commitment carries forward into the period of extended operation and it will be added to the license renewal commitment list.

Thus, an AMP is not necessary for the electrical components from the VHS generators to the Vernon Tie breaker. Operating experience confirms this conclusion. Historically, VHS reliability has exceeded the reliability specified in guidance documents for meeting the SBO rule, specifically, the 95% availability specified in NUMARC 87-00. In fact, historical availability far exceeds that expected from a more typical auxiliary diesel generator or combustion turbine generator.

Additionally, the following ongoing activities provide additional assurance that the SBO alternate AC source remains capable of performing its license renewal intended function.

1. The VHS owner plans to replace the medium-voltage underground cable from the VHS powerhouse to the switchyard. This work is scheduled to be performed in the coming year. Only 26 years of operation remain for VYNPS between now and the end of the period of extended operation. Though not formally qualified, modern underground cables are expected to have a service life of greater than 26 years.

2. The switchyard owner utilizes thermography on a periodic basis to ensure continued reliable switchyard performance.

Per BVY 94-33, dated March 11, 1994, the "Vernon Hydro Station with multiple units, has demonstrated reliability far in excess of an auxiliary generator (99.9% compared to 95%)." Subsequent to 1994, the VHS has continued to demonstrate very high availability. The VHS remained on line throughout the Northeast blackout of August 14, 2003.

Both long-term and recent operating experience confirms that normal operation provides reasonable assurance that the VHS will remain capable of performing its intended function in accordance with the current licensing basis throughout the period of extended operation.

Notwithstanding the above, VYNPS will monitor the availability of the VHS to ensure continued capability to perform its license renewal intended function, that is, conformance with the availability specified in NUMARC 87-00 for meeting the requirements of the SBO rule. If availability falls below the acceptable level, VYNPS will respond to the condition through the corrective action program. The corrective action program requires evaluation and appropriate corrective action to correct the nonconforming condition. This commitment will be added to the license renewal commitment list.

RAI 3.6.2.2-N-08-3

Identify all inaccessible medium-voltage (2 kV to 35 kV) cables associated with station blackout (SBO) alternate ac (AAC) source from the VHS generators to 4.16 kV safety buses at VYNPS. Please describe how aging effects will be managed for all inaccessible medium-voltage cables associated with SBO AAC that are not subject to environment qualification requirements of 10 CFR 50.49 and are exposed to moisture while energized.

RAI 3.6.2.2-N-08-3 Response

Inaccessible medium-voltage cables associated with station blackout (SBO) alternate ac (AAC) source from the VHS generators to 4.16 kV safety buses at VYNPS include the underground cable from the Vernon tie breaker to the Vernon tie transformer, the underground cable from the Vernon tie transformer to the 4.16kV switchgear, and the underground cable between the VHS switchyard and the VHS generators. The medium-voltage underground cables from the Vernon tie breaker to the 4.16kV switchgear at VYNPS are in scope and will be managed by the Non-EQ Medium-Voltage Cable Program described in Appendix B of the LRA.

The medium-voltage underground cables from the VHS generators to the VHS switchyard comprise two independent power circuits between the VHS powerhouse and the step-up transformers in the VHS switchyard. Because of the two independent power circuits, the effects of aging will not result in loss of the intended function of the VHS. Failure of a cable due to the effects of aging will be detected and repaired during normal operation without impacting the ability of the VHS to perform its intended function. Note that the design incorporates redundancy beyond that required for alternate AC sources. The SBO rule does not require redundancy of the alternate AC source. Because of this unique configuration, the fact that the generators and associated electrical circuits are operating is verification that they remain capable of performing their license renewal intended functions under CLB conditions.

RAI 3.6.2.2-N-08-4

The applicant stated that VHS switchyard passive long-lived commodity groups are effectively maintained through routine maintenance by the switchyard owner. Describe how this routine maintenance will manage the aging effects on the VHS switchyard passive long-lived commodity groups during the period of extended operations.

RAI 3.6.2.2-N-08-4 Response

Normal operation confirms these components remain capable of performing their intended functions. In addition, because of the two independent power transmission circuits, the effects of aging will not result in loss of the intended function of the VHS. Failure of a cable due to aging will be detected and repaired during normal operation without impacting the ability of the VHS to perform its intended function. Note that the design incorporates redundancy beyond that required for alternate AC sources. The SBO rule does not require redundancy of the alternate AC source. Because of this unique configuration, the fact that the generators and associated electrical circuits are operating is verification that they remain capable of performing their license renewal intended functions under CLB conditions.

The switchyard owner utilizes thermography on a periodic basis to provide additional assurance of continued reliable switchyard performance.

RAI 3.6.2.2-N-08-5

Address the following items as it related to SBO AAC:

a. Please describe (as stated in Generic Aging Lessons Learned (GALL) AMP XI.E6) how aging effects are managed so that the intended function of cable connections associated with SBO AAC (including VHS) will be maintained during the extended period of operation.

b. As stated in GALL XI.E5, fuse holders that are within the scope of license renewal should be tested. Provide an aging management review (AMR) and describe how aging effects are managed for fuse holders (metallic clamps) associated with SBO AAC source (including VHS).

c. Please discuss why torque relaxation for bolted connections of switchyard bus within the VHS switchyards (69 kV and 13.8kV) is not a concern.

d. Per LRA Section 3.6, increased resistance of connections due to oxidation is not an applicable aging effect. Please discuss why increased resistance of connections due to oxidation is not a concern for the switchyard bus and switchyard bus connections associated with the VHS switchyard, or provide an AMP to manage the aging effect.

e. A large buildup of contamination enables the conductor voltage to track along the surface more easily and can lead to insulator flash over. Please describe how this aging effect is managed for high-voltage insulators within the VHS switchyards.

RAI 3.6.2.2-N-08-5 Response

Two groups of components constitute the electrical components associated with the SBO AAC source for VYNPS. One group consists of components on the plant side of the Vernon tie breaker. This group of components is included in the evaluation of plant electrical equipment. Aging effects and aging management programs are common with other plant electrical equipment. The second group consists of components between the VHS generators and the Vernon tie breaker. This group of components is not owned or controlled by Entergy. The following responses address this second group of components.

RAI 3.6.2.2-N-08-5 (a) Response

Cable connections associated with the SBO AAC source at VHS are evaluated as follows.

Metallic parts of electrical cable connections that are exposed to thermal cycling and ohmic heating are those carrying significant current in power supply circuits. Cable connections for the SBO AAC source at the VHS are associated with redundant power circuits with the exception of a small part of the circuit that feeds the step-down transformer upstream of the Vernon tie. This part of the switchyard is normally

energized supplying power to local consumers. Normal operation confirms availability of the circuit to perform its license renewal intended function.

The fast action of circuit protective devices at high currents mitigates stresses associated with electrical faults and transients. In addition, mechanical stress associated with electrical faults is not a credible aging mechanism because of the low frequency of occurrence for electrical faults. Therefore, electrical transients are not aging mechanisms.

Metallic parts of electrical cable connections exposed to vibration are those associated with active components that cause vibration. Active components are not subject to aging management review in accordance with 10 CFR 54.21. In addition, connections required for the SBO AAC source are not associated with rotating equipment that causes vibration.

Routine releases of corrosive chemicals to areas inside VHS or the associated switchyard do not occur. Corrosive chemicals are not a normal environment for electrical connections. Contamination of electrical connections causes rapid degradation independent of the age of the connection components. Corrosion due to contamination is due to the contamination event rather than aging. Therefore, chemical contamination is not an aging mechanism for electrical connections.

Corrosion and oxidation occur in the presence of moisture or contamination such as industrial pollutants and salt deposits. Enclosures and splice materials protect metal connections from moisture and contamination. In addition, the VHS is not located in an area of significant industrial pollution or near seawater with the potential for salt spray. Therefore, oxidation and corrosion are not applicable aging mechanisms for cable connections.

The mechanisms discussed above are not applicable aging mechanisms for the SBO AAC source. In addition, normal operation of the VHS circuit components confirms the capability to perform license renewal intended functions. Therefore, no aging management program is necessary for connections. This conclusion is supported by the long history of reliable operation of the Vernon tie line.

RAI 3.6.2.2-N-08-5 (b) Response

Review of VYNPS documents for the SBO AAC source at VHS revealed that fuse holders that utilize metallic clamps are part of active devices and therefore are not subject to aging management review.

Fuse holders inside enclosures of active components, such as switchgear, power supplies, power inverters, battery chargers, and circuit boards, are piece parts of the larger active device, and are not subject to aging management review.

RAI 3.6.2.2-N-08-5 (c) Response

The VHS switchyard employs an aerial cable system (transmission conductors suspended by insulators with vertical taps). Cable connections for the SBO AAC source

at the VHS include some bolted connections that are not part of active components. Cable connections for the SBO AAC source at the VHS are associated with redundant power circuits with the exception of a small part of the circuit that feeds the step-down transformer upstream of the Vernon tie. This part of the switchyard is normally energized supplying power to local consumers. Normal operation of the switchyard confirms the ability of these connections to perform their license renewal intended function. The historically high availability of the SBO AAC source demonstrates the effectiveness of normal operation in assuring the ability of the associated connections to perform their license renewal intended function.

RAI 3.6.2.2-N-08-5 (d) Response

NUREG-1801 defines switchyard bus as the uninsulated, unenclosed, rigid electrical conductor or pipe used in switchyards and switching stations to connect two or more elements of an electrical power circuit, such as active disconnect switches and passive transmission conductors. The VHS switchyard employs an aerial cable system (transmission conductors suspended by insulators with vertical taps). No switchyard bus is used in the sections of the VHS switchyard that support the SBO alternate AC source.

Normal operation of the switchyard confirms the ability of the aerial cable system to perform its license renewal intended function. The historically high availability of the SBO AAC source demonstrates the effectiveness of normal operation in assuring the ability of the switchyard components to perform their license renewal intended function.

RAI 3.6.2.2-N-08-5 (e) Response

The evaluation of high-voltage insulators within the VHS switchyard is provided as follows.

Various airborne materials such as dust, salt and industrial effluents can contaminate insulator surfaces. The surface contamination is typically washed away by rain. Surface contamination can be a problem in areas where there are greater concentrations of airborne particles such as near facilities that discharge soot or near the seacoast where salt spray is prevalent. In those areas, surface contamination buildup can occur in a matter of hours in the event of the right weather conditions. The VHS switchyard is not located near the seacoast where salt spray is applicable. At VYNPS, surface contamination buildup on high-voltage insulators is not a problem since rain removes surface contamination preventing accumulation.

Cement growth is a possible aging mechanism for high-voltage insulators used in strain applications. No high-voltage insulators in the VHS switchyard are used in a strain application.

Therefore, surface contamination and cement growth are not applicable degradation mechanisms for high-voltage insulators at the VHS and associated switchyard. In addition, normal operation of the switchyard confirms the ability of the insulators to perform their license renewal intended function. The historically high availability of the SBO AAC source demonstrates the effectiveness of normal operation in assuring the ability of the associated insulators to perform their license renewal intended function.

Attachment 2

Vermont Yankee Nuclear Power Station

License Renewal Application

Amendment 17

Commitment List

(6 pages)

VERMONT YANKEE NUCLEAR POWER STATION
LICENSE RENEWAL COMMITMENT LIST
REVISION 3

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 tank bottom surface will be performed every 10 years during tank cleaning and inspection.	March 21, 2012	BVY 06-009	B.1.9
4	The Diesel Fuel Monitoring Program will be enhanced to specify UT measurements of the fuel oil storage tank bottom surface will have acceptance criterion ≥ 60% Tnom.	March 21, 2012	BVY 06-009	B.1.9
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

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
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
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
13	Implement the Non-EQ Inaccessible Medium-Voltage Cable Program as described in LRA Section B.1.17.	March 21, 2012	BVY 06-009	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

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
16	Implement the One-Time Inspection Program as described in LRA Section B.1.21. Include destructive or non-destructive examination of one (1) socket welded connection using techniques proven by past industry experience to be effective for the identification of cracking in small bore socket welds. Should an inspection opportunity not occur (e.g., socket weld failure or socket weld replacement), a susceptible small-bore socket weld will be examined either destructively or non-destructively prior to entering the period of extended operation.	March 21, 2012	BVY 06-009	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
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
27	For each location that may exceed a CUF of 1.0 when considering environmental effects, VYNPS will implement one or more of the following: (1) further refinement of the fatigue analyses to lower the predicted CUFs to less than 1.0; (2) management of fatigue at the affected locations by an inspection program that has been reviewed and approved by the NRC (e.g., periodic non-destructive examination of the affected locations at inspection intervals to be determined by a method acceptable to the NRC); (3) repair or replacement of the affected locations. Should VYNPS select the option to manage environmental-assisted fatigue during the period of extended operation, details of the aging management program such as scope, qualification, method, and frequency will be provided to the NRC two years prior to the period of extended operation for review and approval.	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
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

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
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 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 to be provided in a LRA Amendment)	March 21, 2012	BVY 06-058	Audit Item 97
33	Include within the Structures Monitoring Program provisions that will ensure an engineering evaluation is made on a periodic basis of groundwater samples to assess aggressiveness of groundwater to concrete.	March 21, 2012	BVY 06-009	B.1.27 Audit Item 77
34	Implement the Bolting Integrity Program. Details to be provided in a LRA Amendment with specific locations in the LRA referenced.	March 21, 2012	BVY 06-058	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

VERMONT YANKEE NUCLEAR POWER STATION
LICENSE RENEWAL COMMITMENT LIST
REVISION 3

ITEM	COMMITMENT	IMPLEMENTATION SCHEDULE	SOURCE	Related LRA Section No./ Comments
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
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	If the Vernon Tie ever becomes unavailable, due to unavailability of the VHS or other reasons, the reactor must be shut down within 15 days unless the Vernon Tie is returned to service or a basis for maintaining continued operation is written and approved. If the Vernon Tie cannot be returned to service within 15 days, within the next 24 hours VYNPS must submit a report to the NRC in accordance with 10CFR50.4 outlining the reason for the unavailability, corrective actions in place to provide AC power for Appendix R alternate shutdown fire scenarios, and the time required to make the Vernon Tie available.	March 21, 2012	BVY 06-096	Response to RAI 3.6.2.2-N-08-2
41	VYNPS will monitor the availability of the VHS to ensure continued capability to perform its license renewal intended function, that is, conformance with the availability specified in NUMARC 87-00 for meeting the requirements of the SBO Rule. If availability falls below the acceptable level, VYNPS will respond to the condition through the corrective action program. The corrective action program requires evaluation and appropriate corrective action to correct the nonconforming condition.	March 21, 2012	BVY 06-096	Response to RAI 3.6.2.2-N-08-2