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BVY 12-016

March 12, 2012

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

SUBJECT: License Amendment Request to Revise License Renewal Commitments
 Vermont Yankee Nuclear Power Station
 Docket No. 50-271
 License No. DPR-28

STATE OF VERMONT
 DEPT OF PUBLIC SERVICE
 MONTPELIER, VT.
 05620-2601
 2012 MAR 16 A 12:27

Dear Sir or Madam:

In accordance with 10 CFR 50.90 and Renewed Facility Operating License Condition 3.Q, Vermont Yankee (VY) is proposing an amendment to Renewed Facility Operating License DPR-28.

The proposed amendment would approve revision of License Renewal Commitment (LRC) No. 3 and No. 6 as described in Appendix A of Supplement 2 to NUREG-1907. Specifically, LRC No. 3 would be revised to clarify that cleaning and inspecting of the fire pump diesel storage tank is not required in order to perform ultrasonic thickness (UT) measurements of the tank bottom surface and LRC No. 6 would be revised to use manual cycle counting to track and compare accumulated cycles against allowable values to determine if cumulative usage factors are required to be updated.

The proposed amendment would approve revision of LRC No. 16 and LRC No. 19, which require, respectively, implementation of the One Time Inspection Program as described License Renewal Application (LRA) Section B.1.21, and implementation of the Selective Leaching Program as described in LRA Section B.1.25. Specifically, the proposed amendment would approve revising the Aging Management Program for Selective Leaching described in LRA Section B.1.25 to provide alternative assessment methods for gray cast iron components and approve revising the One-Time Inspection Program described in LRA Section B.1.21 to remove the reactor vessel flange leak-off line and main steam line flow restrictors from the program.

The proposed amendment does not reflect a reduction in the level of commitment that VY has towards ensuring that effects of aging on plant systems, structures and components within the scope of license renewal are adequately managed throughout the period of extended operation.

VY has reviewed the proposed amendment in accordance with 10 CFR 50.92 and concludes it does not involve a significant hazards consideration. In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the State of Vermont, Department of Public Service.

Attachment 1 to this letter provides a detailed description and evaluation of the proposed amendment. A new regulatory commitment to include two welds from the reactor vessel weld leak-off line in the sample population for UT examination under LRC No. 53 is included in Attachment 2

of this letter. Attachment 2 also contains the proposed revised commitments for LRC No. 3 and LRC No. 6.

Although this change does not meet the requirements for an exigent review under 10 CFR 50.91(a)(6), VY requests a timely review and approval of the proposed amendment.

If you have any questions on this transmittal, please contact Mr. Robert Wanczyk at 802-451-3166.

I declare under penalty of perjury that the foregoing is true and correct. Executed on March 12, 2012.

Sincerely,



[CJW/PLC]

Attachments

1. Description and Evaluation of the Proposed Changes
2. List of Regulatory Commitments

cc: Mr. William M. Dean
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Attachment 1

Vermont Yankee Nuclear Power Station
Description and Evaluation of Proposed Changes

1. SUMMARY DESCRIPTION

Vermont Yankee has submitted a separate amendment request to revise License Conditions 3.P and 3.Q in Reference 6.a. While this amendment request is being reviewed by NRC staff, VY is proposing changes to license renewal activities associated with License Condition 3.Q.

License Condition 3.Q provides, "The UFSAR supplement, as revised, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to and/or during the period of extended operation. Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. shall complete these activities in accordance with Appendix A of Supplement 2 to NUREG-1907, "Safety Evaluation Report Related to the License Renewal of Vermont Yankee Nuclear Power Station." While VY understood this condition as controlling the schedule for those commitments listed in Appendix A of Supplement 2 to NUREG-1907 and not overriding the normal change process for programs described in the UFSAR supplement, a recent interpretation provided by NRC Regional Inspectors during the 71003 License Renewal Commitments inspection, conducted during January and February of this year, clarified that NRC approval is required for any revisions made to the activities described in that Appendix. For this reason, pursuant to 10 CFR 50.90, VY hereby proposes to amend Renewed Facility Operating License DPR-28. Specifically, VY seeks NRC approval to revise four License Renewal Commitments described in Appendix A of Supplement 2 to NUREG-1907, and an appropriate change to License Condition 3.Q so that it does not conflict with these revised commitments. The proposed changes are:

- **Revise License Renewal Commitment (LRC) No. 3 to clarify that cleaning and inspecting of the fire pump diesel storage (day) tank is not required in order to perform ultrasonic thickness (UT) measurements of the tank bottom surface.**
- **Revise LRC No. 6 to use manual cycle counting to track and compare accumulated cycles against allowable values to determine if cumulative usage factors (CUFs) are required to be updated. LRC No. 6 currently requires that a computerized monitoring program be used to directly determine CUFs for locations of interest.**
- **Revise LRC No. 16 by removing the reactor vessel flange leak-off line from the One-Time Inspection (OTI) Program in License Renewal Application (LRA) Section A.2.1.23. Two welds from the line will be included in the sample population for UT examination under LRC 53.**
- **Remove the main steam line flow restrictors from the OTI Program in LRA Section A.2.1.23.**
- **Revise LRC No. 19 to add to the Selective Leaching Program in LRA Section A.2.1.27 the alternative to perform a UT measurement of wall thickness for gray cast iron components that are unavailable for internal inspection.**
- **For buried gray cast iron components, revise the Selective Leaching Program in LRA Section A.2.1.27 to allow use of a soil corrosivity evaluation to determine if the soil is corrosive.**

2. DETAILED DESCRIPTION

LRC No. 3 currently states:

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.

LRC No. 3 is proposed to be revised as follows:

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. Ultrasonic thickness measurement of the fire pump diesel storage (day) tank bottom will be performed every 10 years.

LRC No. 6 currently states:

A computerized monitoring program (e.g., FatiguePro) will be used to directly determine cumulative fatigue usage factors (CUFs) for locations of interest.

LRC No. 6 is proposed to be revised as follows:

Manual cycle counting will be used to track and compare accumulated cycles against allowable values to determine if cumulative usage factors are required to be updated.

LRC No. 16 currently states:

Implement the One-Time Inspection Program as described in LRA Section B.1.21.

LRC No. 16 is proposed to be revised as follows:

Implement the One-Time Inspection Program as described in LRA Section B.1.21 and as modified by letter BVY 12-016.

LRA Section A.2.1.23 currently states:

The elements of the One-Time Inspection Program include (a) determination of the sample size based on an assessment of materials of fabrication, environment, plausible aging effects, and operating experience; (b) identification of the inspection locations in the system or component based on the aging effect; (c) determination of the examination technique, including acceptance criteria that would be effective in managing the aging effect for which the component is examined; and (d) evaluation of the need for follow-up examinations to monitor the progression of any aging degradation.

A one-time inspection activity is used to verify the effectiveness of the water chemistry control programs by confirming that unacceptable cracking, loss of material, and fouling is not occurring on components within systems covered by water chemistry control programs [Sections A.2.1.34, A.2.1.35, and A.2.1.36].

One-time inspection activities on

- *internal carbon steel surfaces exposed to indoor air in the standby gas treatment system,*

- *carbon steel retired in place (RIP) system components in the area around containment penetration X-21,*
- *small bore piping in the reactor coolant system and associated systems that form the reactor coolant pressure boundary,*
- *reactor vessel flange leak-off line, and*
- *main steam flow restrictors*

are used to confirm that loss of material, cracking, and reduction of fracture toughness, as applicable, are not occurring or are so insignificant that an aging management program is not warranted.

When evidence of an aging effect is revealed by a one-time inspection, routine evaluation of the inspection results will identify appropriate corrective actions.

LRA Section A.2.1.23 is proposed to be revised as follows (additions are shown in bold; deletions are shown as strikethrough):

The elements of the One-Time Inspection Program include (a) determination of the sample size based on an assessment of materials of fabrication, environment, plausible aging effects, and operating experience; (b) identification of the inspection locations in the system or component based on the aging effect; (c) determination of the examination technique, including acceptance criteria that would be effective in managing the aging effect for which the component is examined; and (d) evaluation of the need for follow-up examinations to monitor the progression of any aging degradation.

A one-time inspection activity is used to verify the effectiveness of the chemistry control programs by confirming that unacceptable cracking, loss of material, and fouling is not occurring on components within systems covered by water chemistry control programs [Sections A.2.1.34, A.2.1.35, and A.2.1.36].

One-time inspection activities on

- *internal carbon steel surfaces exposed to indoor air in the standby gas treatment system,*
- *carbon steel retired in place (RIP) system components in the area around containment penetration X-21, and*
- *small bore piping in the reactor coolant system and associated systems that form the reactor coolant pressure boundary;*
- ~~*reactor vessel flange leak-off line, and*~~
- ~~*main steam flow restrictors*~~

are used to confirm that loss of material, cracking, and reduction of fracture toughness, as applicable, are not occurring or are so insignificant that an aging management program is not warranted.

When evidence of an aging effect is revealed by a one-time inspection, routine evaluation of the inspection results will identify appropriate corrective actions.

LRC No. 19 currently states:

Implement the Selective Leaching Program as described in LRA Section B.1.25.

LRC No. 19 is proposed to be revised as follows:

Implement the Selective Leaching Program as described in LRA Section B.1.25 and as modified by letter BVY 12-016.

LRA Section A.2.1.27 currently states:

The Selective Leaching Program ensures the integrity of components made of cast iron, bronze, brass, and other alloys exposed to a raw water, treated water, or groundwater environment that may lead to selective leaching of one of the metal components. The program includes a one-time visual inspection and hardness measurement of selected components that may be susceptible to selective leaching to determine whether loss of material due to selective leaching is occurring, and whether the process will affect the ability of the components to perform their intended function for the period of extended operation.

LRA Section A.2.1.27 is proposed to be revised as follows (additions are shown in bold; deletions are shown as strikethrough):

The Selective Leaching Program ensures the integrity of components made of cast iron, bronze, brass, and other alloys exposed to a raw water, treated water, or groundwater environment that may lead to selective leaching of one of the metal components. The program includes a one-time visual inspection and hardness measurement of selected components that may be susceptible to selective leaching to determine whether loss of material due to selective leaching is occurring, and whether the process will affect the ability of the components to perform their intended function for the period of extended operation.

If opportunistic inspections as a result of plant maintenance activities do not present the opportunity to use the inspection techniques described above for sufficient sample populations, the following alternative assessment techniques may be used in lieu of disassembly or excavation solely for the purpose of inspections for this program. For buried gray cast iron components, a soil corrosivity evaluation may be used to determine if the soil is corrosive. If the soil is found to be non-corrosive, then selective leaching is unlikely to occur and no visual examination or hardness measurement is required.

Evaluations shall be performed using AWWA standard ANSI C105/A21.5-99 "American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems" Table A.1. A soil score of less than 10 points is required to implement this assessment technique. For gray cast iron components unavailable for internal inspection an ultrasonic inspection technique to measure wall thickness may be used. The technique shall be capable of discerning the sound metal/graphite matrix transition boundary.

3. TECHNICAL EVALUATION

The following provides an evaluation of the proposed changes:

LRC No. 3 Changes

LRA Appendix B.1.9, as amended, describes the Diesel Fuel Monitoring Program. The program entails sampling to ensure that adequate diesel fuel quality is maintained to prevent plugging of filters, fouling of injectors, and corrosion of fuel systems. Exposure to

fuel oil contaminants such as water and microbiological organisms is minimized by periodic draining and cleaning of selected tanks and by verifying the quality of new oil before its introduction into storage tanks.

LRA Amendment 26 (BVY 07-018, dated 3/23/07) revised LRA Appendix B.1.9, Diesel Fuel Monitoring to add the fire pump diesel storage (day) tank to the scope of the enhancement to the Detection of Aging Effects program attribute and LRC No. 3. The program description was also revised in the same amendment to clarify that only selected tanks in the program are periodically cleaned and inspected. That change was made based on a question asked during the VY License Renewal Regional Inspection in early 2007 which pointed out only the main fuel oil storage tank is cleaned. VY does not perform a periodic cleaning and inspection of the fire pump diesel storage (day) tank.

This change is made to clarify the LRC No. 3 wording. The original commitment description implies that the fire pump diesel storage (day) tank must be cleaned and inspected prior to UT measurement of the bottom surface. As the fire pump diesel storage (day) tank is mounted on legs, UT measurements can be made of the bottom surface externally. The proposed change would clarify the commitment by removing the implication that the tank is cleaned and inspected.

The evaluation and discussion of LRC No. 3 (corresponding to Enhancement 1) in Section 3.0.3.2.9 of the VY License Renewal Safety Evaluation Report, NUREG-1907, Volume I (Reference 6.c) supports the notion that only the diesel fuel storage tank is periodically cleaned and inspected as it applies to this commitment:

Enhancement 1. In the supplement to LRA Section B.1.9, the applicant stated the following enhancement in meeting the program element "detection of aging effects." Specifically, the enhancement states:

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.

The staff determines that the monthly testing of the diesel fuel quality and for the presence of water and sediment augmented by the ultrasonic thickness measurement of the **diesel fuel storage tank bottom every 10 years when the tank is cleaned and inspected** will ensure that significant degradation of the tank bottom surface will not go undetected. [Emphasis added]

On this basis, the staff finds this enhancement acceptable since when the enhancement is implemented, "Diesel Fuel Monitoring Program," will be consistent with GALL AMP XI.M30 and will provide additional assurance that the effects of aging will be adequately managed.

The proposed change is a clarification and does not affect the ability of the Diesel Fuel Monitoring Program to adequately manage the effects of aging on the fire pump diesel storage (day) tank.

LRC No. 6 Changes

The Fatigue Monitoring Aging Management Program (AMP) tracks the number of critical thermal and pressure transients for selected reactor coolant system components. The program ensures the validity of analyses that explicitly assumed a specified number of thermal and pressure fatigue transients by assuring that the actual effective number of

transients is not exceeded. In Reference 6.b, VYNPS committed (LRC No. 6) to use a computerized monitoring program (e.g., FatiguePro) to directly determine CUFs for locations of interest. The NRC staff found the VYNPS Fatigue Monitoring AMP to be adequate in Reference 6.c.

VY currently uses a manual counting method for thermal and pressure transient cycles. This is not a labor intensive process since there have been six or less total transient cycles per plant operating cycle. For VY, the predicted number of transient cycles at the end of the period of extended operation (PEO) is less than 60% of the design number. This prediction was reached by taking the historical data up to the time of the preparation of Reference 6.b and extrapolating it to 60 years of operation.

Based on the predicted number of transient cycles being significantly less than the design number of cycles and the relative ease of counting and tracking cycles, the use of a computerized monitoring program for directly determining CUFs during the PEO is not warranted. As described in Section 3.0.3.2.10 of Reference 6.c, LRC No. 6 was an enhancement made to the existing Fatigue Monitoring Program in LRA Section B.1.11. Section B.1.11 described the existing Fatigue Monitoring Program as consistent, with exceptions and enhancements, with Generic Aging Lessons Learned (GALL) AMP X.M1, "Metal Fatigue of Reactor Coolant Pressure Boundary." The VY Fatigue Monitoring Program will continue to be consistent with GALL AMP X.M1 (NUREG-1801, Revision 1) with this enhancement removed.

VY notified the NRC of the revision to LRC No. 6 in Reference 6.d. In Reference 6.e, the NRC inspectors identified a concern that changing the commitment may have required NRC approval rather than NRC notification. The report noted:

The inspectors noted that the significance of the above concerns was minimal in this particular case. Manual cycle counting has represented an acceptable method in some applications. The Pilgrim license renewal application, which was submitted concurrently with the Vermont Yankee license renewal application, had used manual cycle counting, and NRC issued the Pilgrim Safety Evaluation Report and supplements without a commitment for fatigue monitoring. Other plants with renewed licenses have had manual cycle counting.

For LRC No. 5, plant procedure requires that CUFs and cycle count limits be recomputed if the maximum number of allowable cycles is approached. The continued use of manual transient cycle counting to track and compare accumulated cycles against allowable values to determine if cumulative usage factors are required to be updated during the PEO in conjunction with LRC No. 5 will provide assurance that the effects of aging will be adequately managed.

LRC No. 16 and LRA Section A.2.1.23 Changes

LRC No. 16 states:

Implement the One-Time Inspection Program as described in LRA Section B.1.21.

VY seeks to modify this commitment by removing from the program currently described in Section B.1.21 the reactor vessel flange leak-off line and the main steam line flow restrictors. On approval of this change in commitment, these changes will be reflected in the UFSAR supplement, at Section A.2.1.23. LRA Section A.2.1.23 provides a summary description of the program described in LRA Section B.1.21. Since the VY Renewed Operating License has been issued, revising the UFSAR supplement is the appropriate vehicle for capturing changes made to the OTI Program described in LRA Section B.1.21.

The OTI Program is used to verify the effectiveness of the water chemistry control programs by confirming that unacceptable cracking, loss of material, and fouling is not occurring on components within systems covered by water chemistry control programs. The elements of the OTI Program include (a) determination of the sample size based on an assessment of materials of fabrication, environment, plausible aging effects, and operating experience; (b) identification of the inspection locations in the system or component based on the aging effect; (c) determination of the examination technique, including acceptance criteria that would be effective in managing the aging effect for which the component is examined; and (d) evaluation of the need for follow-up examinations to monitor the progression of any aging degradation.

The proposed changes remove the reactor vessel flange leak-off line and the main steam line flow restrictors from the OTI Program.

The purpose of including the reactor vessel flange leak off line in the OTI Program was to confirm that cracking is not occurring or is so insignificant that an aging management program is not warranted. The leak off line is a one inch socket welded pipe. As described in Item Number 3.1.1-19 of LRA Table 3.1.1 and LRA Section 3.1.2.2.4, a volumetric examination would be performed on the leak off line to detect cracking as part of the OTI Program. Volumetric examinations are performed using UT examinations. A technique for UT of socket welds does not currently exist; it is being developed in support of LRC No. 53. Two welds from the reactor vessel flange leak off line will be included in the sample population for UT examination as part of LRC No. 53, which states:

During the period of extended operation, VYNPS will perform periodic volumetric examinations of small-bore Class 1 socket and butt welds. The examinations will include 10% of the Class 1 weld population greater than or equal to 1 and less than 4 inch NPS up to a total of 25 welds of each weld type. In lieu of a volumetric examination for socket welds, a destructive examination may be performed. Each destructive exam will be equivalent to two ultrasonic examinations when determining the number of completed inspections. The examination method will be a volumetric examination of the base and weld metal using a demonstrated ultrasonic examination technique. Inspection results will determine the need for additional or periodic examinations. The examinations will be performed by December 2016.

This proposed change will ensure that the effects of aging in the reactor vessel flange leak-off line continue to be adequately managed.

The purpose of including the main steam line flow restrictors in the OTI Program was to confirm that loss of material, cracking, and reduction of fracture toughness are not occurring or are so insignificant that an aging management program is not warranted. The main steam line flow restrictors are cast austenitic stainless steel (CASS). They were included in the OTI Program because of the possibility of thermal embrittlement of CASS. NUREG-1801, Revision 2 Section XI.M12, "Thermal Aging Embrittlement of Cast Austenitic Stainless Steel (CASS)," states:

For low-molybdenum content steels (SA-351 Grades CF3, CF3A, CF8, CF8A or other steels with ≤ 0.5 weight percent [wt. %] Mo), only static-cast steels with $>20\%$ ferrite are potentially susceptible to thermal embrittlement. Static-cast low-molybdenum steels with $\leq 20\%$ ferrite and all centrifugal-cast low-molybdenum steels are not susceptible.

A review of plant records and documentation from the component vendor have established that the particular alloy used in the main steam line flow restrictors are not subject to

thermal embrittlement. This is because the CASS main steam line flow restrictors meet the screening criteria for susceptibility stated above in that the flow restrictors are centrifugally cast and are from a low molybdenum grade (0.5 wt. % max) of steel.

The main steam line flow restrictors and the reactor vessel flange leak off piping are included in the population of other stainless steel components exposed to treated water managed by the Water Chemistry Control – BWR program. Thus it is appropriate to exclude an inspection of the main steam line flow restrictors and reactor vessel flange leak off piping welds from the OTI Program. This proposed change will not affect the ability to adequately manage the effects of aging in main steam line flow restrictors and reactor vessel flange leak off piping.

LRC No. 19 and LRA Section A.2.1.27 Changes

LRC No. 19 states:

Implement the Selective Leaching Program as described in LRA Section B.1.25.

VY seeks to modify this commitment by adding to the program currently described in Section B.1.25 alternative assessment methods for gray cast iron components. On approval of this change in commitment, these changes will be reflected in the UFSAR supplement, at Section A.2.1.27. LRA Section A.2.1.27 provides a summary description of the program described in LRA Section B.1.25. Since the VY Renewed Operating License has been issued, revising the UFSAR supplement is the appropriate vehicle for capturing changes made to the Selective Leaching Program described in LRA Section B.1.25.

The Selective Leaching Program ensures the integrity of components made of cast iron, bronze, brass, and other alloys exposed to a raw water, treated water, or groundwater environment that may lead to selective leaching of one of the metal components. The program includes a one-time visual inspection and hardness measurement of selected components that may be susceptible to selective leaching to determine whether loss of material due to selective leaching is occurring, and whether the process will affect the ability of the components to perform their intended function for the period of extended operation.

Selective leaching occurs when a corrosive environment dissolves one component of an alloy. In gray cast iron, the iron portion of the alloy is preferentially corroded away, leaving the graphite behind.

The proposed changes add alternative assessment techniques for gray cast iron components in lieu of disassembly or excavation solely for the purpose of inspections for this program. Specifically, the proposed alternative assessment techniques are:

- For buried gray cast iron components a soil corrosivity evaluation may be used to determine that selective leaching is unlikely because the soil is not corrosive.
- For gray cast iron components unavailable for internal inspection an ultrasonic inspection technique to measure wall thickness may be used.

Selective leaching is less likely to occur if the susceptible components are located in a low-corrosivity environment. American Water Works Association (AWWA) standard ANSI C105/A21.5-99 "American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems" Table A.1 is used to evaluate soil conditions to establish whether or not protective coating of the buried piping system is required. A soil score of greater than or equal to 10 points is established in AWWA C105 as the indicator of corrosive conditions. If

the soil is found to be non-corrosive, then selective leaching is unlikely to occur and no visual examination or hardness measurement is required. A soil score of less than 10 points is required to implement this assessment technique.

In a gray cast iron component that has been subject to selective leaching there is a significant sonic velocity and acoustic impedance difference between the sound material and the dissolved graphite-rich corroded thickness. The appropriate ultrasonic inspection technique is capable of detecting that boundary. Using that thickness measurement, a conservative prediction on possible wall loss can be calculated.

The proposed changes to the Selective Leaching Program will not impact the ability to adequately manage the effects of aging on gray cast iron components.

4. EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Pursuant to 10 CFR 50.92, Vermont Yankee (VY) has reviewed the proposed change and concludes that the change does not involve a significant hazards consideration since the proposed change satisfies the criteria in 10 CFR 50.92(c). These criteria require that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. The discussion below addresses each of these criteria and demonstrates that the proposed amendment does not constitute a significant hazard.

The proposed amendment would approve revision of License Renewal Commitment (LRC) No. 3 and No. 6 as described in Appendix A of Supplement 2 to NUREG-1907. Specifically, LRC No. 3 would be revised to clarify that cleaning and inspecting of the fire pump diesel storage tank is not required in order to perform ultrasonic thickness measurements of the tank bottom surface and LRC No. 6 would be revised to use manual cycle counting to track and compare accumulated cycles against allowable values to determine if cumulative usage factors are required to be updated.

The proposed amendment would also approve revision of LRC No. 16 and LRC No. 19 as described in Appendix A of Supplement 2 to NUREG-1907. Specifically, the proposed amendment would approve revising the Aging Management Program for Selective Leaching to provide alternative assessment methods for gray cast iron components and approve revising the One-Time Inspection Program to remove the reactor vessel flange leak-off line and main steam line flow restrictors from the program.

The proposed change does not involve a significant hazards consideration because:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The amendment does not significantly increase the probability of an accident since it does not involve a change to any plant equipment that initiates a plant accident. The change revises license renewal commitments and aging management programs. License renewal commitments and aging management programs are in place to ensure that the effects of aging are properly managed for the systems, structures and components within the scope of the programs during the period of extended operation. The proposed changes are not an initiator or mitigator of any previously evaluated accidents. Therefore, the proposed amendment does not

involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated since it does not involve any physical alteration of plant equipment and does not change the method by which any safety-related system performs its function. The change revises license renewal commitments and aging management programs. License renewal commitments and aging management programs are in place to ensure that the effects of aging are properly managed for the systems, structures and components within the scope of the programs during the period of extended operation. No new or different types of equipment will be installed and the basic operation of installed equipment is unchanged. Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed amendment does not affect design codes or design margins. The change revises license renewal commitments and aging management programs. License renewal commitments and aging management programs are in place to ensure that the effects of aging are properly managed for the systems, structures and components within the scope of the programs during the period of extended operation. The proposed changes do not have the ability to affect analyzed safety margins. Therefore, operation of VY in accordance with the proposed amendment will not involve a significant reduction in the margin to safety.

Based on the above, Entergy concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5. ENVIRONMENTAL CONSIDERATIONS

This amendment request meets the eligibility criteria for categorical exclusion from environmental review set forth in 10 CFR 51.22(c)(9) as follows:

- (i) The amendment involves no significant hazards determination.

As described in Section 4 of this evaluation, the proposed change involves no significant hazards consideration.

- (ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.

The proposed amendment does not involve any physical alterations to the plant configuration that could lead to a change in the type or amount of effluent release offsite.

- (iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

Based on the above, VY concludes that the proposed change meets the eligibility criteria for categorical exclusion as set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

6. REFERENCES

- a. Letter, Entergy to USNRC, "Proposed Change No. 300, Renewed Facility Operating License Condition 3.P and 3.Q Changes," BVY 12-015, dated March 5, 2012
- b. Letter, Entergy to USNRC, "Vermont Yankee Nuclear Power Station, License No. DPR-28, License Renewal Application," BVY 06-009, dated January 25, 2006
- c. NUREG-1907, "Safety Evaluation Report Related to the License Renewal of Vermont Yankee Nuclear Power Station," Volume 1, dated February 2008
- d. Letter, Entergy to USNRC, "Notification of Revised Regulatory Commitment," BVY 11-026, dated May 19, 2011
- e. Letter, USNRC to Entergy, "Vermont Yankee Nuclear Power Station – NRC Integrated Inspection Report 05000271/2011011," dated December 22, 2011

Attachment 2

Vermont Yankee Nuclear Power Station

List of Regulatory Commitments

List of Regulatory Commitments

This table identifies actions discussed in this letter for which Entergy commits to perform. Any other actions discussed in this submittal are described for the NRC's information and are not commitments.

| COMMITMENT | TYPE (Check one) | | SCHEDULED COMPLETION DATE (If Required) |
|--|---------------------|--------------------------|--|
| | ONE-TIME ACTION | CONTINUING COMPLIANCE | |
| (License Renewal Commitment No. 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. Ultrasonic thickness measurement of the fire pump diesel storage (day) tank bottom will be performed every 10 years. | x | | March, 21 2012 |
| (License Renewal Commitment No. 6) Manual cycle counting will be used to track and compare accumulated cycles against allowable values to determine if cumulative usage factors are required to be updated. | | x | March, 21 2012 |
| Two welds from the reactor vessel flange leak-off line will be included in the sample population for ultrasonic thickness examination under License Renewal Commitment No. 53. | x | | In accordance with LRC No. 53 completion schedule. |