

319 **Category** Accepted

Request LRA Page 4.3-3 and 4 -

A) Discuss how VY developed the condensed list of transients provided in Table 4.3-2 from the complete list in the design spec. Also provide a copy of the design-spec(s) with the complete list of transients for NRC review.

B) LRA Pg 4.3-4 Modify the statement on the bottom of Pg 4.3-4 that the TLAA remains valid except for exceptions where CUF including EAF for 60 years exceed 1.0. Please discuss the exceptions.

Response A) The condensed list of transients in Table 4.3-2 was developed to simplify cycle tracking by the plant operations staff. The basis for reducing the number of transients tracked is contained in Calculations VYC-378 Rev.0 and Rev.1. Attachment 1 of VYC-378 Rev.1 is titled "Recommendations for Tracking/Limiting Reactor Transient Events for Vermont Yankee Nuclear Power Station, November 13,1987. The complete list of design transients is contained in Attachment 1 pgs 24 to 27 and 31 to 32. Copies of VYC-378 Rev.0 and Rev.1 were provided for review.

The updated Reactor Vessel Specification for Extended Power Uprate is GE Specification No. 26A6019 Rev.1 dated 6/2/2003. It is supplemented by the original GE Reactor Vessel Design Specification No. 21A1115 Rev.4 issued 10/21//69. Copies of both specifications were provided for review.

B) The last paragraph of Section 4.3.1.1 will be clarified as follows.

The VYNPS Fatigue Monitoring Program will assure that the allowed number of transient cycles is not exceeded. The program requires corrective action if transient cycle limits are approached. Consequently, the TLAA (fatigue analyses) based on those transients will remain valid for the period of extended operation in accordance with 10 CFR 54.21(c)(1)(i). However, when the effects of reactor coolant environment on fatigue are added to the existing fatigue analyses, several locations have a projected cumulative usage factor in excess of 1.0. See section 4.3.3 for further discussion of the effects of reactor water environment on fatigue.

This requires an amendment to the LRA.

320 **Category** Accepted

Request LRA Page 4.3-5

Ensure that Reference 4.3-1 is correct. If not, provide the correct reference.

Response The correct reference is letter BVY96-96, not 96-48. The originator, addressee, title and date were correct, only the letter number was wrong. The following is the correct citation for Reference 4.3-1.

4.3-1 Sojka, R. E. (VYNPS), to USNRC Document Control Desk, "Response to Request for Additional Information Regarding Vermont Yankee Core Shroud Modification," BVY 96- 96, letter dated August 7, 1996.

This requires an amendment to the LRA.

321 **Category** Accepted

Request LRA Section 4.3.1.2 - Reconcile/revise the discrepancy in Section 3 tables and Section 4.0 on whether a plant-specific analysis is performed.

Response Tables 3.1.2-1, 3.1.2-2, and 3.1.2-3 will be revised to eliminate "TLAA - metal fatigue" whenever there is no corresponding TLAA in Section 4.0.

This requires an amendment to the LRA.

- 326** **Category** Closed
- Request** Please provide the fatigue analysis as referenced in the EPU-FSAR:
- PUSAR Table 3.7
- Response** There is no reactor vessel internals fatigue analysis using the 1986 ASME Section III code as a guideline. The fatigue analysis listed in the PUSAR is Task 0303 and it references NEDC-32424P-A and NEDC-32523P-A; copies of these analyses were provided in response to question 325.
- 327** **Category** Open
- Request** Do you have any plans to use "Fatigue-Pro" other than for cycle counting? If so, explain and supplement application as appropriate.
- Response** Current plans for implementing FatiguePro at VY are to use Stress Based Fatigue (SBF) monitoring for the Feedwater Nozzles. Automated or manual cycle counting (CBF) are planned for the remaining components. Components identified for automated CBF were selected using the following criteria; components with a design basis usage factor greater 0.40 for 40 yrs, Emergency Core Cooling System (ECCS) components, or where field experience suggests that a fatigue concern exists.
- The transient data acquisition capabilities in FatiguePro may be used for future development of SBF models and/or operational transient cycle counting for components as required to address operational changes and/or environmentally assisted fatigue concerns.
- 328** **Category** Accepted
- Request** B.1.13-M-01
The staff has discovered, as a result of previous discussions with the applicant, that the VY FAC program calculations are very specific in terms of calculations, as compared to other wall thickness applicants that we have reviewed. Please provide us with a couple of examples of these calculations.
- Response** Provided RFO 25 (Fall 2005) large bore inspection report evaluations for inspection nos. 2005-01, 2005-02, 2005-09, 2005-10, 2005-36, and 2005-37; and small bore evaluations 05-SB02 and 05_SB03. Also provided a copy of RFO outage inspection report VY-RPT-06-000002 Rev.0.
- 329** **Category** Accepted
- Request** B.113-M-02
The staff has also noted in their review of the LRA, that the VYNPS program operational experience appears to be above average in discovery and identification of FAC-related issues. Please provide us with a couple of examples of piping FAC discovery using the present program.
- Response** Provided scoping / planning worksheets for both RFO 25 and RFO 26. These list FAC industry OE evaluation for VYNPS.
- 330** **Category** Accepted
- Request** 3.1.1-19-P-03
How does Vermont Yankee do volumetric examinations of small bore piping socket welds?
- Response** 330 - VYNPS performs visual examinations of these welds as required by Section XI of the ASME code.
- The One-Time Inspection program will also 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.