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June 22, 2009

NL-09-070

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

SUBJECT: Response To Request for Additional Information Regarding Amendment
Application for Revised Reactor Vessel Heatup and Cooldown Curves (TAC. NO.
ME0788)
Indian Point Unit Number 2
Docket No. 50-247
License No. DPR-29

REFERENCE: 1. NRC letter to Entergy on Indian Point Nuclear Generating Unit No.2 -
Request for Additional Information Regarding Amendment Application for
Revised Reactor Vessel Heatup and Cooldown Curves (TAC. NO.
ME0788), dated May 28, 2009.

2. Entergy Letter to NRC, NL-09-013, Regarding Proposed Changes to
Indian Point 2 Technical Specifications for Reactor Vessel Heatup and
Cooldown Curves and Low Temperature Over Pressure Requirements,
dated March 5, 2009

Dear Sir or Madam:

Entergy Nuclear Operations, Inc (Entergy) is hereby providing a response to the NRC request for additional information, Reference 1, associated with the proposed changes to Indian Point 2 Technical Specification reactor vessel heatup and cooldown curves submitted in Reference 2. The responses to the questions are provided in Attachment 1.

There are no new commitments identified in this submittal. If you have any questions or require additional information, please contact Mr. R. Walpole, Manager, Licensing at (914) 734-6710.

A001
HRR

I declare under penalty of perjury that the foregoing is true and correct. Executed on June
22, 2009.

Sincerely,



JEP/sp

Attachment: 1. Reply to NRC Request for Additional Information Regarding
Proposed Changes to Indian Point 2 Technical Specifications
Regarding Reactor Vessel Heatup and Cooldown Curves (TAC.
NO. ME0788)

cc: Mr. John P. Boska, Senior Project Manager, NRC NRR
Mr. Samuel J. Collins, Regional Administrator, NRC Region I
NRC Senior Resident Inspectors Office
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA
Mr. Paul Eddy, New York State Dept. of Public Service

ATTACHMENT 1 TO NL-09-070

REPLY TO NRC REQUEST FOR ADDITIONAL INFORMATION

REGARDING

PROPOSED CHANGES TO INDIAN POINT 2 TECHNICAL SPECIFICATIONS

REGARDING REACTOR VESSEL HEATUP AND COOLDOWN CURVES (TAC. NO. ME0788)

**ENTERGY NUCLEAR OPERATIONS, INC
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2
DOCKET No. 50-247**

Response To Request For Additional Information

By letter dated March 5, 2009, Entergy Nuclear Operations, Inc., (Entergy), submitted a license amendment request for Indian Point Nuclear Generating Unit Number 2 (IP2) Technical Specification changes regarding pressure-temperature (P-T) limits and low temperature overpressure protection (LTOP) setpoints. The Technical Specification changes intended to replace the current P-T limits and LTOP setpoints for 25 effective full power years (EFPY) with the proposed P-T limits and LTOP setpoints for 29 EFPY. By letter of May 28, 2009 the Nuclear Regulatory Commission requested additional information on that request. Those requests and the responses are addressed below.

Question 1

In Table 2-3, the inlet (T-cold) operating temperatures are provided through cycle 8. Provide T-cold values through the most recent cycle for IP2, IP3, and H.B. Robinson Unit 2. Confirm that the average values in Table 2-3 are still applicable, or provide updated values.

Response

The values contained in Table 2-3 of WCAP-16752 are accurate and up to date. The date provided in this table provide the input for determination of weld material Chemistry Factor (CF), as shown in Note (d) on Table 2-4. The temperatures are correlated to surveillance capsules pulled, and the most recent capsule from Indian Point Unit 2 was taken after the end of cycle 8. Therefore, any T-Cold values taken since then would have no effect on the resultant Chemistry Factor. Multiple plants (IP2, IP3, HBR) are identified in the tables, as they contain common surveillance weld material. Use of data from other plants provides a better statistical base for the establishment of CF, but, like Indian Point 2, only the T-Cold values taken up to the most recently pulled capsule are used in establishment of CF.

For plant operations purposes, Indian Point 2 operates with a T-Cold that is bounded by (i.e. warmer than) the average of 528 deg F shown on Table 2-3. However, this has no bearing on the determination of CF or Adjusted Reference Temperature (ART), as used in the WCAP.

Question 2

Figures 5.1 through 5.4, Appendix A and Appendix B do not identify or include instrumentation uncertainties. Provide values for the instrumentation uncertainties and revise Figures 5.1 through 5.4, Appendix A, and Appendix B to include instrumentation uncertainties, or explain how instrumentation uncertainties are otherwise accounted for in operation.

Response

The Technical Specification curves developed for Unit 2 did not include instrument uncertainty. That is applied later, as the approved Technical Specification curves are adapted into procedures and setpoints. Instrument penalties are being calculated and applied in the same manner to those of Calculation FMX-00270-00 (vendor calculation NET-177-01), which was transmitted to the NRC in Attachment 5 of the Indian Point 2 letter of July 13, 2001 ([ML011990277](#)) as part of the request for the current revision of the P/T curves that were based on 25 EFPY. The methodology is unchanged since that time and is being applied to the new curves in the same manner as before.