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NL-15-109

September 1, 2015

U.S. Nuclear Regulatory Commission
Document Control Desk
11545 Rockville Pike, TWFN-2 F1
Rockville, MD 20852-2738

SUBJECT: Reply to Request for Additional Information for the Review of the Indian Point Nuclear Generating Unit Nos. 2 and 3, License Renewal Application, SET 2015-02
Docket Nos. 50-247 and 50-286
License Nos. DPR-26 and DPR-64

REFERENCES: NRC letter, "Request for Additional Information for the Review of the Indian Point Nuclear Generating Unit Nos. 2 and 3, License Renewal Application, SET 2015-02 (TAC Nos. MD5407 and MD5408)" dated July 7, 2015.

Dear Sir or Madam:

Entergy Nuclear Operations, Inc. (Entergy) is providing, in Attachment 1, the additional information requested in the referenced letter pertaining to NRC review of the License Renewal Application (LRA) for Indian Point 2 and Indian Point 3. Changes to the LRA sections that are as a result of the responses are provided in Attachment 2.

There are no new commitments being made in this submittal. If you have any questions, or require additional information, please contact Mr. Robert Walpole at 914-254-6710.

I declare under penalty of perjury that the foregoing is true and correct. Executed on 9/1, 2015.

Sincerely,

FRD/rl

A128
NRR

Attachments:

1. Reply to NRC Request for Additional Information Regarding the License Renewal Application
2. License Renewal Application Changes Due To Responses To Requests For Information

cc: Mr. Daniel H. Dorman, Regional Administrator, NRC Region I
Mr. Sherwin E. Turk, NRC Office of General Counsel, Special Counsel
Mr. Michael Wentzel, NRC Project Manager, Division of License Renewal
Mr. Douglas Pickett, NRR Senior Project Manager
Ms. Bridget Frymire, New York State Department of Public Service
Mr. John B. Rhodes, President and CEO NYSERDA
NRC Resident Inspector's Office

ATTACHMENT 1 TO NL-15-109

REPLY TO NRC REQUEST FOR ADDITIONAL INFORMATION

REGARDING THE

LICENSE RENEWAL APPLICATION

**ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 & 3
DOCKET NOS. 50-247 AND 50-286**

REQUEST FOR ADDITIONAL INFORMATION, SET 2015-02
RELATED TO INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3
LICENSE RENEWAL APPLICATION

RAI 3.0.3-16

Background:

As amended by letter dated March 10, 2015, license renewal application (LRA) Table 3.3.2-19-43-IP3, "Pressurizer System," states that loss of coating integrity is managed for metal components with internal coating in a "treated borated water > 140°F" environment by the Coating Integrity Program.

Issue:

Environments with high temperatures are not evaluated to be bounding within the assumptions of Generic Aging Lessons Learned (GALL) aging management program (AMP) XI.M42, "Aging Management of Loss of Coating or Lining Integrity for Internal Coatings/Linings on In-Scope Piping, Piping Components, Heat Exchangers, and Tanks." The changes to the LRA do not state the specific coating material used in systems with temperatures exceeding 140°F. Therefore, the staff lacks sufficient information to conclude that the guidance in AMP XI.M42 (e.g., inspection intervals, acceptance criteria) is sufficient for the materials exposed to temperatures greater than 140°F.

Request:

State the coating materials exposed to temperatures greater than 140°F. Provide the basis for concluding that loss of coating integrity is adequately managed in the subject environment.

Response to RAI 3.0.3-16

As amended by letter dated March 10, 2015, license renewal application (LRA), Table 3.3.2-19-43-IP3, "Pressurizer System [10CFR54.4(a)(2)]," indicates that the Coating Integrity Program manages loss of coating integrity for tanks with internal coating (pressurizer relief tank) in a "treated borated water > 140°F" environment.

After further review, Entergy determined that the assumption of temperature greater than 140 degrees Fahrenheit (140°F) was overly conservative. The nominal (normal operating temperature during plant operation) internal temperature for the pressurizer relief tank is less than 140°F.

The pressurizer relief tank is equipped with a high-temperature alarm set at 130°F. Operator actions in response to the alarm are to reduce the internal temperature to less than the alarm setpoint.

The pressurizer relief tank coating is an Amercoat 55 system which is a two-part coating application with both coats of EP series epoxy phenolic (8505 and 8525). The EP series

chemical-resistant epoxy phenolic is designed for temperature limits of 180°F (Immersed) and 250°F (Atmospheric).

Since the nominal internal temperature is less than 140°F, the Coating Integrity Program will adequately manage loss of coating integrity for the pressurizer relief tank. The license renewal application is revised to indicate that the environment is not greater than 140°F.

RAI 3.0.3-17

Background:

As amended by letter dated March 10, 2015, LRA Sections A.2.1.42, A.3.1.42, and B.1.43, "Coating Integrity," state that the Coating Integrity Program will be implemented by December 31, 2024. In addition, Commitment 8, as revised, states that LRA Sections A.2.1.13, A.3.1.13 and B.1.14, "Fire Water System," will be implemented by December 31, 2019.

Issue:

The implementation schedule for LRA Section B.1.43 ranges up to nine years, from 2015 to 2024. In addition, implementation of Commitment 8, as revised, ranges from 2015 to 2019. Standard Review Plan for License Renewal (SRP-LR) Table 3.0-1 for AMP XI.M42 states that the first inspections of internal coatings should be completed no later than the last refueling outage prior to the period of extended operation. The staff recognizes that Indian Point Generating Unit No. 2 has entered timely renewal and Indian Point Generating Unit No. 3 may shortly enter timely renewal. As such, it does not appear that the inspection section schedule recommended in Table 3.0-1 will be met. Further, it is not clear to the staff how loss of coating integrity will be managed in the time frame prior to the programs being implemented.

Request:

State how loss of coating integrity will be managed between now and the proposed implementation dates and the basis for concluding that coating integrity will be adequately managed in this time period.

Response to RAI 3.0.3-17

The timing of baseline inspections and program implementation identified in LR-ISG-2013-01 are tied to the date a particular unit will enter the period of extended operation (PEO). For both IPEC units, the date of entering the PEO was not a realistic date for implementing program changes from the ISG. Specifically, IP2 has already entered the PEO, and IP3 enters the PEO in December 2015. Therefore, the response to RAI 3.0.3-2, letter dated March 10, 2015, identified December 31, 2019, as a realistic implementation date for the Fire Water Program to be treated in the same manner as a date for entering the PEO. Similarly, for the Coating Integrity Program activities (including baseline inspections), December 31, 2024, was identified as the date corresponding to the PEO date for activities required to be "conducted in the 10-year period prior to the period of extended operation" by the ISG and for the full implementation date of the program.

For enhancements to the Fire Water Program, an implementation date of December 31, 2019, was deemed reasonable to allow for (1) training and qualification of individuals involved in coating/lining inspections and evaluating degraded conditions for fire water storage tanks, which are conducted in accordance with an ASTM International standard endorsed in RG 1.54 including staff limitations associated with a particular standard, and (2) revising procedures to incorporate the detailed acceptance criteria of LR-ISG-2013-01. This schedule allows the incorporation of these Fire Water Program changes on the same schedule as the changes related to LR-ISG-2012-02 (as described in NL-14-147, letter dated December 16, 2014, Response to RAI 3.0.3-1). The existing Fire Water System Program includes periodic flushing, system performance testing, and inspections, including internal inspection of the surface condition of the fire water tanks. In this way, coating integrity for the fire water tanks will be adequately managed in this time period prior to full implementation of the Coating Integrity Program.

For the Coating Integrity Program, LR-ISG-2013-01 allows 10 years prior to the PEO to complete the baseline inspections required before entering the PEO. The requirements of the inspections coupled with the need to have appropriately trained and qualified personnel to perform the inspections makes this 10-year window a reasonable time frame. Congruent with the ISG for baseline inspections, the activities necessary to implement the Coating Integrity Program at IPEC, including the baseline inspections, will occur over the course of the next nine years. As the inspections are completed, the condition of inspected coatings at the site will be reviewed, and if deficiencies or degradations are identified, the program requirements for follow-up actions will be performed. In this way, coating integrity will be managed at the site prior to December 31, 2024.

This time period allows for outages for each unit in which to perform the specified baseline inspections, some of which may necessitate an outage. The scope of an outage is established many months in advance to allow for adequate planning and coordination with system and train outages, etc. Given that the ISG provided a ten-year window for the first inspections, the same time period for IPEC is reasonable to allow for adequate planning and scheduling around and within outage windows plus adequate training of required personnel to conduct coating inspections.

For both programs, these implementation dates allow for the following activities to occur.

- Planning the activities specified in the ISG to be performed prior to the PEO.
 - Revising procedures to include the enhancements for the fire water system coated components.
 - Establishing procedures to implement the new Coating Integrity Program.
 - Training and qualification of inspectors in accordance with the ISG.
 - Ensuring availability of the necessary test equipment.
- Scheduling and completing the activities specified in the ISG to be performed prior to the PEO.

- Working with two units, each with two-year operating cycles affecting opportunities for inspections.
- Multiple systems and inspection techniques.
- Assessing the results from the activities specified in the ISG to be performed prior to the PEO.
 - Determining corrective actions as needed.
 - Establishing scope and frequency for future activities.
- Planning and scheduling the activities specified in the ISG to be performed during the PEO.
 - Evaluating the frequency of subsequent inspections.
 - Scheduling inspections for refueling outages.

The approach discussed herein is consistent with the discussion of enhancements to other programs in the IPEC LRA Appendix A and B (stated as, "Enhancements will be implemented prior to the period of extended operation") where the following is understood:

- "Prior to the PEO" activities will be completed prior to the implementation date, and results of the "prior to the PEO" activities will be assessed to establish scope and frequency for future activities as specified. All baseline coating inspections of all internally coated components within the scope of the program will be completed by December 31, 2024.

"During the PEO activities" will be planned prior to the implementation date.

ATTACHMENT 2 TO NL-15-109

LICENSE RENEWAL APPLICATION

CHANGES DUE TO RESPONSES TO REQUESTS FOR INFORMATION

**ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 & 3
DOCKET NOS. 50-247 AND 50-286**

Revisions to LRA text and tables are provided below with additions underlined and deletions marked through.

Revise the following line to Table 3.3.2-19-43-IP3: Pressurizer System [10CFR54.4(a)(2)]

Table 3.3.2-19-43-IP3: Pressurizer System [10CFR54.4(a)(2)]

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Program	NUREG-1801 Item	Table 1 Item	Notes
Tank	Pressure boundary	Metal with internal coating	Treated borated water \geq 140°F (int)	Loss of coating integrity	Coating Integrity	-	-	H