UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 15, 2012

Vice President, Operations
Entergy Nuclear Operations, Inc.
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, NY 10511-0249

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 - REQUEST FOR ADDITIONAL INFORMATION REGARDING PROPOSAL TO ALIGN THE REFUELING WATER STORAGE TANK AND THE SPENT FUEL POOL PURIFICATION SYSTEM (TAC NO. ME9263)

Dear Sir or Madam:

By letter dated August 14, 2012, Entergy Nuclear Operations, Inc., the licensee, submitted a license amendment application that would revise Technical Specification 3.5.4, "Refueling Water Storage Tank," such that the non-seismically qualified piping of the spent fuel pool purification system may be connected to the refueling water storage tank's seismic piping for a limited period of time under administrative controls.

The Nuclear Regulatory Commission staff is reviewing the submittal and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). Based on our discussions, we understand that a response to the RAI will be provided within 30 days of the date of this letter.

Please contact me at (301) 415-1364 if you have any questions on this issue.

Sincerely,

Douglas V. Pickett

Douglas V. Pickett, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-286

Enclosure:
Request for Additional Information

cc w/encl: Distribution via Listserv

REACTOR SYSTEMS BRANCH

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST REGARDING CONNECTION OF NONSEISMIC

PURIFICATION LINE TO REFUELING WATER STORAGE TANK

INDIAN POINT, UNIT NO. 3

DOCKET NO. 50-286

Introduction

By letter dated August 12, 2012 (Agencywide Documents Access and Management System, Accession No. ML12234A098), Entergy Nuclear Northeast submitted a license amendment request for U.S. Nuclear Regulatory Commission (NRC or the Commission) review that would revise the Technical Specifications (TSs), for Indian Point Unit No. 3 (IP3). The changes would revise TS 3.5.4, "Refueling Water Storage Tank [RWST]," such that the non-seismically qualified piping of the Spent Fuel Pool (SFP) purification system may be connected to the RWST's seismic piping by manual operation of an RWST seismically qualified boundary valve under administrative controls for a limited period of time for filtration for removal of suspended solids from the RWST water. The NRC staff has determined that additional information is required as addressed below.

Regulatory Criteria

The Commission's regulatory requirements related to the contents of TS, set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.36, require that the TS limiting conditions for operations (LCO) are consistent with assumed values of the initial conditions in the licensee's safety analyses. 10 CFR 50.36(c)(2)(i) states: "limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met."

Information Notice (IN) 2012-01, "Seismic Considerations – Principally Issues Involving Tanks" states, "[t]his IN provides examples and references to events in which licensees failed to recognize various seismic considerations and system alignment issues that could impact safety. The NRC staff has identified recent concerns about standby liquid control test tanks that were not seismically qualified when they contained water. This operating experience may apply to other tanks found on site at nuclear plants. The NRC identified other examples in which licensees failed to recognize that aligning non seismic piping to the RWST would require TS LCO action statement entry, system modifications, or license amendments."

Enclosure

Applicable General Design Criteria (GDC):

GDC 2 requires that structures, systems and components important to safety be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without the loss of the capability to perform their safety functions.

GDC 35 Emergency Core Cooling requires that a system to provide abundant emergency core cooling shall be provided. The safety function shall be to transfer heat from the reactor core following any loss of reactor coolant at a rate such that (1) fuel and clad damage that could interfere with continued effective core cooling is prevented, and (2) clad metal-water reaction is limited to negligible amounts.

Suitable redundancy in components and features, and suitable interconnections, leak detection, isolation, and containment capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

Questions

1) What are the assumptions and method used to determine the drain flow rate through the break in the non-seismic line? Were worst/limiting conditions assumed and what are they? What was the flow rate through the break? What is the time for the tank to drain from 36.8 feet to 36 feet? (Can be answered by providing CALC-SI-0333)

2) Please provide a piping diagram showing the SFP loop including seismic boundaries.

3) Please provide the downstream distance from the last Seismic Category 1 valve (AC-725) and non-seismically qualified piping. If there is a break in the non-seismically qualified piping, would the break flow in any way impede the operators ability to turn off the refueling water purification pump or close the required valves, or is there non-seismically qualified piping on the operators ingress or egress pathways?

4) What is the maximum purification flow if AC-727B is not throttled?

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/RA/
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