Entergy

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Fred Dacimo
Vice President
License Renewal

February 13, 2008

Re: Indian Point Units 2 & 3
Docket Nos. 50-247 & 50-286

NL-08-031

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

SUBJECT: **Reply to Request for Additional Information Regarding License Renewal Application – Scoping and Screening Methodology**

Reference: NRC letter dated January 14, 2008; "Request for Additional Information for the Review of the Indian Point Nuclear Generating Unit Nos. 2 and 3 License Renewal – Scoping and Screening Methodology

Dear Sir or Madam:

Entergy Nuclear Operations, Inc is providing, in Attachment I, the additional information requested in the referenced letter pertaining to NRC review of the License Renewal Application for Indian Point 2 and Indian Point 3. The additional information provided in this transmittal addresses staff questions regarding Scoping and Screening Methodology.

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.

I declare under penalty of perjury that the foregoing is true and correct. Executed on 2/13/08.

Sincerely,

Fred R. Dacimo
Vice President
License Renewal

A128

NRR

Attachment:

1. Reply to NRC Request for Additional Information Regarding License Renewal Application – Scoping and Screening Methodology

cc: Mr. Bo M. Pham, NRC Environmental Project Manager
Ms. Kimberly Green, NRC Safety Project Manager
Mr. John P. Boska, NRC NRR Senior Project Manager
Mr. Samuel J. Collins, Regional Administrator, NRC Region I
Mr. Sherwin E. Turk, NRC Office of General Counsel, Special Counsel
IPEC NRC Senior Resident Inspectors Office
Mr. Paul D. Tonko, President, NYSERDA
Mr. Paul Eddy, New York State Dept. of Public Service

ATTACHMENT I TO NL-08-031

REPLY TO NRC REQUEST FOR ADDITIONAL INFORMATION

REGARDING

LICENSE RENEWAL APPLICATION

Scoping and Screening Methodology

ENTERGY NUCLEAR OPERATIONS, INC
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 and 3
DOCKETS 50-247 and 50-286

INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3
LICENSE RENEWAL APPLICATION (LRA)
REQUESTS FOR ADDITIONAL INFORMATION (RAI)
SCOPING AND SCREENING METHODOLOGY

The U.S. Nuclear Regulatory Commission (NRC or staff) has reviewed the information related to Scoping and Screening Methodology provided by the applicant in the Indian Point Nuclear Generating Unit Nos. 2 and 3 (IP2 and IP3) LRA. The staff has identified that additional information is needed to complete the review as addressed below.

RAI 2.1-1 10 CFR 54.4(a)(2) Scoping Criteria for Nonsafety-related SSCs

10 CFR 54.4 (a)(2) requires, in part, that all nonsafety-related systems, structures and components (SSCs) whose failure could prevent the satisfactory accomplishment of any of the functions identified in 10 CFR 54.4(a)(1) are to be included within the scope of license renewal.

(a) The staff noted during the audit that the applicant had included fluid-filled, nonsafety-related pipes located within a safety-related space within the scope of license renewal based on the spaces' approach and had also included portions of nonsafety-related piping attached to safety-related SSCs within the scope of license renewal. However, the applicant did not provide sufficient information in the license renewal application nor the implementing procedures to demonstrate that when the fluid-filled pipe was also attached to a safety-related SSC, an additional portion of the pipe, beyond the safety-related space, up to and including an appropriate seismic anchor, equivalent anchor or bounding condition, was also included within the scope of license renewal.

The staff requests that the applicant provide a description of the process used to ensure that fluid-filled, nonsafety-related pipe, attached to safety-related SSCs which exit the safety-related space, was included within the scope of license renewal up to and including an appropriate seismic anchor, equivalent anchor or bounding condition.

(b) During the NRC audit, the staff reviewed the applicant's technical evaluation and on-site documentation for nonsafety-related affecting safety-related SSCs which indicated that certain nonsafety-related SSCs potentially affecting safety-related SSCs were not included within the scope of license renewal based on the proximity of the nonsafety-related SSCs to the safety-related SSCs.

The staff requests that the applicant provide the rationale and basis for not including nonsafety-related SSCs in the vicinity of safety-related SSCs within the scope of license renewal based on their proximity to safety-related SSCs. Indicate the extent of condition by providing a description of the nonsafety-related SSCs which were not included within the scope of license renewal based on their proximity to safety-related SSCs and a description of the corresponding safety-related SSCs.

(c) During the NRC audit, the staff reviewed the applicant's technical evaluation and on-site documentation for nonsafety-related affecting safety-related SSCs which indicated that certain similar SSCs were included within the scope of license renewal in accordance with the requirements of 10 CFR 54.4(a)(1) for one unit and 10 CFR 54.4(a)(2) for the other unit.

The staff requests that the applicant provide the rationale and basis for including similar SSCs within the scope of license renewal in accordance with the requirements of 10 CFR 54.4(a)(1) for one unit and 10 CFR 54.4(a)(2) for the other unit and how the corresponding review of the adjacent or attached nonsafety-related SSCs (for inclusion within the scope of license renewal) was performed for similar systems in the two units. Indicate the extent of condition by providing a description of the SSCs which were included within the scope of license renewal in accordance with 10 CFR 54.4(a)(1) for one unit and 10 CFR 54.4(a)(2) for the other unit and corresponding descriptions of any differences in the review of adjacent or attached nonsafety-related SSCs.

In addressing these issues, indicate if your review concludes that use of the scoping methodology precluded the identification of nonsafety-related SSCs that could interact with safety-related SSCs, and which were not specifically exempted by your current licensing basis, and, therefore, should have been considered within the scope of license renewal. Describe any additional scoping evaluations to be performed to address the 10 CFR 54.4(a)(2) criteria.

As part of your response, list any additional SSCs included within the scope as a result of your efforts related to this RAI; and list those structures and components for which aging management reviews were conducted. For each structure and component, describe the aging management programs, as applicable, to be credited for managing the identified aging effects.

Response for RAI 2.1-1 Part (a):

The process for determining the components to be included for 10 CFR 54.4(a)(2) included a review of all passive mechanical components at IPEC that were not already included in an aging management review report under 10 CFR 54.4(a)(1) or (a)(3).

The review began with a determination of which components needed to be in scope due to their potential for spatial interaction with components with a safety function. If piping and components for fluid-filled systems exit areas containing components with safety functions, further review was performed. This occurred in only limited locations. For those few locations, IPEC reviewed the component database and associated drawings and confirmed that those components required for structural support are within the safety-related space.

Response for RAI 2.1-1 Part (b):

Within a structure that contains components with safety functions, the proximity of components to components with a safety function is not used as a criterion for exclusion of a system or component from (a)(2) scope due to spatial interaction. The wording in the original version of the aging management review report reviewed during the license renewal scoping and screening audit did not clarify why fluid-filled components in locations with safety-related equipment were excluded. Some systems have fluid-filled nonsafety-related components located in structures that contain components with safety functions but cannot spatially affect components with safety functions due to physical barriers such as room separation within the structure. During the license renewal scoping and screening audit, a portion of the IP2 chlorination (CL) system was determined to be in proximity to service water system components which perform a safety function. The CL system had been excluded from 10 CFR 54.4(a)(2) scope. The CL system is added to the scope of license renewal for 10 CFR 54.4(a)(2) with components to be managed by the Periodic Surveillance and Preventive Maintenance, External Surfaces Monitoring, and Bolting Integrity Programs.

Response for RAI 2.1-1 Part (c):

Because IP2 and IP3 were operated independently for an extended period of time, there are differences between IP2 and IP3 in terms of the number of systems, as well as system boundaries and intended functions for similarly named systems. The site component database along with system flow diagrams were used to define system boundaries and identify system intended functions. Consequently, certain similarly named SSCs were included within the scope of license renewal in accordance with the requirements of 10 CFR 54.4(a)(1) only for one unit and 10 CFR 54.4(a)(2) only for the other unit because the system boundaries were different.

The IP2 city water system (CYW) is in scope for 10 CFR 54.4(a)(1) and 10 CFR 54.4(a)(2) while the IP3 city water system (CWM) is in scope only for 10 CFR 54.4(a)(2). IP2 piping assigned to the city water system provides containment isolation, a 10 CFR 54.4(a)(1) intended function, for supply to fire water hose reels inside the containment building. The IP3 city water system does not provide a similar intended function or any other (a)(1) functions and therefore is not in scope for 10 CFR 54.4(a)(1). Since the city water systems are fluid-filled, all components not included for 54.4 (a)(1) or (a)(3) in structures containing components with safety functions were reviewed for potential spatial impact. Appropriate LRA drawings were also reviewed to verify that no components required for structural support of components with safety functions were excluded. This review was performed for both systems regardless of system functions to ensure all in-scope components were identified.

The IP2 instrument air closed cooling water system (IACC) system is in scope only for 10 CFR 54.4(a)(2) while the IP3 IACC system is in scope for 10 CFR 54.4(a)(1) and 10 CFR 54.4(a)(2). IP3 IACC heat exchangers SWN CLC 31 HTX, SWN CLC 32 HTX perform an intended function of providing service water system pressure boundary and are in scope for 10 CFR 54.4(a)(1). The corresponding IP2 IACC heat exchangers 21CWHX, 22CWHX are assigned to the service water (SW) system and not IACC, so the IP2 IACC system has no components with a 10 CFR 54.4(a)(1) intended function. Since the IACC systems are fluid-filled, all components in structures containing components with safety functions were reviewed for potential spatial impact. Appropriate LRA drawings were also reviewed to verify that no components required for

structural support of components with safety functions were excluded. This review was performed for both systems regardless of system functions to ensure all in-scope components were identified.

The IP2 river water service system (RW) is in scope for 10 CFR 54.4(a)(1) to support the service water system pressure boundary. Both IP2 and IP3 RW systems are in scope for 10 CFR 54.4(a)(2). The IP3 RW system has no components within its boundary that support the service water system pressure boundary or any other (a)(1) functions. Since the RW systems are fluid-filled, all system components in structures containing components with safety functions were included for potential spatial impact. Appropriate LRA drawings were also reviewed to verify that no components required for structural support of components with safety functions were excluded. This review was performed for both systems regardless of system functions to ensure all in-scope components were included.

Summary

In addressing these issues, the review concluded that the scoping method was appropriate to identify nonsafety-related SSCs that could interact with safety-related SSCs in a manner that could prevent satisfactory accomplishment of a safety function.

As a result of a plant walkdown during the scoping and screening audit, however, one additional system requires addition to the scope of license renewal per 10 CFR 54.4(a)(2) as described in part (b) above. The LRA is revised as follows to include the IP2 chlorination system (CL).

LRA Revisions (added text underlined, strikeouts deleted)

LRA Table 2.2.1a-IP2, Mechanical Systems within the Scope of License Renewal, is revised to add the following line item.

System Code	Unit 2 System Name	LRA Section Describing System
CL	Chlorination	Section 2.3.3.19, Miscellaneous Systems in Scope for (a)(2)

LRA Table 2.2-2-IP2, Mechanical Systems Not within the Scope of License Renewal, is revised to remove the following line item.

System Code	Unit 2 System Name	UFSAR Reference
~~CL~~	~~Chlorination~~	~~Sections 9.6.1.2 and 10.2.4~~

LRA Table 2.3.3-19-A-IP2, Miscellaneous Systems within the Scope of License Renewal for 10 CFR 54.4(a)(2), is revised to add the following line item.

System Number	System Name	LRA Section Describing System
CL	Chlorination	Section 2.3.3.19, Miscellaneous Systems in Scope for (a)(2)

LRA Section 2.3.3.19, Miscellaneous Systems in Scope for (a)(2), System Description, is revised to add the following IP2 system description for the IP2 chlorination system.

Unit 2
Chlorination

The purpose of the CL system is to provide sodium hypochlorite to the intake bays to limit microorganism fouling in these bays and in the associated water systems that use raw water (service water, circulating water, etc). The system includes the sodium hypochlorite tanks, pumps, distribution piping and valves, instruments and controls.

LRA Table 2.3.3-19-B-IP2, 10 CFR 54.4(a)(2) Aging Management Review Tables, is revised to add the following line item.

Table 2.3.3-19-B-IP2
10 CFR 54.4(a)(2) Aging Management Review Tables

System Name	Series 2.3.3-19-xx-IP2 Table	Series 3.3.2-19-xx-IP2 Table
Chlorination	Table 2.3.3-19-45-IP2	Table 3.3.2-19-45-IP2

The following table is added to Section 2.3.3-19 for IP2.

Table 2.3.3-19-44-IP2
Chlorination System
Nonsafety-Related Components Potentially
Affecting Safety Functions
Subject to Aging Management Review

Component Type	Intended Function
Bolting	Pressure boundary
Piping	Pressure boundary
Valve body	Pressure boundary

LRA Section 3.3, Conclusion, is revised to add the following table.

Table 3.3.2-19-44-IP2: Chlorination System

Comp Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Bolting	Pressure boundary	Carbon steel	Air – indoor (ext)	Loss of material	Bolting integrity	VIII.H-4 (S-34)	3.4.1-22	A
Piping	Pressure boundary	Carbon steel	Air – indoor (ext)	Loss of material	External surfaces monitoring	VIII.H-7 (S-29)	3.4.1-28	A
Piping	Pressure boundary	Carbon steel	Treated water (int)	Loss of material	Periodic surveillance and preventive maintenance	-	-	G,305
Valve body	Pressure boundary	Carbon steel	Air – indoor (ext)	Loss of material	External surfaces monitoring	VIII.H-7 (S-29)	3.4.1-28	A
Valve body	Pressure boundary	Carbon steel	Treated water (int)	Loss of material	Periodic surveillance and preventive maintenance	-	-	G,305