



Entergy Nuclear Northeast  
Entergy Nuclear Operations, Inc.  
Indian Point Energy Center  
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April 03, 2002  
Re: Indian Point Unit No. 2  
Docket No. 50-247  
NL-02-047

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Stop O-P1-17  
Washington, DC 20555-0001

SUBJECT: Indian Point Nuclear Generating Unit No. 2 – Response to Request for Additional Information Regarding One-time Extension of Containment Integrated Leak Rate Test Frequency (TAC No. MB2414)

- References:
1. Consolidated Edison letter (NL 01-093) to NRC, "Indian Point 2 License Amendment Request: Containment Integrated Leakage Rate Testing Frequency," dated July 13, 2001
  2. NRC letter to Entergy Nuclear Operations, Inc., "Indian Point Nuclear Generating Unit No. 2 – Request for Additional Information Regarding One-Time Extension of Containment Integrated Leakage Rate Test Frequency (TAC No. MB2414)," dated October 4, 2001
  3. Entergy Nuclear Operations, Inc. letter (NL 01-140) to the NRC, "Indian Point Nuclear Generating Unit No. 2 – Response to Request for Additional Information Regarding One-time Extension of Containment Integrated Leak Rate Test Frequency (TAC MB2414)" dated November 30, 2001
  4. NRC letter to Entergy Nuclear Operations, Inc., "Request for Additional Information Regarding One-Time Extension of Containment Integrated Leak Rate Test Frequency, Indian Point Nuclear Generating Unit No. 2 (TAC No. MB2414)," dated February 5, 2002
  5. Entergy Nuclear Operations, Inc. letter (NL 02-030) to the NRC, "Indian Point Nuclear Generating Unit No. 2 – Response to Request for Additional Information Regarding One-time Extension of Containment Integrated Leak Rate Test Frequency (TAC MB2414)" dated March 13, 2002

By letter dated July 13, 2001 (Reference 1), Consolidated Edison Company of New York, Inc., (the previous licensee) submitted an application for an amendment to the Technical Specifications (TS) for Indian Point Unit No. 2 (IP2). The proposed amendment would allow a one-time extension of the frequency for the containment integrated leakage rate test from the current interval of one test in 10-years to one test in 15-years.

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The U.S. Nuclear Regulatory Commission (NRC) staff reviewed this submittal, determined that additional information was required to complete its review, and requested the additional information in its letter of October 4, 2001 (Reference 2). Entergy Nuclear Operations, Inc. (ENO – the current licensee) submitted a response to the NRC's request for additional information in a letter (Reference 3) dated November 30, 2001.

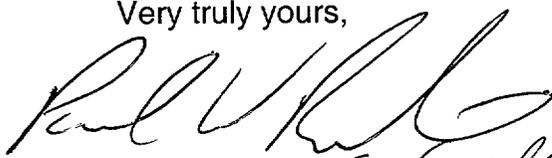
The NRC staff reviewed the additional information provided, determined that additional information was required to complete the review and requested that additional information in its letter of February 5, 2002 (Reference 4). The requested additional information was provided in an ENO letter to the NRC dated March 13, 2002 (Reference 5). After review of this additional information, the NRC staff, in a March 26, 2002 telephone conversation, requested further additional information regarding the cumulative effect on the change in the Large Early Release Frequency (LERF) when going from the original plant baseline case of three tests in 10-years to the proposed one test in 15-years and the basis for the assumed constant liner corrosion failure rate. Attachment 1 to this letter provides the requested additional information.

The assessment submitted in Reference 1 that concluded that the proposed TS did not involve a significant hazards consideration is not affected by the additional information submitted herein in support of the application.

There are no commitments contained in this letter.

Should you or your staff have any questions regarding this submittal, please contact Mr. John F. McCann, Manager, Nuclear Safety and Licensing at (914) 734-5074.

Very truly yours,

  
Fred Dacimo *for Fred Dacimo*  
Vice President – Operations *4/3/02*  
Indian Point 2

cc: See Page 3

Attachments

cc:

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
ENERGY NUCLEAR OPERATIONS, INC. ) Docket No. 50-247  
Indian Point Nuclear Generating Unit No. 2 )

APPLICATION FOR AMENDMENT  
TO OPERATING LICENSE

Pursuant to Section 50.90 of the Regulations of the U. S. Nuclear Regulatory Commission (NRC), Entergy Nuclear Operations, Inc., as holder of Facility Operating License No. DPR-26, hereby submits additional information to support the application for amendment of the Technical Specifications, contained in Appendix A of this license, submitted on July 13, 2001.

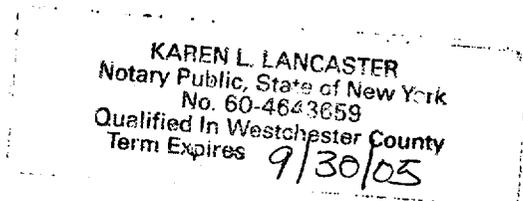
The specific additional information is set forth in Attachment 1. The assessment submitted on July 13, 2001 demonstrated that the proposed change does not involve a significant hazards consideration as defined in 10CFR50.92(c). That assessment is unchanged by the additional information.

As required by 10CFR50.91(b)(1), a copy of this submittal has been provided to the appropriate New York State official designated to receive such amendments.

BY:   
Fred Dacimo  
Vice President – Operations  
Indian Point 2

Subscribed and sworn to  
before me this 3<sup>rd</sup> day  
APRIL, 2002.

  
Notary Public



**ATTACHMENT 1**

**NL-02-047**

**Response to Request for Additional Information  
Regarding Proposed One-Time Extension  
of the  
Containment Integrated Leakage Rate Test Frequency**

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

The ENO response to the NRC Staff's Request for Additional Information, dated March 13, 2002, provided the results of a sensitivity study that postulated a potential for undetectable containment liner degradation and calculated the effect that this postulated potential might have on the justification for the proposed change in the Integrated Leakage Rate Test (ILRT) Surveillance Interval from one test in 10-years to one test in 15-years. The study accounted for the potential for liner failure based on an assumed constant liner corrosion failure rate and an assumption that the ILRT would detect this corrosion failure.

**Request No. 1**

In addition to the sensitivity study results provided in the licensee's response to the staff's Request for Additional Information, dated March 13, 2002, the Staff requests that the cumulative effect of the change in the ILRT surveillance interval from the "original baseline" case of three tests in 10-years to the proposed case one test in 15-years be provided.

**Response to Request No. 1**

The changes in the Large Early Release Frequency (LERF) resulting from extending the ILRT surveillance interval from three tests in 10-years (original baseline case) and one test in 10-years (current license case) to one test in 15-years (proposed amendment) are presented in the following table:

	Class 3b Contribution from prior submittal letter (NL 01-140)	Sensitivity Study	
		Class 7 Contribution	Total Contribution from Class 3b and Class 7
LERF			
Three tests in 10-years	6.51E-07/yr.	1.81E-08/yr.	6.69E-07/yr.
One test in 10-years	7.16E-07/yr.	2.00E-08/yr.	7.36E-07/yr.
One test in 15-years	7.49E-07/yr.	2.13E-08/yr.	7.70E-07/yr.
Change in LERF			
From three tests in 10-years to one test in 15-years	9.8E-08/yr.	3.3E-09/yr.	1.01E-07/yr.
From one test in 10-years to one test in 15-years	3.3E-08/yr.	1.3E-09/yr.	3.4E-08/yr.

Regulatory Guide 1.174 defines very small changes in LERF as less than 1.0E-07/yr. The change in the LERF resulting from the proposed change in the ILRT frequency, when compared to the "original baseline" case of three tests in 10-years, is 9.8E-08/yr. The sensitivity study indicates that, even considering the hypothetical case of the postulated potential for undetectable containment liner degradation, the change in LERF due to increasing the ILRT surveillance interval from the "baseline" case of three tests in 10-years to the proposed case of one test in 15-years is comparable to the guidelines in Regulatory Guide 1.174 for defining a very small change. Therefore, the prior conclusion, that the requested extension is considered to be non-risk significant, remains valid even if the postulated potential for undetectable liner degradation is considered and the change is compared to the original licensing basis.

### **Request No. 2**

Provide the basis for the assumed constant liner corrosion failure rate.

### **Response to Request No. 2**

The failure rate (or likelihood) of 100% liner degradation due to the postulated potential for corrosion in uninspectable areas is based on two events among 70 plants in 5 years. The two events are Brunswick 2 and North Anna 2 (References 1 and 2). The 70 plants is based on the number of plants with a steel-lined concrete containment (Reference 3), and the 5 years is based on the time since changes were made to 10CFR50.55a that require periodic visual inspections of containment surfaces, since September 1996 (Reference 4). The failure rate is then calculated as:

$$\text{Failure Rate } (\lambda) = 2 \text{ events} / (70 \text{ plants} * 5 \text{ years}) = 0.005714 \text{ per year}$$

### **References:**

1. BSEP 02-0032, J. S. Keenan (CP&L), "Response to Request for Additional Information Regarding Request for License Amendments – Frequency of Performance-Based Leakage Rate Testing," Feb. 5, 2002
2. Virginia Electric and Power Company, North Anna Power Station, Unit 2, LER 99-002, "Containment Liner Through Wall Defect Due to Corrosion," Oct. 21, 1999
3. "Commercial Nuclear Power Plants," SCIENTECH-NUS, 20<sup>TH</sup> Edition, January 1998
4. NRC Information Notice 97-10, "Liner Plate Corrosion in Concrete Containment," March 13, 1997