UNITED STATES
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In re:	Docket Nos. 50-247-LR; 50-286-LR
License Renewal Application Submitted by	ASLBP No. 07-858-03-LR-BD01
Entergy Nuclear Indian Point 2, LLC, Entergy Nuclear Indian Point 3, LLC, and Entergy Nuclear Operations, Inc.	DPR-26, DPR-64 November 1, 2011

DECLARATION OF DR. RICHARD T. LAHEY, JR.

I, Richard T. Lahey, Jr., declare under penalty of perjury that the following is true and correct:

1. I submit this declaration in response to Entergy NL-11-107 communication with NRC Staff and in support of the proposed contention pending before the Board.

2. I am the *Edward E. Hood Professor Emeritus of Engineering* at Rensselaer Polytechnic Institute (RPI) in Troy, New York, a member of the National Academy of Engineering (NAE), a Fellow of the American Nuclear Society (ANS) and the American Society of Mechanical Engineers (ASME), and an expert in matters relating to the operations, safety, and the aging of nuclear power plants. I have previously submitted declarations in this proceeding and for the sake of brevity refer the parties and the Board to those submissions with respect to my qualifications and experience. My *curricula vitae*, which more fully describes my

educational and professional background and qualifications, is available at: http://www.rpi.edu/~laheyr/laheyvita.html.

3. The September 28, 2011 Entergy NL-11-107 document on reactor pressure vessel internals is claimed by them to contain "the completion of commitment #30" to their license renewal application for the Indian Point reactors and the aging management programs for RPV internals. While this document does give a comprehensive list of the Indian Point RPV internal structures, components and fittings to be evaluated, and the NDT techniques they plan to employ in these inspections, *no details* are given on the timing for these inspections. Moreover, in some cases, instead of details, Entergy simply states: "In accordance with SER Section 4.2.7, IPEC will submit this information to the NRC as part of the submittal to apply the approved version of MRP-227"(*e.g., see* compliance item-7 on page-22 of Section 3.6). Since MRP-227A is not expected to be released until year end (*i.e.*, December 2011), this information will not be available in time for review and discussion in the State's upcoming submissions and consideration in the ASLB hearings on IP license renewal.

4. In addition, Entergy frequently states that the NDT inspections of 100% of the RPV internal structures, components and fittings of interest are not possible. Moreover, Entergy even states that in some cases "failed or missing bolts" can be considered the indicated aging effect (*see* Table 5-2, page - 36). Significantly, they also state that planar flaws in bolts can be reliably detected if – *and only if* – these flaws occupy more than 30% of the bolt's cross-sectional area (*see* Section

4.1.5, page-25). This means that – under Entergy's proposal – incore bolts can be deemed adequate for continued operations even if they are significantly degraded. While these type of acceptance criteria might make some sense when considering steady-state and normal plant transients, it is not at all clear that they are adequate to assure core coolability subsequent to various accidents which produce severe shock loads on highly embrittled and fatigued RPV internals and which may result in an uncoolable core geometry. As USNRC Staff and Entergy are aware, the State of New York has significant safety concerns about this interrelationship between fatigue and embrittlement and the adequacy of the AMPs of RPV internals, and, unfortunately, the State's concerns have not been addressed at all by Entergy or USNRC Staff.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

November 1, 2011

Signed (electronically) by

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Dr. Richard T. Lahey, Jr.