

September 28, 2012

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )  
 )  
ENTERGY NUCLEAR OPERATIONS, INC. ) Docket Nos. 50-247-LR/286-LR  
 )  
(Indian Point Nuclear Generating )  
Units 2 and 3) )

AFFIDAVIT OF S. TINA GHOSH CONCERNING STATE OF NEW YORK MOTION FOR  
LEAVE TO FILE AN ADDITIONAL EXHIBIT AND ADDITIONAL CROSS-EXAMINATION  
QUESTIONS CONCERNING CONSOLIDATED CONTENTION NYS-12C

I, S. Tina Ghosh, do hereby state as follows:

1. My name is S. Tina Ghosh. I am a senior reactor systems engineer employed by the U.S. Nuclear Regulatory Commission ("NRC"). I have been employed by the NRC for over seven years. My statement of qualifications has been previously submitted and is available as Ex. NRC000043.

2. Currently, my primary responsibility is to serve as the NRC's lead for the State of the Art Reactor Consequence Analysis's ("SOARCA") uncertainty analysis. From November 2010 through January 2011, I served as the temporary project manager for the NRC's Long-Term Research Program ("LTRP") and coordinated the development of the Fiscal Year ("FY") 13 LTRP Commission paper. Previously, as a reactor engineer in the Office of Nuclear Reactor Regulation's ("NRR") Division of Risk Assessment, one of my primary responsibilities was to review Severe Accident Mitigation Alternatives ("SAMA") analyses submitted in support of nuclear power plant license renewal applications, and to write the corresponding portions of the NRC's supplemental environmental impact statements. I also reviewed risk-informed

licensing applications that used level 2 and level 3 PRA results (i.e., analyses of accidents that involve potential radioactive releases outside the reactor containment).

#### Overview of the NRC's Long-Term Research Program ("LTRP")

3. The NRC regularly identifies, as a matter of routine planning, forward-looking research activities that support potential future regulatory needs. The agency identifies and pursues these forward-looking research activities during the normal course of the planning and budgeting processes. The process is conducted by the Office of Nuclear Regulatory Research ("RES"), with suggestions and input from the various offices at the NRC. Each year since 2007, the staff has prepared Commission papers on long-term research activities. The papers discuss candidate long-term research topics and estimated resource needs for use in budget preparation. For the purposes of the annual Commission papers, long-term research is defined as research that is not already funded or otherwise being conducted and will provide fundamental insights and technical information needed to address potential technical issues or knowledge gaps to support future NRC needs. The program is focused on developing insights and information for use more than five years in the future. LTRP projects are generally in the nature of feasibility and scoping studies, which are performed in order to determine whether additional research should be funded. Typically, the LTRP projects last for 1 to 2 years.

#### The LTRP Process

4. The process for determining the research activities that should be funded under the long-term research plan begins with the generation of a potential candidate list. Individual members of the staff throughout the agency may submit proposals for potential projects. In addition, previously suggested projects from prior years that were not funded are also included in the potential candidate list. Individual staff members submit project proposals directly to the LTRP for consideration. The individual staff proposals reflect the individual's ideas and opinions. The content of the proposals was not reviewed by anyone prior to its

submittal as FY 2013 LTRP proposals. Normally, individuals will include a description, justification, and sometimes a statement of work.

5. Once the potential candidate list is compiled, the LTRP review committee reviews, evaluates, and rates these potential projects. This committee is composed of eight senior-level staff members from the Office of Research (“RES”) and other regulatory offices, representing a broad cross-section of technical disciplines. The LTRP review committee uses five evaluation criteria to rate each candidate project. These criteria address leveraging resources, advancing the state of the art, providing an independent assessment tool to the NRC, applying to more than one program area, and addressing technical or regulatory gaps created by technology.

6. The committee forwards the results of its review and recommends selected proposals to the RES Office Director. Based on the committee’s recommendations, the RES Office Director reviews the recommended proposals and generates a final list of proposed projects for the LTRP. Based on this final list of proposed projects, RES develops an annual information paper to the Commission which describes the proposals identified for funding, status of ongoing projects, and the status of the overall program. As part of developing the Commission paper, RES obtains the review and concurrence of other NRC offices.

Description of Email Released under FOIA 2011-0083

7. The proposed exhibit referenced in the NYS’s Motion, available in NRC’s Agency Document Access Management System (“ADAMS”) accession number ML12024A077, was part of the NRC office concurrence process for the annual LTRP Commission paper. These particular e-mails document part of the concurrence process in the Office of New Reactors (“NRO”), on the draft FY 13 LTRP Commission paper, titled, “Agency Long-Term Research Activities for Fiscal Year 2013.” The e-mail dated January 20, 2011, documents the NRO concurrence on the draft Commission paper with the inclusion of comments noted in the body of this e-mail. The attachment at the end of the e-mail chain is

not the FY13 long-term research plan, nor is it a part of the concurrence comments. The attachment is simply a reproduction of all FY13 proposals that had been submitted by individual NRO staff for consideration for inclusion in the FY13 long-term research plan.

Disposition of Mr. Lee's Proposal

8. The proposal in question, titled, "New Improved MELCOR Accident Consequence Code System (MACCS)," submitted by NRO staff Jay Lee (who is deceased), was never included in the FY13 long-term research plan. The proposal was evaluated by the review committee comprised of senior staff from across the agency and as discussed above in para. 5. Mr. Lee's proposal was assigned one of the lowest scores of all proposals submitted that year. In particular, the committee assigned Mr. Lee's proposal the lowest score in the "technical gap" element, indicating that in the committee members' collective expert judgment, there was no important technical gap in our existing regulatory tools and practices. Furthermore, the committee noted that the proposed work is part of NRC's usual on-going activities to periodically assess our codes and practices.

**Executed in Accord with 10 C.F.R. § 2.304(d)**

S. Tina Ghosh