



New York State Energy Research and Development Authority

FAX COVER SHEET

Date: 12/15/11	Number of Pages (Including Cover Sheet): 5

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Docket ID NRC-2011-0201 ⁰²⁰⁴

Attached are New York State's comments on the NRC draft Generic Letter 2011-XX: Seismic Risk Evaluations for Operating Reactors.

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December 15, 2011

Cindy Bladey, Chief
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Office of Administration
Mail Stop: TWB-05-B01M
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Comments on Draft Generic Letter 2011-XX: Seismic Risk Evaluations
for Operating Reactors – Docket ID NRC-2011-0204

Dear Ms. Bladey:

The State of New York welcomes the opportunity to provide comments on the September 2011 Draft Generic Letter 2011-XX: Seismic Risk Evaluations for Operating Reactors. The enclosed consolidated comments are submitted on behalf of the New York State Departments of Public Service and Environmental Conservation.

Thank you for accepting our comments. We look forward to publication of the final Generic Letter.

Sincerely,

A handwritten signature in black ink that reads "Alyse Peterson". The signature is written in a cursive, flowing style.

Alyse Peterson
Senior Project Manager
State Liaison Officer – Designee

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NRC Draft Generic Letter 2011-XX: SEISMIC RISK EVALUATIONS FOR OPERATING REACTORS

Consolidated Comments of the New York State Executive Agencies:
Department of Public Service and Department of Environmental Conservation

INTRODUCTION

The State of New York submits these comments to the Draft Generic Letter referenced above. The State of New York has long been critical of the data upon which the United States Nuclear Regulatory Commission (NRC) and nuclear plant operators have based seismic risk determinations. Certainly the recent events of the earthquakes in Japan and Virginia have demonstrated the vulnerabilities faced by nuclear power plants.

The NRC has been working to develop a comprehensive understanding of the seismic effects on nuclear power plants since the 1980s. In the 1990s, United States nuclear power plants participated in a process known as "Individual Plant Examinations of External Events" (IPEEE) following the NRC's Generic Letter (GL) 88-20, which sought to examine, among other things, seismic risk. That review, however, was based on a now-outdated understanding of seismic risk and limited its recommendations to improvements that would not involve significant costs to the reactor owners. The NRC has recently recognized that updated seismic hazard analysis could change the original estimates completed on nuclear power plants. The initial screening process for Generic Safety Issue (GSI)-199 "Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants" indicates the potential for a reduction in safety margin for some currently operating plants based on a comparison of information provided during the IPEEE effort. NRC Generic Letter 2011-XX: SEISMIC RISK EVALUATIONS FOR OPERATING REACTORS states: "The NRC does not have sufficient information to determine and quantify, on a plant-specific basis, the safety significance associated with the new data regarding seismic margin." Therefore, the letter seeks information from nuclear plant licensees to further the NRC's seismic hazard analysis.

DISCUSSION & RECOMMENDATIONS

NRC Generic Letter 2011-XX: SEISMIC RISK EVALUATIONS FOR OPERATING REACTORS requests licensees to provide further information on plant deficiencies uncovered during the IPEEE process, along with the most recent actions and plans to improve identified seismic vulnerabilities. The licensees will perform and report back on updated seismic analyses.

NRC Generic Letter 2011-XX: SEISMIC RISK EVALUATIONS FOR OPERATING REACTORS requests that each addressee provide "a list of plant vulnerabilities (including any seismic anomalies, outliers, or other findings) identified by the IPEEE and a description of the actions taken to eliminate or reduce them (including their completion dates)." **The State of New York recommends that the request for information include a definition of what is meant by "plant." In particular, the State proposes that licensees be required to include spent fuel pools and their cooling and makeup water systems, monitoring instrumentation, and fuel movement equipment in their latest seismic analyses.**

Walkdowns proved to be extremely beneficial following the IPEEE program, as NUREG-1742 "Perspectives Gained from the Individual Plant Examination of External Events (IPEEE) Program" states: "Regardless of the specific approach used, all plants performed a detailed seismic walkdown, and many of the insights gained by licensees resulted from the walkdowns. Seismic walkdowns have been performed by trained and qualified personnel. Often the walkdowns identified seismic concerns whose correction proved to be relatively simple and cost effective." This observation stresses the usefulness of thorough detailed walkdowns performed by experienced staff. The effectiveness of walkdowns is also dependent upon the uniformity of execution. In other words, if all licensees perform walkdowns on an indiscriminate selection of components in varying degrees of detail, the NRC will have no baseline for comparison between licensee submittal data. **The State of New York recommends that the NRC provide all licensees with specific guidance requirements and acceptance criteria to ensure national fleet uniformity for plant walkdowns. Additionally, the State of New York recommends that licensees perform spent fuel pool and spent fuel pool cooling and makeup water system walkdowns, along with spent fuel pool monitoring instrumentation and fuel movement equipment walkdowns.**

The State of New York has significant concerns about the seismic risk to spent fuel pools, which are located outside containment and contain significant amounts of densely-packed spent nuclear fuel. In addition, the equipment necessary to cool, provide makeup water, and monitor spent fuel pools is generally not classified as safety equipment (meaning this equipment and instrumentation is neither seismically designed nor fully powered by safety-grade electrical power). Recommendation 7 of the NRC's Near-Term Task Force (NTTF) "Recommendations for Enhancing Reactor Safety in the 21ST Century" dated July 12, 2011, addresses this deficiency: "The Task Force recommends enhancing spent fuel pool makeup capability and instrumentation for the spent fuel pool." This recommendation outlines several NRC orders and a rulemaking or licensing activity to ensure that all spent fuel pools have seismically rated means (with safety-related electrical power) of makeup cooling and safety-related instrumentation to monitor spent fuel pool parameters.

Based on SECY-11-0124 (RECOMMENDED ACTIONS TO BE TAKEN WITHOUT DELAY FROM THE NEAR-TERM TASK FORCE REPORT), it appears that the NRC will not be taking immediate action concerning spent fuel pool cooling: "The staff concluded that additional review is needed to identify specific regulatory actions related to NTTF Recommendation 7 regarding enhanced spent fuel pool makeup capacity and instrumentation for spent fuel pools. For example, the resolution strategy for Recommendation 2.1 may influence the seismic qualification of potential instrumentation for spent fuel pools." **The State of New York recommends that the NRC include spent fuel pools, spent fuel pool cooling and makeup water systems, monitoring instrumentation, and fuel movement equipment into licensee seismic analysis as an initial measure to gain insight into further action needed regarding Recommendation 7.**

A recent NRC investigation at the North Anna Nuclear Power Plant determined that seismic monitoring equipment at the plant was not up to date and required modifications following the equipment's poor performance during the August 23, 2011 East Coast earthquake. **The State of New York recommends that additional inspections examine the reliability and accuracy of licensee seismic monitoring equipment.**

Following the IPEEE process, the NRC did not ensure that licensees submitted requested data in accordance with NUREG 1407 "Procedure and Submittal guidance for the Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities." The NRC acknowledges this issue in NRC Generic Letter 2011-XX: SEISMIC RISK EVALUATIONS FOR OPERATING REACTORS, "In several responses,

neither the IPEEE analysis nor subsequent assessments documented the potential safety impacts of these improvements, and in most cases, plants have not reported completion of these improvements to the NRC." Given this history, **the State of New York recommends that the NRC inform the licensees that their submissions in response to the GI-199 Generic Letter are mandatory.**

NRC Generic Letter 2011-XX: SEISMIC RISK EVALUATIONS FOR OPERATING REACTORS states: "The NRC will evaluate the information submitted by the addressees in response to this [Generic Letter] and may then determine whether there is a need to take additional action." Prompt NRC evaluation of seismic risk is critical to the impending Indian Point Unit 2 and 3 license renewals in 2013 and 2015. **The State of New York urges the NRC to follow through on its commitment to give top priority to reviewing Indian Point submittal data** as agreed on March 22, 2011, during a meeting between NRC staff and New York State Delegation led by Lieutenant Governor Robert Duffy (G20110195/LTR-11-0133/EDATS: SECY-2011-0157 - Ltr. Eric T. Schneiderman Re: Seismic Risk at Indian Point Nuclear Generating Stations).

CONCLUSION

NRC Generic Letter 2011-XX: SEISMIC RISK EVALUATIONS FOR OPERATING REACTORS will provide information that the NRC may review as part of its seismic hazard analysis. New York State recognizes the need to update seismic data for operating reactor plants and recommends that this scrutiny be broadened to include the analysis (and walkdowns) of spent fuel pools and spent fuel pool cooling and makeup water systems, monitoring instrumentation, and fuel movement equipment. In addition, all licensees should evaluate the reliability of plant seismic monitoring equipment. New York State also recommends that the NRC firmly define the term "plant" to identify what structures, systems, and components are to be included in the seismic analyses. To achieve national uniformity from licensee seismic analysis submittals, New York State urges the NRC to impose strict and detailed response guidelines with respect to plant walkdowns through NRC Generic Letter 2011-XX: SEISMIC RISK EVALUATIONS FOR OPERATING REACTORS. Finally, New York State recommends that the NRC strictly enforce licensee compliance in providing requested information within the time frame specified, and give priority to the review of Indian Point submittal data.