



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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April 24, 2015

MEMORANDUM TO: Michele G. Evans, Deputy Director  
Office of Nuclear Reactor Regulation

FROM: Christopher G. Miller, Director  
Division of License Renewal  
Office of Nuclear Reactor Regulation

SUBJECT: FINDINGS FROM THE STAFF'S EVALUATION OF PERIODIC SAFETY  
REVIEWS FROM OTHER COUNTRIES

Following a 2010 International Atomic Energy Agency (IAEA) Integrated Regulatory Review Service (IRRS) mission and subsequent report, the U.S. Nuclear Regulatory Commission (NRC) staff provided a Policy Issue paper SECY-11-0084, "Staff Action Plan to Address the Integrated Regulatory Review Service Mission," to the Commission to address the recommendations and suggestions contained within the report. Suggestion S9 of the IRRS report stated that the "NRC should incorporate lessons learned from [Periodic Safety Reviews (PSRs)] performed in other countries as an input to the NRC's assessment process." The SECY paper established a commitment for the staff to conduct a "limited scope pilot effort to review a sample of PSRs performed in other countries for potential insights to be assessed by the NRC's regulatory processes."

As part of this pilot effort, the staff contracted Argonne National Laboratory (ANL) to review a selection of PSR summary reports to identify potential new regulatory insights regarding license renewal related topics and nuclear power plant operating experience. This review is documented in a Technical Letter Report, *Evaluation and Analysis of A Few International Periodic Safety Review Summary Reports* (ADAMS Accession No. ML13317B657). The staff then performed a supplemental evaluation of the PSR summary reports, to assess the topics and issues on an individual basis. As a result of this review, the staff identified several potential insights that should be further considered in the existing regulatory processes or for incorporation into future regulatory guidance. These insights primarily relate to external hazards and long-term aging degradation management.

The staff found that while several specific issues were identified that could be further investigated for informing regulatory efforts currently in progress (e.g., Subsequent License Renewal guidance updates and Japan Lessons Learned Division rulemaking), the nature of these issues did not indicate a deficiency of the U.S. nuclear regulatory framework but rather a potential source of international operating experience. In all cases, the staff found that it is reasonable to expect that the U.S. nuclear regulatory approach would be sufficient for detecting and correcting the types of plant-specific issues documented in the PSR summary reports if they were to occur in U.S. plants.

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The second purpose for performing this pilot review, as stated in SECY-11-0084, was to “establish the value added from the review of the example PSRs.” The benefit of performing this review was in the identification of some specific instances of international operational experience as inputs within the NRC’s existing regulatory process. This review did not provide any insights that would indicate the need for changes to the existing regulatory process itself.

The effort expended in this review was relatively large, both financially and in the staff’s time and resources required, and relied upon contracts and review processes temporarily in place for the subsequent license renewal effort. In addition, PSR summary reports and recommendations are generally not available to the staff or its contractors. Those reports that are obtained often have to be translated, which adds additional cost and complexity to the review process. Future reviews of PSR summary reports would require the same or greater effort, and the limited benefits of operational experience do not justify this effort. Therefore, the staff does not recommend that this type of detailed review of PSRs or PSR summary reports be performed on a periodic basis. The staff does see discussions of other countries’ experiences with PSRs as a valuable resource, and welcomes these discussions during bilateral and multilateral exchanges as appropriate.

Sincerely,

*/RA/*

Christopher G. Miller, Director  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Enclosures:

1. ANL-13/18, Technical Letter Report
2. Supplement to ANL-13/18, Technical Letter Report

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