



LR-N13-0116  
May 10, 2013

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Salem Generating Station, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-70 and DPR-75  
NRC Docket Nos. 50-272 and 50-311

Subject: Path Forward for GSI-191 Resolution

- References:
1. Nuclear Energy Institute (NEI) letter to U.S. Nuclear Regulatory Commission (NRC), "GSI-191 – Revised Schedule for Licensee Submittal of Resolution Path," November 15, 2012
  2. SECY-12-0093, "Closure Options for Generic Safety Issue - 191, Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance," July 9, 2012
  3. Pressurized Water Reactor Owners Group (PWROG), Topical Report (TR) WCAP-16793-NP, Revision 2, "Evaluation of Long-Term Cooling Considering Particulate, Fibrous and Chemical Debris in the Recirculating Fluid," October 2011
  4. NRC letter to NEI, "Nuclear Regulatory Commission Review of Generic Safety Issue-191 Nuclear Energy Institute Revised Schedule for Licensee Submittal of Resolution Path," November 21, 2012
  5. Staff Requirements – SECY-12-0093, "Closure Options for Generic Safety Issue - 191, Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance," December 14, 2012
  6. Final Safety Evaluation for Pressurized Water Reactor Owners Group Topical Report WCAP-16793-NP, Revision 2, "Evaluation of Long-Term Cooling Considering Particulate, Fibrous and Chemical Debris in the Recirculating Fluid," April 8, 2013

Consistent with Reference 1, PSEG Nuclear LLC (PSEG) hereby submits the GSI-191 resolution path and schedule for Salem Generating Station, Units 1 and 2.

In Reference 1, NEI recommended to NRC that licensees submit the GSI-191 resolution path and schedule by January 31, 2013, or within 30 days following the NRC making the Commission response to Reference 2 and the final safety evaluation (SE) associated with the review of Reference 3 publicly available. NRC endorsed this recommendation in Reference 4. The Commission response to Reference 2 was provided in Reference 5, and the SE for Reference 3 was made publicly available in Reference 6 on April 16, 2013.

The resolution path and schedule for Salem are provided in the Attachment to this letter.

There are no new regulatory commitments contained in this submittal.

If you have any questions or require additional information, please do not hesitate to contact Mrs. Emily Bauer at (856) 339-1023.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on

5/10/2013  
(Date)



Carl J. Fricker  
Site Vice President – Salem Generating Station

Attachment

cc: Mr. W. Dean, Administrator, Region I, NRC  
Mr. J. Whited, Project Manager, NRC  
NRC Senior Resident Inspector, Salem  
Mr. P. Mulligan, Manager IV, NJBNE  
Mr. L. Marabella, Corporate Commitment Tracking Coordinator  
Mr. T. Cachaza, Salem Commitment Tracking Coordinator

**Introduction**

PSEG Nuclear LLC (PSEG) has selected Option 1 as described in Reference 1 because it has determined that Salem Generating Station Units 1 and 2 meet the requirements of 10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," based on approved models for analyses, strainer head loss testing, and in-vessel effects. PSEG may incorporate additional margin at a later date through application of alternative limits established through ongoing industry test and analysis efforts.

**Current Resolution Status**

On September 13, 2004, the NRC issued Generic Letter (GL) 2004-02 (Reference 2). GL 2004-02 requested that each plant perform an evaluation of the Emergency Core Cooling System and Containment Spray System recirculation functions in light of the information provided in the Generic Letter, and, if appropriate, take additional actions to ensure system function.

PSEG provided a number of responses to GL 2004-02, including a final supplemental response on April 27, 2012 (Reference 3). The NRC staff provided feedback to PSEG on the final supplemental response, including 18 questions regarding Bypass Testing, during a public conference call on November 28, 2012 (summarized in Reference 4).

PSEG and the NRC staff discussed draft responses to the 18 NRC staff questions at a public meeting on February 28, 2013, as summarized in Reference 5. On April 22, 2013, PSEG submitted the final responses to the NRC staff questions (Reference 6).

**Debris bypass resolution**

As documented in Reference 3, PSEG has determined that 268 cu. ft. (Unit 1) and 42 cu ft (Unit 2) of fibrous debris could be transported to the strainers.

Based on Salem specific strainer bypass testing, the fiber calculated to bypass the strainer is 9.7 grams/fuel assembly (Reference 3). However, as discussed in Reference 6, in order to account for the potential for increased fiber bypass of small fibers through the 0.31 mm mesh fiber bypass capture screen (used in the bypass test), the mass of fiber that bypasses the strainer is increased by 9%. Therefore, the fiber bypass is 10.6 grams/fuel assembly ( $= 9.7 \times 1.09$ ) which is less than the acceptance criteria of 15 grams/fuel assembly given in WCAP 16793-NP (Reference 7).

**Licensing Basis Commitments**

PSEG does not currently have open commitments to provide additional updates or information to the NRC regarding GL 2004-02.

**Resolution Schedule**

PSEG has resolved all open issues associated with GL 2004-02 except for in-vessel downstream effects.

As discussed in final supplemental response (Reference 3), PSEG will provide a plant specific response to the in-vessel downstream effects by July 15, 2013 (i.e., within 90 days of the

issuance of the final NRC Safety Evaluation Report on WCAP-16793-NP, Rev. 2 (Reference 8)).

PSEG will update the current licensing basis following NRC acceptance of this status for Salem Units 1 and 2.

### **References**

1. SECY-12-0093, "Closure Options for Generic Safety Issue - 191, Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance," July 9, 2012
2. NRC Generic Letter 2004-02: "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors," September 13, 2004, ADAMS Accession No. ML042360586
3. PSEG letter LR-N12-0124, "Final Supplemental Response to Generic Letter 2004-02," April 27, 2012, ADAMS Accession No. ML121290536
4. Summary of November 28, 2012, Public Conference Call with PSEG Re: Final Supplemental Response to Generic Letter 2004-02 for Salem Nuclear Generating Station, Units 1 and 2, January 30, 2013, ADAMS Accession No. ML13010A325
5. Summary of February 28, 2013, Public Meeting with PSEG Re: Final Supplemental Response to Generic Letter 2004-02 for Salem Generating Station, Units 1 and 2, April 5, 2013, ADAMS Accession No. ML13078A448
6. PSEG letter LR-N13-0091, "Final Responses to NRC Questions Regarding Salem Bypass Testing," April 22, 2013, ADAMS Accession No. ML13114A048
7. Pressurized Water Reactor Owners Group (PWROG), Topical Report (TR) WCAP-16793-NP, Revision 2, "Evaluation of Long-Term Cooling Considering Particulate, Fibrous and Chemical Debris in the Recirculating Fluid," October 12, 2011, ADAMS Accession No. ML11292A021
8. Final Safety Evaluation for Pressurized Water Reactor Owners Group Topical Report WCAP-16793-NP, Revision 2, "Evaluation of Long-Term Cooling Considering Particulate, Fibrous and Chemical Debris in the Recirculating Fluid," April 8, 2013, ADAMS Accession No ML13084A161