



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE RD, STE 102  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

November 14, 2022

Eric Carr  
President and Chief Nuclear Officer  
PSEG Nuclear, LLC  
P.O. Box 236  
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2 – INFORMATION REQUEST FOR QUADRENNIAL BASELINE COMPREHENSIVE ENGINEERING TEAM INSPECTION; NOTIFICATION TO PERFORM INSPECTION 05000272/2023011 AND 05000311/2023011

Dear Eric Carr:

The purpose of this letter is to notify you that the U.S. Nuclear Regulatory Commission (NRC) Region I staff will conduct a Comprehensive Engineering Team Inspection (CETI) at your Salem Nuclear Generating Station, Units 1 and 2. Jeffrey Kulp, a Senior Reactor Inspector from the NRC's Region I office, will lead the inspection team. The inspection will be conducted in accordance with Inspection Procedure 71111.21M, "Comprehensive Engineering Team Inspection (CETI)," dated January 1, 2023 (ADAMS Accession No. ML19084A030). This inspection combines elements of the Design Basis Assurance Inspection (Teams), the Heat Exchanger/Sink Performance inspection (71111.07T), and the Evaluations of Changes, Tests and Experiments inspection (71111.17).

The inspection will evaluate the capability of risk-significant/low-margin components to function as designed to support proper system operation. The inspection will also include a review of selected modifications, operating experience, and as applicable, operator actions.

During a telephone conversation on October 26, 2022, with Harry Balian and Bernadette Cizin, Salem/Hope Creek Regulatory Compliance, we confirmed arrangements for an information-gathering site visit and the two-week onsite inspection. The schedule is as follows:

- Information-gathering visit: Week of December 12, 2022
- Onsite weeks: Weeks of January 23, 2023 and February 6, 2023

The purpose of the information-gathering visit is to meet with members of your staff to identify risk-significant components, modifications, operator actions, and operating experience items. Information and documentation needed to support the inspection will also be identified. Carey Bickett, a Region I Senior Risk Analyst, will support Jeff during the information-gathering visit to review probabilistic risk assessment data and identify components to be examined during the inspection.

Experience with previous baseline design/modification inspections of similar depth and length has shown this type of inspection is resource intensive, both for the NRC inspectors and the licensee staff. In order to minimize the inspection impact on the site and to ensure a productive

inspection for both parties, we have enclosed a request for information needed for the inspection.

It is important that all of these documents are up-to-date and complete in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection. Insofar as possible, this information should be provided electronically to the lead inspector. The information request has been divided into two groups:

- The first group lists information necessary for our initial inspection scoping activities. This information should be provided to the lead inspector by December 5, 2022. By December 23, 2022, the lead inspector will communicate the initial selected set of components, modifications, 50.59 screenings, and operating experience samples.
- The second group of documents requested is those items needed to support our in-office preparation activities. This set of documents, specific to the selected components and modifications, should be provided to the lead inspector at the Regional Office no later than January 16, 2023. During the in-office preparation activities, the team may identify additional information needed to support the inspection, and those items will be communicated directly to Harry Balian or Bernadette Cizin.

If there are any questions about the inspection or the material requested in the enclosure, please contact the lead inspector at (610) 547-2603 or via email at [jak2@nrc.gov](mailto:jak2@nrc.gov).

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, Control Number 3150-0011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget Control Number.

This letter and its enclosure will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations*, Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Mel Gray, Chief  
Engineering Branch 1  
Division of Operating Reactor Safety

Docket Nos. 05000272 and 05000311  
License Nos. DPR-70 and DPR-75

Enclosure:  
Document Request for Comprehensive  
Engineering Team Inspection

cc w/encl: Distribution via ListServ

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2 – INFORMATION REQUEST FOR QUADRENNIAL BASELINE COMPREHENSIVE ENGINEERING TEAM INSPECTION; NOTIFICATION TO PERFORM INSPECTION 05000272/2023011 AND 05000311/2023011 DATED NOVEMBER 14, 2022

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DOCUMENT NAME: <https://usnrc.sharepoint.com/teams/Region-I-EB1/Inspections/CETI Request/2023 Salem CETI Request for Information Letter.docx>  
 ADAMS ACCESSION NUMBER: ML22318A106

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## DOCUMENT REQUEST FOR DESIGN BASES ASSURANCE INSPECTION

**Onsite Inspection Dates:** January 23, 2023 through January 27, 2023; and  
February 6, 2023 through February 10, 2023

**Inspection Procedure:** Inspection Procedure 71111.21M, Comprehensive Engineering  
Team Inspection (CETI)

**Lead Inspector:** Jeffrey Kulp, Senior Reactor Inspector  
(610) 547-2603  
[jak2@nrc.gov](mailto:jak2@nrc.gov)

**Inspection Report:** 05000272/2023011 and 05000311/2023011

### ***I. Information Requested for Sample Selection Process***

The following information is requested by December 5, 2022, to facilitate inspection preparation. Feel free to contact the lead inspector as soon as possible if you have any questions regarding this information request. Please provide the information electronically in "pdf" files, Word, Excel, or other searchable format. The files should contain descriptive names, and be indexed and hyperlinked to facilitate ease of use. Information in "lists" should contain enough information to be easily understood by someone who has knowledge of light water reactor technology.

1. The site probabilistic risk analysis (PRA) "System Notebook" and latest PRA Summary Document.
2. Risk-ranking of top 250 basic events sorted by Risk Achievement Worth ( $\geq 1.3$ ). Include values for Risk Reduction Worth, Birnbaum Importance, and Fussell-Vesely (as applicable). Please provide in an excel spreadsheet or other sortable format, and include an understandable definition of the coded basic events.
3. Risk-ranking of top 100 components from site specific PRA sorted by Large Early Release Frequency. Provide any basic event mapping used to develop the ranking of components.
4. List of the top 200 cut-sets from your PRA. Provide the descriptions of the basic events in the list of cut-sets.
5. List of the top 200 cut-sets for each initiator modeled in the PRA that contributes more than 5 percent to the baseline plant core damage frequency.
6. If you have an External Events or Fire PRA Model, provide the information requested in Items 1 and 2 for external events and fire. Provide narrative description of each coded event, including fire and flood zone description.
7. List of time-critical and/or risk-significant operator actions.
8. List of emergency and abnormal operating procedures.

Enclosure

## DOCUMENT REQUEST FOR COMPREHENSIVE ENGINEERING TEAM INSPECTION

9. If available, any pre-existing evaluation or list of components and associated calculations with low design margins (e.g., pumps closest to the design limit for flow or pressure, diesel generator close to design required output, heat exchangers close to rated design heat removal).
10. If applicable, copy of any self-assessments and/or Quality Assurance assessments of low-margin structures, systems, and components (SSC), completed in the last 3 years.
11. List of available design margins in both the open and closed direction for valves in the motor-operated valve and air-operated valve programs. Identify the safety-related direction and the basis for how the margin was determined.
12. The age and capacity of the safety-related DC batteries.
13. The In-Service Testing Program (IST) Basis document identifying the in-scope valves and pumps, and the associated IST Program requirements for each component (e.g., IST valve table identifying category, active/passive function).
14. SSCs in the Maintenance Rule (a)(1) category in the last 3 years.
15. List of Root Cause Evaluations associated with SSCs failures or design issues initiated/completed in the last 4 years.
16. List of formal operability evaluations in the last 4 years.
17. List of current "operator work arounds/burdens."
18. List of "permanent plant modifications" to SSCs that are field work complete in the last 3 years. For the purpose of this inspection, permanent plant modifications include permanent: plant changes, design changes, set point changes, equivalency evaluations, suitability analyses, and commercial grade dedications. The list should contain the number of each document, title (sufficient to understand the purpose of the modification), revision/date, and the affected system.
19. List of calculation changes that have been issued for use in the last 3 years.
20. Corrective Action Program Procedure.
21. Programmatic procedures addressing the following: modifications, design changes, set point changes, equivalency evaluations or suitability analyses, commercial grade dedications, and post-modification testing.
22. List of corrective action documents (open and closed) in the last 3 years that address permanent plant modifications issues, concerns, or processes.
23. Any internal/external self-assessments and associated corrective action documents generated in preparation for this inspection.
24. Corrective Action Program documents (e.g., condition reports) associated with inspection findings from the previous NRC Inspection Procedure 71111.21 (or 71111.21 Attachment M inspection).

## DOCUMENT REQUEST FOR COMPREHENSIVE ENGINEERING TEAM INSPECTION

25. Updated Final Safety Analysis Report, Technical Specifications, Technical Specifications Bases, and Technical Requirements Manual.
26. One line safety-related electrical drawings (AC and DC), and Piping and Instrumentation Drawings of emergency core cooling systems, ultimate heat sink, and auxiliary feedwater system.
27. List of 50.59 Evaluations and Screenings performed since June 2021.

### ***II. Information Requested to Be Available by January 16, 2023***

This information should be separated for each selected component and modification, especially if provided electronically (e.g., a folder for each component and modification named after the component or modification that includes the information requested below). Items 1 through 11 are associated with the selected components and Item 12 is for the selected modifications.

1. List of corrective action documents associated with each selected component for the last 4 years.
2. Maintenance history (e.g., corrective, preventive, and elective) associated with each selected component for the last 6 years. Identify frequency of preventive maintenance activities.
3. Aging Management Program documents applicable to each selected component.
4. List of calculations associated with each selected component, excluding data files. Pipe stress calculations are excluded from this request.
5. System Health Report (last completed) and Design Basis Document associated with each selected component.
6. Access to or copy of vendor manual(s) for each selected component.
7. List of open temporary modifications associated with each selected component, if applicable.
8. Trend data/graphs on the selected components' performance for the last 3 years (e.g., pump performance including IST, other vibration monitoring, oil sample results).
9. List of normal operating and alarm response procedures associated with each selected component.
10. Last completed tests and surveillances for each selected component performed during the last 3 years. For those tests and surveillances performed at a periodicity of greater than three years, provide the latest test performed.
11. Schedule of surveillance testing of selected components that occur during the onsite inspection weeks.

## **DOCUMENT REQUEST FOR COMPREHENSIVE ENGINEERING TEAM INSPECTION**

12. For each selected modification, copies of associated documents such as modification package, engineering changes, 50.59 screening or evaluation, relevant calculations, post-modification test packages, associated corrective action documents, design drawings, and new/revised preventive maintenance requirements.
13. A copy of the evaluation or screening document for each of the selected 50.59 evaluation/screens. A copy of the modification package if the evaluation/screen pertains to a modification.