



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II**

245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

July 19, 2016

William R. Gideon  
Site Vice President  
Brunswick Steam Electric Plant  
8470 River Rd. SE (M/C BNP001)  
Southport, NC 28461

**SUBJECT: NOTIFICATION OF BRUNSWICK STEAM ELECTRIC PLANT COMPONENT  
DESIGN BASES INSPECTION – U.S. NUCLEAR REGULATORY COMMISSION  
INSPECTION REPORT 05000325/2016007 AND 05000324/2016007**

Dear Mr. Gideon:

The purpose of this letter is to notify you that the U.S. Nuclear Regulatory Commission (NRC) Region II staff will conduct a component design bases inspection (CDBI) at your Brunswick Steam Electric Plant, Units 1 and 2, during the weeks of November 14, November 28, and December 12, 2016. Mr. Eric Stamm, a Senior Reactor Inspector from the NRC's Region II office, will lead the inspection team. The inspection will be conducted in accordance with Inspection Procedure 71111.21, "Component Design Bases Inspection," dated November 29, 2013.

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

During a telephone conversation on July 11, 2016, with Mr. Lee Grzeck, we confirmed arrangements for an information-gathering site visit and the three-week onsite inspection. The schedule is as follows:

- Information-gathering visit: Week of October 17, 2016
- Onsite weeks: Weeks of November 14-18, November 28-December 2, and December 12-16, 2016

The purpose of the information-gathering visit is to meet with members of your staff to identify risk-significant components and operator actions. Information and documentation needed to support the inspection will also be identified. Mr. Rudolph Bernhard, a Region II Senior Risk Analyst, will support Mr. Stamm during the information-gathering visit to review probabilistic risk assessment data and identify risk-significant components to be examined during the inspection. Additionally, during the onsite weeks, time will be needed on the plant-referenced simulator in order to facilitate the development of operator action-based scenarios.

The enclosure lists documents that will be needed prior to the information-gathering visit. Please provide the referenced information to the Region II Office by Friday, October 7, 2016. Additional documents will be requested following the information-gathering visit. The inspectors will try to minimize your administrative burden by specifically identifying only those documents required for inspection preparation. The additional information will be needed in the Region II office by Friday, October 28, 2016, to support the inspection team's preparation week. During the information-gathering trip, Mr. Stamm will also discuss the following inspection support administrative details: (1) availability of knowledgeable plant engineering and licensing personnel to serve as points of contact during the inspection; (2) method of tracking inspector requests during the inspection; (3) licensee computer access; (4) working space; (5) arrangements for site access; and (6) other applicable information.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Thank you for your cooperation in this matter. If you have any questions, regarding the information requested or the inspection, please contact Mr. Stamm at 404-997-4575 or contact me at 404-997-4607.

Sincerely,

**/RA: ERIC J. STAMM FOR/**

Jonathan H. Bartley, Chief  
Engineering Branch 1  
Division of Reactor Safety

Docket Nos.: 50-325, 50-324  
License Nos.: DPR-71, DPR-62

Enclosure:  
Information Request for Brunswick Steam Electric Plant,  
Component Design Bases Inspection

cc: Distribution via Listserv

The enclosure lists documents that will be needed prior to the information-gathering visit. Please provide the referenced information to the Region II Office by Friday, October 7, 2016. Additional documents will be requested following the information-gathering visit. The inspectors will try to minimize your administrative burden by specifically identifying only those documents required for inspection preparation. The additional information will be needed in the Region II office by Friday, October 28, 2016, to support the inspection team's preparation week. During the information-gathering trip, Mr. Stamm will also discuss the following inspection support administrative details: (1) availability of knowledgeable plant engineering and licensing personnel to serve as points of contact during the inspection; (2) method of tracking inspector requests during the inspection; (3) licensee computer access; (4) working space; (5) arrangements for site access; and (6) other applicable information.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Thank you for your cooperation in this matter. If you have any questions, regarding the information requested or the inspection, please contact Mr. Stamm at 404-997-4575 or contact me at 404-997-4607.

Sincerely,

**/RA: ERIC J. STAMM FOR/**  
Jonathan H. Bartley, Chief  
Engineering Branch 1  
Division of Reactor Safety

Docket Nos.: 50-325, 50-324  
License Nos.: DPR-71, DPR-62

Enclosure:  
Information Request for Brunswick Steam Electric Plant,  
Component Design Bases Inspection

cc: Distribution via Listserv

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE  
ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_       SUNSI REVIEW COMPLETE       FORM 665 ATTACHED

OFFICE	RII:DRS	RII:DRS					
SIGNATURE	<b>EJS2</b>	<b>EJS2</b>					
NAME	E. Stamm	J. Bartley					
DATE	7/19 /2016	7/19/2016					
E-MAIL COPY?	YES    NO	YES    NO					

## INFORMATION REQUEST FOR BRUNSWICK STEAM ELECTRIC PLANT COMPONENT DESIGN BASES INSPECTION

Please provide the information electronically in “.pdf” files, Excel, or other searchable format on CDROM (or FTP site, SharePoint, etc.). The CDROM (or website) should be indexed and hyperlinked to facilitate ease of use. The requested items below, identified with an asterisk (\*), should have a date range from **June 2013, until present**.

1. From your most recent probabilistic safety analysis (PSA) excluding external events and fires:
  - a. Two risk rankings of components from your site-specific PSA: one sorted by Risk Achievement Worth (RAW), and the other sorted by Birnbaum Importance
  - b. A list of the top 500 cut-sets
  - c. A list of the top 500 LERF contributors
2. From your most recent PSA including external events and fires:
  - a. Two risk rankings of components from your site-specific PSA: one sorted by RAW, and the other sorted by Birnbaum Importance
  - b. A list of the top 500 cut-sets
3. Risk ranking of operator actions from your site-specific PSA sorted by RAW and human reliability worksheets for these items
4. List of time-critical operator actions with a brief description of each action
5. \*List of revised (significant) Emergency and Abnormal Operating Procedures with a brief description of each revision
6. \*List of components with low-design margins (i.e., 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, and motor-operated valve risk-margin rankings, etc.) and associated evaluations or calculations
7. \*List of station-operating experience evaluations/reviews performed and documented in the station’s corrective action program for industry events and safety-related equipment failures/vulnerabilities (as communicated by NRC Generic Communications, Industry Communications, 10 CFR Part 21 Notifications, etc.)
8. \*List and brief description of safety-related structures, systems, or components (SSCs) design modifications implemented
9. \*List and brief description of Root Cause Evaluations performed
10. \*List and brief description of common-cause component failures that have occurred

Enclosure

11. List and brief description of equipment currently in degraded or nonconforming status as described in NRC Inspection Manual Chapter 0326, issued December 3, 2015
12. \*List and brief description of Operability Determinations and Functionality Assessments
13. \*List and reason for equipment that has been classified in maintenance rule (a)(1) status
14. \*List of equipment on the site's Station Equipment Reliability Issues List, including a description of the reason(s) why each component is on that list, and summaries (if available) of your plans to address the issue(s) along with dates added or removed from the issues list
15. List of current "operator work arounds/burdens"
16. Copy of Updated Final Safety Analysis Report
17. Copy of Technical Specification(s)
18. Copy of Technical Specifications Bases
19. Copy of Technical Requirements Manual(s)
20. Copy of the Quality Assurance Program Manual
21. Copy of systems Design Bases Documents
22. Copy of Corrective Action Program Procedure(s)
23. Copy of Operability Determination Procedure(s)
24. Copy of In-service Testing Program Procedure(s)
25. List of motor operated valves and air operated valves in the valve program, and their associated design margin and risk ranking
26. Primary AC and DC calculations for safety-related buses
27. One-line diagram of electrical plant (Electronic and full size – hard copy on bagman visit)
28. Index and legend for electrical plant one-line diagrams
29. Piping and instrumentation diagrams (P&IDs) for safety-related systems (Electronic and 1/2 size – hard copy on bagman visit)
30. Index and Legend for P&IDs
31. Index (procedure number, title, and current revision) of station Emergency Operating Procedures, Abnormal Operating Procedures, and Annunciator Response Procedures
32. Copies of corrective action documents generated from previous CDBI

33. Copy of any self-assessments performed in preparation for current and previous CDBI
34. List of corrective action documents generated in preparation for this inspection
35. Contact information for a person to discuss PSA information prior to and during the information-gathering trip (Name, title, phone number, and e-mail address)