



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

January 18, 2022

Mr. John A. Krakuszeski
Site Vice President
Brunswick Steam Electric Plant
Duke Energy Progress, LLC
8470 River Rd. SE (M/C BNP001)
Southport, NC 28461

**SUBJECT: NOTIFICATION OF BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 & 2
DESIGN BASES ASSURANCE INSPECTION – U.S. NUCLEAR REGULATORY
COMMISSION INSPECTION REPORT 05000324/2022010 AND
05000325/2022010**

Dear Mr. Krakuszeski:

The purpose of this letter is to notify you that the U.S. Nuclear Regulatory Commission (NRC) Region II staff will conduct a Design Bases Assurance Inspection (DBAI) at your Brunswick Steam Electric Plant Units 1 & 2 during the weeks of April 25 and May 9, 2022.

Mr. Paul Carman, 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 71111.21M, "Design Bases Assurance Inspection (Teams)," dated December 8, 2016 (ADAMS ML16340B000).

The inspection will evaluate the capability of components that have been modified and 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 January 12, 2022, with Mr. Tom Sherrill we confirmed arrangements for an information-gathering site visit and the two-week onsite inspection. The schedule is as follows:

- Information-gathering visit: April 4, 2022
- Onsite weeks: Weeks of April 25 and May 9, 2022

The purpose of the information-gathering visit is to meet with members of your staff to identify components that have been modified, risk-significant components, and operator actions. Information and documentation needed to support the inspection will also be identified.

Mr. Andy Rosebrook, a Region II Senior Risk Analyst, will support Mr. Carman during the information-gathering visit to review probabilistic risk assessment data and identify components to be examined during the inspection. Additionally, during the onsite weeks, time may be needed on the plant-referenced simulator 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, March 25, 2022.

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, April 15, 2022, to support the inspection team's preparation week. During the information-gathering trip, Mr. Carman 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.

This letter, its enclosure, and your response (if any) 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 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Thank you for your cooperation in this matter. If you have any questions, regarding the information requested or the inspection, please contact Mr. Carman at 404-997-4471 or contact me at 404-997-4506.

Sincerely,

/RA/

James Baptist, Chief
Engineering Branch 1
Division of Reactor Safety

Docket Nos. 05000324 and 05000325
License Nos. DPR-62 and DPR-71

Enclosure:
Information Request for Brunswick Steam Electric Plant, Units 1 & 2
Design Bases Assurance Inspection (Teams)

cc w/ encl: Distribution via LISTSERV®

INFORMATION REQUEST FOR BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 & 2 DESIGN BASES ASSURANCE INSPECTION (TEAMS)

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 **January 1, 2019, until present**.

1. *List and brief description of **permanent and field work completed** plant modifications including permanent plant changes, design changes, set point changes, procedure changes, equivalency evaluations, suitability analyses, calculations, and commercial grade dedications. Include an index of systems (system numbers/designators and corresponding names), the safety classification for each modification, and type of modification.
2. 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
3. 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
4. Risk ranking of operator actions from your site-specific PSA sorted by RAW and human reliability worksheets for these items
5. List of time-critical operator actions with a brief description of each action
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 and brief description of Root Cause Evaluations performed
8. *List and brief description of common-cause component failures that have occurred
9. List and brief description of equipment currently in degraded or nonconforming status as described in NRC Inspection Manual Chapter 0326, issued September 30, 2019
10. *List and brief description of Operability Determinations and Functionality Assessments

Enclosure

11. *List and reason for equipment that has been classified in maintenance rule (a)(1) status
12. *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
13. List of current "operator work arounds/burdens"
14. Copy of Updated Final Safety Analysis Report
15. Copy of Technical Specification(s)
16. Copy of Technical Specifications Bases
17. Copy of Technical Requirements Manual(s)
18. Copy of the Quality Assurance Program Manual
19. Copy of Corrective Action Program Procedure(s)
20. Copy of Operability Determination Procedure(s)
21. Copy of procedures addressing the following: Modifications, design changes, set point changes, equivalency evaluations or suitability analyses, commercial grade dedications, post-modifications testing, 10 CFR 50.59 screenings and evaluations, and UFSAR updates
22. List of motor operated valves and air operated valves in the valve program, and their associated design margin and risk ranking
23. Primary AC and DC calculations for safety-related buses
24. One-line diagram of electrical plant (Electronic only)
25. Index and legend for electrical plant one-line diagrams
26. Piping and instrumentation diagrams (P&IDs) for safety-related systems (Electronic)
27. Index and legend for P&IDs
28. Index (procedure number, title, and current revision) of station Emergency Operating Procedures, Abnormal Operating Procedures, and Annunciator Response Procedures
29. Copies of corrective action documents generated from previous CDBI
30. Copy of any self-assessments performed, and corrective action documents generated, in preparation for current DBAI
31. 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)