



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II**

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

January 3, 2020

Kim Maza  
Site Vice President  
Duke Energy Progress, LLC  
5413 Shearon Harris Rd.  
Mail Code HNP01  
New Hill, NC 27562-9300

**SUBJECT: NOTIFICATION OF SHEARON HARRIS NUCLEAR POWER PLANT DESIGN  
BASES ASSURANCE INSPECTION – U.S. NUCLEAR REGULATORY  
COMMISSION INSPECTION REPORT 05000400/2020010**

Dear Ms. Maza:

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 Shearon Harris Nuclear Power Plant during the weeks of March 16 - 20, and March 30 – April 3, 2020. Mr. Marcus Riley, a 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 ML16238A320).

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 2, 2020, with Ms. Sarah McDaniel, 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 February 24 – 28, 2020
- Onsite weeks: Weeks of March 16 - 20, and March 30 – April 3, 2020

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. Riley 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 will be needed on the plant-referenced simulator in order to facilitate the development of operator action-based scenarios.

K. Maza

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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 Monday, February 17, 2020. 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, March 6, 2020, to support the inspection team's preparation week. During the information-gathering trip, Mr. Riley 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. Riley at 404-997-4888 or contact me at 404-997-4506.

Sincerely,

/RA/

James Baptist, Chief  
Engineering Branch 1  
Division of Reactor Safety

Docket Nos.: 50-400  
License Nos.: NPF-63

Enclosure:  
Notification of Shearon Harris Nuclear Power Plant,  
Design Bases Assurance Inspection (Teams)

cc: Distribution via Listserv

SUBJECT: NOTIFICATION OF SHEARON HARRIS NUCLEAR POWER PLANT DESIGN  
BASES ASSURANCE INSPECTION – U.S. NUCLEAR REGULATORY  
COMMISSION INSPECTION REPORT 05000400/2020010 DATED  
JANUARY 3, 2019

**ADAMS: ACCESSION NO: ML20003F456**

OFFICE	RII:DRS	RII:DRS
NAME	MRiley	JBaptist
DATE	1/3/2020	1/3/2020

**OFFICIAL RECORD COPY**

## INFORMATION REQUEST FOR SHEARON HARRIS NUCLEAR POWER PLANT 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, 2017, 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 Operability Determinations and Functionality Assessments
10. \*List and reason for equipment that has been classified in maintenance rule (a)(1) status

Enclosure

11. \*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
12. List of current "operator work arounds/burdens"
13. Copy of Updated Final Safety Analysis Report
14. Copy of Technical Specification(s)
15. Copy of Technical Specifications Bases
16. Copy of Technical Requirements Manual(s)
17. Copy of the Quality Assurance Program Manual
18. Copy of Corrective Action Program Procedure(s)
19. Copy of Operability Determination Procedure(s)
20. List of motor operated valves and air operated valves in the valve program, and their associated design margin and risk ranking
21. Primary AC and DC calculations for safety-related buses
22. One-line diagram of electrical plant (Electronic only)
23. Index and legend for electrical plant one-line diagrams
24. Piping and instrumentation diagrams (P&IDs) for safety-related systems (Electronic)
25. Index and legend for P&IDs
26. Index (procedure number, title, and current revision) of station Emergency Operating Procedures, Abnormal Operating Procedures, and Annunciator Response Procedures
27. Copies of corrective action documents generated from previous CDBI
28. Copy of any self-assessments performed, and corrective action documents generated, in preparation for current DBAI
29. 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)