



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 6, 2016

Ms. Tanya Hamilton
Site Vice President
Shearon Harris Nuclear Power Plant
5413 Shearon Harris Road
M/C – HNP01
New Hill, NC 27562-0165

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 – REQUEST FOR
ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT
REQUEST TO MODIFY DIESEL FUEL OIL TESTING SURVEILLANCE
REQUIREMENTS (CAC NO. MF7775)

Dear Ms. Hamilton:

By letter dated May 26, 2016 (Agencywide Documents Access and Management System Accession No. ML16151A001), Duke Energy Progress, LLC (Duke Energy, the licensee) (previously operating as Duke Energy Progress, Inc.), submitted a license amendment request (LAR) in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.90, for Shearon Harris Nuclear Power Plant, Unit 1. The proposed LAR would add a new Administrative Control Technical Specification (TS) to establish, implement, and maintain a Diesel Fuel Oil Testing Program for the testing of new and stored fuel oil. Additionally, Duke Energy is requesting to modify its TS by moving the surveillance requirement to perform a 10-year sediment cleaning of the fuel oil storage tank to a licensee-controlled document. The licensee is also requesting an exception to Regulatory Guide 1.137, Revision 1, "Fuel-Oil systems for Standby Diesel Generators" (ADAMS Accession No. ML003740180), to allow for the ability to perform new fuel oil sampling offsite prior to its addition to the storage tanks.

The U.S. Nuclear Regulatory Commission (NRC) staff has determined that additional information is needed in order to complete its review. The enclosed request for additional information was e-mailed to the licensee in draft form on November 18, 2016, and no clarification call was requested by Duke Energy. Please note that if a response to this letter is not received by December 19, 2016, or an acceptable alternate date is not provided in writing, we may deny the application for amendment under the provisions of 10 CFR 2.108, "Denial of application for failure to supply information."

T. Hamilton

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If you have any questions, please contact me at 301-415-2760 or by e-mail at Martha.Barillas@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to be 'MB' with a stylized flourish extending from the top right.

Martha Barillas, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosure:
Request for Additional Information

cc w/enclosure: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION
REGARDING LICENSE AMENDMENT REQUEST
FOR TECHNICAL SPECIFICATION CHANGES TO MODIFY DIESEL FUEL OIL TESTING
SURVEILLANCE REQUIREMENTS
DUKE ENERGY PROGRESS, LLC
SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1
DOCKET NO. 50-400

By application dated May 26, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16151A001), Duke Energy Progress, LLC (Duke Energy, the licensee) (previously operating as Duke Energy Progress, Inc.), submitted a license amendment request (LAR) for Shearon Harris Nuclear Plant, Unit 1 (HNP). The proposed LAR would add a new Administrative Control Technical Specification (TS) to establish, implement, and maintain a Diesel Fuel Oil Testing Program for the testing of new and stored fuel oil. Additionally, Duke Energy is requesting to modify its TS by moving the surveillance requirement to perform a 10-year sediment cleaning of the fuel oil storage tank to a licensee-controlled document. The licensee is also requesting an exception to Regulatory Guide (RG) 1.137, Revision 1, "Fuel-Oil systems for Standby Diesel Generators" (ADAMS Accession No. ML003740180), to allow for the ability to perform new fuel oil sampling offsite prior to its addition to the storage tanks. The U.S. Nuclear Regulatory Commission staff has reviewed the LAR and has determined the following request for additional information (RAI) is needed in order to complete its review.

RAI #1

Title 10 of the *Code of Federal Regulations*, Part 50, Appendix A, General Design Criterion (GDC) 17, "Electric power systems," states, in part, that an onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. GDC-17 also requires that the onsite electric power supplies shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure. The safety function for each redundant system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

Enclosure

RG 1.137, states in part:

Prior to adding new fuel oil to the supply tanks, onsite samples of the fuel oil should be taken. As a minimum, prior to the addition of new fuel, tests for the following properties should be conducted:

- (1) Specific or API [American Petroleum Institute] gravity
- (2) Water and sediment
- (3) Viscosity

Test results for the latter two tests should not exceed the limits specified in the applicable specification. Analysis of the other properties of the fuel oil listed in the applicable specification should be completed within 2 weeks of the addition.

HNP Final Safety Analysis Report, Section 9.5.4.6, Diesel Fuel Distribution Sources, lists the following fuel oil suppliers:

Selma, NC	45 miles
Greensboro, NC (Primary)	75 miles
Charlotte, NC	140 miles
Spartanburg, SC	200 miles
Wilmington, NC	120 miles

- A. The licensee is requesting an exception to the onsite sampling requirement in RG 1.137 to allow for the sampling of the new fuel oil offsite. Describe in detail how testing will be adequately controlled at a fuel oil supplier location to continue to meet RG 1.137 and assure adequate fuel oil quality. Address if there will be a procedure in place that will state the maximum time interval between the proposed sampling of fuel offsite and the offloading of the fuel into the plant storage tanks. Also, describe the controls in place to prevent thermal cycling of the fuel in the tanker during the time interval above which may accelerate biological growth, fuel degradation, and/or condensation of water inside the tanker.
- B. Describe the controls in place that will provide assurance that all connections to the tanker truck are sealed including any vents, drains, and sample points, for the truck bays in question. If tampering of the fuel oil were to occur, describe the controls in place to detect tampering so that the truck would be rejected. Specifically, address the controls in place to prevent:
- contamination of the fuel occurred in the tanker due to aging,
 - sediment in the tanker,
 - condensation of water,

and to assure that GDC 17 will continue to be met and the Emergency Diesel Generators will continue to meet their mission time.

T. Hamilton

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If you have any questions, please contact me at 301-415-2760 or by e-mail at Martha.Barillas@nrc.gov.

Sincerely,

/RA/

Martha Barillas, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosure:
Request for Additional Information

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ADAMS Accession No.: ML16335A046

*via email

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