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

November 21, 2017

Ms. Tanya Hamilton
Site Vice President
Duke Energy Progress, LLC
Shearon Harris Nuclear Power Plant
5413 Shearon Harris Rd.
M/C HNP01
New Hill, NC 27562-0165

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 – ACCEPTANCE OF PILOT APPLICATION OF TORNADO MISSILE RISK EVALUATOR METHODOLOGY (EPID L-2017-LLA-0355) (HNP-17-072)

Dear Ms. Hamilton:

By letter dated October 19, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17292B648), Duke Energy Progress, LLC (the licensee), requested a pilot license amendment request for Shearon Harris Nuclear Power Plant, Unit 1. The proposed amendment request would pilot the Nuclear Energy Institute (NEI) Technical Report NEI 17-02, Revision 1, "Tornado Missile Risk Evaluator (TMRE) Industry Guidance Document," September 2017 (ADAMS Accession No. ML17268A036). The proposed amendment request screens systems, structures, and components, using risk values (assessment of external hazard frequencies, system responses, and mitigating actions) to determine whether physical protection from tornado-generated missiles is warranted. The methodology would only be applicable to discovered conditions where tornado missile protection should be but is not currently provided. Future modifications to the facility requiring tornado missile protection would not be evaluated using the TMRE methodology. The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this amendment request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including the technical specifications) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The NRC staff has reviewed your application and concluded that it does provide technical information in sufficient detail to enable the NRC staff to complete its detailed technical review and make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements and the protection of public health and safety and the

environment. Given the lesser scope and depth of the acceptance review as compared to the detailed technical review, there may be instances in which issues that impact the NRC staff's ability to complete the detailed technical review are identified despite completion of an adequate acceptance review. If additional information is needed, you will be advised by separate correspondence.

The NRC staff did have a comment regarding the characterization of the compliance of the proposed change with current regulations. It is recognized that the submittal is risk-informed and outlines how the proposed change addresses the five principles of risk-informed decision making. As discussed in a public teleconference on November 8, 2017, the discussion in Section 4.1 of Enclosure 1 of the submittal indicates that the relaxation criteria is based on the risk metrics (i.e., overall plant core damage frequency or large early release frequency) in Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis." The NRC staff notes that the probabilistic criteria (i.e., the probability of damage to unprotected safety-related features) in Section 3.5.1.4 of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition" (SRP), Revision 0, is not directly comparable to RG 1.174 acceptance guidelines. The description regarding continuing compliance with regulations needs to be enhanced by a more comprehensive discussion of the existing design bases and how it continues to meet the applicable regulations. Alternatively, the description could be enhanced to demonstrate that the relaxation, which is based on the concept that the frequency of damage to unprotected essential safety-related features, as permitted by SRP 3.5.1.4, remain applicable.

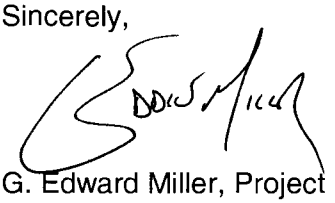
The NRC staff further notes that your submittal included application of the De Minimis screening approach. Justification for this approach is not addressed in either NEI 17-02, Revision 1, or the subject license amendment request. Although this would typically be treated as a sufficiency issue, the submittal is a pilot application, and the NRC staff has decided not to address the issue via the acceptance review in this instance. If your intent is to continue to use application of the De Minimis screening approach, a detailed justification should be provided promptly to ensure a timely review.

By letter dated July 3, 2017 (ADAMS Accession No. ML17130A761), the NRC staff approved a waiver of the fees in support of the NRC staff's review of the TMRE methodology and the amendment request related to this project. As there is an approved fee waiver, no estimate of resources will be provided. It should be noted that based on the information provided, the NRC staff expects to complete this review no later than October 2018. If there are emergent complexities or challenges in our review that would cause changes to the initial forecasted completion date, the reasons for the changes, will be communicated during the routine interactions with the assigned TMRE project manager.

The schedule is based on the NRC staff's initial review of the application and it could change, due to several factors including requests for additional information and unanticipated addition of scope to the review.

If you have any questions, please contact me at (301) 415-2481 or via e-mail at Ed.Miller@nrc.gov.

Sincerely,



G. Edward Miller, Project Manager
Special Projects and Process Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-400

cc: Listserv

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