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U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555-0001**Joseph M. Farley Nuclear Plant Unit 1 and 2**  
**Report of Changes to Emergency Plan**

Ladies and Gentlemen:

In accordance with 10 CFR 50.54(q)(5) and 10 CFR 72.44(f), Southern Nuclear Operating Company (SNC) hereby submits descriptions of changes to the Plant Farley Emergency Plan and a summary of the analysis demonstrating that the changes do not reduce the effectiveness of the plan. The Emergency Plan, as changed, continues to meet the requirements in 10 CFR 50 Appendix E and the planning standards of 10 CFR 50.47(b). A description of the changes and a summary of analysis is enclosed.

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at (205) 992-7369.

Respectfully submitted,

J. J. Hutto  
Regulatory Affairs Director

JJH/efb/lac

Enclosure:

1. Description of Changes and Summary of Analysis

cc: NRC Regional Administrator, Region II  
NRC NRR Project Manager – Farley  
NRC Senior Resident Inspector – Farley  
SNC Records RTYPE: CFA04.054

**Joseph M. Farley Nuclear Plant Unit 1 and 2  
Report of Changes to Emergency Plan  
Description of Changes and Summary of Analysis**

**Enclosure 1**

### Description of Changes and Summary of Analysis

On June 13, 2017, Joseph M. Farley Nuclear Plant (FNP) Unit 1 and Unit 2 completed implementations of design changes to the plant vent stack effluent radiation monitors resulting in changes to the emergency plan and emergency action levels (EALs). The existing radiation monitors were aging and obsolete, not reliable, and difficult to maintain, including problems with procuring spare parts. The following radiation monitors were removed: R29B, R-14, R-21, R-22, and R-68. These monitors were replaced by a new General Atomics digital radiation monitoring system on both units. The replacement is not a one for one equipment change; but rather, functions of the existing monitors are being consolidated into the new monitoring system. The new monitoring system has an auto-scaling function that results in fewer monitors but maintains the same number of inputs as the existing system. The new system has low/medium/high range gas detection, particulate, iodine, and noble gas grab sampling capabilities for normal, emergency, and post-accident conditions.

The new radiation monitoring system necessitated minor changes to setpoint values for unit conversions and minor changes to emergency action levels (EALs). SNC has compared the ranges of the monitors being replaced with the ranges of the new monitors being installed and has ensured that the new monitors have a range capable of observing EAL setpoints listed in the Emergency Plan. FNP maintains the ability to declare an emergency based on the initiating conditions and threshold values in the relevant EALs.

These changes were evaluated in accordance with 10 CFR 50.54(q)(3) and it was determined that the new radiation monitors are an improvement in functionality and reliability, and as such, do not reduce the effectiveness of the Farley Emergency Plan. In addition, these changes have been reconciled with the recently approved Farley Emergency Plan Annex and NEI 99-01 Rev. 6 EAL scheme prior to implementation of the SNC Standard Emergency Plan.