

March 2, 2006

Mr. L. M. Stinson
Vice President - Farley Project
Southern Nuclear Operating
Company, Inc.
P.O. Box 1295
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SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 1, ENVIRONMENTAL
ASSESSMENT RELATED TO EXEMPTION TO 10 CFR PART 50, APPENDIX R
(TAC NO. MC5718)

Dear Mr. Stinson:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your letters dated January 19, June 9 (two letters), and November 18, 2005, that requested exemptions from certain Appendix R requirements.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Robert E. Martin, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-348

Enclosure: Environmental Assessment

cc w/encl: See next page

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Joseph M. Farley Nuclear Plant, Units 1 & 2

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UNITED STATES NUCLEAR REGULATORY COMMISSION
SOUTHERN NUCLEAR OPERATING COMPANY
DOCKET NO. 50-348
JOSEPH M. FARLEY NUCLEAR POWER PLANT, UNIT 1
ENVIRONMENTAL ASSESSMENT AND FINDING OF
NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," Section III.G.2, for Facility Operating License No. NPF-2, issued to Southern Nuclear Operating Company (SNC or the licensee), for operation of the Joseph M. Farley Nuclear Power Plant (FNP), Unit 1, located in Houston County, Alabama. Therefore, as required by 10 CFR 51.21, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would allow the use of fire-rated electrical cable produced by Meggitt Safety System, Inc. (previously known as Whittaker Electronic Resources Unit of Whittaker Electronic Systems), for several cables in Fire Areas 1-013 and 1-042 associated with safe shutdown (SSD) control circuits. The licensee proposes the use of these fire-rated electrical cables in lieu of the alternatives specified in Section III.G.2 of Appendix R. In summary, SNC has requested a permanent exemption from 10 CFR Appendix R, Section III.G.2 to use 1-hour fire-rated cable in lieu of a 1-hour rated fire barrier as required by 10 CFR

Part 50, Appendix R, Section III.G.2 for protection of safe shutdown control circuits located in Fire Areas 1-013 and 1-042. Section III.G.2 of 10 CFR Part 50, Appendix R, provides fire protection requirements for electrical cables located within the same fire areas whose failure could cause the maloperation of redundant trains of systems necessary to achieve and maintain hot shutdown conditions. These areas are required to have protection features such that one of the redundant trains will be free of fire damage in the event of a fire. One method, described in Section III.G.2, for ensuring compliance with this requirement is to enclose the cable and equipment and associated non-safety circuits of one redundant train in a 1-hour rated fire barrier. In addition, an area-wide automatic fire suppression and detection system shall be installed in the fire area.

A postulated fire in Fire Area 1-013 or 1-042 could cause loss of offsite power since both fire areas contain cable bus ducts from the startup transformers to both redundant trains of the 4 kilovolt (kV) Appendix R SSD buses. A postulated fire in either of these fire areas could also potentially impact the function of the Train B of the 4 kV Emergency Diesel Generator 1B control circuitry. The majority of the Train A onsite electrical power system components required for Appendix R SSD are not located in Fire Area 1-013 or 1-042. Certain Train A onsite power system related SSD circuits located in Fire Areas 1-013 and 1-042 will be protected by a 1-hour fire-rated electrical cable along with area-wide automatic fire suppression and detection.

Thus, the licensee's request for an exemption addresses the situation wherein a 1-hour rated fire barrier as described in Section III.G.2 of 10 CFR Part 50, Appendix R is not provided for certain components. Instead, these credited Train A components will utilize fire-rated electrical cables (Mineral Insulated (MI) cables). This fire-rated electrical cable has been tested in accordance with American Society for Testing Materials E-119, "Standard Test Methods for Fire Tests of Building Construction Materials." Further details of the NRC staff's review of this

issue, with respect to determining that the fire-rated electrical cables would be capable of providing an equivalent level of protection as would be provided by a 1-hour rated fire barrier, are provided in a related safety evaluation.

The proposed action is in accordance with the licensee's application dated January 19, 2005, as supplemented by letters dated June 9 (two letters) and November 18, 2005.

The Need for the Proposed Action:

The exemption is needed to enable the licensee to utilize fire-rated electrical cables (MI cables) for certain components in lieu of a 1-hour rated fire barrier, as described in Section III.G.2 of 10 CFR Part 50, Appendix R, for FNP, Unit 1 Fire Areas 1-013 and 1-042.

Environmental Impacts of the Proposed Action:

The NRC has completed its safety evaluation of the proposed action and concludes that the proposed exemption will not present an undue risk to the public health and safety. The details of the NRC staff's safety evaluation will be provided in an exemption that will be issued in a letter to the licensee. The action relates to revising the bases for the adequacy of the fire protection program at FNP, Unit 1.

The proposed action will not significantly increase the probability or consequences of accidents. No changes are being made in the types of effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential non-radiological impacts, the proposed action does not have a potential to affect any historic sites. It does not affect non-radiological plant effluents and has no other environmental impact. Therefore, there are no significant non-radiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

The action does not involve the use of any different resources than those previously considered in the Final Environmental Statement related to the operation of the FNP, Units 1 and 2, dated December 1974, and the Final Supplemental Environmental Impact Statement (NUREG-1437, Supplement 18), dated March 2005.

Agencies and Persons Consulted:

In accordance with its stated policy, on February 14, 2006, the NRC staff consulted with the Alabama State official, Kirk Whatley, of the Office of Radiation Control, Alabama Department of Public Health, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee’s letters dated January 19, June 9, and November 18, 2005. Documents may be examined, and/or copied for a fee, at the NRC’s Public Document Room (PDR), located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management

System (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 2nd day of March 2006.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert E. Martin, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation