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NL-04-0372

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Docket Nos.: 50-348
50-364

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Joseph M. Farley Nuclear Plant
Reactor Material Surveillance Program
Specimen Capsule Withdrawal Schedule Revisions – Additional Information

Ladies and Gentlemen:

By letter dated February 23, 2004, Southern Nuclear Operating Company (SNC) provided notice of SNC's plans for withdrawal and analysis of those reactor material surveillance program specimen capsules installed in Farley Nuclear Plant (FNP) Units 1 and 2 which had been previously designated as "standby" (i.e., with no fixed withdrawal date). This information was provided to NRC for review and concurrence as appropriate.

In a teleconference on March 3, 2004, the NRC staff requested that withdrawal schedules for the standby capsules be provided in a tabular format similar to that used for the capsule withdrawal schedules in the Pressure Temperature Limits Report (PTLR) for each FNP unit, including fluence values for previously withdrawn capsules and projected fluences for the planned capsule withdrawals. The requested information is provided in the enclosed tables.

This letter contains no new NRC commitments. If you have any questions, please advise.

Sincerely,

A handwritten signature in black ink, appearing to read "L. M. Stinson".

L. M. Stinson

LMS/DWD/sdl

- Enclosures: 1. FNP Unit 1 Surveillance Capsule Withdrawal Schedule
2. FNP Unit 2 Surveillance Capsule Withdrawal Schedule

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cc: Southern Nuclear Operating Company
Mr. J. B. Beasley, Jr., Executive Vice President
Mr. D. E. Grissette, General Manager – Plant Farley
RTYPE: CFA04.054; LC# 13976

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. S. E. Peters, NRR Project Manager – Farley
Ms. T. Liu, NRR License Renewal Project Manager – Farley
Mr. C. A. Patterson, Senior Resident Inspector – Farley

Alabama Department of Public Health
Dr. D. E. Williamson, State Health Officer

Enclosure 1

FNP Unit 1 Surveillance Capsule Withdrawal Schedule ^(a)

Capsule	Capsule Location (Degree)	Lead Factor	Removal EFPY ^(b)	Fluence (n/cm ²)
Y ^(c)	343	3.24	1.15	6.12 x 10 ¹⁸
U ^(c)	107	3.34	3.08	1.73 x 10 ¹⁹
X ^(c)	287	3.35	6.11	3.06 x 10 ¹⁹
W ^(c)	110	3.01	12.43	4.75 x 10 ^{19(d)}
V ^(c)	290	3.04	20.16	7.14 x 10 ^{19(c)}
Z	340	3.04	~24	8.44 x 10 ^{19(f)(g)}

Notes:

- a) Based on the draft WCAP-16221 analysis of Capsule V, which updates lead factors and fluence values. Issuance of the final WCAP is expected in March 2004.
- b) Effective Full Power Years (EFPY) from plant startup
- c) Plant-specific evaluation
- d) This fluence is not less than once or greater than twice the peak EOL fluence for the initial 40-year license term.
- e) This fluence is not less than once or greater than twice the peak EOL fluence for a 20-year license renewal term to 60 years.
- f) This projected fluence is not less than once or greater than twice the peak EOL fluence for an additional 20-year license renewal term to 80 years.
- g) This projected fluence was obtained using draft WCAP-16221, Page 6-16, Table 6-2, "Calculated Azimuthal Variation of Maximum Exposure Rates and Integrated Exposures at the Reactor Vessel Clad/Base Metal Interface." This table projects neutron fluences at various EFPY. The tabulated fluence values for neutrons with E>1.0 MeV were found at 0° azimuth (the peak fluence position) for EFPY values above and below the desired withdrawal EFPY. The fluence value corresponding to the desired withdrawal EFPY was then determined by interpolation from the tabulated values and multiplied by the capsule lead factor to yield the projected capsule fluence value listed above.

Enclosure 2

FNP Unit 2 Surveillance Capsule Withdrawal Schedule ^(a)

Capsule	Capsule Location (Degree)	Lead Factor	Removal EFPY ^(b)	Fluence (n/cm ²)
U ^(c)	343°	3.31	1.10	6.44 x 10 ¹⁸
W ^(c)	110°	2.86	3.97	1.85 x 10 ¹⁹
X ^(c)	287°	3.41	6.41	3.19 x 10 ¹⁹
Z ^(c)	340°	3.03	13.24	5.28 x 10 ^{19(d)}
Y	290°	3.03	~19	7.24 x 10 ^{19(c)(g)}
V	107°	3.47	~22	9.45 x 10 ^{19(f)(g)}

Notes:

- a) Based on WCAP-15171 Rev. 1 analysis of Capsule Z, issued in February 2000.
- b) Effective Full Power Years (EFPY) from plant startup
- c) Plant-specific evaluation
- d) This fluence is not less than once or greater than twice the peak EOL fluence for the initial 40-year license term.
- e) This projected fluence is not less than once or greater than twice the peak EOL fluence for a 20-year license renewal term to 60 years.
- f) This projected fluence is not less than once or greater than twice the peak EOL fluence for an additional 20-year license renewal term to 80 years.
- g) This projected fluence was obtained using WCAP-15171 Rev. 1, Page 6-35, Table 6-13, "Azimuthal Variation of Neutron Exposure Projections on the Reactor Vessel Clad/Base Metal Interface at the Core Midplane - Calculated." This table projects neutron fluences at various EFPY. The tabulated fluence values for neutrons with E>1.0 MeV were found at 0° azimuth (the peak fluence position) for EFPY values above and below the desired withdrawal EFPY. The fluence value corresponding to the desired withdrawal EFPY was then determined by interpolation from the tabulated values and multiplied by the capsule lead factor to yield the projected capsule fluence value listed above.