



Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72802
Tel 479-858-4704

Stephenie L. Pyle
Manager, Regulatory Assurance
Arkansas Nuclear One

2CAN031802

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U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Response to Request for Additional Information -
Proposed Revision to Reactor Vessel Surveillance
Capsule Withdrawal Schedule
Arkansas Nuclear One – Unit 2
Docket No. 50-368
License No. NPF-6

- REFERENCES:**
- (1) Entergy letter to NRC, "Proposed Revision to Reactor Vessel Surveillance Capsule Withdrawal Schedule," dated September 14, 2017 (2CAN091702) (ML17257A121)
 - (2) Entergy letter to NRC, "Correction to Proposed Revision to Reactor Vessel Surveillance Capsule Withdrawal Schedule," dated November 1, 2017 (2CAN111701) (ML17305B616)
 - (3) NRC email to Entergy, "FW: ANO-2 – Final RAI RE: Request to Revise RV Materials Surveillance Program Withdrawal Schedule (CAC No. MG0244; EPID L-2017-LLL-0020) dated February 20, 2018 (2CNA021801) (ML18052A009)
 - (4) Entergy letter to NRC, "Reactor Vessel Surveillance Capsule Technical Report," dated October 17, 2016 (2CAN101602) (ML16293A577)

Dear Sir or Madam:

By Reference 1, as supplemented by Reference 2, Entergy Operations, Inc. (Entergy), submitted a request for the NRC's approval of a revision to the Arkansas Nuclear One, Unit 2 (ANO-2) surveillance capsule withdrawal schedule. The current schedule is presented in Table 5.2-12 of the ANO-2 Safety Analysis Report. The NRC has reviewed the submittals and determined that additional information is required to complete its review (Reference 3).

The NRC noted in Reference 3 that Table 7-1 of Reference 4 provides a specific target withdrawal for Capsule 277°. The NRC in Reference 3 requests that ANO-2 provide a specific withdrawal target year / Effective Full Power Year (EFPY) and the corresponding neutron fluence for the ANO-2 Capsule 277°. The purpose of this submittal is to provide the requested information.

The target withdrawal for the ANO-2 Capsule 277° is at the end of Cycle 32. As of the end of February 2018, ANO-2 is operating in Cycle 26 (~31.1 EFPY). At the end of Cycle 32, the ANO-2 reactor vessel will be exposed to greater than 40 EFPY. The end of Cycle 32 is scheduled for the Fall of 2027. At that time the target fluence to the reactor vessel surveillance capsule is calculated to be greater than the target fluence of $4.95 \text{ E}+19$ neutrons per square centimeters (E greater than 1 MeV). The target fluence is the projected 60-year (54 EFPY) peak vessel fluence. The target information provided above is consistent with Table 7-1 of Reference 4.

The requirement of the Aging Management Program (AMP) XI.M31 of the GALL Report specifies that the Appendix H surveillance program withdraws one capsule at an outage in which the capsule receives a fluence of between one and two times the neutron peak reactor vessel wall neutron fluence at the end of the period of extended operation. To meet this requirement ANO-2 will withdraw Capsule 277° at the end of Cycle 33 (Spring of 2029).

The reactor vessel will have been exposed to a value greater than 40 EFPY and the projected fluence will be greater than $4.95 \text{ E}+19$ neutrons per square centimeters (E greater than 1 MeV) at that time. This information replaces the originally proposed values provided in References 1 and 2.

This letter contains no new regulatory commitments.

Should you have any questions regarding this submittal, please contact me.

Sincerely,

ORIGINAL SIGNED BY DAVID B BICE FOR STEPHENIE L. PYLE

SLP/rwc

cc: Mr. Kriss Kennedy
Regional Administrator
U. S. Nuclear Regulatory Commission, Region IV
1600 East Lamar Boulevard
Arlington, TX 76011-4511

NRC Senior Resident Inspector
Arkansas Nuclear One
P.O. Box 310
London, AR 72847

U. S. Nuclear Regulatory Commission
Attn: Mr. Thomas Wengert
MS O-08B1A
One White Flint North
11555 Rockville Pike
Rockville, MD 20852