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REQUEST FOR ADDITIONAL INFORMATION

PROPOSED REVISION TO REACTOR VESSEL SURVEILLANCE

CAPSULE WITHDRAWAL SCHEDULES

FIRSTENERGY NUCLEAR OPERATING COMPANY

BEAVER VALLEY POWER STATION, UNITS 1 AND 2

DOCKET NOS. 50-334 AND 50-412

By letter dated May 28, 2013,¹ as supplemented by letter dated December 13, 2013,² First Energy Nuclear Operating Company (FENOC, the licensee) submitted a request to revise the reactor vessel (RV) surveillance capsule withdrawal schedules for the Beaver Valley Power Station, Units 1 and 2 (BVPS-1 and BVPS-2). The request was based, in part, on updated fluence calculations. In order to complete its review of this request, the staff requires additional information.

The table below shows the differences between the peak fluence values for both units, as presently reported, and as calculated to support the license renewal safety review in 2007/2008. The table shows that the Unit 2 peak fluence values for 48 EFPY differ by 16%, which is judged to be excessive to attribute to the incorporation of 4 additional cycles of core follow data, without further information.

Max. Calculated Fluence, Pressure Vessel Clad/Base Metal Interface		
BVNPS Unit 1 48 EFPY 0° Azimuth	Sept. 2011	April 2008
	WCAP-15571-S1-R2	WCAP-15571-S1-R1
	ML13151A059	ML082740205
	5.36E19	5.42E19
	Cycle 20 →	Cycle 17 →
	% Diff.	1.1 %
BVNPS Unit 2 48 EFPY 0° Azimuth	Sept. 2011	July 2007
	WCAP-16527-NP-S1-R1	WCAP-16527-NP-S1-R0
	ML13151A060	ML072410032
	4.67E19	5.56E19
	Cycle 15 →	Cycle 11 →
	% Diff.	16%

According to WCAP-14040-A,³ Revision 4, which is the most recent document generically describing Westinghouse's methods for determining pressure vessel neutron fluence, the analytical uncertainty associated with these methods is 13%. Thus, the 16% difference at Unit 2 exceeds the uncertainty estimated for the method.

¹ Agencywide Documents Access Management System (ADAMS) Accession No. ML13151A058.

² ADAMS Accession No. ML13350A581.

³ ADAMS Accession No. ML050120209.

SRXB RAI-1) Given the differences identified in the table above, please provide a summary description explaining what aspects of the neutron fluence methodology and input assumptions were changed between the 2007/2008 evaluations and those submitted in 2013. Provide a sufficiently detailed description to permit the NRC staff to determine independently whether the present calculations are adherent to NRC Regulatory Guide 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence."

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