



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

Mr. Bryan C. Hanson
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

January 19, 2018

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2 – REQUEST
FOR ADDITIONAL INFORMATION REGARDING ALTERNATIVE REQUEST
SI-RR-01, REV. 0 (CAC NOS. MG0068 AND MG0069; EPID L-2017-LLR-0078)

Dear Mr. Hanson:

By letter dated August 2, 2017 (Agencywide Documents Access and Management System Accession No. ML17215A007), Exelon Generation Company, LLC (the licensee) submitted relief requests associated with the fifth 10-year inservice testing interval for Calvert Cliffs Nuclear Power Plant, Units 1 and 2. One of the alternative requests, designated SI-RR-01, Rev. 0, would authorize testing the low pressure safety injection pumps as Group B pumps during power operations instead of as Group A pumps.

The U.S. Nuclear Regulatory Commission staff is reviewing the submittal and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information. The request for additional information was discussed with your staff on January 17, 2018, and it was agreed that your response would be provided within 30 days from the date of this letter.

If you have any questions regarding this issue, please contact me at (301) 415-2871 or Michael.Marshall@nrc.gov.

Sincerely,

/RA/

Michael L. Marshall, Jr., Senior Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosure:
Request for Additional Information

cc w/Enclosure: Distribution via Listserv

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DATED JANUARY 19, 2018

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REQUEST FOR ADDITIONAL INFORMATION

ALTERNATIVE REQUEST SI-RR-01, REV. 0

EXELON GENERATION COMPANY, LLC

CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-317 AND 50-318

By letter dated August 2, 2017 (Agencywide Documents Access and Management System Accession No. ML17215A007), Exelon Generation Company, LLC (the licensee) submitted relief requests associated with the fifth 10-year inservice testing interval for Calvert Cliffs Nuclear Power Plant, Units 1 and 2. One of the alternative requests, designated SI-RR-01, Rev. 0, would authorize testing the low pressure safety injection (LPSI) pumps as Group B pumps during power operations instead of as Group A pumps.

The U.S. Nuclear Regulatory Commission staff has determined that additional information is needed to complete its review of the request.

Requests for Additional Information

1. In Section 4 of the alternative request, it states:

Additionally, in Generic Letter (GL) 89-04, Position 9, the NRC determined that, in cases where pump flow can only be established through a non-instrumented, minimum-flow path during quarterly pump testing, and a path exists at cold shutdown or refueling outages to perform a test of the pump under full or substantial flow conditions, the increased interval is an acceptable alternative to the Code requirements. Therefore, the proposed alternative testing of LPSI pumps as Group B during Modes 1-4 and as Group A during Modes 5-6 is consistent with GL 89-04, Position 9.

Provide an explanation describing how the proposed alternative is consistent with Generic Letter 89-04, Position 9, when the minimum recirculation flow common header used for quarterly testing is instrumented with an ultrasonic flow meter.

2. In Section 4, it is stated that:

The low pressure safety injection (LPSI) pumps are tested at a substantial flow rate (approximately 3000 gallons per minute (gpm)) during every refueling outage, as well as during planned and unplanned cold shutdown periods when plant conditions and circumstances permit.

It is also stated that:

The quarterly tests are performed at approximately 55 - 65 gpm, which is between approximately 1.3% - 1.6% the LPSI pumps' Best Efficiency Flow rate.

There are large differences in the substantial flow rate, the best efficiency flow rate, and the low quarterly test flow rate.

- a. Are the LPSI pumps operated below the manufacturer's minimum continuous stable flow?
- b. Provide the manufacturer's recommended minimum flow and maximum run time at the minimum flow for the LPSI pumps and compare that to the flow rate and maximum run time for the LPSI pumps for the quarterly test.
- c. Explain any differences between manufacturer's recommended minimum flow and maximum run time at the minimum flow and the flow rate and maximum run time for the LPSI pumps for the quarterly test.