



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

August 5, 2020

LICENSEE: Dominion Energy Nuclear Connecticut, Inc.

FACILITY: Millstone Power Station, Unit No. 3

SUBJECT: SUMMARY OF JUNE 29, 2020, PRE-SUBMITTAL TELECONFERENCE WITH DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
RE: PROPOSED LICENSE AMENDMENT REQUEST RELATED TO A MEASUREMENT UNCERTAINTY RECAPTURE POWER UPRATE (EPID L-2020-LRM-0050)

On June 29, 2020, the U.S. Nuclear Regulatory Commission (NRC) staff held a public teleconference with representatives of Dominion Energy Nuclear Connecticut, Inc (DENC or the licensee). The purpose of the meeting was to discuss DENC's proposed license amendment request (LAR) to increase the Millstone Power Station, Unit No. 3 (MPS3), authorized core power level from 3,650 megawatts thermal (MWt) to 3,709 MWt (an increase of approximately 1.6 percent rated thermal power) based on the use of the Cameron U.S. Technology, Inc. Leading Edge Flow Meter (LEFM) Check-Plus System. On June 16, 2020, the meeting notice and agenda were posted on the NRC public Web page (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20168A527). The licensee's presentation is available at ADAMS Accession No. ML20176A276. A list of attendees is enclosed.

DENC presented a summary of the following:

- proposed LAR and approach
- summary of engineering review
- plant modifications
- precedents
- forthcoming LAR submittals
- projected schedule for submission

Proposed LAR and Approach

The licensee provided a brief overview of its proposed measurement uncertainty recapture (MUR) LAR and the approach in achieving the 1.6 percent MUR power uprate. DENC explained that it will utilize the existing LEFM Check-Plus System, installed in 2004, to improve plant calorimetric heat balance measurement accuracy to 0.325 percent. The licensee will also propose as part of the MUR LAR an allowed outage time of 48 hours in the MPS3 technical requirements manual for a loss of power supply or failure of the LEFM Check-Plus System. The proposed submittal will be based on Regulatory Issue Summary 2002-03, "Guidance on the Content of Measurement Uncertainty Recapture Power Uprate Applications" (ADAMS Accession No. ML013530183). The supporting uncertainly calculations will be included in the LAR in both a proprietary and non-proprietary version.

Summary of Engineering Review

Engineering reviews were performed by DENC on all nuclear steam supply system (NSSS) components and auxiliary systems that would have revised design parameters. The licensee stated that it expects no changes to the nuclear steam supply system design-basis transients resulting from the proposed design parameter, and there will be no changes to the setpoints associated with reactor trip and engineered safety features actuation systems due to the MUR power uprate. There are no proposed changes to the design ratings or design pressures and temperatures, as those parameters will all be bounded by the existing design ratings for the components. The licensee also stated the LAR will include a discussion of the grid stability study; this will be conducted and approved by independent system operators (ISO) New England (ISO-NE) prior to implementation of the license amendment. The reason for not conducting the grid stability study sooner is due to the large backlog of wind projects in the ISO-NE's review queue. Additionally, the protection scheme modifications currently being developed for the Millstone Power Station are inputs to the grid stability model; therefore, a completed grid stability study from ISO-NE would not be expected until after the MUR LAR is submitted.

Plant Modifications

The licensee presented a general description of the plant modifications supporting the proposed MUR power uprate. Some of the more significant modifications include:

- LEFM Check-Plus System upgrades and replacement of the electronic cabinetry
- main generator rotor, stator, and stator rewind exciter upgrades
- instrument loop rescaling for turbine impulse pressure and moisture separator reheater steam supply pressure setpoints changes
- steam generator feed pump suction trip and alarm setpoint changes
- main control board LEFM trouble annunciation additions
- plant process computer programs to support the MUR power calorimetry

Precedents

The licensee has reviewed several precedent MUR power uprate LARs, including the associated requests for additional information and safety evaluations for applicability. Specifically, the licensee referenced the related DENC submittals for the Surry and North Anna Power Stations, as well as the Farley and Watts Bar MUR LARs, both of which are currently under NRC staff review.

Forthcoming LAR Submittals

The licensee is planning to submit two other LARs for MPS3 in 2020 related to the Chapter 15 accident analyses in the final safety analysis report. Both planned submittals are independent of the MPS3 MUR LAR but were included in the presentation for the staff's awareness because the planned implementation of the license amendments will coincide (during the MPS3 spring 2022 refueling outage).

Projected Schedule for Submission

The licensee stated its planned submittal is on track and projected for submission by the end of October 2020. DENC intends to request an approval date of October 2021 with implementation of the MUR planned for the spring 2022 operating cycle for MPS3.

Questions from NRC Staff

The NRC staff asked the licensee whether it has evaluated the impact on the environmental qualification of electrical equipment due to the MUR power uprate on radiation, temperature, and relative humidity aspects. The licensee stated that it has evaluated the potential impacts on the electrical equipment environmental qualification program for normal operating and accident conditions and determined there are minimal impacts on radiation, temperature, and relative humidity aspects due to the MUR power uprate. Also, for a large break loss-of-coolant accident, the radiological consequences are bounding for the MUR power uprate. The licensee stated that it will include a discussion of this technical review area in its submittal.

The staff also inquired whether the licensee has evaluated the impact of the MUR on the high energy line break and the moderate energy flooding condition based on the expected increase on steam and feed flow from the power uprate. The licensee stated that both the flooding and high energy line break aspects are addressed in the submittal. The staff also requested clarification on the conditions for declaring the LEFM Check-Plus System inoperable, given that the system covers two trains. The licensee clarified that if any one transducer in a train is inoperable, it will consider it a complete loss of the LEFM, and therefore, the 48-hour allowed outage time to address the inoperability would be applicable.

The staff also asked the licensee what will be given to the power range detector readouts in the control room and the power range high flux trip setpoints, given that the elevated thermal power level will correspond to a different level of neutron flux on those nuclear instrumentation detectors. The licensee confirmed that the nuclear instrumentation will be calibrated to the new 100 percent power, and there will be no changes to the reactor protection system setpoints. The staff further inquired whether the licensee had any concerns regarding the expectation that the high flux trip setpoint will not be at a higher total thermal power output. The licensee responded that it would assess this area further and address it as appropriate in its submittal.

No decisions were made regarding the acceptability of the licensee's proposed submittal. Two members of the public were in attendance. There were no comments or questions from the public. To date, no public meeting feedback forms have been submitted through the NRC public meeting feedback system.

Please direct any inquiries to me at 301-415-1030 or Richard.Guzman@nrc.gov.

Sincerely,

/RA/

Richard V. Guzman, Senior Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-423

Enclosure:
List of Attendees

cc: Listserv

LIST OF ATTENDEES

JUNE 29, 2020, PRE-SUBMITTAL TELECONFERENCE WITH

DOMINION ENERGY NUCLEAR CONNECTICUT, INC.

MILLSTONE POWER STATION, UNIT NO. 3

PROPOSED LICENSE AMENDMENT REQUEST

RE: MEASUREMENT UNCERTAINTY RECAPTURE POWER UPRATE

Name	Organization
Richard Guzman	U.S. Nuclear Regulatory Commission (NRC)
Jonathan Rowley	NRC
James Danna	NRC
Brett Titus	NRC
Victor Cusumano	NRC
Tania Martinez Navedo	NRC
Kent Wood	NRC
Naeem Iqbal	NRC
Chakrapani Basavaraju	NRC
Jorge Cintron-Rivera	NRC
Edmund Kleeh	NRC
Gurjendra Bedi	NRC
Jeff Circle	NRC
Brian Green	NRC
Sean Meighan	NRC
Justin Vazquez	NRC
Stephen Smith	NRC
Gregory Makar	NRC
Ian Tseng	NRC
Hang Vu	NRC
Duc Nguyen	NRC
Raul Hernandez	NRC
Nan Chien	NRC
Angie Buford	NRC
Joel Jenkins	NRC
Barbara Hayes	NRC
Shie-Jeng Peng	NRC
Jennifer Whitman	NRC
Eben Allen	NRC
Chris Highley	NRC
Mark Draxton	NRC
Steve Brabec	Dominion Energy Nuclear Connecticut, Inc. (DENC)
Prasad Bandaru	DENC
Kimberly Keithline	DENC

Tom Lafauci	DENC
Kettan Bivek	DENC
Lauren Lopez	DENC
Emily Tomlinson	DENC
Jeffry Langan	DENC
Tim Olsowy	DENC
Craig Sly	DENC
Shayan Sinha	DENC
Anthony Stevens	Massachusetts Municipal Wholesale Electric Company
Andrea Jennetta	Nuclear Power Publications, S&P Global Platts

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RE: PROPOSED LICENSE AMENDMENT REQUEST RELATED TO A MEASUREMENT UNCERTAINTY RECAPTURE POWER UPRATE (EPID L-2020-LRM-0050) DATED AUGUST 5, 2020

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CdeMessieres, NRR	RidsNrrDrololb Resource
LBetancourt, NRR	JFuller, R-I
JRowley, NRR	EAllen, R-I
KWood, NRR	NIqbal, NRR
CBasavaraju, NRR	JCintron-Rivera, NRR
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GBedi, NRR	SSmith, NRR
JCircle, NRR	GMakar, NRR
BGreen, NRR	ITseng, NRR
SMeighan, NRR	HVu, NRR
DNguyen, NRR	RHernandez, NRR
NChien, NRR	JJenkins, NRR
SPeng, NRR	CHighley, R-I
MDraxton, R-I	

ADAMS Accession Nos.:
ML20210M424 (Package)
ML20168A527 (Meeting Notice)
ML20210M423 (Meeting Summary)
ML20176A276 (Meeting Slides)

OFFICE	NRR/DORL/LPL1/PM	NRR/DORL/LPL1/LA	NRR/DORL/LPL1/BC	NRR/DORL/LPL1/PM
NAME	RGuzman	LRonewicz	JDanna	RGuzman
DATE	07/28/2020	07/28/2020	08/05/2020	08/05/2020

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