POLICY ISSUE
(Notation Vote)

July 14, 2020 SECY-20-0063

FOR: The Commissioners

FROM: Margaret M. Doane
Executive Director for Operations

SUBJECT: DENIAL OF PETITION FOR RULEMAKING REGARDING MEASUREMENT STANDARDS USED AT U.S. NUCLEAR POWER PLANTS (PRM-50-118; NRC-2019-0071)

PURPOSE:

To obtain Commission approval to deny Petition for Rulemaking (PRM)-50-118 regarding measurement standards used at U.S. nuclear power plants, submitted by Mr. Michael Taylor (the petitioner), and publish a notice of the denial in the *Federal Register*. This paper does not address any new commitments or resource implications.

BACKGROUND:

Mr. Michael Taylor filed a petition with the U.S. Nuclear Regulatory Commission (NRC) on December 3, 2018, as amended on July 22, 2019 (Agencywide Documents Access and Management System Accession Nos. ML19074A303 and ML19199A014 Respectively) requesting that the NRC amend its regulations regarding measurement standards used at U.S. nuclear power plants. The NRC docketed the petition on March 4, 2019, and assigned it Docket No. PRM-50-118.

The NRC published a notice of receipt and request for public comment in the *Federal Register* on May 15, 2019 (84 FR 21727). The public comment period closed on July 29, 2019. The NRC received a total of five public comment submissions with three commenters supporting the petition, one not clearly supporting or opposing the petition, and one (from the petitioner) providing grammatical corrections and minor clarifications to the petition.

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DISCUSSION:

Petitioner's Request

The petitioner requested that the NRC amend its regulations to require that all metrology and calibration laboratories at nuclear power plants become certified by accrediting organizations such as the American Association for Laboratory Accreditation, National Voluntary Laboratory Accreditation Program, or similar accrediting bodies that require the use of certain measurement standards. The petitioner also asked that the NRC require training of all personnel that make measurements at nuclear power plants, and their management, to ensure a "clear understanding of the effects of measurement standard to unit under test ratios on measurements that are made, and also all other factors that affect the results of the measurements made." The petitioner observed that individuals conducting measurements without such accreditation are subject to significant errors and do not currently consider certain important factors, including the ratio of measurement standards to units under test (UTT). According to the petitioner, "[p]erhaps the most important factor from among those that effect measurements made, and that currently are not being considered, are the ratios of the accuracies of the measurement standard instruments used, to that of the accuracies of the items being measured (UUT or Units under test)." Further, the petitioner states that the "use of low ratios of measurement standards, to [UTT] will cause significant errors in measurements made." The petitioner contends that this leads to an unresolved safety issue for "Q" measurements in particular. The petitioner also states existing internal quality assurance and documents and standards currently in use for inspections and audits do not adequately address this concern.

Summary of Petition Evaluation

The NRC staff evaluated the petition and determined that the issues raised do not warrant rulemaking. To reach this determination, the staff evaluated the merits of the petition, public comments received, the immediacy of any safety concerns raised by the petitioner, and the NRC's relevant past decisions and current policies. Specifically, staff considered existing NRC requirements for the control of measuring and test equipment. While the NRC does not require nuclear power plant laboratories to be certified by accrediting bodies, the programs for safety-related measuring and test equipment calibration must meet the requirements in Title 10 of the Code of Federal Regulation (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," specifically Criterion XII, "Control of Measuring and Test Equipment." In addition, these facilities are subject to NRC inspection, which provides additional assurance that licensees are adequately implementing the requirements of Criterion XII of Appendix B to 10 CFR Part 50 to measurement and test equipment programs through direct inspection of calibration and testing activities. These direct inspections ensure that measurement calculations are being adequately performed. The requirements for the training of nuclear power plant personnel performing safety-related activities is covered by Criterion II, "Quality Assurance Program," of Appendix B to 10 CFR Part 50. Staff concluded that any safety-related calibrations or measurements that are performed at metrology laboratories utilized by nuclear power plants would fall under these requirements.

To further evaluate whether the petitioner identified any safety-significant issues and find examples of the stated issue, the staff performed an independent search of all licensee event reports and greater-than-green inspection findings from 2015 onward. The staff did not identify

any examples of safety issues caused by improper calibrations measurement and test equipment at nuclear power plant internal laboratories or the lack of laboratory certification requirements. Rather, most of the issues identified had to do with component failures, maintenance errors in performing the calibration of the components themselves, calibration drift of the installed component, use of the wrong test instrumentation, or other human performance issues. Finally, the staff held a petition review board meeting on December 19, 2019, and the board unanimously approved the determination that it is appropriate to deny the PRM based on the NRC's current policies and practice.

RECOMMENDATION:

The staff recommends that the Commission deny PRM-50-118 because the petition does not raise a significant safety or security concern that would warrant the requested changes to the NRC's regulations. The requested amendments to NRC regulations are not necessary because existing regulations (i.e., Criteria II and XII of Appendix B to 10 CFR Part 50) and inspection procedures provide for the reasonable assurance of adequate protection of public health and safety.

The staff requests the Commission's approval to publish the *Federal Register* notice (Enclosure 1) denying PRM-50-118. The enclosed letter for signature by the Secretary of the Commission (Enclosure 2) informs the petitioner of the Commission's decision to deny the petition. The staff will also inform the appropriate congressional committees of the Commission's decision.

RESOURCES:

This paper does not address any new commitments or resource implications.

COORDINATION:

The Office of the General Counsel has reviewed this package and has no legal objection to the denial of the petition.

Margaret M. Doane

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Date: 2020.07.14 13:29:39 -04'00'

Margaret M. Doane
Executive Director
for Operations

Enclosures:
1. *Federal Register* notice
2. Letter to the Petitioner

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ADAMS Accession Nos: **PKG: ML20030A129;**
SECY: ML20030A132; FRN: ML20030A130; LTR: ML20030A131 ***Via e-mail** **SECY-012**

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DATE	01/30/2020	01/30/2020	02/27/2020	02/27/2020	03/03/2020
OFFICE	NMSS/REFS/RASB/BC*	NRR/DRO/IQVB/BC*	NMSS/REFS/D*	NRR/DRO/D*	OGC/GCLR/RMR*
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