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

November 7, 2022

Mr. James Barstow
Vice President, Nuclear Regulatory Affairs
and Support Services
Tennessee Valley Authority
1101 Market Street, LP 4A-C
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNIT 1 – AUTHORIZATION OF ALTERNATIVE REQUEST RP-12 FOR TESTING OF CENTRIFUGAL CHARGING PUMP 1B-B (EPID L-2022-LLR-0055)

Dear Mr. Barstow:

By letter dated July 20, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML22201A556), Tennessee Valley Authority (TVA, the licensee) submitted one-time Alternative Request RP-12 to the U.S. Nuclear Regulatory Commission (NRC) related to certain Inservice Testing (IST) requirements in the American Society of Mechanical Engineers (ASME) *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code), Section IST, "Rules for Inservice Testing of Light-Water Reactor Power Plants," for the IST program at Sequoyah Nuclear Plant, Unit 1 (SQN Unit 1). Based on discussions with NRC staff, the licensee submitted a letter on July 21, 2022 (ML22202A508) providing supplemental information to support its alternative request.

Specifically, pursuant to subparagraph (2) in paragraph (z) in Section 55a, "Codes and standards," of Part 50 to Title 10 of the *Code of Federal Regulations* (10 CFR 50.55a(z)(2)), the licensee requested that the NRC authorize Alternative Request RP-12 for testing of SQN Unit 1 Centrifugal Charging Pump 1B-B on the basis that compliance with the ASME OM Code would result in hardship or unusual difficulty without compensating increase in level of quality or safety.

As described in a letter dated July 25, 2022 (ML22203A112), the NRC staff provided verbal authorization of the licensee's proposed Alternative Request RP-12 for SQN Unit 1 on July 21, 2022. The verbal authorization documentation provides a summary of the NRC staff's evaluation for the proposed alternative. The enclosed safety evaluation provides the details of the NRC staff's review of Alternative Request RP-12 for SQN Unit 1.

The NRC staff has determined, as set forth in the enclosed safety evaluation, that TVA's proposed alternative will provide reasonable assurance that SQN Unit 1, CCP 1B-B will be operationally ready to perform its safety function and that TVA has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(2) for Alternative Request RP-12. Therefore, the NRC staff authorizes one-time Alternative Request RP-12 until the October 2022 refueling outage at SQN Unit 1.

All other ASME OM Code requirements for which relief or an alternative was not specifically requested and approved as part of this request remain applicable.

Please direct any inquiries to Mr. Perry Buckberg at 301-415-1383 or Perry.Buckberg@nrc.gov.

Sincerely,

David J. Wrona

Digitally signed by David J. Wrona
Date: 2022.11.07 13:31:20 -05'00'

David J. Wrona, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-327

Enclosure:
Safety Evaluation

cc: Listserv

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNIT 1 – AUTHORIZATION OF ALTERNATIVE REQUEST RP-12 FOR TESTING OF CENTRIFUGAL CHARGING PUMP 1B-B (EPID L-2022-LLR-0055) DATED NOVEMBER 7, 2022

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ADAMS Accession Nos.:
ML22284A014 (Package)
ML22284A007 (Authorization of Relief Request)
ML22203A112 (Verbal Authorization)
ML22202A508 (Supplement to Request)
ML22201A556 (Request)

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DATE	11/07/2022		

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UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FOR ALTERNATIVE REQUEST RP-12

CENTRIFUGAL CHARGING PUMP 1B-B ALTERNATIVE TESTING

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT, UNIT 1

DOCKET NUMBER 50-327

EPID NO. L-2022-LLR-0055

1.0 INTRODUCTION

By letter dated July 20, 2022 (Agencywide Documents and Access Management System (ADAMS) Accession Number ML22201A556), Tennessee Valley Authority (TVA, the licensee) submitted one-time Alternative Request RP-12 to the U.S. Nuclear Regulatory Commission (NRC) related to certain Inservice Testing (IST) requirements in the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), Section IST, "Rules for Inservice Testing of Light-Water Reactor Power Plants," for the IST program at Sequoyah Nuclear Plant, Unit 1 (SQN Unit 1). Based on discussions with NRC staff, the licensee submitted a letter on July 21, 2022 (ML22202A508) providing supplemental information to support its alternative request.

Specifically, pursuant to subparagraph (2) in paragraph (z) in section 55a, "Codes and standards," of Part 50 to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(2), the licensee requested that the NRC authorize Alternative Request RP-12 for testing of SQN Unit 1 Centrifugal Charging Pump (CCP) 1B-Ba on the basis that compliance with the ASME OM Code would result in hardship or unusual difficulty without compensating increase in level of quality or safety.

As described in a letter dated July 25, 2022 (ML22203A112), the NRC staff provided verbal authorization of the licensee's proposed Alternative Request RP-12 for SQN Unit 1 on July 21, 2022. The verbal authorization documentation provides a summary of the NRC staff's evaluation for the proposed alternative. This safety evaluation provides the details of the NRC staff's review of Alternative Request RP-12 for SQN Unit 1.

2.0 REGULATORY EVALUATION

The NRC regulations in 10 CFR 50.55a(f)(4), "Inservice testing standards requirement for operating plants," state, in part, that throughout the service life of a boiling or pressurized water-cooled nuclear power facility, pumps and valves that are within the scope of the ASME OM Code must meet the inservice test requirements (except design and access provisions) set forth in the ASME OM Code and addenda that become effective subsequent to editions and addenda

specified in 10 CFR 50.55a(f)(2) and (3) and that are incorporated by reference in 10 CFR 50.55a(a)(1)(iv), to the extent practical within the limitations of design, geometry, and materials of construction of the components.

The NRC regulations in 10 CFR 50.55a(z) state, in part, that alternatives to the requirements of 10 CFR 50.55a(f) may be used, when authorized by the NRC, if the licensee demonstrates (1) the proposed alternatives would provide an acceptable level of quality and safety or (2) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The SQN Unit 1 Fourth 10-Year IST Program interval began on September 1, 2016, and is scheduled to end on June 30, 2026. The applicable ASME OM Code edition for the SQN Unit 1 Fourth 10-Year IST Program interval is the 2004 Edition through 2006 Addenda, which are incorporated by reference in 10 CFR 50.55a with conditions.

3.0 TECHNICAL EVALUATION

3.1 Licensee's Alternative Request RP-12

The licensee submitted Alternative Request RP-12 related to the pump testing requirements in the ASME OM Code, Subsection ISTB, "Inservice Testing of Pumps in Light-Water Reactor Nuclear Power Plants," in accordance with 10 CFR 50.55a(z)(2).

The applicable ASME OM Code of Record for the SQN Unit 1 Fourth 10-Year IST Program interval is the 2004 Edition through 2006 Addenda of the ASME OM Code, as incorporated by reference in 10 CFR 50.55a.

Paragraph ISTB-3310, "Effect of Pump Replacement, Repair, and Maintenance on Reference Values," in the ASME OM Code, Subsection ISTB, states:

> When a reference value or set of values may have been affected by repair, replacement, or routine servicing of a pump, a new reference value or set of values shall be determined in accordance with ISTB-3300, or the previous value reconfirmed by a comprehensive or Group A test run before declaring the pump operable. The Owner shall determine whether the requirements of ISTB-3100, to reestablish reference values, apply. Deviations between the previous and new set of reference values shall be evaluated and verification that the new values represent acceptable pump operation shall be placed in the record of tests (see ISTB-9000).

ASME OM Code Case OMN-16, "Use of a Pump Curve for Testing," Revision 2, subsection 16-3310, "Effect of Pump Replacement, Repair, and Maintenance on Reference Values," states:

> When a reference curve(s) may have been affected by repair, replacement, or routine servicing of a pump, a new reference curve shall be determined in accordance with para. 16-3300, or the previous curve(s) reconfirmed by a comprehensive or Group A test run before declaring the pump operable. The Owner shall determine whether the requirements of ISTB-3100, to reestablish reference curves, apply. Deviations between the previous and new set of reference curves shall be identified, and verification that the new curves represent acceptable pump operation shall be placed in the record of tests (see section ISTB-9000).

SQN Technical Specification (TS) Surveillance Requirement (SR) 3.5.2.4 states:

> Verify each ECCS pump's developed head at the test flow point is greater than or equal to the required head at a frequency in accordance with the Inservice Testing Program.

The licensee requested the NRC staff to authorize the use of Alternative Request RP-12 described below for the pump listed in Table 1 of this SE.

Table 1

Site/Unit	Pump ID	Pump Description	Pump Type	ASME Code Class	OM Group
SQN Unit 1	SQN-1-PMP-062-0104	CCP 1B-B	Centrifugal – Horizontal, Fixed Speed	2	A

Reason for Request

The licensee provided the following reason for its request:

> On July 18, 2022, operators in the main control room (MCR) noticed that the SQN Unit 1 pressurizer level was slowly declining with the downstream flow control valve near 100 percent open. Thereafter, operators received an unexpected alarm for low flow to the number 1 reactor coolant pump (RCP) seal. Operators dispatched auxiliary unit operators to the field to validate MCR indications. Subsequently, operators received an alarm indicating a lowering pressurizer level with level indicating 54 percent and declining. Operators placed the 1A-A centrifugal charging pump (CCP) in service and pressurizer level began to recover. The 1B-B CCP was declared inoperable due to reduced pump capacity and on July 18, 2022, at 2230 Eastern Daylight Time (EDT), SQN Unit 1 entered Technical Specification (TS) 3.5.2, "EMERGENCY CORE COOLING SYSTEMS (ECCS)," Condition A, which requires that with one or more ECCS trains inoperable in Modes 1, 2, and 3, then the ECCS train(s) must be restored to operable status within 72 hours. The 72-hour completion time currently expires at 2230 EDT on July 21, 2022. The cause of the failure of the 1B-B CCP is still under investigation, but troubleshooting indicates a pump rotating element degradation, which will necessitate replacement of the pump element, as a minimum. The new rotating element comes with a balance drum and the remaining components have been inspected and are satisfactory.
>
> To obtain additional information about the condition of the 1B CCP, the pump was placed back into service on July 19, 2022, at 1304 EDT. The pump experienced excessive internal recirculation flow at 70 gallons per minute (gpm) versus 25 gpm normal. A vibration measure of the inboard bearing showed an abnormal vibration as high as 0.89 inches per second (in/s) which is above the action required range of greater than 0.70 in/s.
>
> The 1B-B CCP pump element is being replaced and TVA has determined that the requirements of ISTB-3100, "Preservice Testing," and subsequently ISTB-5110, "Preservice Testing," are applicable, and a preservice test is required to establish new reference values and acceptance criteria before declaring the 1B-B CCP operable. Currently, SQN Unit 1 is in Mode 1 operating at 100 percent power. Performing the ISTB-3100 required preservice test is not possible in Mode 1 and would require a unit shutdown, with the reactor head off in Mode 6 to perform the test. Maneuvering the plant from Mode 1 to lower modes of operation introduces additional shutdown risks, infrequent field and control room operations, and an

increase in the volume of critical parameter monitoring. Cycling plant temperature and pressure from Mode 1 to Mode 6, and subsequently back to Mode 1 would introduce the potential to challenge both primary and secondary systems, such as safety valves simmering.

Operability of the 1B-B CCP is also verified by SQN Unit 1 TS Surveillance Requirement (SR) 3.5.2.4 which states “Verify each ECCS pump’s developed head at the test flow point is greater than or equal to the required developed head.” The Frequency of this SR is “in accordance with the Surveillance Frequency Control Program.” If the 1B-B CCP is not able to be restored to operable status within the 72-hour Completion Time of SQN Unit 1 TS 3.5.2, Condition A, then SQN Unit 1 TS 3.5.2, Condition B would require the unit to transition from Mode 1 to Mode 3 within 6 hours and transition to Mode 4 within 12 hours. Performing a mid-cycle outage in July 2022 simply to perform the required comprehensive or preservice tests is not desirable due to high peak electrical load demands and would result in unnecessary plant transients and unnecessary radiological dose to plant personnel.

Furthermore, SQN Unit 1 is scheduled to commence a refueling outage in October 2022 (U1R25) at which time the ISTB-3100 required preservice test would be performed. Accordingly, commencing a shutdown of SQN Unit 1 to perform the ISTB-3100 required comprehensive or preservice tests, prior to U1R25, would result in undue increase in risk with no corresponding benefit to public health and safety.

TVA will be challenged from a reliability perspective if it loses a unit, or any portion of a unit, at SQN, anytime within the next 8 days. TVA is already in a Conservative Operations Alert (COA) in preparation for high temperatures and record-setting load forecasts that are expected to continue for at least the next 8 days, and potentially longer. TVA will need to make use of all available generation to meet this peak during this time, and even with all available generation in service, TVA anticipates that it will need to make non-firm spot market energy replacements to meet its forecast system load. Given the high loads forecast in TVA and neighboring systems alike, it is likely that TVA will be challenged in its ability to make these energy replacements and, if they are not available, TVA will be at risk of shedding firm load. Thus, it is critical that TVA maintain its native generation resources throughout the duration of the system challenges it is currently facing.

Therefore, compliance with ISTB-3310 under the circumstances described above represents a hardship or unusual difficulty without a compensating increase in the level of quality and safety. Therefore, this request for alternative is being submitted in accordance with 10 CFR 50.55a(z)(2).

Proposed Alternative

The licensee described its proposed alternative as follows:

1. Following repair of the 1B-B CCP, initial pump operability for compliance with SQN Unit 1 TS Limiting Condition for Operation (LCO) 3.5.2 and Surveillance Requirement (SR) 3.5.2.4 will be established by performance of a Group A pump test. The Group A pump test will be performed in accordance with Code Case OMN-16, Revision 2. The reference curve will be established in accordance with OMN-16, subsection 16-3300, for the range of flow rates achievable during Mode 1 operation. Differential pressure, flow rate and vibration shall be determined and compared with the associated reference values from the reference curve. Deviations from the associated reference values will be

compared with the limits given in ASME OM Code Table ISTB-5121-1 and corrective action taken as specified in OMN-16, subsection 16-6200. This acceptance criterion is truncated, if necessary, to ensure the pump minimum design limits are met.

2. The ISTB-3310 required comprehensive or preservice test will be performed during U1R25. Testing will be performed in accordance with ISTB 3100, ISTB-3300, ISTB-5110, and Table ISTB-5121-1, as applicable. In the event SQN Unit 1 experienced an unplanned outage before U1R25, then TVA would evaluate whether plant conditions would be favorable to performing the ISTB-3310 required comprehensive or preservice test. As previously noted, this test is currently required to be performed in Mode 6 with the reactor vessel head removed. The basis for performing this test in Mode 6 is provided in the section of this enclosure titled “Operations.”

3. In accordance with ISTB-3100, the preservice test method is in accordance with ISTB-5110, which requires flow and differential pressure to be measured at a minimum of five points. If practicable, these points shall be from pump minimum flow to at least pump design flow. The Group A reference value for flow and differential pressure will be essentially the same point as the minimum flow and differential pressure used as the minimum flow point for the preservice test. Acceptance criteria will be established in accordance with Table ISTB-5121-1.

In its supplement dated July 21, 2022, the licensee provided the following additional information in support of Alternative Request RP-12:

Additional Information on the 1B-B Centrifugal Charging Pump Degradation

SQN experienced several shaft failures in the 1990s as a result of cyclic fatigue. To address this condition, the Centrifugal Charging Pump (CCP) shafts were replaced with custom material, better machining tolerances, and different rotating element locking mechanisms. This upgrade provided better resistance to cyclic fatigue, increasing the service life on the order of five to ten times the original material service life. SQN has not experienced a failure since these upgrades began in 1999 and completed in 2003. The 1B-B CCP rotating shaft was replaced in November 2001 with upgraded shaft material and flow elements. With this CCP component upgraded to custom age 625 (CA-625) alloy material, periodic shaft replacements were no longer required as they were previously.

Though the upgraded material provides more resistance to fatigue, it does not eliminate the failure mechanism. The 1B-B CCP had approximately 100,000 hours of runtime when degradation was identified. This is within the five to ten times service life span estimated. In comparison, 1A-A CCP has upgraded CA-625 shaft material and has approximately 11,000 hours of run time.

In alignment with industry operating experience and Westinghouse WCAPs, the direct cause of the 1B-B CCP degradation is most likely pump element wear associated with cyclic fatigue. Other potential causes have been refuted through the troubleshooting process and a support/refute matrix.

Transitioning from a time-based maintenance strategy to a condition-based maintenance strategy, after shaft upgrades, failed to ensure all failure mechanisms were addressed by condition monitoring and contributed to the degradation of the 1B-B CCP.

The 1B-B CCP work scope will involve the replacement of the pump element and associated parts for a standard refurbishment. This work requires uncoupling the pump shaft from the motor, removing the inboard and outboard bearings, removing the mechanical seals, and then pulling the rotating element out. For reassembly, a refurbished and modified rotating element will be installed that is made of the CA-625 alloy material. New inboard and outboard bearings will be installed, and the mechanical seals will be rebuilt. Prior to restoring the 1B-B CCP pump to operable status, an adverse condition monitoring plan will be in place in accordance with TVA procedures to monitor parameters such as vibration data, balance drum recirculation flow, and other parameters.

Description of the Baker Testing of the Motor

As noted in the referenced letter, troubleshooting was performed for the 1B-B CCP, which indicated a pump rotating element degradation. As part of this troubleshooting, a current signature analysis test (CSA - commonly known as 'Online Baker') was performed.

The baker test indicated that the recent event associated with the 1B-B CCP is not expected to have adversely affected the performance of the motor. The operating current of the motor reported at the time of the event is consistent with the values that were recorded during the baker test performed during the subsequent troubleshooting run. The data obtained during this test confirmed that the operating current of the motor was well below the nameplate rating and that the phases were well balanced. The winding temperatures recorded during the event were also well below the thermal rating of the motor's insulation system and consistent with the expected small increase in current. Because the motor's torque is directly related to the operating current and the operating current is expected to have remained below the nameplate rating, no rotor or shaft degradation is expected to have occurred during the event. There was no noticeable change in motor bearing temperatures during the event and were well below alert limits. In addition, the 1B-B CCP motor stator was recently rewound in 2019 before being installed during the SQN Unit 1 Cycle 24 (U1R24) refueling outage. Therefore, the motor is expected to have sufficient winding life margin.

The Relative Life or Health of the 1A-A CCP

The 1A-A CCP element was last replaced in U1R22 (2018). The current run time is approximately 11,000 hours. The average balance drum recirculation flow since the replacement is 25 gallons per minute (gpm). The last recorded value from quarterly surveillance was 24.2 gpm. Pump vibration, oil analysis, and performance trends have been reviewed and support reliable operation.

The 1A-A CCP motor was last refurbished in 2014. Electrical test results from insulation resistance, winding resistance, polarization index, and direct current (DC) step voltage testing have been favorable with no adverse conditions noted. Bearing and winding temperatures have been stable and below alert limits, as well as current signature analysis data collected from online baker testing. Vibration data trends have also been stable and well below alert limits. The performance and trend data monitored for the 1A-A CCP motor support it being in good health and the motor is expected to perform reliably.

3.2 NRC Staff Evaluation

On July 18, 2022, the licensee declared CCP 1B-B inoperable when it was found to be incapable of meeting its flow requirements to the reactor coolant system at SQN Unit 1. In

support of the planned post-maintenance testing activities, the licensee submitted Alternative Request RP-12 requesting NRC authorization to perform short-term alternative testing for SQN Unit 1 CCP 1B-B, in lieu of specific provisions in the ASME OM Code and ASME OM Code Case OMN-16, Revision 2, "Use of a Pump Curve for Testing." Based on its evaluation of the urgent request from the licensee, the NRC staff provided a verbal authorization on July 21, 2022, for short-term alternative testing of SQN Unit 1 CCP 1B-B.

In its alternative request, the licensee asserted that compliance with the provisions of the 2004 Edition through 2006 Addenda of the ASME OM Code, Subsection ISTB, paragraph ISTB-3310, as incorporated by reference in 10 CFR 50.55a, and the provisions in ASME OM Code Case OMN-16, Revision 2, which is accepted without conditions in NRC Regulatory Guide 1.192, Revision 4, "Operation and Maintenance Code Case Acceptability, ASME OM Code," as incorporated by reference in 10 CFR 50.55a, to perform a comprehensive or preservice test of CCP 1B-B during the current plant operating conditions at SQN Unit 1, would result in a hardship without a compensating increase in the level of quality and safety in accordance with 10 CFR 50.55a(z)(2).

In that SQN Unit 1 was then in Operating Mode 1, the licensee stated that it would need to maneuver the plant from Mode 1 to a shutdown condition with the reactor vessel head removed in Mode 6 to perform the comprehensive or preservice test. According to the licensee, this plant maneuver would introduce additional shutdown risk, infrequent field and control room operations, and an increase in the volume of critical parameter monitoring. The licensee also indicated that cycling plant temperature and pressure from Mode 1 to Mode 6, and subsequently back to Mode 1 would introduce the potential to challenge both primary and secondary systems, such as simmering of safety valves. The licensee further stated that performing a mid-cycle outage at this time is not desirable because of high electrical load demands and would result in unnecessary plant transients and unnecessary radiological dose to plant personnel. The licensee also discussed the extremely high temperatures that were challenging the ability of TVA to meet the electric supply needs of its service area.

In describing its proposed alternative, the licensee stated that following repair of CCP 1B-B, initial pump operability would be established by performance of an ASME OM Code Group A pump test. The licensee indicated that the Group A pump test would be performed in accordance with Code Case OMN-16, Revision 2, in establishing a reference curve in accordance with OMN-16, subsection 16-3300, for the range of flow rates achievable during Mode 1 operation. The licensee would determine differential pressure, flow rate and vibration as part of that test. The licensee would then compare deviations from the reference values with the limits in ASME OM Code, Subsection ISTB, Table ISTB-5121-1, and take any necessary corrective action in accordance with OMN-16, subsection 16-6200, "Corrective Action."

In discussing the post-maintenance testing for CCP 1B-B, the licensee stated that any significant abnormalities in pump performance should be detectable by a deviation from the expected hydraulic performance. The licensee also planned to monitor the performance of CCP 1B-B during plant operation. For example, the licensee stated that CCP 1B-B has performance parameters that can detect degradation or eminent failure when the pump is in normal service. In particular, the licensees stated that an adverse condition monitoring plan would be in place in accordance with TVA procedures to monitor pump parameters such as vibration data, balance drum recirculation flow, and other parameters.

When reaching U1R25, the licensee stated that it would conduct the comprehensive or preservice test for CCP 1B-B as required by ASME OM Code, Subsection ISTB, paragraph

ISTB-3310. The licensee stated that, in the event of an unplanned outage before U1R25, an evaluation will be made of whether plant conditions would be favorable to performing the required comprehensive or preservice test required by ISTB-3310. This evaluation would include consideration of the removal of the reactor vessel head to conduct the testing.

In its supplement to the alternative request dated July 21, 2022, the licensee provided additional information to support Alternative Request RP-12 for SQN Unit 1 CCP 1B-B. For example, the licensee indicated, based on its current determination, that the cause of the failure of CCP 1B-B is wear of the rotating element after 21 years (100,000 hours) of high head and low flow operation, with the planned replacement of the pump element and associated parts. The licensee also reported that following the failure of CCP 1B-B, a current signature analysis test was performed on the pump motor using Baker diagnostic equipment, and the pump motor data showed no adverse impact on motor operation. Further, the licensee determined that no concern currently exists for a similar failure of SQN Unit 1 CCP 1A-A because it has experienced only one-tenth of the operating hours of CCP 1B-B.

Based on the information described above for SQN Unit 1 CCP 1B-B, the NRC staff finds that a hardship existed without a compensating increase in the level of quality and safety in accordance with 10 CFR 50.55a(z)(2) for the performance of a comprehensive or preservice test of CCP 1B-B following the repair maintenance activity in July 2022. With the compensating measures described in the licensee's request, the NRC finds that the licensee's proposed alternative, submitted in accordance with 10 CFR 50.55a(z)(2), will provide reasonable assurance that SQN Unit 1 CCP 1B-B will be operationally ready to perform its safety function until the comprehensive or preservice test of CCP 1B-B is performed during U1R25. This authorization of one-time Alternative Request RP-12 for CCP 1B-B is applicable until U1R25.

4.0 CONCLUSION

On July 21, 2022, the NRC provided verbal authorization of Alternative Request RP-12 for SQN Unit 1. Based on its review described in this safety evaluation, the NRC staff finds that the licensee's proposed alternative, submitted in accordance with 10 CFR 50.55a(z)(2), will provide reasonable assurance that SQN Unit 1, CCP 1B-B will be operationally ready to perform its safety function until the comprehensive or preservice test of CCP 1B-B is performed during U1R25. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(2) for Alternative Request RP-12. Therefore, the NRC staff authorizes one-time Alternative Request RP-12 until U1R25. If the licensee identifies a performance issue with SQN Unit 1, CCP 1B-B, the licensee will be expected to take action to implement the requirements of its Technical Specifications.

All other ASME OM Code requirements for which relief or an alternative was not specifically requested and granted or authorized (as applicable) as part of this request remain applicable.

Principal Contributors: T. Scarbrough, NRR
Y. Wong, NRR

Dated: November 7, 2022