



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

March 4, 2022

Mr. Kevin Cimorelli
Site Vice President
Susquehanna Nuclear, LLC
769 Salem Boulevard
NUCSB3
Berwick, PA 18603-0467

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 –
REGULATORY AUDIT PLAN IN SUPPORT OF LICENSE AMENDMENT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS FOR REACTOR
STEAM DOME PRESSURE – LOW INSTRUMENTATION FUNCTION
ALLOWABLE VALUES (EPID L-2021-LLA-0062)

Dear Mr. Cimorelli:

By letter PLA-7950 dated October 5, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21279A026), as supplemented by letter PLA-7979 dated December 16, 2021 (ADAMS Accession No. ML21350A265), Susquehanna Nuclear, LLC (the licensee) requested to amend Renewed Facility Operating License Nos. NPF-14 and NPF-22 for Susquehanna Steam Electric Station, Units 1 and 2, respectively. The licensee requested to revise the technical specifications for the emergency core cooling system instrumentation.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's application and determined that a regulatory audit would assist in the timely completion of the review. The NRC staff will conduct a regulatory audit to support its review in accordance with the enclosed audit plan. A regulatory audit is a planned activity that includes the examination and evaluation of primarily non-docketed information.

The NRC staff will conduct the audit to increase its understanding of the application and identify information that will require docketing to support the NRC staff's regulatory findings. The NRC staff will conduct the audit virtually from approximately March 9 through April 29, 2022.

K. Cimorelli

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If you have any questions, please contact me at (301) 415-0489 or by e-mail at Audrey.Klett@nrc.gov.

Sincerely,

/RA/

Audrey L. Klett, Senior Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-387 and 50-388

Enclosure:
Audit Plan

cc: Listserv

REGULATORY AUDIT PLAN
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
IN SUPPORT OF LICENSE AMENDMENT REQUEST TO REVISE
TECHNICAL SPECIFICATIONS FOR REACTOR STEAM DOME PRESSURE – LOW
INSTRUMENTATION FUNCTION ALLOWABLE VALUES
SUSQUEHANNA NUCLEAR, LLC
SUSQUEHANNA STEAM ELECTRIC STATIONS, UNITS 1 AND 2
DOCKET NOS. 50-387 AND 50-388

1.0 BACKGROUND

By letter PLA-7897 (Reference 1), as supplemented by letter PLA-7979 (Reference 2), Susquehanna Nuclear, LLC, (the licensee) submitted a license amendment request (LAR) to amend the technical specifications (TS) in Renewed Facility Operating License Nos. NPF-14 and NPF-22 for Susquehanna Steam Electric Station, Units 1 and 2, respectively. The licensee proposed to modify the plant's instrumentation allowable values for the core spray and the low-pressure cooling injection systems' reactor steam dome pressure low initiation and injection permissive instrumentation functions in Table 3.3.5.1-1 in each unit's TS 3.3.5.1, "Emergency Core Cooling System (ECCS) Instrumentation." The licensee also proposed to revise the analytical limits and setpoints associated with these allowable values.

The U.S. Nuclear Regulatory Commission (NRC) staff has started its review of the LAR per NRR Office Instruction LIC-101, "License Amendment Review Procedures" (Reference 3).

2.0 REGULATORY AUDIT BASIS

A regulatory audit is a planned license- or regulation-related activity that includes the examination and evaluation of information of primarily non-docketed information. NRC staff conducts an audit to gain understanding, verify information, and identify information that will require docketing to support the basis of a licensing or regulatory decision. An audit helps the NRC staff with understanding the licensee's proposed changes, conducting its review, and gaining insights on the licensee's processes and procedures related to the proposed changes.

The NRC staff will conduct this audit per NRR Office Instruction LIC-111, "Regulatory Audits" (Reference 4), with exceptions noted within this audit plan. The NRC staff will perform the audit to support its evaluation of whether the licensee's request can be approved per Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.90, "Application for amendment of license, construction permit, or early site permit." The NRC staff will use the Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-115, "Processing Requests for Additional Information" (Reference 5), to request information needed to make a licensing or regulatory decision.

3.0 REGULATORY AUDIT SCOPE AND METHODOLOGY

NRC's goals of the audit are the following:

- Gain a better understanding of the detailed calculations, analyses, and bases underlying the LAR and confirm the staff's understanding of the LAR.
- Gain a better understanding of plant design features and their implications for the LAR.
- Identify any information needed to enable the staff's evaluation of whether the proposed changes challenge design-basis functions or adversely affect the capability or capacity of plant equipment to perform design-basis functions.
- Identify questions and requests that may become requests for additional information per NRR Office Instruction LIC-115.

4.0 INFORMATION AND OTHER MATERIAL NECESSARY FOR THE AUDIT

The NRC staff will request information (e.g., methodology, process information, and calculations) and interviews throughout the audit period. The NRC staff's initial audit questions and discussion topics are listed in the attachment to this audit plan. The NRC's licensing project manager will email any additional audit questions or requests as supplements to this audit plan so that the licensee can better prepare for audit discussions with NRC staff. The NRC staff requests the licensee to have the requested audit information listed in the audit items list to be readily available and accessible for the NRC staff's review via a Web-based portal. Any information accessed through the licensee's portal will not be held or retained in any way by NRC staff. The NRC staff will schedule audit meetings with the licensee as needed.

5.0 TEAM ASSIGNMENTS

The audit team will consist of the following NRC staff.

- Audrey Klett, Plant Licensing Branch 1 (LPL1)
- Hang Vu, Instrumentation and Controls Branch (EICB)
- Richard Stattel, EICB
- Summer Sun, Nuclear Systems Performance Branch (SNSB)
- Ashley Smith, Nuclear Methods and Fuel Analysis Branch (SFNB)
- Michael Breach, Mechanical Engineering and Inservice Testing Branch (EMIB)
- Yuken Wong, EMIB
- Thomas Scarbrough, EMIB
- Khadijah West, Technical Specifications Branch (STSB)

6.0 LOGISTICS

To support the schedule established when the NRC staff accepted the LAR for technical review, audit activities will be performed remotely and virtually using Microsoft Teams, teleconference, and any Web-based portals or meeting spaces created by the licensee. NRC information requests and communications with licensee staff will be coordinated through the NRC's licensing project manager.

The audit will occur March 9 through April 29, 2022. If requested, the audit team will conduct a telephone conference with the licensee for the purposes of introducing the team, discussing the scope of the audit, and describing the information to be made available on the internet portal.

The audit team will also confirm with the licensee if the information made available on the online portal contains any sensitive or proprietary information. The audit team may request that the licensee and its representatives answer any audit team questions during the audit related to information provided on the portal at a mutually agreeable day and time by telephone conference or Microsoft Teams meetings. The NRC will work with the licensee to schedule additional audit meetings to discuss information needs and questions arising from the NRC's review of the audited information.

The NRC staff requests the licensee to have the information referenced in Section 4.0 of this audit plan available and accessible for the NRC staff's review via an internet-based portal within two weeks of the date of this audit plan. The NRC staff requests that any supplemental information requested be available and accessible for the NRC staff's review within one week of the date of the NRC's notification to the licensee of the new requests. The NRC's licensing project manager will inform the licensee via routine communications when the NRC staff no longer needs access to the portal. The NRC staff requests the licensee to notify the NRC's licensing project manager when an audit item is added to its portal.

The NRC staff does not foresee the need for an onsite visit or in-person discussions between the NRC and licensee staff to discuss information to be provided on the portal at this time. However, if the need for a such a meeting is identified in the future, the audit plan will be revised and the schedule for the audit will be adjusted accordingly. The NRC project manager will coordinate any changes to the audit schedule and location with the licensee.

7.0 SPECIAL REQUESTS

The NRC requests access to requested documents and information through a Web-based portal that allows the NRC staff to access documents over the Internet. The following conditions associated with the online portal must be maintained while the NRC staff and contractors have access to the online portal:

- The online portal will be password-protected. A separate password will be assigned to each member of the NRC staff and NRC contractors participating in the audit.
- The online portal will prevent the NRC participants from printing, saving, downloading, or collecting any information directly from the online portal.
- Conditions of use of the online portal will be displayed on the login screen and will require acknowledgment by each user.

Username and password information should be provided directly to members of the NRC staff and contractors. The NRC licensing project manager will provide the licensee names and contact information of the NRC staff and contractors participating in the audit. All other communications should be coordinated through the NRC project manager.

8.0 DELIVERABLES

The NRC staff will develop any requests for additional information (RAIs), as needed, via NRR Office Instruction LIC-115 and issue such RAIs separately from audit-related correspondence. The NRC staff will issue an audit summary report prior to completing its review of the LAR.

9.0 REFERENCES

1. Letter from K. Cimorelli to the U.S. Nuclear Regulatory Commission, "Susquehanna Steam Electric Station Proposed Amendment to Licenses NPF-14 and NPF-22: Revise Reactor Steam Dome Pressure – Low Instrumentation Function Allowable Value PLA-7950," October 5, 2021 (ADAMS Accession No. ML21279A026)
2. Letter from K. Cimorelli to the U.S. Nuclear Regulatory Commission, "Susquehanna Steam Electric Station Supplement to License Amendment to Revise Reactor Steam Dome Pressure – Low Instrumentation Function Allowable Value PLA-7979," December 16, 2021 (ADAMS Accession No. ML21350A265)
3. U.S. Nuclear Regulatory Commission, NRR Office Instruction LIC-101, Revision 6, "License Amendment Review Procedures," July 31, 2020 (ADAMS Accession No. ML19248C539)
4. U.S. Nuclear Regulatory Commission, NRR Office Instruction LIC-111, Revision 1, "Regulatory Audits," October 31, 2019 (ADAMS Accession No. ML19226A274)
5. U.S. Nuclear Regulatory Commission, NRR Office Instruction LIC-115, Revision 1, "Processing Requests for Additional Information," August 5, 2021 (ADAMS Accession No. ML21141A238)

LIST OF AUDIT REQUESTS

ITEM No.	AUDIT REQUEST
1	<p>The proposed upper allowable value (UAL) of 445 pounds per square inch gauge (psig) would leave margins of 5 pounds per square inch (psi) to the design pressure of 450 psig for the low-pressure piping of the low-pressure coolant injection (LPCI) system, and 55 psi to the design pressure of 500 psig for the core spray (CS) system. The location where the reactor steam dome pressure (RSDP) measurement is taken and the locations where the pressure isolation valves (PIVs) are installed in the LPCI and CS systems may be at different elevations, which may result in pressure differences caused by the effects of the elevation differences between the measured RSDP pressure and the coolant pressures for the LPCI and CS systems where the PIVs are located. The UAL is intended to protect against over-pressurization. However, the proposed pressure differences may decrease the margin to the design pressures to be smaller than the margin of 5 psi and 55 psi for the LCPI and CS systems, respectively.</p> <p>The NRC staff would like to discuss, during an audit call with the licensee, the elevation effects on the subject pressure differences. The staff requests the licensee to provide information in the audit portal that demonstrates that the proposed margins of 5 psi and 55 psi are sufficient to bound the margin decreases resulting from elevation-induced pressure differences for the LPCI and CS discussed above.</p>
2	<p>The licensee's calculation(s) supporting the proposed technical specification (TS) allowable values for the emergency core cooling systems (ECCS) instrumentation, CS and LPCI RSDP – low instrumentation functions 1.c, 1.d, 2.c, and 2.d, in TS Table 3.3.5.1-1. The calculation(s) should include: (1) the relay setting design basis, (2) the uncertainties associated with these settings, (3) the expected drift between surveillances, (4) measurement and test equipment uncertainties, (5) and the as-found and as-left tolerance acceptance values to be applied during TS surveillances.</p> <p>Alternatively, the licensee may provide a full setpoint uncertainty calculation.</p>

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 ALLOWABLE VALUES (EPID L-2021-LLA-0062) DATED MARCH 4, 2022

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RidsNrrDexEmib Resource	MBreach, NRR

ADAMS Accession No.: ML22056A012

OFFICE	NRR/DORL/LPL1/PM	NRR/DORL/LPL1/LA	NRR/DEX/EICB/TR
NAME	AKlett	KEntz	HVu
DATE	03/02/2022	03/02/2022	02/23/2022
OFFICE	NRR/DEX/EICB/BC	NRR/DSS/SNSB/TR	NRR/DSS/SNSB/BC
NAME	MWaters	SSun	SKrepel (CPeabody for)
DATE	02/23/2022	02/23/2022	02/23/2022
OFFICE	NRR/DSS/STSB/TR	NRR/DSS/STSB/BC	NRR/DORL/LPL1/BC
NAME	KWest	VCusumano	JDanna
DATE	02/23/2022	02/23/2022	03/03/2022
OFFICE	NRR/DORL/LPL1/PM		
NAME	AKlett		
DATE	03/04/2022		

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