



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE RD, STE 102
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

September 20, 2023

Brad Berryman
Senior Vice President and Chief
Nuclear Officer
Susquehanna Nuclear, LLC
769 Salem Blvd., NUCSB3
Berwick, PA 18603

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 – INITIAL
OPERATOR LICENSING EXAMINATION REPORT 05000387/2023301 AND
05000388/2023301

Dear Brad Berryman:

On August 10, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at the Susquehanna facility. The enclosed examination report documents the examination results, which were discussed on September 11, 2023, with Justin Crocker, Training Director, and other members of your staff.

The examination included the evaluation of eight applicants for reactor operator licenses, three applicants for instant senior reactor operator licenses, and three applicants for upgrade senior reactor operator licenses. The facility licensee developed the written and operating examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 12. The license examiners determined all applicants satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55, and the appropriate licenses were issued on September 11, 2023.

No findings were identified during this examination.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Donald E. Jackson, Chief
Operations Branch
Division of Operating Reactor Safety

Docket Nos. 05000387 and 05000388
License Nos. NPF-14 and NPF-22

Enclosure:
Examination Report 05000387/2023301
and 05000388/2023301 w/ Attachment:
Supplementary Information

cc w/encl: Distribution via ListServ

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 – INITIAL OPERATOR LICENSING EXAMINATION REPORT 05000387/2023301 AND 05000388/2023301 DATED SEPTEMBER 20, 2023

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EXAMINATION REPORT

**U.S. NUCLEAR REGULATORY COMMISSION
REGION I**

Docket Nos. 05000387 and 05000388

License Nos. NPF-14 and NPF-22

Enterprise Identifier: L-2023-OLL-0009

Report No. 05000387/2023301 and 05000388/2023301

Licensee: Susquehanna Nuclear, LLC

Facility: Susquehanna Steam Electric Station, Units 1 and 2

Location: Berwick, PA

Dates: July 31, 2023 - August 4, 2023 (Operating Test Administration)
August 10, 2023 (Written Examination Administration)
September 1, 2023 (Facility Submitted Post Exam Package)
August 7, 2023 - September 7, 2023 (NRC Examination Grading)
September 11, 2023 (Licenses Issued)

Examiners: T. Fish, Chief Examiner
J. Demarshall, Senior Operations Engineer
B. Fuller, Senior Operations Engineer
C. Crisden, Examiner
T. Hedigan, Operations Engineer

Approved By: Donald E. Jackson, Chief
Operations Branch
Division of Operating Reactor Safety

Enclosure

SUMMARY

ER 05000387/2023301 and 05000388/2023301; July 31, 2023 – August 10, 2023; Susquehanna Steam Electric Station, Units 1 and 2; Initial Operator Licensing Examination Report.

Five NRC examiners evaluated the competency of eight applicants for reactor operator licenses, three applicants for instant senior reactor operator licenses, and three applicants for upgrade senior reactor operator licenses. The facility licensee developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 12. The written examination was administered by the facility on August 10, 2023. NRC examiners administered the operating tests July 31, 2023 – August 4, 2023. The NRC examiners determined that all applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued.

A. NRC-Identified and Self-Revealing Findings

No findings were identified.

B. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA5 Other Activities (Initial Operator License Examination)

.1 License Applications

a. Scope

The examiners reviewed all license applications submitted by the licensee to ensure the applications reflected that each applicant satisfied relevant license eligibility requirements. The applications were submitted on NRC Form 398, "Personal Qualification Statement," and NRC Form 396, "Certification of Medical Examination by Facility Licensee." The examiner also audited three of the license applications in detail to confirm that they accurately reflected the subject applicant's qualifications. This audit focused on the applicant's experience and on-the-job training, including control manipulations that provided significant reactivity changes.

b. Findings

No findings were identified.

.2 Operator Knowledge and Performance

a. Examination Scope

On August 10, 2023, the licensee proctored the administration of the written examinations to all applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on September 1, 2023.

The NRC examination team administered various portions of the operating examination July 31, 2023 – August 4, 2023. The applicants for reactor operator licenses participated in at least two dynamic simulator scenarios, in a control room and facilities walkthrough test consisting of eleven system tasks, and an administrative test consisting of four administrative tasks. The applicants for instant senior reactor operator licenses participated in at least two dynamic simulator scenarios, a control room and facilities walkthrough test consisting of ten system tasks, and an administrative test consisting of five administrative tasks. The applicants for upgrade senior reactor operator licenses participated in at least one dynamic simulator scenario, a control room and facilities walkthrough test consisting of five system tasks, and an administrative test consisting of five administrative tasks.

b. Findings

All applicants passed the operating test and the written examination. For the written examinations, the reactor operator applicants' average score was 90.8 percent and ranged from 82.6 to 93.3 percent. The senior operator applicants' average score was 92.6 percent and ranged from 87.0 to 95.0 percent. The text of the examination questions may be accessed in the ADAMS system under the accession numbers noted in the Attachment. In accordance with current NRC policy, the release of the written examination in ADAMS to the public will be delayed for two years.

Chapter ES-403 and Form ES-403-1 of NUREG 1021 require the licensee to analyze the validity of any written examination questions that were missed by half or more of the applicants. The licensee conducted this performance analysis and submitted the analysis to the chief examiner.

.3 Initial Licensing Examination Development

a. Examination Scope

The facility licensee developed the examinations in accordance with NUREG-1021, Revision 12. All licensee facility training and operations staff involved in examination preparation and validation were listed on a security agreement. The NRC conducted an onsite validation of the operating examinations during the week of June 26, 2023.

b. Findings

No findings were identified. The examiners determined that the written and operating examinations initially submitted by the licensee were within the range of acceptability expected for a proposed examination.

.4 Simulation Facility Performance

a. Examination Scope

The examiners observed simulator performance with regard to plant fidelity during the examination validation and administration.

b. Findings

No findings were identified.

.5 Examination Security

a. Examination Scope

The examiners reviewed examination security for examination development during both the onsite preparation week and examination administration week for compliance with NUREG-1021, Revision 12 requirements. Plans for simulator security and applicant control were reviewed and discussed with licensee personnel.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

The chief examiner presented the examination results to Justin Crocker, Training Director, and other members of the licensee's staff on September 11, 2023. The licensee did not identify any information or materials used during the examination as proprietary.

ATTACHMENT: SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

K. Kline, Exam Support
C. Michaels, Exam Support

ITEMS OPENED, CLOSED, AND DISCUSSED

NONE

ADAMS DOCUMENTS REFERENCED

Accession No. ML23257A074 – FINAL-Written Exam (Note: In accordance with current NRC policy, the release of this examination in ADAMS to the public will be delayed for two years.)

Accession No. ML23257A075 – FINAL-Operating Exam (Note: In accordance with current NRC policy, the release of this examination in ADAMS to the public will be delayed for two years.)