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

February 14, 2022

Mr. Eric Carr
President and Chief Nuclear Officer
PSEG Nuclear LLC - N09
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION AND SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 − ISSUANCE OF AMENDMENT NOS. 230, 342, AND 323 RE: DELETION OF SPECIFIED DEFINITIONS AND FIGURES (EPID L-2021-LLA-0171)

Dear Mr. Carr:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment Nos. 230, 342, and 323 to Renewed Facility Operating License Nos. NPF-57, DPR-70, and DPR-75 for the Hope Creek Generating Station (Hope Creek), and Salem Nuclear Generating Station, Unit Nos. 1 and 2 (Salem), respectively, in response to your application dated September 29, 2021, as supplemented by letter dated November 18, 2021.

The amendments revise the Hope Creek and Salem technical specifications (TSs) to remove TS definitions for Member(s) of the Public, Site Boundary, and Unrestricted Area which are already present in the definitions found in the Offsite Dose Calculation Manual for each site as well as Title 10 of the *Code of Federal Regulations*, Part 20, Section 1003. The amendments also remove figures of the site and surrounding area from the TSs.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's monthly *Federal Register* notice.

Sincerely,

/RA/

James S. Kim, Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-354, 50-272, and 50-311

Enclosures:
1. Amendment No. 230 to NPF-57
2. Amendment No. 342 to DPR-70
3. Amendment No. 323 to DPR-75
4. Safety Evaluation

cc: Listserv

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

PSEG NUCLEAR LLC

DOCKET NO. 50-354

HOPE CREEK GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 230
Renewed License No. NPF-57

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment filed by PSEG Nuclear LLC, dated September 29, 2021, as supplemented by letter dated November 18, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-57 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 230, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James G. Danna

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Date: 2022.02.14 11:28:28 -05'00'

James G. Danna, Chief
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility Operating License and Technical Specifications

Date of Issuance: February 14, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 230

HOPE CREEK GENERATING STATION

RENEWED FACILITY OPERATING LICENSE NO. NPF-57

DOCKET NO. 50-354

Replace the following page of the Renewed Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
3	3

Replace the following pages of Renewed Facility Operating License No. NPF-57 with the attached revised pages. The revised pages are identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
i	i
ii	ii
iii	iii
xxiii	xxiii
1-4	1-4
1-7	1-7
1-9	1-9
5-1	5-1
5-2	5-2
5-3	5-3
6-16b	6-16b
6-16c	6-16c
6-16d	6-16d

reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(4) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(5) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(6) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility. Mechanical disassembly of the GE14i isotope test assemblies containing Cobalt-60 is not considered separation.

(7) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Part 30, to intentionally produce, possess, receive, transfer, and use Cobalt-60.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

PSEG Nuclear LLC is authorized to operate the facility at reactor core Power levels not in excess of 3902 megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 230, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

SECTION

SECTION

SECTION

DESIGN FEATURES

LIMITING CONTROL ROD PATTERN

1.20 A LIMITING CONTROL ROD PATTERN shall be a pattern which results in the core being on a thermal hydraulic limit, i.e., operating on a limiting value for APLHGR, LHGR, or MCPR.

LINEAR HEAT GENERATION RATE

1.21 LINEAR HEAT GENERATION RATE (LHGR) shall be the heat generation per unit length of fuel rod. It is the integral of the heat flux over the heat transfer area associated with the unit length.

LOGIC SYSTEM FUNCTIONAL TEST

1.22 A LOGIC SYSTEM FUNCTIONAL TEST shall be a test of all logic components, i.e., all relays and contacts, all trip units, solid state logic elements, etc, of a logic circuit, from sensor through and including the actuated device, to verify OPERABILITY. The LOGIC SYSTEM FUNCTIONAL TEST may be performed by any series of sequential, overlapping or total system steps such that the entire logic system is tested.

1.23 DELETED

1.24 Not Used

MINIMUM CRITICAL POWER RATIO

1.25 The MINIMUM CRITICAL POWER RATIO (MCPR) shall be the smallest CPR which exists in the core.

OFF-GAS RADWASTE TREATMENT SYSTEM

1.26 An OFF-GAS RADWASTE TREATMENT SYSTEM is any system designed and installed to reduce radioactive gaseous effluents by collecting reactor coolant system offgases from the main condenser evacuation system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.

OFFSITE DOSE CALCULATION MANUAL

1.27 The OFFSITE DOSE CALCULATIONAL MANUAL (ODCM) shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip Setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs required by Section 6.8.4 and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating Report and the Annual Radioactive Effluent Release Report required by Specifications 6.9.1.6 and 6.9.1.7.

SECONDARY CONTAINMENT INTEGRITY

1.39 SECONDARY CONTAINMENT INTEGRITY shall exist when:

a. All secondary containment penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an OPERABLE secondary containment automatic isolation system, or

2. Closed by at least one manual valve, blind flange, or deactivated automatic valve or damper, as applicable secured in its closed position, except as provided in Table 3.6.5.2-1 of Specification 3.6.5.2.

b. All secondary containment hatches and blowout panels are closed and sealed.

c. The filtration, recirculation and ventilation system is in compliance with the requirements of Specification 3.6.5.3.

d. For double door arrangements, at least one door in each access to the secondary containment is closed, except when the access opening is being used for entry and exit.

e. For single door arrangements, the door in each access to the secondary containment is closed, except for normal entry and exit.

f. The sealing mechanism associated with each secondary containment penetration, e.g., welds, bellows or O-rings, is OPERABLE.

g. The pressure within the secondary containment is less than or equal to the value required by Specification 4.6.5.1.a, except as indicated by the footnote for Specification 4.6.5.1.a.

SHUTDOWN MARGIN (SDM)

1.40 SHUTDOWN MARGIN shall be the amount of reactivity by which the reactor is subcritical or would be subcritical throughout the cycle assuming that:

a. The reactor is xenon free;

b. The moderator temperature is ≥ 68°F, corresponding to the most reactive state; and

c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.

1.41 Not Used

TURBINE BYPASS SYSTEM RESPONSE TIME

1.48 The TURBINE BYPASS SYSTEM RESPONSE TIME consists of two separate time intervals: a) time from initial movement of the main turbine stop valve or control valve until 80% of the turbine bypass capacity is established, and b) the time from initial movement of the main turbine stop valve or control valve until initial movement of the turbine bypass valve. Either response time may be measured by any series of sequential, overlapping, or total steps such that the entire response time is measured.

UNIDENTIFIED LEAKAGE

1.49 UNIDENTIFIED LEAKAGE shall be all leakage which is not IDENTIFIED LEAKAGE.

1.50 Not Used

VENTILATION EXHAUST TREATMENT SYSTEM

1.51 A VENTILATION EXHAUST TREATMENT SYSTEM shall be any system designed and installed to reduce gaseous radioiodine or radioactive material in particulate form in effluents by passing ventilation or vent exhaust gases through charcoal adsorbers and/or HEPA filters for the purpose of removing iodines or particulates from the gaseous exhaust stream prior to the release to the environment. Such a system is not considered to have any effect on noble gas effluents. Engineered Safety Feature (ESF) atmospheric cleanup systems are not considered to be VENTILATION EXHAUST TREATMENT SYSTEM components.

VENTING

1.52 VENTING shall be the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is not provided or required during VENTING. Vent, used in system names, does not imply a VENTING process.

5.1 SITE LOCATION

Hope Creek Generating Station is located in Salem County, New Jersey along the eastern shore of the Delaware River approximately 8 miles southwest of Salem, New Jersey and 18 miles south of Wilmington, Delaware.

5.2 CONTAINMENT

CONFIGURATION

5.2.1 The primary containment is a steel structure composed of a spherical lower portion, a cylindrical middle portion, and a hemispherical top head which form a drywell. The drywell is attached to the suppression chamber through a series of downcomer vents. The suppression chamber is a steel pressure vessel in the shape of a torus. The drywell has a nominal free air volume of 169,000 cubic feet. The suppression chamber has an air volume of 137,000 cubic feet and a water region as described in Technical Specification Bases 3/4.6.2, Depressurization Systems.

DESIGN TEMPERATURE AND PRESSURE

5.2.2 The primary containment is designed and shall be maintained for:

a. Maximum internal pressure 62 psig.

b. Maximum internal temperature: drywell 340°F.
suppression pool 310°F.

c. Maximum external differential pressure 3 psid.

SECONDARY CONTAINMENT

5.2.3 The secondary containment consists of the Reactor Building, and a portion of the main steam tunnel and has a free volume of 4,000,000 cubic feet.

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6.8.4.f Primary Containment Leakage Rate Testing Program

A program shall be established, implemented, and maintained to comply with the leakage rate testing of the containment as required by 10CFR50.54(o) and 10CFR50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in NEI 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR 50 Appendix J," Revision 3-A, dated July 2012, and the conditions and limitations specified in NEI 94-01, Revision 2-A, dated October 2008.

The peak calculated containment internal pressure for the design basis loss of coolant accident, Pa, is 50.6 psig.

The maximum allowable primary containment leakage rate, La, at Pa, shall be 0.5% of primary containment air weight per day.

Leakage Rate Acceptance Criteria are:

a. Primary containment leakage rate acceptance criterion is less than or equal to 1.0 La. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are less than or equal to 0.6 La for Type B and Type C tests and less than or equal to 0.75 La for Type A tests;

b. Air lock testing acceptance criteria are:

   1) Overall air lock leakage rate is less than or equal to 0.05 La when tested at greater than or equal to Pa,
   2) Door seal leakage rate less than or equal to 5 scf per hour when the gap between the door seals is pressurized to greater than or equal to 10.0 psig.

The provisions of Specification 4.0.2 do not apply to the test frequencies specified in the Primary Containment Leakage Rate Testing Program.

The provisions of Specification 4.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

6.8.4.g Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to member(s) of the public from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

PROCEDURES AND PROGRAMS (Continued)

1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,

2) Limitations on the concentration of radioactive material released in liquid effluents to unrestricted areas conforming to 10 CFR Part 20, Appendix B, Table II, Column 2,

3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 and with the methodology and parameters in the ODCM,

4) Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from the unit to unrestricted areas conforming to Appendix I to 10 CFR Part 50,

5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,

6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,

7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary conforming to the doses associated with 10 CFR Part 20, Appendix B, Table II, Column 1,

PROCEDURES AND PROGRAMS (Continued)

6.8.4.g Radioactive Effluent Controls Program

8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from the unit to areas beyond the site boundary conforming to Appendix I to 10 CFR Part 50,

9) Limitations on the annual and quarterly doses to a member of the public from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from the unit to areas beyond the site boundary conforming to Appendix I to 10 CFR Part 50,

10) Limitations on venting and purging of the containment through the Reactor Building Ventilation System, Hardened Torus Vent, or the FRVS to maintain releases as low as reasonably achievable, and

11) Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

h. Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluents monitoring program and modeling of the environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,

2) A Land Use Census to ensure that changes in the use of areas at and beyond the site boundary are identified and that modifications to the monitoring program are made if required by the results of this census, and

3) Participation in an Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

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

PSEG NUCLEAR LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-272

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 342
Renewed License No. DPR-70

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment filed by PSEG Nuclear LLC, acting on behalf of itself and Exelon Generation Company, LLC (the licensees), dated September 29, 2021, as supplemented by letter dated November 18, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-70 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 342, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications, and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James G. Danna

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James G. Danna, Chief
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility Operating License and Technical Specifications

Date of Issuance: February 14, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 342

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

RENEWED FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Replace the following page of Renewed Facility Operating License No. DPR-70 with the attached revised page as indicated. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
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Replace the following pages of Renewed Facility Operating License No. DPR-70 with the attached revised pages as indicated. The revised pages are identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
I	I
XVII	XVII
1-4	1-4
1-6	1-6
1-7	1-7
5-1	5-1
5-2	5-2
5-3	5-3
5-3a	5-3a
6-19a	6-19a
6-19b	6-19b

(4) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(5) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(6) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

PSEG Nuclear LLC is authorized to operate the facility at a steady state reactor core power level not in excess of 3459 megawatts (one hundred percent of rated core power).

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 342, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications, and the Environmental Protection Plan.

(3) Deleted Per Amendment 22, 11-20-79

(4) Less than Four Loop Operation

PSEG Nuclear LLC shall not operate the reactor at power levels above P-7 (as defined in Table 3.3-1 of Specification 3.3.1.1 of Appendix A to this renewed license) with less than four (4) reactor coolant loops in operation until safety analyses for less than four loop operation have been submitted by the licensees and approval for less than four loop operation at power levels above P-7 has been granted by the Commission by Amendment of this renewed license.

(5) PSEG Nuclear LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety

INDEX

DEFINITIONS

SECTION

PAGE

1.0 DEFINITIONS

INDEX

DESIGN FEATURES

b. Leakage into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be PRESSURE BOUNDARY LEAKAGE, or

c. Reactor coolant system leakage through a steam generator to the secondary system (primary-to-secondary leakage).

INSERVICE TESTING PROGRAM

1.15.1 The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).

1.16 Not Used

OFFSITE DOSE CALCULATION MANUAL (ODCM)

1.17 The OFFSITE DOSE CALCULATION MANUAL (ODCM) shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent controls and Radiological Environmental Monitoring programs required by Section 6.8.4 and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Annual Radioactive Effluent Release Reports required by Specifications 6.9.1.7 and 6.9.1.8 respectively.

OPERABLE - OPERABILITY

1.18 A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).

OPERATIONAL MODE - MODE

1.19 An OPERATIONAL MODE (i.e., MODE) shall correspond to any one inclusive combination of core reactivity condition, power level and average reactor coolant temperature specified in Table 1.1.

REACTOR TRIP SYSTEM RESPONSE TIME

1.26 The REACTOR TRIP SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

REPORTABLE EVENT

1.27 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10CFR Part 50.

SHUTDOWN MARGIN

1.28 SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all full length rod cluster assemblies (shutdown and control) are fully inserted except for the single rod cluster assembly of highest reactivity worth which is assumed to be FULLY WITHDRAWN.

1.29 Not Used

SOLIDIFICATION

1.30 Not Used

SOURCE CHECK

1.31 SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to either (a) an external source of increased radioactivity, or (b) an internal source of radioactivity (keep-alive source), or (c) an equivalent electronic source check.

STAGGERED TEST BASIS

1.32 A STAGGERED TEST BASIS shall consist of:

a. A test schedule for (n) systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into (n) equal subintervals.

b. The testing of one system, subsystem, train, or other designated component at the beginning of each subinterval.

THERMAL POWER

1.33 THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

UNIDENTIFIED LEAKAGE

1.34 UNIDENTIFIED LEAKAGE shall be all leakage (except Reactor Coolant Pump Seal Water Injection) which is not IDENTIFIED LEAKAGE.

1.35 Not Used

VENTILATION EXHAUST TREATMENT SYSTEM

1.36 A VENTILATION EXHAUST TREATMENT SYSTEM shall be any system designed and installed to reduce gaseous radioiodine and radioactive material in particulate form in effluents by passing ventilation or vent exhaust gases through charcoal adsorbers and/or HEPA filters for the purpose of removing iodines or particulates from the gaseous exhaust stream prior to the release to the environment (such a system is not considered to have any effect on noble gas effluents). Engineered Safety Feature (ESF) atmospheric cleanup systems are not considered to be VENTILATION EXHAUST TREATMENT SYSTEM components.

VENTING

1.37 VENTING shall be the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration, or other operating condition, in such a manner that replacement air or gas is not provided or required during VENTING. Vent, used in system names, does not imply a VENTING process.

5.1 SITE LOCATION

Salem Generating Station is located in Salem County, New Jersey along the eastern shore of the Delaware River approximately 8 miles southwest of Salem, New Jersey and 18 miles south of Wilmington, Delaware.

5.2 CONTAINMENT

CONFIGURATION

5.2.1 The reactor containment building is a steel lined, reinforced concrete building of cylindrical shape, with a dome roof and having the following design features:

a. Nominal inside diameter = 140 feet.

b. Nominal inside height = 210 feet.

c. Minimum thickness of concrete walls = 4.5 feet.

d. Minimum thickness of concrete roof = 3.5 feet.

e. Minimum thickness of concrete floor mat = 16 feet.

f. Nominal thickness of steel liner = 1/4 to 1/2 inch.

g. Net free volume = 2.62×10^6 cubic feet

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following testing in accordance with this program, the leakage rate acceptance criteria are less than or equal to 0.6 L_a for Type B and Type C tests and less than or equal to 0.75 L_a for Type A tests;

b. Air lock testing acceptance criteria are:

1) Overall air lock leakage rate is less than or equal to 0.05 La when tested at greater than or equal to Pa,

2) Seal leakage rate less than or equal to 0.01 La per hour when the gap between the door seals is pressurized to 10.0 psig.

Test frequencies and applicable extensions will be controlled by the Primary Containment Leakage Rate Testing Program.

The provisions of Specification 4.0.3 will be applied to the Primary Containment Leakage Rate Testing Program.

6.8.4.g Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to the members of the public from radioactive effluents as low as reasonable achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,

2) Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas conforming to 10 CFR 20, Appendix B, Table II, Column 2,

3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 and with the methodology and parameters in the ODCM,

4) Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas conforming to Appendix I to 10 CFR Part 50,

5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days.

6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 92-day period would exceed a suitable fraction of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,

7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary conforming to the doses associated with 10 CFR Part 20, Appendix B, Table II, Column 1,

8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary conforming to Appendix I to 10 CFR Part 50,

9) Limitations on the annual and quarterly doses to a member of the public from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the site boundary conforming to Appendix I to 10 CFR Part 50,

10) Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

6.8.4.h Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,

2) A Land Use Census to ensure that changes in the use of areas at and beyond the site boundary are identified and that modifications to the monitoring program are made if required by the results of the census, and

3) Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

6.8.4.i Steam Generator (SG) Program

An SG Program shall be established and implemented to ensure that SG tube integrity is maintained. In addition, the SG Program shall include the following:

a. Provisions for condition monitoring assessments. Condition monitoring assessment means an evaluation of the “as found” condition of the tubing with respect to the performance criteria for structural integrity and accident induced leakage. The “as found” condition refers to the condition of the tubing during an SG inspection outage, as determined from the inservice inspection results or by other means, prior to the plugging of tubes. Condition monitoring assessments shall be conducted during each

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

PSEG NUCLEAR LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 323
Renewed License No. DPR-75

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment filed by PSEG Nuclear LLC, acting on behalf of itself and Exelon Generation Company, LLC (the licensees), dated September 29, 2021, as supplemented by letter dated November 18, 2021, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-75 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 323, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James G. Danna

Digitally signed by James G. Danna
Date: 2022.02.14 11:30:00 -05'00'

James G. Danna, Chief
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility Operating License and Technical Specifications

Date of Issuance: February 14, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 323

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

RENEWED FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Replace the following page of Renewed Facility Operating License No. DPR-75 with the attached revised page as indicated. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
3	3

Replace the following pages of Renewed Facility Operating License No. DPR-75 with the attached revised pages as indicated. The revised pages are identified by amendment number and contains a marginal line indicating the area of change.

Remove	Insert
I	I
XVII	XVII
1-4	1-4
1-6	1-6
1-7	1-7
5-1	5-1
5-2	5-2
5-3	5-3
5-3a	5-3a
6-19a	6-19a
6-19b	6-19b

(3) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(4) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use at any time any byproduct, source or special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration and as fission detectors in amounts as required;

(5) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(6) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

PSEG Nuclear LLC is authorized to operate the facility at steady state reactor core power levels not in excess of 3459 megawatts (thermal).

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 323, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

INDEX

DEFINITIONS

SECTION PAGE

1.0 DEFINITIONS

INDEX

DESIGN FEATURES

b. Leakage into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be PRESSURE BOUNDARY LEAKAGE, or

c. Reactor coolant system leakage through a steam generator to the secondary system (primary-to-secondary leakage).

INSERVICE TESTING PROGRAM

1.15.1 The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).

1.16 Not Used

OFFSITE DOSE CALCULATION MANUAL (ODCM)

1.17 The OFFSITE DOSE CALCULATION MANUAL (ODCM) shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip Setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent controls and Radiological Environmental Monitoring programs required by Section 6.8.4 and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Annual Radioactive Effluent Release Reports required by Specifications 6.9.1.7 and 6.9.1.8 respectively.

OPERABLE - OPERABILITY

1.18 A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s), and when all necessary attendant instrumentation, controls, normal or emergency electrical power source, cooling and seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its specified safety function(s) are also capable of performing their related support function(s).

OPERATIONAL MODE - MODE

1.19 An OPERATIONAL MODE (i.e., MODE) shall correspond to any one inclusive combination of core reactivity condition, power level and average reactor coolant temperature specified in Table 1.1.

REACTOR TRIP SYSTEM RESPONSE TIME

1.26 The REACTOR TRIP SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.

REPORTABLE EVENT

1.27 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10CFR Part 50.

SHUTDOWN MARGIN

1.28 SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all full length rod cluster assemblies (shutdown and control) are fully inserted except for the single rod cluster assembly of highest reactivity worth which is assumed to be FULLY WITHDRAWN.

1.29 Not Used

SOLIDIFICATION

1.30 Not Used

SOURCE CHECK

1.31 SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to either (a) an external source of increased radioactivity, or (b) an internal source of radioactivity (keep-alive source), or (c) an equivalent electronic source check.

STAGGERED TEST BASIS

1.32 A STAGGERED TEST BASIS shall consist of:

a. A test schedule for (n) systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into (n) equal subintervals.

b. The testing of one system, subsystem, train, or other designated component at the beginning of each subinterval.

THERMAL POWER

1.33 THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

UNIDENTIFIED LEAKAGE

1.34 UNIDENTIFIED LEAKAGE shall be all leakage (except Reactor Coolant Pump Seal Water Injection) which is not IDENTIFIED LEAKAGE.

1.35 Not Used

VENTILATION EXHAUST TREATMENT SYSTEM

1.36 A VENTILATION EXHAUST TREATMENT SYSTEM shall be any system designed and installed to reduce gaseous radioiodine and radioactive material in particulate form in effluents by passing ventilation or vent exhaust gases through charcoal adsorbers and/or HEPA filters for the purpose of removing iodines or particulates from the gaseous exhaust stream prior to the release to the environment (such a system is not considered to have any effect on noble gas effluents). Engineered Safety Feature (ESF) atmospheric cleanup systems are not considered to be VENTILATION EXHAUST TREATMENT SYSTEM components.

VENTING

1.37 VENTING shall be the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration, or other operating condition, in such a manner that replacement air or gas is not provided or required during VENTING. Vent, used in system names, does not imply a VENTING process.

5.1 SITE LOCATION

Salem Generating Station is located in Salem County, New Jersey along the eastern shore of the Delaware River approximately 8 miles southwest of Salem, New Jersey and 18 miles south of Wilmington, Delaware.

5.2 CONTAINMENT

CONFIGURATION

5.2.1 The reactor containment building is a steel lined, reinforced concrete building of cylindrical shape, with a dome roof and having the following design features:

a. Nominal inside diameter = 140 feet.

b. Nominal inside height = 210 feet.

c. Minimum thickness of concrete walls = 4.5 feet.

d. Minimum thickness of concrete roof = 3.5 feet.

e. Minimum thickness of concrete floor mat = 16 feet.

f. Nominal thickness of steel liner = 1/4 to 1/2 inch.

g. Net free volume = 2.62×10^6 cubic feet

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acceptance criteria are less than or equal to 0.6 La for Type B and Type C tests and less than or equal to 0.75 La for Type A tests;

b. Air lock testing acceptance criteria are:

1) Overall air lock leakage rate is less than or equal to 0.05 La when tested at greater than or equal to Pa,

2) Seal leakage rate less than or equal to 0.01 La per hour when the gap between the door seals is pressurized to 10.0 psig.

Test frequencies and applicable extensions will be controlled by the Primary Containment Leakage Rate Testing Program.

The provisions of Specification 4.0.3 will be applied to the Primary Containment Leakage Rate Testing Program.

6.8.4.g Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to the members of the public from radioactive effluents as low as reasonable achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM,

2) Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas conforming to 10 CFR 20, Appendix B, Table II, Column 2,

3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 and with the methodology and parameters in the ODCM,

4) Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas conforming to Appendix I to 10 CFR Part 50,

5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days.

6) Limitations on the operability and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 92-day period would exceed a suitable fraction of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50,

7) Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary conforming to the doses associated with 10 CFR Part 20, Appendix B, Table II, Column 1,

8) Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary conforming to Appendix I to 10 CFR Part 50,

9) Limitations on the annual and quarterly doses to a member of the public from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the site boundary conforming to Appendix I to 10 CFR Part 50,

10) Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

6.8.4.h Radiological Environmental Monitoring Program

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the ODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM,

2) A Land Use Census to ensure that changes in the use of areas at and beyond the site boundary are identified and that modifications to the monitoring program are made if required by the results of the census, and

3) Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

6.8.4.i Steam Generator (SG) Program

An SG Program shall be established and implemented to ensure that SG tube integrity is maintained. In addition, the SG Program shall include the following:

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 230, 342, AND 323 TO

RENEWED FACILITY OPERATING LICENSE NOS. NPF-57, DPR-70, AND DPR-75

PSEG NUCLEAR LLC

HOPE CREEK GENERATING STATION

AND

PSEG NUCLEAR LLC

CONSTELLATION ENERGY GENERATION, LLC

SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-354, 50-272, AND 50-311

1.0 INTRODUCTION

By application dated September 29, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21272A184), as supplemented on November 18, 2021 (ADAMS Accession No. ML21323A016), PSEG Nuclear LLC (PSEG, the licensee), submitted a license amendment request (LAR, application) to the U.S. Nuclear Regulatory Commission (NRC, Commission) to change technical specifications (TSs) for Salem Nuclear Generating Station (Salem), Units 1 and 2, and the Hope Creek Generating Station (Hope Creek).

The LAR proposed to revise Section 1.0, “DEFINITIONS,” in both the Salem and Hope Creek technical specifications (TSs) to delete the definitions for “MEMBER(S) OF THE PUBLIC,” “SITE BOUNDARY,” and “UNRESTRICTED AREA.” These terms are already defined in the Offsite Dose Calculation Manuals (ODCMs) for both stations and in the definitions contained in Title 10 of the *Code of Federal Regulations* (10 CFR), Part 20, “Standards for Protection Against Radiation,” Section 1003, “Definitions.” In conjunction with these changes, references to these deleted definitions within the Salem and Hope Creek TSs are proposed to be revised to show as non-capitalized font to reflect that these terms are no longer TS DEFINITIONS. The proposed change also removes figures portraying the Plant Site, Exclusion Area, and Low Population Zone from TS Section 5, “Design Features,” from both the Salem and Hope Creek TSs. TS Section 5.1, “SITE,” of both stations is proposed to be revised to provide a text description of the location of the plant due to the proposed removal of the site figures currently referenced in TS Section 5.1. In addition, TS Section 5.1 will be renamed “SITE LOCATION” for consistency with the Standard Technical Specifications (STS).

The supplemental letter dated November 18, 2021, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on November 30, 2021 (86 FR 67989).

2.0 REGULATORY EVALUATION

2.1 Description of Salem Proposed TS Changes

2.1.1 Salem TS DEFINITIONS to be Deleted

MEMBER(S) OF THE PUBLIC

1.16 MEMBER(S) OF THE PUBLIC shall be all those persons who are not occupationally associated with the plant. This category does not include employees of PSE&G, its contractors, or vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational, or other purposes not associated with the plant.

SITE BOUNDARY

1.29 The SITE BOUNDARY shall be that line beyond which the land is not owned, leased, or otherwise controlled by the licensee, as shown in Figure 5.1-3, and which defines the exclusion area as shown in Figure 5.1-1.

UNRESTRICTED AREA

1.35 An UNRESTRICTED AREA shall be any area at or beyond the SITE BOUNDARY, access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials, or any area within the SITE BOUNDARY used for residential quarters or industrial, commercial, institutional, and/or recreational purposes.

2.1.2 Salem TS Figures to be Deleted

- Figure 5.1-1 – Exclusion Area
- Figure 5.1-2 – Low Population Zone
- Figure 5.1-3 – Area Plot Plan of Site

2.1.3 Salem TS Impacted by Deletion of DEFINITIONS and Figures

- TS INDEX to remove deleted DEFINITIONS, change the Index title for TS Section 5.1 from SITE to SITE LOCATION and delete line items in the Index for Section 5.1 associated with deleted TS Figures

- TS 5.1.1 EXCLUSION AREA – Deleted and replaced with new Section 5.1 SITE LOCATION

- TS 5.1.2 LOW POPULATION ZONE – Deleted and replaced with new Section 5.1 SITE LOCATION

- TS 5.1.3 UNRESTRICTED AREAS FOR RADIOACTIVE GASEOUS AND LIQUID EFFLUENTS – Deleted and replaced with new Section 5.1 SITE LOCATION

- New TS Section 5.1 added to replace TS 5.1.1, 5.1.2 and 5.1.3:

  5.1 SITE LOCATION
  Salem Generating Station is located in Salem County, New Jersey along the eastern shore of the Delaware River approximately 8 miles southwest of Salem, New Jersey and 18 miles south of Wilmington, Delaware.

- TS 6.8.4.g - Radioactive Effluent Controls Program - Replace capitalized font for the terms MEMBER(S) OF THE PUBLIC, UNRESTRICTED AREA and SITE BOUNDARY that are referenced within TS 6.8.4.g with normal (non-noncapitalized) font to reflect their deletion from TS DEFINITIONS

- TS 6.8.4.h – Radiological Environmental Monitoring Program - Replace capitalized font for the term SITE BOUNDARY that is referenced within TS 6.8.4.h with normal (non-noncapitalized) font to reflect its deletion from TS DEFINITIONS

2.2 Description of Hope Creek Proposed TS Changes

2.2.1 Hope Creek TS DEFINITIONS to be Deleted

MEMBER(S) OF THE PUBLIC

1.24 MEMBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the utility, its contractors, or vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational, or other purposes not associated with the plant.

SITE BOUNDARY

1.41 The SITE BOUNDARY shall be that line beyond which the land is neither owned, nor leased, nor otherwise controlled by the licensee.

UNRESTRICTED AREA

1.50 An UNRESTRICTED AREA shall be any area at or beyond the SITE BOUNDARY, access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials, or any area within the SITE BOUNDARY used for residential quarters or industrial, commercial, institutional, and/or recreational purposes.

2.2.2 Hope Creek TS Figures to be Deleted

- Figure 5.1.1-1 – Exclusion Area and Unrestricted Areas and Site Boundary for Radioactive Gaseous and Liquid Effluents
- Figure 5.1.2-1 – Low Population Zone

2.2.3 Hope Creek TS Impacted by Deletion of DEFINITIONS and Figures

- TS INDEX to remove deleted DEFINITIONS, change the Index title for TS Section 5.1 from SITE to SITE LOCATION and delete line items in the Index for Section 5.1 associated with deleted TS Figures

- TS 5.1.1 - EXCLUSION AREA AND MAP DEFINING UNRESTRICTED AREAS AND SITE BOUNDARY FOR RADIOACTIVE GASEOUS AND LIQUID EFFLUENTS – Deleted and replaced with new Section 5.1 – SITE LOCATION

- TS 5.1.2 – LOW POPULATION ZONE – Deleted and replaced with new Section 5.1 – SITE LOCATION

- New TS Section 5.1 added to replace TS 5.1.1 and 5.1.2:

  5.1 SITE LOCATION
  Hope Creek Generating Station is located in Salem County, New Jersey along the eastern shore of the Delaware River approximately 8 miles southwest of Salem, New Jersey and 18 miles south of Wilmington, Delaware.

- TS 6.8.4.g – Radioactive Effluent Controls Program – Replace capitalized font of the terms MEMBERS OF THE PUBLIC, UNRESTRICTED AREA and SITE BOUNDARY that are referenced within TS 6.8.4.g with normal (non-capitalized) font to reflect their deletion from TS DEFINITIONS

- TS 6.8.4.h – Radiological Environmental Monitoring Program - Replace capitalized font for the term SITE BOUNDARY that is referenced within TS 6.8.4.h with normal (non-noncapitalized) font to reflect its deletion from TS DEFINITIONS

2.3 Regulatory Requirements and Guidance

The NRC staff considered the following regulations and guidance during its review of the LAR:

Section 50.36, “Technical specifications,” of Title 10 of the *Code of Federal Regulations* (10 CFR) contains the requirements for the content of TS. Section 50.36(c) of 10 CFR requires TSs to include items in the following categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls. Paragraph 50.36(c)(4) states, in part, that design features to be included in the TSs are those features of the facility such as materials of construction and geometric arrangements, which, if altered or modified, would have a significant effect on safety. Paragraph 50.36(c)(5) states, in part, that administrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner.

The NRC staff's guidance for the review of TSs is in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition" (SRP)," Chapter 16.0, "Technical Specifications," Revision 3, dated March 2010 (ADAMS Accession No. ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared STS for each of the LWR nuclear designs. Accordingly, for Westinghouse plant designs, the NRC staff's review includes consideration of whether the proposed changes are consistent with NUREG-1431, "Standard Technical Specifications – Westinghouse Plants."[1] Additionally, for General Electric plant designs, the NRC staff's review includes consideration of whether the proposed changes are consistent with NUREG-1433, "Standard Technical Specifications – General Electric Plants (BWR/4)."[2]

In general, there are two classes of changes to TSs: (1) changes needed to reflect modifications to the design-basis (TSs are derived from the design-basis), and (2) voluntary changes to take advantage of the evolution in policy and guidance as to the required content and preferred format of TSs over time. The proposed amendments relate to the second class of changes. Specifically, the proposed changes are based on TS improvements contained in the STS. The NRC staff used this guidance in evaluating the proposed amendments.

3.0 TECHNICAL EVALUATION

The NRC staff evaluated the licensee's application to determine whether the proposed changes discussed in Sections 2.1 and 2.2 of this safety evaluation (SE) are consistent with the regulations and guidance discussed in Section 2.3 of this SE.

In accordance with the Commission's Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors (58 FR 39132; July 22, 1993), improved STS (e.g., NUREG-1431 and NUREG-1433) have been developed and are maintained for each nuclear steam supply system owners' group. The Commission encourages licensees to use the improved STS as the basis for plant-specific TSs. Although the Salem Units 1 and 2, and Hope Creek Unit 1 TSs are not based on the guidance in NUREG-1431 and NUREG-1433, respectively, the Commission policy also recognizes selective incorporation of improved STS requirements may occur by noting that "licensees may adopt portions of the improved STS without fully implementing all STS improvements."

3.1 Changes that Remove TS DEFINITIONS

The licensee proposed to delete the TS DEFINITIONS for the terms "MEMBER(S) OF THE PUBLIC," "SITE BOUNDARY," and "UNRESTRICTED AREA." In conjunction with deleting these terms, the licensee proposed corresponding changes to the TS INDEX and replacing the capitalized font for these terms that are referenced within the TS with normal (non-capitalized) font. In the application, the licensee states that "[t]hese terms are already defined within 10 CFR 20.1003 and are defined in the Offsite Dose Calculation Manual (ODCM) for both

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[1] U.S. Nuclear Regulatory Commission, "Standard Technical Specifications – Westinghouse Plants," NUREG-1431, Volume 1, "Specifications," Revision 5, September 2021 (ADAMS Accession No. ML21259A155).

[2] U.S. Nuclear Regulatory Commission, "Standard Technical Specifications – General Electric Plants (BWR/4)" NUREG-1433, Volume 1, "Specifications," Revision 5, September 2021 (ADAMS Accession No. ML21272A357). To note, in the LAR, the licensee cites Revision 4, not Revision 5 of NUREG-1433; however, the STSs at issue in the LAR did not change from Revision 4 to Revision 5.

stations. Having these terms defined in the TS in addition to 10 CFR 20 and licensee-controlled station documents is duplicative." In addition, the licensee states in the application that "[d]eletion of the definitions from the TS does not affect the substance of any TS requirement, and the definitions are not needed for clarity as these terms are used in the TS. Deleting these terms as TS DEFINITIONS … does not affect the design or operation of any plant Structures, Systems or Components (SSCs) and will also align the Salem and Hope Creek TS with NUREG-1431 and NUREG-1433 respectively relative to these specific terms in the TS DEFINITIONS."

The staff reviewed the information provided in the application regarding the proposed deletions of these TS Definitions. Based on the information provided in the application and summarized above, the NRC staff determined that the proposed deletion of these TS Definitions will not impact or change any safety limits, limiting safety system settings, limiting control settings, limiting conditions for operation, or surveillance requirements as described in paragraphs (c)(1), (c)(2), and (c)(3) of 10 CFR 50.36. These proposed changes also align with guidance contained in NUREG-1431 and NUREG-1433 relative to not having these specific terms defined in the TS DEFINITIONS. The staff also notes that these terms are defined in 10 CFR 20.1003 and in each plant's ODCM, in which changes are subject to the administrative control provisions of 10 CFR 50.36(c)(5) through plant-specific TS 6.14 ODCM requirements. In addition, the NRC staff determined that the proposed non-capitalized font is consistent with the customary TS formatting for terminology that is not defined in TS. Therefore, the staff finds these proposed TS changes are acceptable because they are consistent with guidance, do not affect the substance of any TS requirement or are not needed for clarity, and the proposed TSs will continue to meet the requirements of 10 CFR 50.36(c)(5).

The application also contained changes to the TS INDEX, as identified in Sections 2.1 and 2.2 of this SE, that reflect the proposed changes to TS DEFINITIONS. The NRC staff finds these proposed changes are acceptable because they are editorial clarifications and do not substantively change TS requirements.

3.2 Changes that Remove TS Figures that Depict the Site and Surrounding Area

The licensee proposed to delete figures contained in the Salem and Hope Creek TSs (Design Features) that depict the site and surrounding area. In the application, the licensee states that "[t]hese diagrams are legacy in their depiction and diagrams of this nature and supporting text are also contained in licensee-controlled documents such as the Updated Final Safety Analysis Reports (UFSAR) and ODCMs for both plants." In addition, the licensee further states, "[i]n conjunction with the deletion of these diagrams is the proposed revision to TS Section 5.1 to provide a text description of the site location since the current TS descriptions reference the TS Figures being deleted. The associated diagrams and Section 5.1 references to the diagrams are not requirements of 10 CFR 50.36(c)(4), Design Features of Technical Specifications. Replacement of these diagrams and references to them with a text description of the Site Location … do not affect the design or operation of any plant SSCs and aligns the Salem and Hope Creek TS to NUREG-1431 and NUREG-1433 respectively relative to descriptions of the Site."

The staff reviewed the information provided in the application regarding the deleted figures and corresponding change to the site location description. Based on the information provided in the application and summarized above, the NRC staff determined that no physical modifications to the facilities are required to implement these proposed changes, and thus, these changes would have no effect on the materials of construction or geometric arrangements of features of the

facility as described in 10 CFR 50.36(c)(4). In addition, the NRC staff determined that the proposed deletion of the figures and adding a site location description will not impact or change any safety limits, limiting safety system settings, limiting control settings, limiting conditions for operation, or surveillance requirements as described in paragraphs (c)(1), (c)(2), and (c)(3) of 10 CFR 50.36. Furthermore, the staff also notes that "diagrams of this nature," as referenced by the licensee, are contained in each plant's UFSAR and ODCM. The approach for changes to the UFSAR are governed by the requirements of 10 CFR 50.59, "Changes, tests, and experiments," and changes to the ODCM are subject to the administrative control provisions of 10 CFR 50.36(c)(5) through plant-specific TS 6.14 ODCM requirements. These proposed changes also align with guidance provided in both Section 4.0, "Design Features," which does not include a site map or references to locations depicted on a site map, and Section 4.1, "Site Location," which specifies a text description of the site location, of NUREG-1431 and NUREG-1433. Therefore, the staff finds these proposed TS changes continue to meet the requirements of 10 CFR 50.36(c)(4) and are acceptable.

The application also contained changes to the TS INDEX, as identified in Sections 2.1 and 2.2 of this SE, that reflects proposed changes to the site location. The NRC staff finds the proposed changes are acceptable because they are editorial clarifications and do not substantively change TS requirements.

3.3 Conclusion

Based on the above, the NRC staff determined that the proposed TS changes to Salem and Hope Creek are acceptable because the proposed TSs are consistent with applicable STS guidance and comply with the requirements of 10 CFR 50.36.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendments on February 3, 2022. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change the format of the license or permit or otherwise make editorial, corrective or other minor revisions. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, as published in the *Federal Register* on November 30, 2021 (86 FR 67989), and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: C. Ashley

Date: February 14, 2022

SUBJECT: HOPE CREEK GENERATING STATION AND SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 − ISSUANCE OF AMENDMENT NOS. 230, 342, AND 323 RE: DELETION OF SPECIFIED DEFINITIONS AND FIGURES (EPID L-2021-LLA-0171) DATED FEBRUARY 14, 2022

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