



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

August 7, 1989

Docket No. 50-354

Mr. Steven E. Miltenberger
Vice President and Chief Nuclear
Officer
Public Service Electric & Gas Company
Post Office Box 236
Hancocks Bridge, New Jersey 08038

Dear Mr. Miltenberger:

SUBJECT: REVISE TECHNICAL SPECIFICATION REQUIREMENTS FOR THE FILTRATION,
RECIRCULATION, AND VENTILATION SYSTEM (FRVS) AND THE CONTROL ROOM
EMERGENCY FILTRATION SYSTEM (CREFS) (TAC NO. 66830)

Re: HOPE CREEK GENERATING STATION

The Commission has issued the enclosed Amendment No. 30 to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated November 25, 1987, as supplemented on April 17, 1989. The supplemental letter clarified the original application.

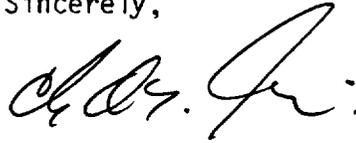
This amendment results in separate Technical Specification sections for the FRVS Ventilation Subsystem and the FRVS Recirculation Subsystem, changes the acceptance criterion for testing the charcoal absorbent in the FRVS Recirculation Subsystem, and changes the definition of situations where tests of the FRVS need to be performed. In addition, it contains minor clarifications for the FRVS and the CREFS.

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A copy of our safety evaluation is also enclosed. Notice of Issuance will be forwarded to the Office of the Federal Register for publication.

Sincerely,



Clyde Shiraki, Project Manager
Project Directorate I-2
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

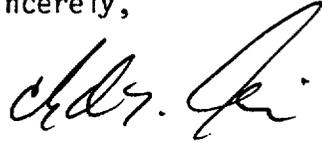
Enclosures:

1. Amendment No. 30 to
License No. NPF-57
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:
See next page

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Sincerely,



Clyde Shiraki, Project Manager
Project Directorate I-2
Division of Reactor Projects I/II
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6/15/89
7/21/89
wanted revision to FR notice

Mr. Steven E. Miltenberger
Public Service Electric & Gas Co.

Hope Creek Generating Station

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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-354

HOPE CREEK GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 30
License No. NPF-57

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the Public Service Electric & Gas Company (PSE&G) dated November 25, 1987 as supplemented on April 27, 1989, 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 set forth in 10 CFR Chapter I;
 - 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 Facility Operating License No. NPF-57 is hereby amended to read as follows:

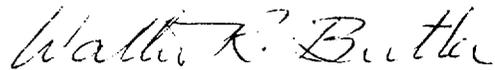
(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 30, and the Environmental Protection Plan contained in

Appendix B, are hereby incorporated in the license. PSE&G 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 7, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 30

FACILITY OPERATING LICENSE NO. NPF-57

DOCKET NO. 50-354

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. Overleaf pages provided to maintain document completeness.*

<u>Remove</u>	<u>Insert</u>
3/4 6-51	3/4 6-51
3/4 6-52	3/4 6-51a
-	3/4 6-52
-	3/4 6-52a
3/4 6-53	3/4 6-53
3/4 6-54	3/4 6-53a
-	3/4 6-54*
-	3/4 6-55*
3/4 7-7	3/4 7-7
3/4 7-8*	3/4 7-8*

CONTAINMENT SYSTEMS

3.6.5.3 FILTRATION, RECIRCULATION AND VENTILATION SYSTEM (FRVS)

FRVS VENTILATION SUBSYSTEM

LIMITING CONDITION FOR OPERATION

3.6.5.3.1 Two FRVS ventilation units shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.

ACTION:

- a. With one of the above required FRVS ventilation units inoperable, restore the inoperable unit to OPERABLE status within 7 days, or:
 1. In OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 2. In Operational Condition *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.
- b. With both ventilation units inoperable in Operational Condition *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS or operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3. are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.3.1 Each of the two ventilation units shall be demonstrated OPERABLE:

- a. At least once per 14 days by verifying that the water seal bucket traps have a water seal and making up any evaporative losses by filling the traps to the overflow.
- b. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 hours with the heaters on in order to reduce the buildup of moisture on the carbon adsorbers and HEPA filters.

*When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months or upon determination** that the HEPA filters or charcoal adsorbent could have been damaged by structural maintenance or adversely affected by any chemicals, fumes or foreign materials (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the subsystem by:
1. Verifying that the subsystem satisfies the in-place penetration testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rates are 9,000 cfm \pm 10% for each FRVS ventilation unit.
 2. Verifying within 31 days after removal from the FRVS ventilation units, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 1.0% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803; and
 3. Verifying a subsystem flow rate of 9,000 cfm \pm 10% for each FRVS ventilation unit during system operation when tested in accordance with ANSI N510-1980.
- d. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal from the FRVS ventilation units, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 1.0% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

**This determination shall consider the maintenance performed and/or the type, quantity, length of contact time, known effects and previous accumulation history for all contaminants which could reduce the system performance to less than that verified by the acceptance criteria in items c.1 through c.3 below.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- e. At least once per 18 months by:
 - 1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 5 inches Water Gauge in the ventilation unit while operating the filter train at a flow rate of 9,000 cfm \pm 10% for each FRVS ventilation unit.
 - 2. Verifying that the filter train starts and isolation dampers open on each of the following test signals:
 - a. Manual initiation from the control room, and
 - b. Simulated automatic initiation signal.
 - 3. Verifying that the heaters dissipate 32 ± 3 kw for each ventilation unit when tested in accordance with ANSI N510-1980, and verifying humidity is maintained less than or equal to 70% relative humidity through the carbon adsorbers by performance of a channel calibration of the humidity control instrumentation.
- f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter bank satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with Regulatory Position C.5.a and C.5.c of Regulatory Guide 1.52, Revision 2 March 1978, while operating the system at a flow rate of 9,000 cfm \pm 10% for each FRVS ventilation unit.
- g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorber bank satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with Regulatory Position C.5.a and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 9,000 cfm \pm 10% for each FRVS ventilation unit.

CONTAINMENT SYSTEMS

3.6.5.3 FILTRATION, RECIRCULATION AND VENTILATION SYSTEM (FRVS)

FRVS RECIRCULATION SUBSYSTEM

LIMITING CONDITION FOR OPERATION

3.6.5.3.2 Five FRVS recirculation units shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.

ACTION:

- a. With one of the above required FRVS recirculation units inoperable, restore the inoperable unit to OPERABLE status within 7 days, or:
 1. In OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 2. In Operational Condition *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.
- b. With two of the above required FRVS recirculation units inoperable in Operational Condition *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS or operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.3.2 Each of the six FRVS recirculation units shall be demonstrated OPERABLE:

- a. At least once per 14 days by verifying that the water seal bucket traps have a water seal and making up any evaporative losses by filling the traps to the overflow.
- b. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 hours with the heaters on in order to reduce the buildup of moisture on the carbon adsorbers and HEPA filters.

*When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months or upon determination** that the HEPA filters or charcoal adsorbent could have been damaged by structural maintenance or adversely affected by any chemicals, fumes or foreign materials (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the subsystem by:
1. Verifying that the subsystem satisfies the in-place penetration testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rates are 30,000 cfm \pm 10% for each FRVS recirculation unit.
 2. Verifying within 31 days after removal from the FRVS recirculation units, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 7.5% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ATM D3803; and
 3. Verifying a subsystem flow rate of 30,000 cfm \pm 10% for each FRVS recirculation unit during system operation when tested in accordance with ANSI N510-1980.
- d. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal from the FRVS recirculation units, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 7.5% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

**This determination shall consider the maintenance performed and/or the type, quantity, length of contact time, known effects and previous accumulation history for all contaminants which could reduce the system performance to less than that verified by the acceptance criteria in items c.1 through c.3 below.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- e. At least once per 18 months by:
 - 1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 8 inches Water Gauge in the recirculation filter train while operating the filter train at a flow rate of 30,000 cfm \pm 10% for each FRVS recirculation unit.
 - 2. Verifying that the filter train starts and isolation dampers open on each of the following test signals:
 - a. Manual initiation from the control room, and
 - b. Simulated automatic initiation signal.
 - 3. Verifying that the heaters dissipate 100 \pm 10 kw for each recirculation unit when tested in accordance with ANSI N510-1980, and verifying humidity is maintained less than or equal to 70% relative humidity through the carbon adsorbers by performance of a channel calibration of the humidity control instrumentation.
- f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter bank satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with Regulatory Position C.5.a and C.5.c of Regulatory Guide 1.52, Revision 2 March 1978, while operating the system at a flow rate of 30,000 cfm \pm 10% for each FRVS recirculation unit.
- g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorber bank satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with Regulatory Position C.5.a and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 30,000 cfm \pm 10% for each FRVS recirculation unit.

CONTAINMENT SYSTEMS

3/4.6.6 PRIMARY CONTAINMENT ATMOSPHERE CONTROL

CONTAINMENT HYDROGEN RECOMBINER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.6.1 Two independent containment hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With one containment hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.6.6.1 Each containment hydrogen recombiner system shall be demonstrated OPERABLE:

- a. At least once per 6 months by verifying during a recombiner system functional test that the minimum reaction chamber gas temperature increases to greater than or equal to 1150°F within 120 minutes and is maintained \geq 1150°F for at least 2 hours.
- b. At least once per 18 months by:
 1. Performing a CHANNEL CALIBRATION of all recombiner control panel instrumentation and control circuits.
 2. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test within 30 minutes following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to one megaohm.

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER OXYGEN CONCENTRATION

LIMITING CONDITION FOR OPERATION

3.6.6.2 The drywell and suppression chamber atmosphere oxygen concentration shall be less than 4% by volume.

APPLICABILITY: OPERATIONAL CONDITION 1*, during the time period:

- a. Within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER, following startup, to
- b. Within 24 hours prior to reducing THERMAL POWER to less than 15% of RATED THERMAL POWER, preliminary to a scheduled reactor shutdown.

ACTION:

With the drywell and/or suppression chamber oxygen concentration exceeding the limit, restore the oxygen concentration to within the limit within 24 hours or be in at least STARTUP within the next 8 hours.

SURVEILLANCE REQUIREMENTS

4.6.6.2 The drywell and suppression chamber oxygen concentration shall be verified to be within the limit within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER and at least once per 7 days thereafter.

*See Special Test Exception 3.10.5.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 hours with the heaters on in order to reduce the buildup of moisture on the carbon adsorbers and HEPA filters.

- c. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the subsystem filter train by:
 1. Verifying that the subsystem satisfies the in-place penetration testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system filter train flow rate is 4000 cfm \pm 10%.
 2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803 with a 4 inch bed; and
 3. Verifying a subsystem filter train flow rate of 4000 cfm \pm 10% during subsystem operation when tested in accordance with ANSI N510-1980.
- d. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ATSM D3803 with a 4 inch bed.
- e. At least once per 18 months by:
 1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 7.5 inches Water Gauge while operating the filter train subsystem at a flow rate of 4000 cfm \pm 10%.
 2. Verifying with the control room hand switch in the recirculation mode that on each of the below recirculation mode actuation test signals, the subsystem automatically switches to the isolation mode of operation and the isolation dampers close within 5 seconds:

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- a) High Drywell Pressure
 - b) Reactor Vessel Water Level Low Low Low, Level 1
 - c) Control room ventilation radiation monitors high.
3. Verifying with the control room hand switch in the outside air mode that on each of the below pressurization mode actuation test signals, the subsystem automatically switches to the pressurization mode of operation and the control room is maintained at a positive pressure of at least 1/8 inch water gauge relative to adjacent areas during subsystem operation at a flow rate less than or equal to 1000 cfm:
- a) High Drywell Pressure
 - b) Reactor Vessel Water Level Low Low Low, Level 1
 - c) Control room ventilation radiation monitors high.
4. Verifying that the heaters dissipate 13 ± 1.3 Kw when tested in accordance with ANSI N510-1980 and verifying humidity is maintained less than or equal to 70% humidity through the carbon adsorbers by performance of a channel calibration of the humidity control instrumentation.
- f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter bank satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with Regulatory Positions C.5.a and C.5.c of Regulatory Guide 1.52, Revision 2, March 1978, while operating the system at a flow rate of 4000 cfm \pm 10%.
- g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorber bank satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with Regulatory Positions C.5.a and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 4000 cfm \pm 10%.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE NO. NPF-57

PUBLIC SERVICE ELECTRIC & GAS COMPANY

ATLANTIC CITY ELECTRIC COMPANY

HOPE CREEK GENERATING STATION

DOCKET NO. 50-354

1.0 INTRODUCTION

By letter dated November 25, 1987 and supplemented on April 17, 1989, Public Service Electric & Gas Company requested an amendment to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. The proposed amendment would revise Sections 3/4.6.5.3 and 3/4.7.2 of the Technical Specifications (TSs) to (1) provide additional clarity by separating the Reactor Building Filtration, Ventilation, and Recirculation System (FRVS) TS into two separate sections, one affecting the FRVS Recirculation Subsystem (FRVS-RS) and the other affecting the FRVS Ventilation Subsystem (FRVS-VS); (2) extend the life of the FRVS-RS absorber charcoal by revising certain surveillance requirements concerning the FRVS-RS absorber bed charcoal; (3) eliminate unnecessary surveillance tests of the FRVS by rewording the surveillance requirements to better define situations where laboratory and other tests need to be performed following maintenance activities, such as welding and painting in the reactor building; and (4) provide minor clarifications for the FRVS and the CREFS.

2.0 EVALUATION

The FRVS consists of two engineered safety feature subsystems, the FRVS-RS and the FRVS-VS. Both subsystems are located inside the reactor building and are seismic Category 1 design. The FRVS-RS is designed to filter and clean contaminated air in the reactor building following a design basis accident or abnormal occurrence that could result in high airborne radiation levels in the reactor building. The system consists of six 25 percent recirculation units (2 units in standby). Each unit is sized to provide a 30,000 cfm air recirculation rate and includes one 2-inch deep charcoal absorber bed. The FRVS-VS is designed to exhaust sufficient air from the reactor building to maintain a negative pressure in the reactor building and remove airborne radioactive materials prior to air discharge to the environment. The FRVS-VS takes suction only from the discharge duct of the FRVS-RS. The FRVS-VS consists of two 100 percent filtration units (one in standby). Each unit is sized to provide up to a 9,000 cfm

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air filtration rate and includes one 2-inch deep charcoal absorber bed. Thus, the reactor building air exhausted to the environment must first pass through each of the two 2-inch charcoal beds in series (total of 4 inches of charcoal absorbent bed thickness).

2.1 Separation of FRVS TS

Hope Creek TS Section 3/4.6.5.3 currently addresses the FRVS. The proposed separation will create Section 3/4.6.5.3.1, "FRVS Ventilation Subsystem," and Section 3/4.6.5.3.2, "FRVS Recirculation Subsystem." The staff finds that the separation itself with the identical limiting condition for operation (LCO) and surveillance requirements is acceptable since it provides the intended clarification and does not remove or relax the current requirements.

2.2 Acceptance Criteria for FRVS Adsorber Bed Charcoal Testing

TS Sections 4.6.5.3(c) and (d) require that the methyl iodide penetration of a sample of each FRVS charcoal absorber be determined to be less than 1.0% when tested in the laboratory under specified conditions. This acceptance criterion is based on Regulatory Guide (RG) 1.52, which provides that laboratory tests result in a methyl iodine penetration of less than 1% for charcoal from a 2-inch bed. (A 95% decontamination efficiency may be thereby assigned to such a bed). The requested amendment would change this acceptance criterion to 7.5% methyl iodine penetration for tests of the FRVS-RS charcoal; the acceptance criterion for test of the FRVS-VS charcoal would remain at 1.0% penetration.

In the Hope Creek SER, the staff assigned an overall system decontamination efficiency of 99% iodine removal for the FRVS absorbers. This is based on Regulatory Guide (RG) 1.52 which provides that for charcoal absorber bed depths of 4 inches or greater a 99% decontamination efficiency may be assigned, provided that laboratory tests of the charcoal result in iodide penetrations of less than 0.175%. Under the proposed changes to the TS, the test acceptance criteria for the charcoal absorbent from the two beds in series (FRVS-RS and FRVS-VS) are 7.5% and 1%, respectively, which corresponds to a combined iodide penetration for the two beds in series of less than 0.075%, which is within the RG 1.52 acceptance criterion.

The staff has determined that the proposed amendment described above provides the intended revision of requirements and is consistent with the intent of RG 1.52 and the Standard Technical Specifications (STS) and, therefore, is acceptable.

2.3 Definition of Situations Where Tests Need to be Performed

The Hope Creek FRVS-RS units contain 5,200 lbs of carbon absorbent each. At full capacity, four of these units are required using 20,800 lbs of carbon absorbent. Total flow rate through the four units is 120,000 cfm.

The FRVS-VS draws suction directly from the exhaust of the FRVS-RS at a full capacity flow rate of 9,000 cfm (one unit operating). This design is unlike that of a typical BWR, where a standby gas treatment system (SGTS) is employed using significantly smaller quantities of charcoal absorbent (e.g., each full capacity SGTS filter train design contains 2,746 lbs of charcoal at Grand Gulf and 785 lbs of charcoal at Brunswick). Due to the significantly larger quantity of carbon absorbent, a given quantity of potential airborne contaminant (chemicals, fumes or foreign materials) in the vicinity of the FRVS-RS would be less apt to degrade the system performance than would the same quantity of potential airborne contaminants in the vicinity of a typical SGTS, which contains a significantly smaller quantity of carbon absorbent.

Similarly, since the FRVS-VS filters would be protected from potential airborne contaminants in the reactor building by the significant level of "guard-bed" protection afforded by the FRVS-RS filters, the expected degradation in system performance due to the contaminants would be expected to be significantly less than the system degradation for a typical SGTS, for which there is no similar "guard bed," in the vicinity of the same quantity of airborne contaminants.

The present TS requires that subsystem flow rate, in-place penetration, and carbon absorbent laboratory tests be conducted for each FRVS recirculation subsystem unit and ventilation subsystem unit at least once per 18 months or after any structural maintenance on the HEPA filter or charcoal absorber housing or following painting, fire or chemical release in any ventilation zone communicating with the subsystem. Under the proposed TS amendment the above requirement for tests to be conducted at least once per 18 months would be unaffected. However, under the other situations described above (structural maintenance, painting, etc.) the test would be required only upon determination that the HEPA filters or carbon absorbent could have been damaged by the structural maintenance or adversely affected by any chemicals, fumes or foreign materials. The TS amendment would further clarify that this determination shall consider the maintenance performed and/or the type, quantity, length of contact time, known effects and previous accumulation history for all contaminants which could reduce the system performance to less than that verified by the acceptance criteria of the tests.

To support the requested amendment, the licensee submitted in their letter dated April 17, 1989, an outline providing guidelines for their determination of FRVS degradation in consideration of the potential contamination described above.

The following comments were submitted by the Bureau of Nuclear Engineering (BNE) staff of the State of New Jersey in a letter dated April 5, 1989. The NRC staff response follows each comment.

Comment (1): The statement "Any structural maintenance on the HEPA filter or charcoal absorber housings" is not clear. The scope of the maintenance activity should be defined in detail. BNE staff believes that this may affect instrument setpoints which are vital for unit performance during an actual emergency.

NRC Staff
Response:

The scope of maintenance activities will be defined by the licensee. The licensee will determine whether a specific maintenance activity requires performance of subsystem flow rate, in-place penetration, or carbon adsorbent laboratory tests in accordance with procedure requirements.

Comment (2): BNE staff also believes that following painting or chemical release, it will be difficult to establish a verifiable method to determine the type, quantity, length of contact time, known defects and previous accumulation history for all contaminants that could reduce the system efficiency.

NRC Staff
Response:

NRC staff considers that the licensee's procedural requirements are sufficient to determine reductions in system efficiency that result from contamination. These requirements are summarized in Attachment 2 to the PSE&G letter dated April 17, 1989. They require contacting the cognizant department prior to entry into the Reactor Building with any chemical/solvent, evaluation of the chemical/solvent for its effects on the FRVS carbon adsorbent, logging of the specific locations of use of the chemical/solvent, reporting of the amount of the chemical/solvent used, and, in the event of an FRVS initiation while using or shortly after application of a chemical/solvent, a determination of the amount and type of chemicals/solvents in the Reactor Building at the time of the FRVS initiation and the expected percentage degradation. By this procedure, the reduction in system efficiency can be calculated following each exposure to a potentially significant contaminant. This calculation provides a method for the licensee to determine if the HEPA filters or charcoal adsorbent may have been damaged or adversely affected.

The staff has determined that the proposed amendment described above is consistent with the intent of RG 1.52 and the STS and, therefore, is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32 and 51.35, an environmental assessment and finding of no significant impact have been prepared and published (54

FR 29119) in the Federal Register on July 11, 1989. Accordingly, based upon the environmental assessment, the Commission has determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

4.0 CONCLUSION

The Commission has issued a Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for Prior Hearing which was published in the Federal Register (53 FR 3967) on February 10, 1988. No petition to intervene or request for hearing has been filed on this action. Comments from the State of New Jersey are addressed above.

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributor: C. Nichols

Dated: August 7, 1989

UNITED STATES NUCLEAR REGULATORY COMMISSIONPUBLIC SERVICE ELECTRIC AND GAS COMPANYDOCKET NO. 50-354NOTICE OF ISSUANCE OF AMENDMENT TOFACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission has issued Amendment No. 30 to Facility Operating License No. NPF-57, issued to Public Service Electric and Gas Company, which revised the Technical Specifications for operation of the Hope Creek Generating Station, located in Salem County, New Jersey. The amendment was effective as of the date of issuance.

The amendment changed the Technical Specifications concerning the Reactor Building Filtration, Recirculation, and Ventilation System (FRVS) and the Control Room Emergency Filtration System (CREFS). It provided separate Technical Specification sections for the Ventilation and Recirculation subsystems of the FRVS, changed the acceptance criterion for testing the charcoal absorbent in the FRVS Recirculation Subsystem, and changed the definition of situations where tests of the FRVS need to be performed. In addition, there are minor clarifications for the FRVS and CREFS.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendments and Opportunity for Prior Hearing in connection with this action was published in the FEDERAL REGISTER on February 10, 1988 (53 FR 3967). No request for a hearing or petition for leave to intervene was filed following this notice. The Bureau of Nuclear Engineering (BNE) staff of the State of New Jersey submitted comments in a letter dated April 5, 1988 and those comments are addressed in the safety evaluation issued with this amendment.

The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact statement. Based upon the environmental assessment, the Commission has concluded that the issuance of this amendment will not have a significant effect on the quality of the human environment (54 FR 29119).

For further details with respect to the action see (1) the application for amendment dated November 25, 1987, as supplemented on April 17, 1989, (2) Amendment No. 30 to License No. NPF-57, and (3) the Commission's related Safety Evaluation and Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, 2120 L Street NW, Washington, D.C. 20555, and at the Pennsville Public Library, 190 S. Broadway, Pennsville, New Jersey 08070. A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Reactor Projects I/II.

Dated at Rockville, Maryland this 7th day of August 1989.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation