



Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

Nuclear Business Unit

MAR 2 2000

LR-N000075

LCR S99-05

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

**SUPPLEMENTAL INFORMATION FOR
REQUEST FOR LICENSE AMENDMENT
FUEL HANDLING AREA VENTILATION SYSTEM (FHAVS)
SALEM GENERATING STATION NOS. 1 AND 2
FACILITY OPERATING LICENSES DPR-70 AND DPR-75
DOCKET NOS. 50-272 AND 50-311**

By letter dated April 14, 1999, (Ref: LR-N990028/LCR S99-05) Public Service Electric and Gas Company (PSE&G) requested an amendment to modify Technical Specification 3/4 9.12 "Fuel Handling Area Ventilation System." (TAC Nos. MA5267 and MA5268).

The proposed TS changes represented the following changes to Specification 3/4.9.12.

- 1) Make the filter testing requirements reflect the latest filter testing standards and brings consistency between units,
- 2) Delete surveillance testing requirements that are inappropriate or no longer valid, and
- 3) Clarify the Salem Units 1 and 2 TS Bases as stated in Insert C of Attachment 3.

Subsequently, the Staff issued Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear Grade Activated Charcoal," on June 3, 1999. PSE&G responded to GL 99-02 on November 24, 1999 (Ref: LR-N99501). In light of the GL requirements, the Staff's comments, and PSE&G's response to the GL, the portion of the change associated with filter testing (Insert B of the original submittal) is withdrawn, and Insert C (Technical Specification basis change) is modified.

Attachment I contains the applicable Inserts and Attachment II contains the new Technical Specifications marked-up pages. PSE&G has concluded that the information contained in this letter does not alter the conclusions reached in the 10CFR50.92 No Significant Hazards analysis previously submitted with the original LCR S99-05.

MAR 2 2000

Document Control Desk
LR-N000075

2

Upon NRC approval of this proposed change, PSE&G requests that the amendment be made effective on the date of issuance, but allow an implementation period of sixty days to provide sufficient time for associated administrative activities.

Should you have any questions regarding this request, we will be pleased to discuss them with you.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark B. Bezilla". The signature is written in a cursive style with a large, sweeping initial "M".

Mark B. Bezilla
Vice President –
Operations

Affidavit
Attachments (2)

MAR 2 2000

Document Control Desk
LR-N000075

3

C Mr. H. Miller, Administrator - Region I
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ATTACHMENT I
LR-N000075

INSERT A (New Surveillance 4.9.12 a.2)

- a.2 Prior to and during movement of irradiated fuel assemblies or crane operation over the storage pool in the Fuel Handling Building:
1. Both exhaust fans and one supply fan must be OPERABLE and operating with flow being directed through the HEPA and charcoal filters.
 2. All dampers required to divert the entire airflow through the HEPA/charcoal filter train are OPERABLE and in the position required to divert full exhaust flow through the HEPA/charcoal filter train.
 3. Ductwork, dampers and housings which will ensure all post-accident exhausted air is processed through the HEPA/charcoal filter train are intact.
 4. The fuel handling area is maintained at a negative pressure equal to or more negative than 1/8 inch water gauge relative to the outside atmosphere, and
 5. At least once per 24 hours verify both exhaust fans and one supply fan operating with the entire flow being directed through the HEPA and charcoal filters.

INSERT C (New Bases 3/4.9.12)

The operability of the Fuel Handling Area Ventilation System during movement of irradiated fuel ensures all building exhaust flow is processed through the HEPA/charcoal filter train whenever a Fuel Handling Accident is possible. This will minimize offsite doses following the postulated Fuel Handling Accident.

ATTACHMENT II
LR-N000075

MARKED-UP TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following TS for Facility Operating License No. DPR-70 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
3.9.12	3/4 9-12
4.9.12a	3/4 9-12
	3/4-9-13
4.9.12.d.3	3/4 9-14
	3/4 9-15
B 3/4.9.12	b 3/4 9-3

The following TS for Facility Operating License No. DPR-75 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
3.9.12	3/4 9-13
4.9.12.d.2	3/4 9-14
B 3/4.9.12	b 3/4 9-3

REFUELING OPERATIONS

FUEL HANDLING AREA VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 The Fuel Handling Area Ventilation system shall be OPERABLE.

APPLICABILITY: Whenever irradiated fuel is in the storage pool.

ACTION:

- a. With no Fuel Handling Area Ventilation system OPERABLE, suspend all operations involving movement of fuel within the storage pool or crane operation with loads over the storage pool until the Fuel Handling Area Ventilation system is restored to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12 The above required ventilation system shall be demonstrated OPERABLE:

- a.1 At least once per 31 days by initiating flow through the HEPA filter and charcoal adsorber train and verifying that the train operates for at least 15 minutes.

INSERT A
b.

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 system, by:

1. Verifying that with the ventilation system operating at a flow rate of 19,490 cfm + 10% and exhausting through the HEPA filters and charcoal adsorbers, the total bypass flow of the ventilation system to the facility vent, including leakage through the ventilation system diverting valves, is < 1% when the ventilation system is tested by admitting cold DOP at the storage pool ventilation system intake.

ATTACHMENT II

LR - N000075

REFUELING OPERATIONS

SURVEILLANCE REQUIREMENTS (Continued)

- a) Emptying one entire bed from a removed adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed, or
- b) Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.

Subsequent to reinstalling the adsorber tray used for obtaining the carbon sample, the system shall be demonstrated OPERABLE by also:

- a) Verifying that the charcoal adsorbers remove $\geq 99\%$ of a halogenated hydrocarbon refrigerant test gas when they are tested in-place while operating the ventilation system at a flow rate of 19,490 cfm $\pm 10\%$, and
 - b) Verifying that the HEPA filter banks remove $> 99\%$ of the DOP when they are tested in-place while operating the ventilation system at a flow rate of 19,490 cfm $\pm 10\%$.
- d. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is ≤ 4 inches Water Gauge while operating the ventilation system at a flow rate of 19,490 cfm $\pm 10\%$.
 2. Verifying that the air flow distribution is uniform within 20% across HEPA filters and charcoal adsorbers.
 3. Verifying that on a high radiation test signal, the system automatically directs its exhaust flow through the HEPA filters and charcoal adsorber banks.
 4. Verifying that the ventilation system maintains the spent fuel storage pool area at a negative pressure of $\geq 1/8$ inches Water Gauge relative to the outside atmosphere during system operation.

ATTACHMENT II

LR-N000075

REFUELING OPERATIONS

BASES

3/4.9.9 CONTAINMENT PURGE AND PRESSURE-VACUUM RELIEF ISOLATION SYSTEM

The OPERABILITY of this system ensures that the containment vent and purge penetrations will be automatically isolated upon detection of high radiation levels within the containment. The OPERABILITY of this system is required to restrict the release of radioactive material from the containment atmosphere to the environment.

3/4.9.10 and 3/4/9/11 WATER LEVEL - REACTOR VESSEL AND STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gas activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the accident analysis.

3/4.9.12 FUEL HANDLING AREA VENTILATION SYSTEM

The limitations on the fuel handling area ^{is dropped} ventilation system ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the accident analyses. ANSI N510-1975 should be used as a procedure guideline for surveillance testing.

INSERT. C →

ATTACHMENT II
LR- W 000075

REFUELING OPERATIONS

3/4.9.12 FUEL HANDLING AREA VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 The Fuel Handling Area ventilation system shall be OPERABLE.

APPLICABILITY: Whenever irradiated fuel is in the storage pool.

ACTION:

- a. With no Fuel Handling Area ventilation system OPERABLE, suspend all operations involving movement of fuel within the storage pool or crane operation with loads over the storage pool until the Fuel Handling Area ventilation system is restored to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12 The above required ventilation system shall be demonstrated OPERABLE:

- a.1 At least once per 31 days by initiating flow through the HEPA filter and charcoal adsorber train and verifying that the train operates for at least 15 minutes.
- b. 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 system, by:
 1. Verifying that with the ventilation system operating at a flow rate of 19,490 cfm \pm 10% and exhausting through the HEPA filters and charcoal adsorbers, the total bypass flow of the ventilation system to the facility vent, including leakage through the ventilation system diverting valves, is \leq 1% when the ventilation system is tested by admitting cold OGP at the storage pool ventilation system intake.

INSERT A →

2. Verifying that the charcoal adsorbers remove $\geq 99\%$ of a halogenated hydrocarbon refrigerant test gas and that the HEPA filter banks remove $\geq 99\%$ of the DOP when they are tested in-place using the test procedure guidance of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978 (except for the provisions of ANSI N510 Sections 8 and 9), and the system flow rate is $19,490 \text{ cfm} \pm 10\%$.
 3. 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.
 4. Verifying a system flow rate of $19,490 \text{ cfm} \pm 10\%$ during system operation.
- c. 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.
- d. 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 or equal to 4 inches Water Gauge while operating the system at a flow rate of $19,490 \text{ cfm} \pm 10\%$.
 2. Verifying that on a high radiation test signal, the system automatically starts (unless already operating) and directs its exhaust flow through the HEPA filters and charcoal adsorber banks.
 3. Verifying that the system maintains the spent fuel storage pool area at a negative pressure of greater than or equal to 1/8 inches Water Gauge relative to the outside atmosphere during system operation.

REFUELING OPERATIONS

ATTACHMENT II

LR-N 000075

BASES

3/4.9.9 CONTAINMENT PURGE AND PRESSURE-VACUUM RELIEF ISOLATION SYSTEM

The OPERABILITY of this system ensures that the containment vent and purge penetrations will be automatically isolated upon detection of high radiation levels within the containment. The OPERABILITY of this system is required to restrict the release of radioactive material from the containment atmosphere to the environment.

3/4.9.10 and 3/4/9/11 WATER LEVEL - REACTOR VESSEL AND STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gas activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the accident analysis.

3/4.9.12 FUEL HANDLING AREA VENTILATION SYSTEM

The limitations on the fuel handling ^{a dropped} area ventilation system ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the accident analyses. ANSI N510-1975 and Generic Letter 83-13 should be used as procedural guidelines for surveillance testing.

INSERT. C →