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Mr. A. Schwencer, Chief
Licensing Branch No. 2
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

AUG 27 1984

SUBJECT: Limerick Generating Station
Docket Nos. 50-352 and 50-353
HVAC Filter In Place Testing Criteria

REFERENCE: PECo and NRC Telecon dated 8/21/84

FILE: GOVT 1-1 (NRC)

Dear Mr. Schwencer:

As discussed with Charles Nichols of the Meteorology and Effluent Treatment Branch in the reference conference call, we are proceeding to perform the HVAC filter "In Place Testing" in accordance with ANSI/ASME 510-1980. NRC Regulatory Guides 1.52 and 1.140 endorses HVAC filter In Place Testing to be performed in accordance with ANSI N510-1975. However, the updated and improved testing methodology and clarifications found in ANSI/ASME 510-1980 provide for improvements in areas where experience has shown the 1975 version to be cumbersome. We, therefore, intend to take the exception to Regulatory Guides 1.52 and 1.140 and modify FSAR Tables 6.5-2, 9.4-4 and 9.4-18 accordingly.

The attached draft FSAR page changes will be incorporated in the FSAR, exactly as they appear in the attachments, in the revision scheduled for September, 1984.

Sincerely,

John S. Kemper

RJS/dg/08228401

Copy to: (See Attached Service List)

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Mr. James Wiggins (w/enclosure)
Mr. Timothy R. S. Campbell (w/enclosure)

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TABLE 6.5-2 (Cont'd)

REGULATORY POSITION	STANDBY GAS TREATMENT SYSTEM (SGTS)	REACTOR ENCLOSURE RECIRCULATION SYSTEM (RERS)	CONTROL ROOM EMERGENCY FRESH AIR INTAKE SYSTEM
Position n	Conforms	Conforms	Conforms
Position o	Conforms	Conforms	Conforms
Position p	Conforms	Conforms	Conforms
C.4. Maintenance			
Position a	Conforms	Conforms	Conforms
Position b	Conforms	Does not conform. Because of space restrictions,(1) distance between filter banks is less than recommended.	(Same as RERS)
Position c	Partially conforms. There are 4 charcoal test canisters provided rather than 6.	Conforms	Conforms
Position d	Does not conform. SGTS trains continuously purged with dry instrument air to prevent buildup of moisture.	(Same as SGTS)	(Same as SGTS)
Position e	Conforms	Conforms	Conforms
C.5. In-Place Testing Criteria			
Position a	Conforms (4)	Conforms (4)	Conforms (4)
Position b	Conforms (4)	Conforms (4)	Conforms (4)
Position c	Conforms (4)	Conforms (4)	Conforms (4)
Position d	Conforms (4)	Conforms (4)	Conforms (4)
C.6. Laboratory Testing Criteria for Activated Carbon(2)			
Position a	Conforms	Conforms	Conforms
Position b	Conforms	Conforms	Conforms

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TABLE 6.5-2 (Cont'd)

(1) The Limerick air filter systems were designed before the issuance of NRC Regulatory Guide 1.52 in 1973. The filter design details have been studied in accordance with the regulatory guide and it was found that the filter performs satisfactorily although the design is not in strict conformance with the regulatory guide.

(2) Each original or replacement batch of impregnated activated charcoal used in the adsorber section meets the qualification and batch test results of ANSI N509-1980.

(3) The prefilters in the RERS act as prefilters for the SGTS during reactor enclosure isolation. The prefilters in the SGTS duct from the refueling area will be installed prior to the first refueling and will conform to the requirements of Regulatory Guide 1.52.

(4) TO ANSI/ASME N510-1980 TESTING CRITERIA.

Filters are subjected to acceptance tests made by an NRC quality assurance station. The filter efficiency exceeds 99.97% when tested with monodispersed, thermally-generated DOP aerosol having a mean particle size of 0.3 micron.

Filters selected at random from the manufacturer's production line are subjected to moisture, overpressure resistance, and filter dust loading tests in order to initially qualify the filters. The moisture and overpressure resistance tests are performed in accordance with MIL-F-51068.

Each filter is individually tested by the appropriate NRC quality assurance station at 100% and 20% of the rated capacity.

b. Preoperational Tests for Acceptance (Performed in Filter Train Housing)

Visual and dimensional checks of the housing and mounting frames are made in the field to check for conformance with design specifications. Nonconforming items are rejected and replaced with acceptable equipment.

N510-1975

ANSI/ASME N510-1980

After installation, inplace testing of HEPA filter efficiency is conducted in accordance with Section 10 of ~~ANSI N510-1975~~ (formerly ANSI ~~N101.1-1972~~). The tests are conducted at the rated airflow, using the DOP aerosol test equipment, test procedures, and test reports specified in ~~ANSI N510-1975~~. The overall filtration efficiency is not less than 99.95%. When leaks exist that would result in inability to meet the specified system parameters, they are located and repaired by welding. The system is then tested again to ensure conformance with acceptance criteria.

8. CARBON ADSORBERS

ANSI/ASME N510-1980

Carbon adsorbers are tested as follows:

a. Qualification Tests Before Installation

1. Representative samples, taken from each original or replacement batch of activated carbon used for filling the adsorbers, are tested to meet the qualificiation and batch test results summarized in ANSI N509-1980, table 5.1 for ESF systems, and

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TABLE 9.4-18 (Cont'd)

REGULATORY GUIDE POSITION	TURBINE(2)	SGTS(2)	REACTOR(2)	RADWASTE(2)
Para C.4 - Maintenance				
C.4.a	Conform	Conform	Conform	Conform
C.4.b	Conform	Conform	Due to space restrictions, distance between filter banks is less than recommended	(A) The system is rated at 330 cfm and the physically small housing design provides easy access to the filters for servicing (B) Same as Reactor
C.4.c	Conform	Conform	Conform	Conform
C.4.d	Conform	Conform	Conform	Conform
Para C.5 - In-Place Testing Criteria	Conform (3)	Conform (3)	Conform (3)	(A) Conform (3) (B) Does not contain charcoal filter (3)
Para C.6 - Laboratory Testing Criteria for Activated Carbon	Conform	Conform	Conform	(A) Conform (B) Does not contain charcoal filter

(1) The Limerick design was completed prior to the issuance of this guide, and therefore the guide was not specifically considered in the design

(2) Turbine - Turbine enclosure equipment compartment exhaust air filter plenum
SGTS - Standby gas treatment room exhaust air filter plenum
Reactor - Reactor enclosure equipment compartment exhaust air filter plenum
Radwaste - (A) Radwaste enclosure common tanks vent filter assembly
(B) Radwaste Enclosure Equipment Compartment Exhaust Filter Assembly.

(3) TO ANSI/ASME N510-1980 TESTING CRITERIA