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MURRAY R. EDELMAN

VICE PRESIDENT
NUCLEAR

June 29, 1984
PY-CEI/NRR-0121 L

Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Perry Nuclear Power Plant, Units 1 & 2
Docket Nos. 50-440; 50-441
Control Room Ventilation Testing

Dear Mr. Youngblood:

This letter is provided to reflect a revision in the method of pre-operational testing of the Control Room Heating, Ventilating, Air Conditioning (HVAC) and the Emergency Recirculation Systems at the Perry Nuclear Power Plant. The proposed change was discussed with your staff in a conference call on June 7, 1984.

The FSAR Section 14.2.12.1.25 presently describes a positive pressurization test for both the normal and emergency operating modes of the control room HVAC systems. We plan to conduct two pre-operational tests to verify the systems ability to perform within design specifications. A pressurization test will be performed on the control room HVAC system in its normal operating mode and a tracer gas dilution test will be conducted on the emergency recirculation mode of the system.

The use of the tracer gas dilution method for testing is consistent with the actual HVAC system design, as described in the Section 9.4.1 of the FSAR. Since the design does not provide for a positive pressure in the control room envelope during emergency conditions but switches to a recirculation mode, testing under positive pressure conditions is not representative of system performance. Use of a tracer gas and concentration time related measurements provides the ability to test the system in its designed emergency operating mode. The testing will be conducted in accordance with ASTM E 741-83, "Measuring Air Leakage Rate by the Tracer Dilution Method".

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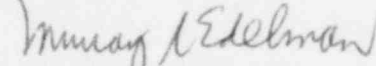
Mr. B. J. Youngblood

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June 29, 1984

To reflect this revised testing approach, attached are draft FSAR changes to Section 14.2.12.1.25 and Table 1.8-1. These revised pages will be incorporated in a future amendment to the FSAR. If you have any question, please contact us.

Very truly yours



Murray R. Edelman
Vice President
Nuclear Group

MRE:njc

cc: Jay Silberg, Esq
John Stefano
J. Grobe
D. Becker

b. Prerequisites

1. Individual component tests have been completed and are approved.
2. Permanently installed instrumentation is properly installed, calibrated and operable.
3. Instrument air is available.
4. Appropriate a-c and d-c power sources are available.
5. Test instrumentation is available and properly calibrated.
6. The following systems are operational:
 - (a) Control Complex Chilled Water System
 - (b) Adequate fire protection is available
 - (c) Emergency Closed Cooling System
 - (d) Battery Room Exhaust System
 - (e) Standby Diesel Generator System
 - (f) Nuclear Closed Cooling System

c. Test Procedure

1. Control Room HVAC
 - (a) Verify fan, damper and air conditioner interlocks, trips, permissives and control functions.
 - (b) Verify system will be automatically deactivated by emergency signals.

- (c) Verify that the control room is maintained at a positive pressure with respect to surrounding areas.
- (d) Verify operation times for isolation dampers.
- (e) Verify system response to manual isolation and automatic isolation signals.

2. Emergency Recirculation

- (a) Verify fan, heater, damper and air handler interlocks, trips permissives and control function.
- (b) Verify system will be automatically activated by emergency signals.
- (c) Verify that the control room envelope inleakage criteria is not exceeded.
- (d) Verify system response to manual isolation and automatic isolation signals.
- (e) Verify HEPA filters and charcoal absorber beds perform to meet the requirements of Section 6.5.1.4.2.

d. Acceptance Criteria

- 1. Fan, heater, damper and air conditioner interlocks, trips, permissives and controls function within design specifications.
- 2. Systems respond to emergency signals automatically in accordance with design specifications.
- 3.
 - a. Control room is maintained at a positive pressure with respect to surrounding areas in accordance with design specifications (Normal Operations).
 - b. Inleakage criteria of the control room envelope is not exceeded (Emergency Recirculation).
- 4. Operating times for isolation dampers are within design specifications.
- 5. System isolation response is within design specifications limits.
- 6. HEPA filters and charcoal beds function within design specification limits.

640.26

640.26

TABLE 1.8-1 (Continued)

<u>Regulatory Guide (Rev.;RRRC Category)</u>	<u>Degree of Conformance</u>	<u>Reference</u>
<u>1.90 - (Revision 1 - 8/77;RRRC Cat. 1)</u> Inservice inspection of prestressed concrete containment structures with grouted tendons	Not applicable to PNPP design.	-
<u>1.91 - (Revision 1 - 2/78;RRRC Cat. 2)</u> Evaluations of explosions postulated to occur on transportation routes near nuclear power plants	PNPP conforms to this guide.	2.2.3
<u>1.92 - (Revision 1 - 2/76;RRRC Cat. 1)</u> Combining modal responses and spatial components in seismic response analysis	PNPP design conforms to this guide.	3.7.3
<u>1.93 - (Revision 0 - 12/74;RRRC Cat. 4)</u> Availability of electric power sources	The requirements of Regulatory Guide 1.93 for Limiting Conditions for Operations are addressed in Technical Specifications.	16.3/4.8
<u>1.94 - (Revision 1 - 4/76;RRRC Cat. 1)</u> Quality assurance requirements for installation, inspection, and testing of structural concrete and structural steel during the construction phase of nuclear power plants	PNPP conforms to this guide to the extent required by ANSI N18.7-1976	17.2
<u>1.95 - (Revision 1 - 2/77;RRRC Cat. 1)</u> Protection of nuclear power plant control room operators against an accidental chlorine release	PNPP design conforms to this guide with exception of item C.5. Control room leakage shall be determined by tracer gas method per ASTM E741-83.	2.2.3