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August 7, 1984

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

Docket Nos. 50-352
50-353

Subject: Limerick Generating Station, Units 1 and 2
Procedures and Systems Review Branch
Pre-Service Examination of Mechanical Snubbers

Reference: PECO and NRC Conference Calls dated
July 16 and 17, 1984

File: GOVT 1-1 (NRC)

Dear Mr. Schwencer:

As discussed with the Procedures and System Review Branch and Quality Assurance Branch reviewers in the reference conference calls, Pre-Operational Test 100.3 "Mechanical Snubber Testing", will be deleted from the preoperational test program. It will be performed as a component level Technical Test as a prerequisite to Start-Up test 17, "System Expansion". The technical content and scope of the snubber pre-service inspection as described in Chapter 14 of the FSAR remains unchanged.

Qualification of Inspection, Examination and Testing personnel for snubber "technical test" will be in accordance with ANSI N45.2.6-1978. ANSI N45.2.6 allows Level I personnel to record data and implement procedures and Level II personnel to plan and setup tests and to evaluate and report test results. The snubber technical test will be conducted using Level I personnel to implement the inspection/exam/test procedure and to record all data. The data will be reviewed and evaluated by a Level II person. All testing groups (i.e. one Level I person, 2 fitters) will be under the supervision of a Level II person. Final signoff and approval of any changes to the snubber technical test will be by a Level III person. QA/QC may request witness and/or hold points they feel are necessary to assure proper implementation of the program.

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The attached draft FSAR page changes and revised response of RAI 460.26 will be incorporated into the FSAR exactly as it appears on the attachments in the revision scheduled for August 1984.

Sincerely,

JW Galleghan
for
JL Kasper

RJS/gra/07278401

cc: See Attached Service List

cc: Judge Lawrence Brenner (w/enclosure)
Judge Richard F. Cole (w/enclosure)
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Mr. James Wiggins (w/enclosure)
Mr. Timothy R. S. Campbell (w/enclosure)
Ms. Phyllis Zitzer (w/enclosure)
Judge Peter A. Morris (w/enclosure)

QUESTION 640.26 (Section 14.2.12)

Expand your preoperational and startup test descriptions to describe (or cross-reference other appropriate FSAR Subsections) all expansion, vibration, and restraint testing prescribed by NUREG-0800 (Standard Review Plan) Section 3.9.2.I.1, and snubber testing prescribed by Section 3.9.3.

RESPONSE

~~Preoperational Test P100.3 has been added; Startup Tests ^{STP-17} ~~SUT-15~~, SUT-35, and ~~SUT-36~~ have been changed; and Sections 3.9.2.1.b and 3.9.3.4.2 have been changed to provide the requested information.~~

↓
STP-36

Pre-service examination of all safety related snubbers is done as a prerequisite to selected start-up tests.

Acceptance Criteria - The resultant low-speed setting maintains upper and lower region coolant temperatures within the specified limits.

(STP-17 System Expansion (Formerly SUT-15))

Test Objectives - The test objectives are: to demonstrate that major equipment and the piping systems throughout the plant are free and unrestrained, with regard to thermal expansion; and that suspension components are functioning in the specified manner. See Section 3.9.2.1a.2 for nuclear steam supply system (NSSS) piping, and Table 3.9-7 for non-NSSS piping.

The test also provides data for calculating stress levels in various critical nozzles and weldments.

Prerequisites - Engineering review of the piping systems is completed. Fuel loading ~~is completed~~, and cold plant data are recorded.

(and pre-service examination of snubbers is complete)

Test Method - During equipment heatup, observations and/or recordings of the horizontal and vertical movements of major equipment and piping in the NSSS and balance-of-plant (BOP) systems are made to ensure that components are free to move as designed. Adjustments are made as necessary for freedom of movement.

Acceptance Criteria - There is no evidence of blocking the displacement of any system component caused by thermal expansion of the system.

Inspected hangers are not bottomed out or fully extended.

The shock suppressor positions allow movement at operating temperature with adequate swing clearance.

All measured displacements of the piping are within the specified acceptable range.

Pre-service examination will include the following:

(P-100.3) Mechanical Snubber TestingUnit Scope

- a. 1P-100.3 (Unit 1, common, and portions of Unit 2 system components)
- b. 2P-100.3 (Unit 2 remaining system components)

Test Objective

The test objective is to verify adequate pre-service examination to mechanical snubbers on all safety-related systems.

Prerequisites

All pre-installation, installation, and post-installation inspections have been performed on mechanical snubbers by designated inspection organizations.

Test Method

Verify through document review that all inspection activities have been completed, verified, and signed. Reviews will be made by system, and additional visual inspections will be made if original inspections are performed more than 6 months prior to initial heatup of the system.

Acceptance Criteria

- a. There are no visible signs of damage or impaired operability as a result of storage, handling, or installation. (Sections 3.9.2 and 3.9.3)
- b. Location, orientation, position setting, and configuration are according to design drawings and specifications. (Sections 3.9.2 and 3.9.3)
- c. Snubbers are not seized, frozen, or jammed. (Sections 3.9.2 and 3.9.3)
- d. Adequate swing clearance is provided to allow snubber movement. (Sections 3.9.2 and 3.9.3)
- e. Structural connections such as pins, fasteners, and other connecting hardware such as lock nuts, tabs, wire, cotter pins are installed correctly. (Sections 3.9.2 and 3.9.3)

↑ TO FOLLOW PG

11 OF 24, TABLE 14.2-3

(P-100.3) Mechanical Snubber TestingUnit Scope

- a. 1P-100.3 (Unit 1, common, and portions of Unit 2 system components)
- b. 2P-100.3 (Unit 2 remaining system components)

Test Objective

The test objective is to verify adequate pre-service examination to mechanical snubbers on all safety-related systems.

Prerequisites

All pre-installation, installation, and post-installation inspections have been performed on mechanical snubbers by designated inspection organizations.

Test Method

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Verify through document review that all inspection activities have been completed, verified, and signed. Reviews will be made by system, and additional visual inspections will be made if original inspections are performed more than 6 months prior to initial heatup of the system.

Acceptance Criteria

- a. There are no visible signs of damage or impaired operability as a result of storage, handling, or installation. (Sections 3.9.2 and 3.9.3)
- b. Location, orientation, position setting, and configuration are according to design drawings and specifications. (Sections 3.9.2 and 3.9.3)
- c. Snubbers are not seized, frozen, or jammed. (Sections 3.9.2 and 3.9.3)
- d. Adequate swing clearance is provided to allow snubber movement. (Sections 3.9.2 and 3.9.3)
- e. Structural connections such as pins, fasteners, and other connecting hardware such as lock nuts, tabs, wire, cotter pins are installed correctly. (Sections 3.9.2 and 3.9.3)

If inspections for items a and d are performed more than 6 months prior to initial system heatup, reverify and document. *Delete*

(P-100.4) Standby Diesel Generator Loading

Unit Scope

- a. 1P-100.4 (Unit 1 system and components)
- b. 2P-100.4 (Unit 2 system and components)

Test Objective

The objective of this test is to demonstrate the capability of the standby diesel generators to accept the design accident loading sequence with a coincident Loss of Offsite Power.

Prerequisites

To the extent necessary to perform this test, construction is completed, and instrumentation and controls are operable and calibrated. Emergency Service Water, diesel generator enclosure HVAC, 125 volt DC power, fuel oil, and fire protection are available for diesel generator operation. ESF systems are available for operation during accident response testing.

Test Method

Each diesel generator is verified to automatically start and accelerate to rated speed and voltage upon receipt of a simulated LOCA signal with coincident Loss of Offsite Power (LOOP). The plant emergency loads are then automatically applied, and proper system response to the loading sequence is verified. This test is conducted twice on each engine, once when the engine is cold and once after the engine has been operated at full load temperature conditions for a 24 hour period. In addition, diesel generator synchronization to offsite power and load transfer is verified.

Proper diesel generator and auxiliary system performance is verified during the 24 hour run. From the data taken at this time, the fuel oil storage system, the lube oil system, and the jacket water system are analytically verified to contain enough inventory to sustain each diesel generator for a 7-day period of continuous full-load operation.

TABLE 14.2-1 (Cont'd)

<u>TEST NUMBER</u>	<u>TEST TITLE</u>
P-78.2	Power Range Neutron Monitoring System
P-78.3	Traversing In-core Probes (TIP) Calibration System
P-79.1	Area Radiation Monitoring System
P-79.2	Process Radiation Monitoring System
P-80.1	Reactor Vessel Instrumentation System
P-81.1	Fuel Handling System
P-83.1	Main Steam System
P-83.2	Auto Depressurization System
P-83.3	Steam Leak Detection System
P-85.1	Cathodic Protection System
P-85.2	Freeze Protection System
P-91.1	Plant Annunciator Systems
P-93.2	Main Turbine Control System
P-93.3	Main Turbine Supervisory System
P-99.1	Reactor Enclosure Crane
P-99.2	Seismographical Monitoring System
P-99.3	Public Address and Evacuation System
P-100.1	Loss of Offsite Power Test
P-100.2	Loss of Instrument Air
P-100.3	Mechanical Snubber Testing <i>Delete</i>
P-100.4	Standby Diesel Generator Loading

(1) Common System - All common testing to be performed during Unit 1 initial test program only.