

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

W. L. STEWART  
VICE PRESIDENT  
NUCLEAR OPERATIONS

March 30, 1984

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
Attn: Mr. Steven A. Varga, Chief  
Operating Reactors Branch No. 1  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Serial No. 162  
E&C/TLG:  
Docket Nos. 50-280  
50-281  
License Nos. DPR-32  
DPR-37

NUREG 0612 - CONTROL OF HEAVY LOADS  
PHASE I  
SURRY POWER STATION UNITS 1 AND 2

Gentlemen:

In response to your February 21, 1984 and February 28, 1984 telephone request for additional information required to complete Franklin Research Center's (FRC) review of Vepco's submittal for Surry Power Station Units 1 and 2 conformance to NUREG-0612 "Control of Heavy Loads at Nuclear Power Plants" Phase I, the following is provided.

SPECIAL LIFTING DEVICES [GUIDELINE AND NUREG-0612, SECTION 5.1.1(4)]

ANSI N14.6 Section 5.3 requires verification of continuing compliance of the special lifting devices by either annual load test at 150 percent of maximum load or non-destructive testing and dimensional visual examination of the major load carrying welds and critical areas. As previously stated in Vepco's letter dated July 26, 1983 (Serial Number 325), these tests are impractical to perform because the devices are located in the containment. However, Maintenance Procedures require the reactor vessel head and internals lift rigs to be visually inspected prior to each refueling and at each containment maintenance period if they are to be used and have been idle for a period of more than six months or the last inspection has been over one year. Visual inspection of the reactor coolant pump motor lifting rig is required prior to each refueling and at each containment maintenance period if they are to be used and the last inspection has been over one month. All critical welds and bolted joints or connections are inspected during this time and the results are documented per the appropriate procedures. It was also noted that a load cell is used with the reactor vessel head and internals lift rigs for continued monitoring during all lifting and lowering. This approach is consistent with Westinghouse's (the designer, fabricator and supplier) recommendations.

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It was Vepco's intention that through the use of procedural requirements and controls for visual inspection and documentation prior to use, continued load cell monitoring during all lifting and lowering operations, the simplicity and specific designs of the rigs, and the infrequent use of the rig, the intent of ANSI N14.6 - 1978 for continuing compliance would be sufficiently met. However, in order to ensure a higher level of confidence and acceptability in demonstrating the continued reliability of the special lifting rigs and continuing compliance with ANSI N14.6 - 1978, further investigations, discussions and reviews of these procedures and controls were performed. As a result, Vepco has taken action to establish a Non Destructive Examination (NDE) Program in addition to the existing procedural requirements and controls.

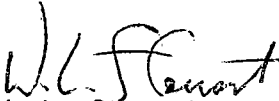
The NDE Program is being developed and will be incorporated into and as part of Surry's Inservice Inspection Program. The new program shall provide for inspection and NDE of all critical welds and critical parts of the subject special lifting devices over a normal inservice inspection of 10 years. Surry has reviewed the existing operating and maintenance procedures to ensure the appropriate visual inspections and controls are in place. Procedures are now being re-reviewed to incorporate any additional inspections and/or hold points which may be required by any new prior-to-use inspection and the 10 year NDE Program being established. Any procedures which are effected or required by the new NDE program will be completed and in effect by the next refueling outage or movement of any heavy load should it occur before the outage.

ANSI N14.6 Section 5.2.1 requires each rig to be load tested at 150 percent maximum load prior to its initial use. As previously stated, the reactor vessel head lifting rig had load and lift tests of 100 percent performed, followed by the appropriate non-destructive testing. Westinghouse (designer, fabricator and supplier) did not require load testing of the reactor vessel, internals lift rig and the reactor coolant pump motor lift rig, however, load tests were performed on these two devices as stated.

The percent of load used for load testing of the reactor vessel internals lift rig and the reactor coolant pump motor lift rig was investigated. Indications are that these two rigs were load tested at 100 percent of load, however, no official documentation has been found to support and verify the percent of load used. It should be noted that each of these rigs has been used only as designed and for its specific function. Further investigation of records is continuing in an attempt to find the testing documentation for the two rigs, however, at this time no documentation is available.

Measures taken by Veeco to control and monitor the use and maintenance of the special lifting devices are believed to be more than adequate to satisfy the intent of NUREG-0612 and ANSI N14.6 - 1978 requirements. This letter should provide the information necessary to complete the Phase I review.

Very truly yours,

  
W. L. Stewart

cc: Mr. James P. O'Reilly  
Regional Administrator  
Region II  
Atlanta, Georgia 30303

Mr. Donald J. Burke  
NRC Resident Inspector  
Surry Power Station