VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

December 15, 1982

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. Robert A. Clark, Chief
Operating Reactors Branch No. 3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Serial No. 709
NO/DJF/jmj/SP5
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

NUREG-0612 - CONTROL OF HEAVY LOADS
NORTH ANNA POWER STATION UNITS 1 AND 2

On October 22, 1982, a conference call was held between Vepco, the NRC, and Franklin Research Center personnel. The following information is provided concerning areas requiring further action as a result of the conclusions and recommendations shown in the draft Technical Evaluation Report for Control of Heavy Loads at North Anna Power Station and the October 22, 1982 conference call.

TER 2.1.2 Safe Load Paths [Guideline 1, NUREG-0612, Sec. 5.1.1(1)]

Comment

It was stated by the NRC that in order for North Anna to fully comply with the guidelines, the licensee should:

1. Review existing load paths and modify those which take credit for intervening floors to protect safety-related equipment from the consequences of a load drop.

2. Verify that deviations to existing load paths are reviewed and approved by the plant safety review committee or its equivalent.

3. Provide suitable visual aids to assist operators in lieu of permanently marking load paths on the floors.

Response

1. Load paths were identified for the Group 1 Overhead Handling Systems taking into account the location of plant equipment needed for plant shutdown or decay heat removal, and conservatively adding the effects of possible load swings. In the six-month report credit was

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Response (cont'd)

taken for intervening floors to protect safety-related equipment from the consequences of a load drop without a structural analysis being performed on the floor areas. However, in the nine-month report a structural analysis was performed on floor areas and maximum lift heights were established to correspond with the floor capacities.

2. Vepco stated that the information concerning deviations to procedures with existing load paths is presently available to the NRC and that it could be found in Section 5 of Vepco's Nuclear Power Station Quality Assurance Manual and in Section 6 of the North Anna Power Station Technical Specifications. The procedure for deviations to procedures requires review by station supervisory personnel with a follow-up review by the Station Nuclear Safety and Operating Committee.

3. In providing visual aids to operators in lieu of marking load paths on floors, Vepco stated that supervision will review load paths with the operators prior to a lift being made and will also provide a signalman to walk the load through on the load path during the lift operation.

TER 2.1.3 Load Handling Procedures [Guideline 2, NUREG-0612, Sec. 5.1.1(2)]

Comment

The NRC stated that Vepco should verify that procedures in use and being prepared contain the information specified in the guideline.

Response

Vepco stated that the procedures will contain the information specified in the guideline and that the procedures will be in place by the next refueling or the next movement of the individual loads.

TER 2.1.4 Crane Operator Training [Guideline 3, NUREG-0612, Sec. 5.1.1(3)]

Comment

It was stated by the NRC that Vepco should verify that provisions exist to monitor operator conduct on a continuing basis following qualification.

Response

Vepco stated that provisions do not presently exist to monitor operator conduct on a continuing basis but that provisions will made to do so by the next refueling or the next movement of the individual loads.

TER 2.1.5 Special Lifting Devices [Guideline 4, NUREG-0612, Sec. 5.1.1(4)]

Comment

The NRC requested a date when the results of the special lifting rig analysis will be provided to them.

Response

The dates for completion of the analyses as provided by Westinghouse and submittal to Vepco are as follows:

- January 7, 1983 - Preliminary Stress Report
- February 1, 1983 - Preliminary Evaluation
- April 1, 1983 - Final Report

After internal evaluation Vepco would submit the results of the review no later than May 16, 1983.

TER 2.1.6 Lifting Devices (Not Specially Designed) [Guideline 5, NUREG-0612, Sec. 5.1.1(5)]

Comment

The NRC stated that an evaluation must be performed to determine the significance of dynamic loads on the slings used for lifting heavy loads. If there are significant dynamic loads, slings shall be marked to indicate which slings are restricted in their use to only certain cranes.

Response

The information concerning dynamic loads on slings at North Anna Power Station is presently under further evaluation and cannot be provided at this time. This information will be provided to the NRC by February 1, 1983.

TER 2.1.8 Crane Design [Guideline 7, NUREG-0612, Sec. 5.1.1(7)]

Comment

Vepco must verify that the polar cranes meet the fourteen (14) requirements of CMAA-70 as outlined in the TER.

Response

Vepco has verified that the polar cranes meet 10 of the 14 requirements of CMAA-70. The remaining four items are presently under evaluation. They are: No. 3 - Longitudinal stiffeners, No. 6 - Hoist rope requirements, No. 7 - Drum design, and No. 9 - Gear design. Final verification will be confirmed on the remaining four items by March 1, 1983.

TER 2.2.3 Special Reviews for Heavy Loads Over the Core [Interim Protection Measure 6, NUREG-0612, Sec. 5.3(1)]

Comment

It was stated by the NRC that Vepco has not previously addressed Special Reviews for Heavy Loads Over the Core. Specifically, (1) review of procedures for installation of rigging or lifting devices and movement of the load to assure that sufficient detail is provided and that instructions are clear and concise; (2) visual inspections of load bearing components of cranes, slings, and special lifting devices to identify flaws or deficiencies that could lead to failure of the component; (3) appropriate repair and replacement of defective components; and (4) verify that the crane operators have been properly trained and are familiar with specific procedures used in handling these loads, e.g., hand signals, conduct of operations, and content of procedures.

Response

Items (2) and (3) are covered by North Anna Power Station Plant Maintenance Procedure MMP-P-MH-1, "Reactor Containment Cranes and Associated Lifting Equipment". By this procedure all containment cranes and associated lifting equipment are inspected and repaired as necessary at each refueling outage.

Items (1) and (4) are presently under evaluation. The appropriate procedures for these items will be generated or modified as necessary to meet the criteria of the TER prior to the next refueling or movement of the individual loads.

If you have any questions or require further clarification concerning the above subjects, please advise.

Very truly yours,

For W. L. Stewart

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