LONG ISLAND LIGHTING COMPANY
SHOREHAM NUCLEAR POWER STATION
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JOHN D. LEONARD, JR.
VICE PRESIDENT - NUCLEAR OPERATIONS

June 28, 1985 SNRC-1189

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

TDI Emergency Diesel Generators
Request for Information - Part 21 Notifications
Shoreham Nuclear Power Station
Docket 50-322

Reference: Letter from NRC (W. R. Butler) to LILCO (J. D. Leonard) dated June 10, 1985 entitled "TDI Diesel Generators - Shoreham Nuclear Power Station"

Dear Mr. Denton:

In response to the request in the referenced letter, please find attached a summary description of LILCO's resolution to the TDI 10CFR21 notifications issued after April 1, 1984. Included in each of the descriptions are the actions taken in the assessment of the notification and its applicability to the SNPS engines, and where appropriate, both the corrective actions taken and a schedule of implementation.

With respect to future TDI Part 21 notifications, LILCO will inform the Staff of its actions relative to these notifications up until the Staff issues its final SER which is now, as indicated, currently planned for July 1985. The TDI Owner's Group has taken the position that responses to Part 21 notifications should be handled in the normal fashion as soon as the site specific DR/QR Report is issued. We would point out that this was the policy LILCO was following. However, LILCO recognizes the need to take measures to expeditiously complete the review of the TDI diesels even though a departure from the Owner's Group position is required. Upon issuance of the SER, LILCO will resume its normal method of resolution of Part 21 notifications.

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Should you or your staff have any additional questions concerning our response, please contact my office.

Very truly yours,

J. D. Leonard, Jr.
Vice President - Nuclear Operations

BEG/cf

Attachment

cc: J. A. Berry

A. TDI Notification No. 123
Valve Spring Failure
July 13, 1984

TDI reported a failure of a valve spring in a non-nuclear application (marine) which appeared to have been caused as a result of a surface imperfection on the valve spring. Since this represented the only failure in its kind that TDI was aware of, and given that TDI reported that there were over 8,000 valve springs in service, TDI concluded that no corrective action was required.

At Shoreham, the valve springs installed on each engine were visually inspected as part of the DR/QR Program. No surface imperfections were found. Additionally, Shoreham has not experienced a valve spring failure of its operating history. Therefore, LILCO has concluded that on the basis of both physical inspection and operating history of the SNPS valve springs, no further action is required on this matter.

B. TDI Notification No. 124
High Pressure Injection Pump
July 13, 1984

TDI reported a failure of a fuel injection pump at the Catawba Nuclear Power Plant. This failure was investigated by the pump manufacturer, Bendix Corporation, and determined to be the result of a material defect in the delivery valve holder. Bendix also determined this failure to be an isolated case, and no corrective action was recommended.

During the DR/QR Program at Shoreham, the injection pumps, including the delivery valve holders, were inspected. No defects of the type found at Catawba were noted. Therefore, LILCO concurs with TDI that no further action is required.

C. TDI Notification No. 125
Generator Voltage Regulator
September 18, 1984

TDI reported a potential problem with the generator voltage regulator which could result in overheating of adjacent electrical components. TDI reported that the unique configuration necessary to cause the potential overheating problem exists only at the Perry Nuclear Station.

As noted by TDI, this Part 21 only applies to the Perry Nuclear Station, and therefore is not applicable to Shoreham.

D. TDI Notification No. 126
Fuel Control Shaft Levers
October 2, 1984

TDI reported that the cap screws on the fuel control shaft levers could loosen if not torqued properly, resulting in engine non-availability. To minimize the potential of engine non-availability due to improper torqueing, TDI recommended the installation of roll pins to pin the levers in addition to proper torqueing of the capscrews.

Inspection and review of torque, alignment and lubrication of the entire fuel rack assembly, including the associated levers, was completed for each of the Shoreham engines during the DR/QR program. Further, inspections of control shaft levers for the presence of roll pins as identified in the Part 21 notification were performed with NRC Staff and the PNL consultants during the May 15, 1985 onsite audit of Phase II components. Additional inspections and dialogue with TDI are ongoing to assure that all other components associated with these mechanical linkages are pinned, where appropriate. Since LILCO has taken proper measures during the reinstallation of the fuel control shaft assembly and considers the roll pin installation to be an additional enhancement, LILCO intends to complete the modification on these other components at the first refueling outage.

E. TDI Notification No. 127
Air Filter Bowl
January 22, 1985

TDI reported that the pressure rating of the polycarbonate transparent bowl in the air filter for the engine control panel had been changed by the vendor from 250 psig to 150 psig at 125°F. The filter is subjected to air pressures ranging between 200 psig and 250 psig at room temperature. TDI recommends that the polycarbonate bowls be replaced with metal bowls having a pressure rating of 250 psig at 175°F.

Shoreham's air filter bowls as originally supplied by TDI were metal, and therefore, this problem is not applicable to Shoreham.

F. TDI Notification No. 128
Air Start Check Valves
March 12, 1985

TDI reported that during operational testing of Engine 74033 at the Grand Gulf station, engine shutdown was required as the result of a defective air start check valve. The check valve failure appeared to be operationally induced and the result of high and low cycle fatigue cracking, and included dislodging of a portion of the air start check valve disk. The air start check valve was manufactured by Clow Williams-Hager Corporation.

Inspection of the air start check valves installed in the Shoreham engines was performed in accordance with TDI recommendations. As a result of the inspection of the six valves, two defective disk assemblies and a cracked valve body were replaced. As a long term modification, TDI has recommended replacement of the Clow Williams-Hager air start check valves with Mission Duo check valves. LILCO has adopted this recommendation. The replacement Mission Duo valves have been received and installation is in progress. The scheduled completion for the installation of these valves is July 29, 1985.

Clow Williams-Hager check valves are also installed on both the diesel lube oil and jacket water systems. As the air start valve problem appears to be operationally induced, and both the jacket water and lube oil systems are a light duty service as compared to the air start system, it was concluded that the problem would not exist for valves in fluid service. LILCO will inspect the jacket water and lube oil check valves at the first refueling outage.

Inspection results and corrective actions as outlined above have been reviewed with both NRC Staff and Region I and found to be acceptable.

G. TDI Notification No. 129
Crankshaft Oil Plugs
March 18, 1985

TDI reported that a failed crankshaft oil plug had been discovered at the River Bend Nuclear Plant. The failure was attributed to an oil plug design that had been in place only for the period of March 10, 1980 through June 22, 1982. This design had required that the crankshaft oil plug be fabricated from 22 gauge material while the design prior to March 10, 1980 and following June 22, 1982, required fabrication with 16 gauge material.

Shoreham's replacement crankshafts were fabricated in the last quarter of 1983. Therefore, they were fabricated using the crankshaft drawing requiring the thicker 16 gauge material and as such, the problem is not applicable to Shoreham.

H. TDI Notification No. 130
Generator Control Panel Overheating
May 17, 1985

TDI reported that a potential problem of overheating could occur in the generator control panel. The overheating of the panel could result in failure of some components within the panel.

To minimize the potential for overheating, early in 1983 LILCO made modifications to the diesel generator HVAC systems, in part, to assure that the generator control panel temperature was maintained within the acceptable range. The DR/QR Program identified concerns with certain components within the panel with respect to overheating. These concerns resulted in a recommendation to provide a surveillance program to assure that the components did not loosen or overheat during either standby service or operation. The DR/QR recommendations regarding surveillance of these components have been implemented at Shoreham and are reflected in the maintenance and surveillance program submitted to the Staff.