

APPENDIX A

Transamerica Delaval, Incorporated  
Engine and Compressor Division  
Docket No. 99900334/83-02

NOTICE OF NONCONFORMANCE

Based on the results of an NRC inspection conducted on September 6-15, 1983, it appears that certain of your activities were not conducted in accordance with NRC requirements as indicated below:

Criterion V of Appendix B to 10 CFR Part 50 states: "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Nonconformances with these requirements are as follows:

- A. Paragraph 2:06.10 in Perry Specification No. SP-750-4549-00 dated August 30, 1973, states, in part, "Exhaust System . . . This system is safety related but not ASME Section III." Paragraph 1:02.2 states, "The requirements of this Specification are mandatory and shall be imposed by the Vendor on all Subvendors furnishing safety related items or services." Paragraph 1:06.4 in Specification No. SP-706-4549-00 states, in part, ". . . 3. Procurement documents shall require suppliers to provide, as necessary, a QA program consistent with this Specification. 4. Procurement documents shall include provision for the following as applicable: a. Define the level of QA program development required for the Subvendors . . . ."

Contrary to the above, a QA program was not imposed by Transamerica Delaval, Incorporated (TDI) on the manufacture of exhaust silencers for emergency diesel generators (EDGs) furnished to Perry, Units 1 and 2.

- B. Paragraph 10.3.2 in Section 10 of the Quality Assurance Manual (QAM), Revision 2, states, in part, "Evidence of inspection acceptance of normal manufactured parts is indicated by affixing the inspection stamp and date to the manufacturing processing sheet during process and after final acceptance . . . ." Paragraph 10.2.6 states, in part, "Parts, components and/or assemblies are inspected prior to shipment and after performance test completion . . . ."

8402130513 840207  
PDR ADOCK 05000322  
G PDR

Contrary to the above, inspection stamps and dates on process sheets did not, necessarily, provide evidence of performance of inspection or inspection acceptance as illustrated by the following examples:

1. Operation 550 (i.e., dowel cam gear rocker arm hold down bolt installation) in the assembly route sheets (RSs) for Shoreham Nuclear Power Station (SNPS) EDG Serial Nos. 74011, 74012, and 74013 was stamped off as complete by the QC inspector. A subsequent inspection at the SNPS site discovered, however, that the bolts had not been installed.
2. A Certificate of Compliance was signed for 23 reworked pistons on March 4, 1982, and shipment made to the San Onofre Nuclear Generating Station, Unit 1, on the following day. Review of inspection dates on the RSs for these pistons indicated, however, that QC inspectors accepted the various RS operations in the time period of March 22-26, 1982.

- C. Paragraph 8.1.3 in Section 8 of the QAM states, in part, "A processing package is issued with each part or group of parts at the beginning of the manufacturing cycle. The manufacturing cycle is controlled by the processing package which includes a Manufacturing Engineering Route Sheet, Inventory Job Card, Engineering drawings and a Manufacturing Engineering Tool and Fixture Card."

Paragraph 4.17.1 in Bechtel Specification 9645-M-018-0, Revision 4, states, with respect to Grand Gulf EDGs, "Records shall be maintained to furnish documentary evidence of activities affecting quality. The records shall include the results of inspections, test, audits, monitoring of work performance and material analyses as specified."

Contrary to the above:

1. Rework was performed on 92 pistons from SNPS and Grand Gulf EDGs without issue and use of RSs.
2. Records of activities affecting quality were not maintained with respect to rework operations performed on 66 pistons from Grand Gulf.

- D. Paragraphs 2.2, 2.2.3, 2.3, 2.3.2, and 2.4 in Engineering Operating Procedure 6 dated July 21, 1978, require that results of testing/analysis be: (1) reviewed by the analyst, (2) reviewed and approved by the Manager of Applied Mechanics, and (3) reviewed and certified by the staff Registered Professional Engineer (RPE).

Contrary to the above, jacket water pump analyses dated September 24 and October 4, 1982, and July 15, 1983, for SNPS had not been certified by the staff RPE.

- E. Paragraph 6.4 and its subparagraphs in Section 6.0 dated January 25, 1983, of the Foundry Quality Control Manual state, in part, "Non-destructive

Testing shall be performed per the following Process Specifications (sic)  
. . . . . Magnetic Particle . . . . 600-30 . . . . Ultrasonic . . . .  
600-50 . . . . ." These documents, in turn, require that test reports of  
acceptable inspections be initiated.

Paragraph 10.1 in Quality Control Procedure (QCP) 600-20 dated October 6,  
1976, states, "A report of acceptable Liquid Penetrant Inspection shall be  
issued and the shop order signed off on areas or pieces found acceptable."

Contrary to the above, the following was noted with respect to replacement  
cylinder head assemblies for SNPS (Long Island Lighting Company [LILCO]  
Purchase Order [PO] No. 310552-23):

1. Test reports had not been initiated to confirm performance of  
magnetic particle and ultrasonic examination of castings. Examples  
by serial and heat number are G83/381J; H-60/519J; H-56/512J; H-66,  
67/5335; and H-89/586J.
2. Liquid penetrant inspection reports had not been issued in regard to  
acceptance of valve seats of cylinder heads.

- F. Paragraph 9.3.5 in Section 9 of the QAM states, in part, "Personnel  
performing nondestructive examinations will be certified . . . ."

Contrary to the above, certain personnel performing nondestructive  
examinations of replacement cylinder head assemblies for SNPS had not been  
certified as evidenced by the application of QC Stamp Nos. 3, 8, and 10  
(i.e., unqualified personnel) at nondestructive operations on RSs for  
Part No. 03-360-03-OF. Examples by serial numbers are G-53, H-11, E-71,  
H-50, and G-83.

- G. Paragraph 4.4.2 in QCP I.P.600 dated April 1, 1981, states, "Examinations  
shall be in accordance with SNT-TC-1A Recommended Practices 1975 Edition.  
Attachement (sic) 'B' indicates the designated (minimum) number of  
questions to be answered for each certification level and discipline."  
Attachment B states, in part, ". . . Ten different checkpoints of test  
variables and Transamerica Delavals NDE procedural requirements shall be a  
part of the practical examination." Paragraph 4.6.1 in QCP I.P.600  
states, "Certification shall be renewed at a minimum of every three years.  
Recertification shall be by re-examination."

Contrary to the above, review of certification records for current TDI  
nondestructive examination personnel revealed that practical examination  
records did not indicate the use of ten checkpoints by the examiner. It  
was additionally noted that the Level II radiographer was certified on  
August 20, 1979, but not recertified until June 2, 1983.

- H. Paragraphs 2.4.1, 8.1.2, and 8.1.3 in QCP I.P.300 dated April 1, 1981,  
stipulate that: (1) the inspector stamp and date the particular operation  
of the RS for acceptable parts, (2) use of a signature or initial is  
prohibited except where specifically requested or dictated, and (3) a

surrendered inspection stamp must not be reissued for a minimum of 6 months.

Contrary to the above, regarding cylinder heads for SNPS:

1. The inspector had not stamped and dated RSs in the appropriate space for acceptable parts. This was evidenced by: (a) more stamps than dates, and (b) limited stamps and dates joined by a line. Examples by serial numbers are E-71, H-11, G-50, H-34, and G-4.
2. Initials had been used as acceptable evidence of inprocess inspection on RSs. Examples by serial numbers are G-50, H-11, G-19, E-71, H-89, and H-60.
3. A surrendered inspection stamp (QC 30) had been reissued prior to expiration of the minimum 6-month period. Records indicate that the previous holder left the company on September 10, 1982; however, as an example, the RS for cylinder head G-50 reflects its usage at Operation No. 170 on November 10, 1982.

- I. Paragraph 7.5.8.1 in Section 7.0 dated January 25, 1983, of the Foundry Quality Control Manual states that weld machines are calibrated in accordance with QCP I.P.100.

Paragraph 2.6.1 and its subparagraphs in QCP I.P.100 dated February 12, 1982, require that gages and equipment subject to periodic calibration and inspection display a calibration sticker which indicates when the item was: (1) calibrated and (2) due for calibration. Paragraph 3.1.2 addresses a list which contains welding machines, heat treat furnaces, and numerous other items along with respective calibration frequencies and other information.

Contrary to the above:

1. Welding Machine No. 41 in Weld Area No. 3 (Foundry) had not been calibrated in accordance with the required 12-month frequency as evidenced by its displaying three calibration stickers which exhibited due dates of August 30, 1980.
2. Heat Treat Furnace No. 5 had not been calibrated in accordance with the required 6-month frequency as evidenced by the meters and recorder displaying calibration stickers which exhibited due dates of March 13, 1983.

- J. Paragraph 2.2.3.2 in Section 2 dated February 27, 1981, of the QAM states, "It is the responsibility of the Manufacturing Manager to assure that specified processes are adhered to and that the product conforms to the specification in both processing components and the ultimate assembly."

Contrary to the above, the Manufacturing Manager had not assured adherence to the specified process identified at Operation No. 90 of the RSs for

SNPS replacement cylinder head assemblies. The operation (hard facing of valve seats) required welding in accordance with Specification No. 100-W-17. The NRC inspector was informed that the material reflected in that specification was no longer used; consequently, a new specification (100-W-17A) was being used.

- K. Paragraph 16.2.1 in Section 16 dated February 27, 1981, of the QAM states, "Manufacturing and assembly Route Sheets are used as records of in-process inspection of parts, components and assemblies. All Route Sheets are retained by Quality Control as objective evidence of inspection acceptance."

Contrary to the above, assembly RSs for the cylinder head assemblies furnished for SNPS on LILCO PO No. 310552-23 had not been retained by Quality Control.

- L. LILCO PO No. 310552-23 dated May 24, 1983, states, in part, "Certificate of Compliance to SHI-89 required."

Lines 65.4 through 65.12 of Revision 1 to Specification No. SHI-89 states, in part, "The Seller shall state, in writing, to the Purchaser, at the conclusion of his design, procurement, and engineering phase and prior to shipment, that all referenced specifications, codes, and procedures have been complied with to the best of his knowledge and belief . . . . All statements of compliance shall be notarized."

Contrary to the above, the Certificate of Compliance dated June 28, 1983, for the cylinder head assemblies furnished for SNPS on LILCO PO No. 310552-23 had not been notarized.