APPENDIX B

NOTICE OF NONCONFORMANCE

Hoke Incorporated
Spartanburg, South Carolina

Docket No.: 99901205/90-01

During an inspection at Hoke Incorporated (HI), Assembly and Test Facility, Spartanburg, South Carolina on September 17-20, 1990, it was determined that certain activities were not conducted in accordance with Nuclear Regulatory Commission (NRC) requirements which are contractually imposed on HI by purchase orders with NRC licensees. These items are set forth below and have been classified as nonconformances to the requirements of 10 CFR Part 50, Appendix B, imposed on HI by: (1) contract with NRC licensees, (2) the HI Nuclear Quality Assurance Manual (NQAM) for The American Society of Mechanical Engineers (ASME) Code Section III, Division 1, Nuclear Line Valves, Edition 3, Revision 17, dated August 10, 1989, and (3) HI Procedures.

A. Criterion II, "Quality Assurance Program," of Appendix B to 10 CFR Part 50, states, in part, that the quality assurance program shall provide control over activities affecting the quality of components, to the extent consistent with their importance to safety.

Contrary to the above, HI failed to establish and implement a quality program comprising all those planned and systematic actions necessary to provide adequate confidence that non-pressure boundary, non-ASME Code components or assemblies will perform their safety-related function. (90-01-02)

B. Criterion II, "Quality Assurance Program," of Appendix B to 10 CFR Part 50, states, in part, that indoctrination and training shall be provided to personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained.

Subsection 2.3, "Personnel Involved in Activities Affecting Quality, Indoctrination and Training," of the HI NQAM, which, in part, implements Criterion II of Appendix B to 10 CFR Part 50, requires the Director of Quality in Cresskill, New Jersey (DOQ), in conjunction with the Manager of Quality Control (MQC) in Spartanburg, South Carolina to create, maintain and present a quality assurance indoctrination program for employees performing or managing activities affecting quality.

Subsection 2.4, "Responsibility for Determining Job Performance," of the HI NQAM, which, in part, implements Criterion II of Appendix B to 10 CFR Part 50, requires the MQC to perform an annual revaluation of inspection and test personnel to ascertain inspectors and testers performance qualification. An inadequate performance qualification will result in disqualification and the need to requalify.

Contrary to the above, HI failed to indoctrinate and train the MQC, Lead Quality Control Inspector (LQCI), and two other Level II QCIs that performed activities affecting quality in the requirements of 10 CFR Part 21 and HI procedure HQI-147, "Reporting of Defects and Noncompliance," and the annual performance review necessary for each individual to maintain their qualification had expired in July 1990 and had not been performed as of September 20, 1990. (90-01-03)

C. Criterion III, "Design Control," of Appendix B to 10 CFR Part 50, states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis for components are correctly translated into specifications, drawings, procedures, and instructions and that design control measures shall be applied to the delineation of acceptance criteria for inspections and test.

Subsection 3.3, "Engineering Drawings," of the HI NQAM, which, in part, implements Criterion III of Appendix B to 10 CFR Part 50, requires that all engineering drawings for nuclear valves, which are governed by the ASME Code, are reviewed, certified and approved by the Registered Professional Engineer (Conformance Engineer) to assure compliance with the Code and the Design Specification.

Contrary to the above, HI failed to comply with the minimum ASME Code requirements of 0.125 inch fillet weld leg length on HI Part No. N9303Q8Y37 for Beaver Valley Unit 1, Purchase Order (PO) No. D03012 due to the undersized machined dimension, as specified by engineering, of the valve body weld-prep land length on the socket welded joint attaching the valve body and tube nipples. (90-01-04)

D. Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50 states, in part, that measures shall be established to assure that applicable regulatory requirements and other requirements which are necessary to assure adequate quality are included or referenced in the documents for procurement of material.

Subsection 4.1.2, "Scope of Work and Technical Requirements," of the HI NQAM, which, in part, implements Criterion IV of Appendix B to 10 CFR Part 50, requires that all technical and quality requirements must be specified on the PO.

Contrary to the above, two examples were identified where HI failed to include the requirements necessary to assure adequate quality of the documents for the procurement of material used in the assembly of ASME Code Section III, Class 2 hermetically (bellows) sealed instrument valves for Beaver Valley Unit 1, PO No. D038012. (90-01-05)

1. HI failed to include the quality requirement for the acetone, procured on HI PO No. 41987, to be free of halogens as required by HI procedure HPS-85, "Cleaning for Nuclear Service (or Oxygen Applications)," Revision H, dated June 27, 1988. Acetone was the cleaning media prescribed in HI procedure HPS-85, used to clean the valve body and tube nipple subassemblies.

2. HI failed to include the requirements for lot classification and level of testing required by ASME Code Section II, Specification SFA-5.01 on HI PO No. 38235 for the procurement of ASME Code Section III, Class 1 weld filler material used to weld the tube nipples to valve body subassemblies.

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

1. Subsection 5.2, "Engineering Specifications and Procedures," of the HI NQAM, which, in part, implements Criterion V of Appendix B to 10 CFR Part 50, requires that customer specifications are translated into HI documents. These specifications and procedures are controlled by the Nuclear Traveler, which lists the procedure number and revision letter at the appropriate traveler sequence.

   Subsection 5.4, "Standards," of the HI NQAM, which, in part, implements Criterion V of Appendix B to 10 CFR Part 50, requires that applicable ASME Code, ANSI, customer specifications and other recognized standards are properly referenced in Drawings, Specifications and Procedures.

   Contrary to the above, three examples were identified where HI either failed to prescribe activities affecting quality necessary to assure compliance with ASME Code requirements and the customers specifications or failed to include the appropriate acceptance criteria to assure activities affecting quality had been satisfactorily accomplished for ASME Code Section III, Class 2 hermetically (bellows) sealed instrument valves for Beaver Valley Unit 1, PO No. D038012. (90-01-06)

   a. HI failed to prescribe the fillet weld leg length on HI assembly drawings No. N81575-1, Revision A, dated May 17, 1983 and No. N3503Q8X37, Revision G, dated February 12, 1986 for socket welded valve body and tube nipple subassemblies.

   b. HI failed to prescribe the visual and dimensional inspection requirements of HI procedure HQI-132, "Weld Inspection Procedure (ASME Section III)," Revision B, dated April 17, 1989 on Nuclear Traveler No. NA0020 for the assembly and welding of the valve body and tube nipples.

   c. HI failed to prescribe the proof-flushing requirements of HI procedure HPS-85, "Cleaning for Nuclear Service (or Oxygen Applications)," Revision H, dated June 27, 1988 on Nuclear Traveler No. NA0020 to comply with the requirement that item surfaces after cleaning shall be free of cleaning media.

2. Subsection 6.2, "Specification Revision Authorization," (SRA) of the HI NQAM, which, in part, implements Criterion V of Appendix B to 10 CFR Part 50, requires that when an SRA is used to revise specifications and procedures, approval by the Manufacturing Engineer is required.

Subsection 6.6.1, "Specification and Procedure Revisions," of the HI NQAM, which, in part, implements Criterion V of Appendix B to 10 CFR Part 50, requires, that revisions must be initiated by the Nuclear Order Administrator (NOA) with approvals by the Conformance Engineer and the Corporate Director of Quality.

Subsection 9.4, "Nondestructive Examination," of the HI NQAM, which, in part, implements Criterion V of Appendix B to 10 CFR Part 50, requires that all Nondestructive Examination (NDE) procedures must be approved by a qualified Level III Examiner.

Contrary to the above, examples were identified where HI failed to accomplish activities affecting quality in accordance with established procedures to assure revisions were reviewed for adequacy and approved by the same organizations that performed the original review. (50-01-07)

a. HI failed to document revisions of procedure HPT-N145, "Liquid Penetrant (PT) Examination Procedure (Visible Dye, Solvent Removable Method) in accordance with ASME Code Sections III and V," Revision U, dated February 21, 1989 in accordance with established procedures by not providing evidence of a documented review and approval by the NOA, Conformance Engineer, Corporate Director of Quality, Manufacturing Engineer, and the Qualified Level III Examiner for Revisions A through U.

b. HI failed to document revisions of procedure HWS-NI, "Procedure Specification For Gas Tungsten Arc Welding (GTAW) in accordance with ASME Section III and IX, Single Butt and Fillet Joints, .062" to .308" Thickness P8 to P8," Revision L, dated August 9, 1988 in accordance with established procedures by not providing evidence of a documented review and approval by the NOA, Conformance Engineer, Corporate Director of Quality, and the Manufacturing Engineer for Revision A through L.

F. Criterion VIII, "Identification and Control of Material, Parts, and Components," of Appendix B to 10 CFR Part 50, states, in part, that measures shall be established for the identification and control of materials and parts to prevent the use of incorrect or defective materials and parts.

Subsection 8.4, "Age-Controlled Items," of the HI NQAM, which, in part, implements Criterion VIII of Appendix B to 10 CFR Part 50, requires that age-controlled items in stock are inspected every three months to verify that the shelf life has not been exceeded and objective evidence of the inspection of the cure dates is recorded in the "O" Ring Log Book.

Contrary to the above, HI failed to implement established measures to prevent the use of potentially defective "O" rings, that may have exceeded their shelf life, in safety-related components. A combined total of 280 "O" rings from seven part numbers were stored in the nuclear material storage area and had not been inspected every three months or recorded in the "O" Ring Log Book. The quality characteristics of these "O" rings and

the ability of the "O" rings, and all components supplied with "O" rings from this inventory, to perform their safety-related function is indeterminate. (90-01-08)

G. Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50, states, in part, that measures shall be established to assure that special processes are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes and specifications.

Subsection 9.1.1, "The Nuclear Traveler," of the HI NQAM, which, in part, implements Criterion IX of Appendix B to 10 CFR Part 50, requires that the Nuclear Traveler assure that the item meets the requirements of the ASME Code and customers Design Specification.

Subsection 9.4.1, "Qualification and Testing of Personnel," of the HI NQAM, which, in part, implements Criterion IX of Appendix B to 10 CFR Part 50, requires that the written statement of qualifications of the NDE Level III Examiner be approved by the Senior Vice President.

Contrary to the above, two examples were identified where HI failed to establish measures to assure that nondestructive examinations were controlled and accomplished by qualified personnel using procedures in accordance with applicable codes and specifications. Additionally, cleaning was a special process used in the manufacture and assembly of nuclear valves. However, the HI NQAM did not establish measures to assure that the cleaning processes were controlled and accomplished by qualified personnel using procedures in accordance with applicable codes and specifications. Three examples were identified where HI failed to establish measures to assure that cleaning was controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes and specifications (90-01-09)

1. HI failed to evaluate HI procedure HPT-N145, "Liquid Penetrant Examination Procedure, (Visible Dye, Solvent-Removable Method) in accordance with ASME Code Section III and V," Revision U, dated February 21, 1989 and HQI-183, "Written Practice For The Qualification and Certification of Nondestructive Examination (NDE) Personnel," Revision A, dated August 3, 1990 and failed to reconcile the differences between the 1984 Edition and the 1975 Edition of SNT-TC-IA to assure compliance with the Beaver Valley Unit 1, PO No. D038012.

2. HI accepted and certified the qualifications of an NDE Level III Examiner for PT examinations that contained the following deficiencies: (a) The certification did not reference the written practice/procedure to which the Level III was qualified; (b) The certification did not reference the applicable edition of SNT-TC-IA to which the Level III was qualified; and, (c) The HI certification letter was not signed by the Senior Vice-president as required by Subsection 9.4.1, "Qualification and Testing of Personnel," of the HI NQAM.

3. HI failed to comply with the pH and conductivity requirements for demineralized rinse water as specified in ANSI N45.2.1, "Cleaning of Fluid Systems and Associated Components During Construction Of Nuclear Power Plants," and NRC Regulatory Guide 1.37, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water Cooled Nuclear Power Plants," which were specified in Addendum 1, dated February 14, 1985 of Design Specification 2BVS-679, "Specification For Hermetically Sealed Instrument Valves," required in Beaver Valley Unit 1, PO No. D038012. Also, HI failed to measure the values of and prescribe the quality standards for chloride, floride, sulfide, silica, and turbidity of the demineralized rinse water in HI procedure HPS-85, "Cleaning for Nuclear Service," Revision H, dated June 27, 1988.

4. HI failed to measure the values of and prescribe the quality standards for halogen contamination of the acetone cleaning media as required by HI procedure HPS-85 described above.

5. HI failed to establish measures to perform proof-flushing of nuclear valve internal cavities to ensure that surfaces were free of cleaning media as prescribed by ANSI N45.2.1 and required by the licensees PO.

Dated at Rockville, Maryland
this 19 day of DECEMBER, 1990