UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

May 8, 1989

TO: ALL HOLDERS OF LIGHT WATER REACTOR OPERATING LICENSES

SUBJECT: ASME SECTION III COMPONENT REPLACEMENTS (GENERIC LETTER 89-09)

BACKGROUND

The purpose of this Generic Letter is to provide guidance to Licensees who require component replacements, as defined in Definition 1 (see Appendix for definitions), for components that were constructed (see Definition 2) to Section III of the ASME Boiler and Pressure Vessel Code (hereafter called the Code), but are not currently available in full compliance with the stamping and documentation requirements of the Code. The staff position in this Generic Letter does not apply to new construction or the addition of complete systems to operating power reactors. Complete systems being added to operating power reactors shall continue to meet all applicable Code requirements, including stamping. The position in this Generic Letter supersedes previously issued differing position on this subject. This Generic Letter is intended to serve as interim guidance pending revision of 10 CFR 50.55a, the Codes and Standards Rule, or development of a Regulatory Guide.

For replacements of components that were originally constructed to ASME Code Section III, Classes 1, 2 or 3 or other standards within the scope of the current edition of Section XI, Division 1, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the Code, Article IWA-7000 of Section XI specifies the general requirements. Paragraph IWA-7210 provides that replacements ordered as spares shall meet the requirements of the original construction Code used or those of a later Code edition and/or addenda approved in the Codes and Standards Rule 10 CFR 50.55a.

Prior to May 14, 1984, paragraph (a)(2) of the Codes and Standards Rule, 10 CFR 50.55a, permitted an exception to Section III of the Code: §50.55a(a)(2) provided that the Code N-symbol need not be applied when constructing Class A or Class 1 nuclear reactor components to comply with the ASME Code. This exception was initiated in 1971 to permit qualified foreign manufacturers to supply components to domestic nuclear plants. At that time the ASME had no provisions for issuing Certificates of Authorization and the Code N-symbol stamps to firms outside of the United States and Canada. This Code requirement was waived by NRC when the Code was first incorporated by reference in the regulation in 1971; however, the Commission always intended that items within the scope of the Code comply with all other Code provisions. As of September 11, 1972, the ASME instituted provisions for making Certificates of Authorization and symbol stamps available to foreign manufacturers, making the exemption in 10 CFR 50.55a unnecessary and permitting the regulation to be revised accordingly. As of May 14, 1984, any components or parts required by the procurement document to meet the requirements of ASME Section III, Code Class 1, 2 or 3 must meet all the requirements of Section III, including stamping.

IDTR-5
INFO-HR

Because of the decline in nuclear plant orders in the United States, a number of utilities are experiencing difficulties in obtaining replacements for components that were originally constructed in accordance with Section III of the Code. This decline in nuclear power plant orders has caused certain manufacturing companies that previously provided nuclear-grade components in accordance with Section III of the Code to allow their Certificates of Authorization to expire. In other cases, companies have discontinued a product line or sold a product line to another company that does not have a Certificate of Authorization and, therefore, does not manufacture nuclear-grade components. Some of the companies have retained the capability to provide components which meet the design, fabrication, and examination requirements of Section III of the Code. However, because of the limited demand for nuclear-grade components and part, these companies have not maintained their Certificates of Authorization and their related agreements with the Authorized Inspection Agencies.

Even though the manufacturer of an original component does not currently manufacture nuclear components and parts, it may sometimes be necessary to procure replacements from the original manufacturer in order to ensure adequate operation and proper fit and function. In special cases, consideration may be given to procurement of replacements from the original manufacturer in order to avoid an adverse impact on existing components or systems. However, it is also necessary to obtain objective evidence that the quality of the replacement is adequate. For example, in order to avoid rerouting and reanalysis of system piping, consideration may be given to replacement of an ASME Section III, Class 3 nuclear-stamped heat exchanger with an ASME Section VIII stamped heat exchanger that has the same heat removal capacity, construction, and physical dimensions as the original component. When replacements are considered as special cases, they should be procured in a manner consistent with the staff position provided below which is a means of ensuring that a replacement's level of quality is at least equivalent to the original Section III construction.

NRC POSITION

In order to use the guidance in this staff position (provided below) for purchasing replacements, a licensee must first establish that an equivalent Section III stamped replacement is not available. When replacements are required in accordance with Article IWA-7000 of Section XI of the Code, cost cannot be used as a justification for purchasing non-stamped parts. Where replacements are no longer available in full compliance with the stamping and documentation requirements of Section III of the Code they should be procured under the utility's Quality Assurance Program that is in conformance with 10 CFR Part 50, Appendix B and included in the plant operational Quality Assurance list. Furthermore, these replacements should meet all other applicable requirements of Section III (including third party inspection by an Authorized Nuclear Inspector) endorsed by NRC regulations except that the Code N-symbol need not be applied.

Licensees that choose to use this staff position need only indicate such replacements in the Final Safety Analysis Report annual update and certify their compliance with the guidance provided herein. Licensees should retain on file for the service lifetime of each replacement that information detailing the basis for the action and all other related documentation in order to demonstrate conformance with the guidance in this Generic Letter.

The staff concludes that adherence to the guidance provided in this Generic Letter will provide reasonable assurance that component replacements will perform their safety-related function. Pursuant to 10 CFR 50.55a(3), the staff has determined that where component replacements are not currently available, full compliance with the stamping and documentation requirements of the Code would result in hardship or unusual difficulties without a compensating increase in the level of quality and safety over that provided by the alternatives contained in this guidance, and that the alternatives contained in this guidance provide an acceptable level of quality and safety. Accordingly, pursuant to 10 CFR 50.55a(3) relief is granted to those licensees that choose to use the guidance in this Generic Letter for those component replacements that are not currently available in full compliance with the stamping and documentation requirements of Section III of the ASME Boiler and Pressure Vessel Code. If you have any questions about this matter, please contact the NRC project manager or the technical contact listed below.

Sincerely,

James G. Partlow
Associate Director for Projects
Office of Nuclear Reactor Regulation

Enclosures:
1. Appendix
2. Listing of Recently Issued Generic Letters

Technical Contacts:
R. Kirkwood, RES
(301) 492-3928

S. Hou, NRR
(301) 492-0904

APPENDIX
DEFINITIONS AND FOOTNOTES

Definition 1

Replacements are defined in Paragraph IWA-7110 of Article IWA-7000, Section XI of the Code as follows:

> "Replacements are defined as spare and renewal components, appurtenances, and subassemblies or parts of a component or system. Replacement also includes the addition of components, such as vales, and system changes, such as rerouting of piping, within the scope of this Division.* This Article does not provide rules for the addition of complete systems."

Definition 2

Constructed, as used herein, is an all-inclusive term comprising materials, design, fabrication, examination, testing, inspection, and certification required in the manufacture and installation of items.

Footnote 1

Included within the scope of Section XI of the Code are pressure vessels constructed to the 1963, 1965, and 1968 Editions of Section III, Classes A, B, and C. Also included within the scope of Section XI are components constructed to other Codes and Standards, such as USAS B31.7 for nuclear power piping, ASME Section VIII for pressure vessels, USAS B31.1 for piping and valves, and AISC Structural Steel Standard for supports, provided these components are in systems classified as Quality Groups A, B, and C as defined in Regulatory Guide 1.26, "Quality Group Classifications and Standards for Water-Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants or in the applicable Section of Standard Review Plan NUREG-0800. Replacements for components constructed to Codes and Standards not originally requiring stamping, such as USAS B31.1, may continue to be procured in the same manner.

---

*Preventive maintenance or inspection may reveal the need for replacements; reasons for such replacements may include:

(a) Discrepancies detected during inservice inspection
(b) Regulatory requirements change
(c) Design changes to improve equipment service
(d) Changes to improve reliability
(e) Damage
(f) Failure during service
(g) Personnel exposure
(h) Economics
(i) End of Service life

ENCLOSURE 2

LIST OF RECENTLY ISSUED GENERIC LETTERS

Generic Letter No.	Subject	Date of Issuance	Issued To
89-09	ASME SECTION III COMPONENT REPLACEMENTS	5/8/89	ALL HOLDERS OF LIGHT WATER REACTOR OPERATING LICENSES
89-08	ISSUANCE OF GENERIC LETTER 89-08: EROSION/CORROSION - INDUCED PIPE WALL THINNING - 10 CFR §50.54(f)	5/2/89	LICENSEES TO ALL POWER REACTORS, BWRS, PWRS, AND VENDORS IN ADDITION TO GENERAL CODES APPLICABLE TO GENERIC LETTERS
89-07	GENERIC LETTER 89-07, POWER REACTOR SAFEGUARDS CONTINGENCY PLANNING FOR SURFACE VEHICLE BOMBS	4/28/89	LICENSEES TO ALL BWRS, PWRS, AND VENDORS IN ADDITION TO GENERAL CODES APPLICABLE TO GENERIC LETTERS
89-06	TASK ACTION PLAN ITEM I.D.2 - SAFETY PARAMETER DISPLAY SYSTEM - 10 CFR §50.54(f)	4/12/89	LICENSEES OF ALL POWER REACTORS, BWRS, PWRS, HTGR, AND NSSS VENDORS IN ADDITION TO GENERAL CODES APPLICABLE TO GENERIC LETTERS
89-05	PILOT TESTING OF THE FUNDAMENTALS EXAMINATION	4/4/89	LICENSSES OF ALL POWER REACTORS AND APPLICANTS FOR A REACTOR OPERATOR'S LICENSE UNDER 10 CFR PART 55
89-04	GUIDANCE ON DEVELOPING ACCEPTABLE INSERVICE TESTING PROGRAMS	4/3/89	ALL HOLDERS OF LIGHT WATER REACTOR OPERATING LICENSES AND CONSTRUCTION PERMITS
89-03	OPERATOR LICENSING NATIONAL EXAMINATION SCHEDULE	3/24/89	ALL POWER REACTOR LICENSEES AND APPLICANTS FOR AN OPERATING LICENSE