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DENTON,H.R. Office of Nuclear Reactor Regulation

SUBJECT: Forwards AIF position paper on procurement of "Off-the-Shelf" items.Requests NRC concurrence re implementation on project.

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CP&L
Carolina Power & Light Company

November 6, 1979

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

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NOS. 1, 2, 3, AND 4
DOCKET NOS. 50-400, 50-401, 50-402, AND 50-403
PROCUREMENT OF "OFF-THE-SHELF" ITEMS

Dear Mr. Denton:

Attached please find a position paper on procurement of "off-the-shelf" items recently issued by the Atomic Industrial Forum Committee on Power Plant Design, Construction, and Operation. Carolina Power & Light Compnay (CP&L) has reviewed the paper and finds that it is consistant with previous licensing commitments for procurement quality assurance and that it provides valuable guidance in determining what items can be purchased as "off-the-shelf". Accordingly, CP&L desires to use this position paper for guidance in procurement of new, as well as spare and replacement parts, for the Shearon Harris Nuclear Power Plant (SHNPP). However, in order to preclude unnecessary future compliance problems, CP&L considers it prudent to obtain NRC concurrence with the use of this position paper prior to its implementation on the SHNPP project. It is, therefore, requested that the NRC review the attached position paper and inform CP&L of its acceptability for use on the SHNPP project.

Since procurement for the SHNPP project is currently on-going, it is requested that this matter be handled as expeditiously as possible.

Yours very truly,

M. A. McDuffie
Senior Vice President
Engineering & Construction

MAM/jcb

Attachment

cc: Mr. V. Stello
Mr. J. P. O'Reilly

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411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

POSITION PAPER ON PROCUREMENT OF "OFF-THE-SHELF" ITEMS

PURPOSE

The purpose of this paper is to identify, generically, which safety related spare and replacement parts may be purchased by a utility as "off-the-shelf" items for use in systems and components during the start-up and operations phases of a nuclear power plant.

BACKGROUND

Since the publication of Appendix B of 10 CFR 50, many control systems for procurement of safety related equipment have been developed. These systems are so diverse that it is difficult to realize that they are all trying to accomplish the same thing - Quality. Nowhere is this diversity as apparent as in the area of safety related spare and replacement parts. For example, a bearing for a safety related motor might be ordered as a "shelf" item from a non-qualified vendor by one utility. Another utility might order the identical item with one or more of the following controls: qualified vendor, dimensional certification, certification of compliance, receipt inspection, material identification tagging, and verification of part at point of use.

DEFINITIONS

1. Off-the-shelf items are commerical grade items which:

   (a) Do not have unique design or specification requirements wherein the item manufacturer must perform a separate or special operation or test to qualify the item for use in facilities licensed by the NRC. The item may be available off-the-shelf with generic test documentation for equipment or seismic qualification as part of the manufacturer's published specification.

   (b) May be used in applications other than facilities or activities licensed by the Nuclear Regulatory Commission.

   (c) May be ordered from the manufacturer, distributor, or retailer solely on the basis of the manufacturer's published specifications.

2. Normal procurement controls are those inspection controls which a given utility exercises over its day-to-day non-safety related procurement activities for its nuclear facilities.

3. Quality is "fitness for the service intended."

4. Quality control are those quality assurance actions which provide a means to control and measure the characteristics of spare and replacement parts to established requirements.

POSITION STATEMENT

In order to provide a guide for consistent procurement practices, the following identifies, generically, those spare and replacement parts that may be purchased as "off-the-shelf" items for use in safety related systems and components of operating nuclear power plants when special nuclear design or specification requirements were not applied to the original part:

A. Items which may be purchased "off-the-shelf" using normal procurement controls:

1. Individual electronic components such as resistors, capacitors, transistors, integrated circuits, etc. Use of these items in safety related modules shall be limited to replacement of like items. Substitutions may be made in accordance with published industry substitution guides or standards if a postmaintenance check verifies the acceptability of the substitution.

   This may include items at the safety related "module" level such as standard printed circuit boards, standard transformers or standard manufactured components or assemblies designated commercial grade in the plant specifications which are manufactured to a published manufacturer's specification and can be identified by a catalog or part number which is not unique to a user's specification.

   Generic qualification and seismic testing for these items is acceptable providing it is documented and certified by the manufacturer/supplier and that it envelopes the qualification or seismic criteria for the particular plant where it is to be installed.

This does not include unique items at the safety related "module" level such as non-standard printed circuit boards, specially wound transformers or unique components and assemblies. It does not include items for which plant specifications require qualification or seismic testing more stringent than the manufacturer's generic published qualification or test information which is part of a manufacturer's specification.

2. Bearings, gaskets, packing, bolting material (other than pressure retaining), O'rings, springs, fittings (other than pressure retaining), seals, handwheels, etc. which are classified as Commercial Grade and purchased in accordance with normal procurement controls. Substitution of manufacturers may be made in accordance with published industry crossreference charts if the replacement items meet the same catalog specification.

3. Replacement parts listed as catgeories 7 and 8 in ASME Boiler and Pressure Vessel Code Case N-62-2 (1621-2) and category 6 in ASME Boiler and Pressure Vessel Code Case N-119 (1739-1).

4. Standard, catalog equipment used to conduct calibrations where this equipment is calibrated or calibration checked prior to initial use.

5. Individual electrical components such as breaker contacts, relays, springs, lamps, etc. that were originally purchased as catalog items. Use of these items in safety related systems is the same as A.1.

B. Parts which may be purchased "off-the-shelf" from the manufacturer, distributor or retailer of the original equipment provided that; (1) the supplier is qualified according to the utility's Quality Assurance program and (2) the parts can be ordered by catalog number, part number, assembly number, or by manufacturer's specification:

1. Replacement parts listed as category 5, Class 2 and 3 of ASME Boiler and Pressure Vessel Code Case N-119 (1739-1).

2. Non-Pressure Boundary parts which have been qualified by type for a particular safety related application and which will be tested to design conditions at receiving inspection or after installation but prior to service. This includes

complete breaker assemblies or sub-assemblies, and major parts for equipment such as diesel generators, motors, and steam turbines.

3. If safety-related parts are to be purchased "off-the-shelf" from other than the original manufacturer, these parts would have to be verified by utility owners Engineering to perform an equivalent safety-related function.