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April 29, 1983

2CAN048311

Director of Nuclear Reactor Regulation  
ATTN: Mr. Robert A. Clark, Chief  
Operating Reactors Branch #3  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

SUBJECT: Arkansas Nuclear One - Unit 2  
Docket No. 50-368  
License No. NPF-6  
Environmental Qualification -  
Response to Category II.B Items

Gentlemen:

We acknowledge receipt of the Safety Evaluation Report (SER) with attached Technical Evaluation Report (TER) transmitted by your letter dated April 15, 1983 (2CNA048302) pertaining to the Environmental Qualification (EQ) of safety-related electrical equipment for ANO-2. The letter, received by AP&L on April 19, 1983, requires among other things that AP&L provide justifications for continued operation (JCO), if not previously provided, within ten days of receipt of the letter. The following is AP&L's response.

The Category II.B items consist of eight equipment item numbers, but reduce to only two different components for the purposes of EQ evaluation. The first is Rotork 70NA2 series actuators which were said to fail at temperatures above 163°F. According to the Franklin TER, the actuators in question (three total) "are installed in a plant location which will exceed this limiting value during the anticipated transient." This statement is incorrect. The first actuator, represented by worksheet B133, is not exposed to the limiting temperature by any transient for which it is required to function. This was indicated in the JCO for the device which was previously provided (see AP&L letter dated February 27, 1983 (0CAN028211)). The other two actuators, represented by worksheets B167 and B168, are exposed to a maximum temperature during accident conditions of only 107°F. This is indicated on the worksheet provided in previous submittals. Therefore, based on the above justification, the devices are considered qualified and no further action is necessary.

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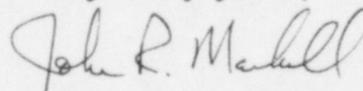
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The second type of component placed in Category II.B are Rosemount 1153 series "A" transmitters. According to Franklin, these devices are unqualified based on testing results provided by another utility. These test results had indicated transmitter failure due to high temperature which was applied to address aging considerations. We have carefully evaluated the contentions made by Franklin and feel their conclusions are inappropriate for the following reasons:

1. Type testing is only a means to provide assurance that a device is capable of performing as designed. An isolated test failure does not, therefore, indicate the device is categorically unsuitable for use in its intended applications; rather, the failure must be carefully studied to determine the possible causes before any final conclusions are drawn.
2. The information regarding the test failure indicated the problems were attributed to the "high temperature versus time necessary for the Arrhenius curve time compression" which is used to address aging requirements. As you are aware, the Arrhenius methodology applied in such cases is an extremely unreliable means to quantify aging qualification. Further, the test failures due to high temperature can not prove the device is unqualified for its intended service, rather it only indicates that application of the Arrhenius methodology using the elevated temperature can not be justified. It is our position that a transmitter qualified to accident conditions (plus margin) plus a materials analysis or suitable qualification/maintenance program provides the necessary assurance that the device will function as intended. This is consistent with the NRC guidance provided in 79-01B (DOR Guidelines Section 7) and Generic Letter 82-09 (question 9).
3. Franklin apparently did not give proper consideration to the qualification testing on Rosemount transmitters performed specifically for AP&L in 1978 (ref: Wyle test report 26304 submitted to Franklin July 29, 1982 (ØCANØ7822Ø)). This testing was performed to satisfy NRC licensing concerns over the qualification of transmitters at ANO-2. The NRC accepted the test results and closed out the matter as documented by a November 7, 1978, letter (meeting notes) to AP&L from NRC (Leon B. Engle) (2CNA117845). This test demonstrated that a Rosemount 1153 series "A" transmitter functioned properly during the applied LOCA simulations. Transmitter accuracy and the suitability of the installed connectors were also examined specifically and deemed acceptable.

Based on the above justification, AP&L maintains that the ANO-2 transmitters listed in Franklin Category II.B are qualified in accordance with applicable testing requirements; consequently, no further actions are necessary.

Very truly yours,



John R. Marshall  
Manager, Licensing