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C J Rosenthal

American Air Filter
AN ALLIS-CHALMERS COMPANY
215 CENTRAL AVENUE, LOUISVILLE, KENTUCKY 40208

UPB/STONE

January 30, 1987

REPLY TO:
P. O. BOX 35690
LOUISVILLE, KENTUCKY 40232
TELEX: 20-4351
OPERATOR: (502) 637-0011
TO CALL WRITER DIRECT
TELEPHONE: (502) 637-0670

Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: The Director

Reference: 10CFR 21 Report
Newport Scientific Hygrotran Transmitter
Model 9371BM

Dear Sir:

The following report is issued in compliance with the requirements of NRC Regulation 10CFR Part 21.

On November 7, 1985 and April 14, 1986, American Air Filter (AAF) issued orders to

Newport Scientific Incorporated
8246-E Sandy Court
Jessup, MD 20794-0189

for model 9371BM Hygrotran humidity transmitters. The purchase orders required that the equipment be capable of functioning properly after being exposed to a radiation level of 1×10^7 rads. Newport Scientific supplied the equipment to AAF with the following certification:

> "This system will perform its required function in a nuclear power plant as a class IE equipment - 1×10^7 rads."

In order to comply with contractural verification requirements, AAF radiated the Newport Scientific transmitters to a level of 1×10^5 rads, performed a seismic shake table test, and we also performed a functionability test. The transmitters failed the functionability test. Further testing indicated that the failure was caused by the radiation.

The transmitters were returned to Newport Scientific for evaluation of the reported failures. After further testing and analysis, Newport Scientific advised AAF on December 17, 1986 that:

> "... the Hygrotran Transmitter Model 9371BM is only suitable for environments with the radiation level of the 1×10^4 rads or lower, ...".

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AAF's contract for supply of this equipment was with a nuclear electric generating facility in Canada. To the best of my knowledge, AAF has not in the past supplied this item of equipment, with radiation resistance requirements, to any nuclear facility in the United States. Neither does AAF know if this transmitter has been supplied by Newport Scientific, or other contractors, with radiation resistance requirements to any nuclear facility in the United States.

AAF does not have adequate information on the use of the Hygrotran Model 9371BM to enable it to determine if a safety hazard is created or could be created by the failure of the instrument to meet certified radiation levels as described herein. However, it is not unreasonable to expect that the potential for such a safety hazard could exist.

AAF's contacts at Newport Scientific on this matter have been:

Mr. N. Kumar Ahuja
President & Chief Operating Officer
Phone: (301) 498-6721

Mr. Hamid R. Azmi
Design Engineer
Hygrodynamics Products
Phone: (301) 498-6707

If further information on this matter is required, please contact the undersigned.

Sincerely,

Keiron P. O'Connell, P.E.
Project Manager
Environmental Safety Systems

KPO:ajp