Telemecanique

QA15/JDH/dg
Serial: E026

15 April 1987

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Director, Office of Inspection
and Equipment

SUBJECT: Notification Pursuant to 10 CFR 21
Concerning Magnet Part #403869
Used in Type "J" Industrial Control Relays

Gentlemen:

On March 20, 1987 Black & Veatch called from the Coranado Generating Station/Salt River Project in St. Johns, Arizona and reported that the Type "J" Control Relays showed unusual temperature rises and that 2 of 50 relays failed. Upon investigation it was found that the Magnet Assembly Part #403869 had an air gap too large between the center elements which resulted in additional power being required to operate the unit.

The potential hazard for the magnet condition, described above, is the possibility of the relay not operating properly, i.e., not pulling-in after the unit has heated up from continuous operation. An additional hazard is the possibility of the coil opening as a result of over heating.

The product was manufactured by: Telemecanique Inc.
100 Relay Rd.
Plantsville, CT 06479

Model numbers include J10 and J12 AC Control Relays having a J20M Magnet Block with Coil - date coded 8705 thru 8712 inclusive. The model number "J20M" is located on the side of the magnet block assembly and the date code is located on the bottom of same.

The incorrect air gap was caused by over grinding the center element past the drawing limit. This grinding operation is performed using a written procedure. When a new operator was assigned to this process, the operator mis-read the instructions causing him to over grind the center element. Quality Control was not required to inspect the air gap dimension or measure the seal-in current after final assembly. QC did perform pick-up

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and drop-out tests which would verify proper relay operation, but an unsatisfactory seal-in current would not affect the pick-up and drop-out tests; thus, relays that tested satisfactory were actually unsatisfactory.

Immediate Corrective Action has already been established at the manufacturer's facility, listed above, which included:

* Reinstructing the operator and inspector as to the proper inspection procedures at the completion of an operation or submittal of material for inspection.

* Adding the magnet's critical dimensions to the end of the grinding procedure for operator verification.

* Changing the inspection procedure to clearly call out the dimensions that must be measured at the completion of the operation.

* Monitoring the seal-in current after final assembly to make sure it does not exceed a maximum level.

90 devices were supplied for nuclear application to Mercury Co. of Norwood for subsequent use at the Three Mile Island Nuclear Power Plant - Unit 1. Other nuclear stations use these relays, but no other relays were supplied with the above date codes.

Replacement magnet blocks have already been supplied to GPU Nuclear Corp. with the recommendation to replace all relays bearing the above listed date codes. Even though our records indicate that no other potential defective devices were supplied, nuclear stations that have used these relays can perform a check of the seal-in current if the relays cannot be removed from the panel to verify the date code. A relay is considered acceptable and within limits if the seal-in current is .190 Amps or less.

Based on this report and a verification audit of the manufacturing facility by our QA Engineer, Telemecanique Inc. believes the reporting requirements of 10 CFR 21 are now complete and that no further action is required or planned.

Sincerely,

R. W. Jones

Richard W. Jones
Director of Operations

CC: Administrator, Region I Office
USNRC
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