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TO:

MR. J. TAYLOR, DIR., I AND E

FROM:

THOMAS J. SHIDELER, ITT BARTON INSTRUMENTS COMPANY

DATE:

APRIL 14, 1986

RE:

NOTIFICATION OF DEFECT IN ACCORDANCE WITH 10CFR PART 21

ITT BARTON IS A SUPPLIER OF BASIC COMPONENTS TO THE NUCLEAR POWER INDUSTRY.

DURING REQUALIFICATION TESTING OF ITT BARTON MODEL 580 SERIES INDICATING SWITCHES UNDER LOSS OF COOLANT ACCIDENT CONDITIONS, SWITCH MALFUNCTIONS OCCURRED WHEN THE CHAMBER TEMPERATURE WAS RAISED TO 340 DEGREES FAHRENHEIT. THE MALFUNCTION SYMPTOMS WERE:

IN THREE OF THE FIVE INSTRUMENTS TESTED, ONE OR BOTH OF THE SWITCHES FAILED TO OPERATE (NO CHANGE IN SWITCH STATE) WHEN INPUT PRESSURE TO THE INSTRUMENT WAS VARIED. SWITCH SET-POINT SHIFT IN EXCESS OF THE ALLOWABLE TEN

PERCENT OCCURRED ON TWO OF THE INSTRUMENTS.

ALL OF THE SWITCHES OPERATED, I.E., CHANGED STATE WHEN INPUT PRESSURE WAS VARIED, WHEN THE CHAMBER TEMPERATURE WAS LOWERED TO ROOM AMBIENT, HOWEVER, THE SWITCH SET-POINT SHIFTS WHICH OCCURRED AT TEMPERATURE WERE PERMANENT.

THE SPECIFIC COMPONENT USED IN THESE APPLICATIONS IS A HONEYWELL SNAP-ACTING SWITCH, PART NUMBER 11SM403. THESE SWITCHES WERE PROCURED UNDER REQUIREMENTS FOR CERTIFICATION OF SIMILARITY OF PARTS, MATERIALS AND PROCESSES TO SWITCHES PREVIOUSLY SUPPLIED BY THE MANUFACTURER, SO THE MALFUNCTIONS WHICH OCCURRED MUST BE CONSIDERED TO BE GENERIC IN NATURE.

SUPPORTING DATA FOR OPERATION OF THESE MODEL 580 SERIES INDICATING SWITCHES AT TEMPERATURES BELOW 340 DEGREES FAHRENHEIT IS BEING DEVELOPED AND WILL BE PROVIDED TO ALL CUSTOMERS WHO HAVE PURCHASED THE INSTRUMENTS FOR USE IN HARSH ENVIRONMENTS. THIS INFORMATION WILL BE AVAILABLE AND DISTRIBUTION MADE BY MAY 1, 1986.

IN ADDITION, RETESTING OF THE MODEL 580 SERIES INSTRUMENTS WILL BE INITIATED USING RECENTLY DEVELOPED SNAP-ACTING SWITCHES WHICH HAVE CHARACTERISTICS BETTER SUITED FOR THE APPLICATION THAN THOSE PREVIOUSLY USED. THESE TESTS WILL BE COMPLETED BY OCTOBER 1, 1986.

THE MODEL 581-4 HYDRAULIC ISOLATOR USED AS PART OF THE REACTOR VESSEL LEVEL INDICATING SYSTEM IS NOT AFFECTED BY THIS REPORT.

SINCERELY, THOMAS J. SHIDELER GENERAL MANAGER

CC:

J. DOYON

- D. PRICE
- J. RILEY
- R. SPADY
- G. WELT

EAST FICE

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