

!!!!!!! THIS EVENT HAS BEEN RETRACTED. THIS EVENT HAS BEEN RETRACTED !!!!!!!

POWER REACTOR	EVENT NUMBER: 27447
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FACILITY: MILLSTONE	REGION: 1	NOTIFICATION DATE: 06/24/94
UNIT: [] [2] []	STATE: CT	NOTIFICATION TIME: 20:38 [ET]
RX TYPE: [1] GE-3, [2] CE, [3] W-4-LP		EVENT DATE: 06/24/94
		EVENT TIME: 20:20 [EDT]
NRC NOTIFIED BY: BATES		LAST UPDATE DATE: 07/21/94
IC OPS OFFICER: DICK JOLLIFFE		

EMERGENCY CLASS: NOT APPLICABLE	NOTIFICATIONS	
10 CFR SECTION:	JOHN ROGGE	RDO
AND 50.72(b)(2)(iii)(D) ACCIDENT MITIGATION		

UNIT	SCRAM CODE	RX CRIT	INIT PWR	INIT RX MODE	CURR PWR	CURR RX MODE
2	N	Y	100	POWER OPERATION	100	POWER OPERATION

EVENT TEXT

- POSSIBLE DEFECTIVE FUSES INSTALLED IN VITAL AC INVERTERS IN UNITS 1 & 2 -

BUSSMANN COMPANY REPRESENTATIVES NOTIFIED LICENSEE THAT A POTENTIAL DEFECT EXISTS WITH BUSSMANN TYPE KTK, 120 VAC, 5 AMP FUSES WITH DATE CODE #V-303 DUE TO A POSSIBLE MANUFACTURING DEFECT. POSSIBLE COLD SOLDER JOINTS COULD ALLOW THESE FUSES TO OPEN UNEXPECTEDLY.

THESE TYPE FUSES ARE PRESENTLY INSTALLED IN 6 VITAL AC INVERTERS IN UNIT 2, 7 VITAL AC INVERTERS IN UNIT 1 (PRESENTLY AT 100% POWER) AND NO EQUIPMENT IN UNIT 3 (PRESENTLY AT 100% POWER). LICENSEE HAS 7 OF THIS TYPE FUSES IN STOCK FOR UNITS 1 & 2.

LICENSEE DESTRUCTIVELY TESTED THESE IN-STOCK FUSES AND FOUND NO COLD SOLDER JOINTS.

LICENSEE HAS ADEQUATE QUANTITIES OF SUITABLE REPLACEMENT FUSES FROM OTHER MANUFACTURERS.

LICENSEE WILL SUBMIT AN LER TO THE NRC ON THESE FUSES.

THE CALLER DID NOT KNOW IF BUSSMANN COMPANY HAD SUBMITTED OR IF THE LICENSEE PLANS TO SUBMIT A 10CFR21 REPORT TO THE NRC ON THESE FUSES.

LICENSEE INFORMED THE NRC RESIDENT INSPECTOR.

UPDATE AT 08:52 ON 07/21/94 BY BATES TO GOULD THE LICENSEE IS RETRACTING THIS EVENT DUE TO THE DISCOVERY THAT THE FUSES INSTALLED IN UNIT 2 INVERTERS DO NOT HAVE THE MANUFACTURES DEFECT FOUND IN THE FUSES INSTALLED IN THE UNIT 1 INVERTERS, THEREFORE THE FUSES IN UNIT 2 WERE ALWAYS FULLY OPERABLE MAKING THE EVENT NOT REPORTABLE. THE RI WILL BE informed.

excellent in handling the sample, minimizing the spread of contamination, and making recommendations to prevent a repeat of the occurrence.

- University collaborative researchers were cooperative when notified about the occurrence.

DOE OPERATING EXPERIENCE
WEEKLY SUMMARY

7/1-7/94

6. FUSE MANUFACTURING DEFECT MAY CAUSE PREMATURE FAILURE

On June 24, 1994, Northeast Utilities personnel notified the Nuclear Regulatory Commission (NRC) that potentially defective fuses may have been installed in vital equipment at their Millstone commercial nuclear power plant (NRC Event Number 27447). Subsequent review by ONS personnel indicated that the deficiency is generic in nature and could affect safety-related equipment at DOE facilities.

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In April 1993, Cooper-Bussmann, the manufacturer of the fuses, issued a Product Analysis Report notifying Northeast Utilities that some KTK fuses manufactured before 1990 and supplied to them may contain a cold solder joint, which occurs when the solder does not form a bond between the cap material and the fuse link. These fuses could prematurely or unexpectedly open. According to the report, the bridge elements used in the construction of the fuses had no copper-clad tape over the ends of the fiber bridge material, resulting in an insufficient solder joint between the wire of the element and the inside of the ferrules.

Bussmann representatives reported that all KTK fuses manufactured before 1990 could have been affected. In December 1989, all affected stock at Cooper-Bussmann was purged and an engineering change notice was issued to add copper-clad tape to the ends of the fuse element to enhance the contact surface and improve the solder-ability. Bussmann representatives indicated that in addition to the copper tape, other enhancements to the manufacturing process were implemented after 1989 to improve the quality of the solder joint, including use of a different flux and an enlarged soldering surface.

Bussmann representatives informed ONS personnel that it is highly unlikely that fuses showing no increase in temperature or resistance in response to periodic thermal scans or resistance checks would have a cold solder joint. However, KTK fuses exhibiting increases in temperature or resistance over time may be deficient and can be returned to Bussmann for analysis at no charge. Additional information can be obtained by contacting Rich Helgeson or David Bernhard at Cooper-Bussmann at 314-527-1235 and 314-527-1404, respectively.

7. OPERATING EXPERIENCE BULLETIN BOARD ANNOUNCEMENT

As part of an effort by the Office of Environment, Safety, and Health to disseminate lessons learned to facilities operated and regulated by the Department of Energy, ONS announced the creation of the Operating Experience Bulletin Board System (BBS). The BBS will be available to Department of Energy, Managing and Operating contractor, and associated subcontractor personnel on July 18, 1994. ONS plans to operate the BBS for a three-month trial period and then make modifications based on comments and suggestions by users. The purpose of the BBS is three-fold.

- Provide the Operating Experience Weekly Summary in electronic form in response to feedback from the 1993 customer survey.
- Provide a forum for discussion of lessons learned from operating experience gained at facilities managed, operated, and regulated by DOE.
- Reduce the use of paper and the time associated with delivering the Weekly Summary.

The BBS can support up to eight users at one time at a maximum modem speed of 9600 baud. It provides user security through use of passwords, messaging (e-mail), and common file areas to store documents. The BBS will shut down on Friday of each week to perform file maintenance and update the current Weekly Summary.