

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
RUSKIN FIRE DAMPERS
NCR WBN MEB 8008
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

In our response to NRC on NCR WBN MEB 8007 (formally MEB 80-04), we addressed a problem relating to Ruskin's vertical, spring closure, NIBD23 Fire Dampers and a fix or correction was suggested which consisted of fastening a #6 screw in the narrow portion of the slot in the spring brackets.

Although it appears that this method should have eliminated the problem, an engineering firm has indicated to us that some of the screws worked loose during shipment. This raises the possibility that the use of screws as a fix is questionable.

A second problem has also been brought to our attention. If the blade package in vertical units less than 9" high is shifted such that the leading edge of the bottom blade rests higher than the trailing edge, the blades may jam when released.

Safety Implications

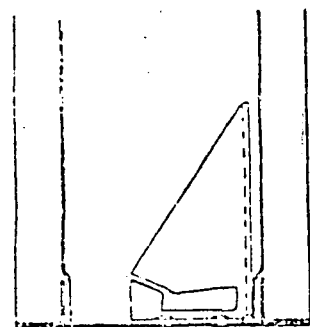
This deficiency does not alter the ability of Ruskin's fire dampers to survive a seismic event and remain intact and operable. However, it can affect the complete closure of the damper.

Corrective Actions

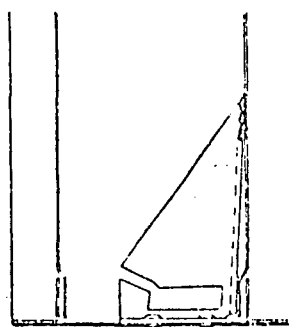
Ruskin has now developed an alternate fix consisting of a small metal clamp which attaches to the spring bracket and provides a positive stop for the spring (see drawing 5564).

Ruskin has developed a snap-in strip which when installed will hold the bottom blade in the proper orientation and ensure complete and consistent closure (see drawing 5565).

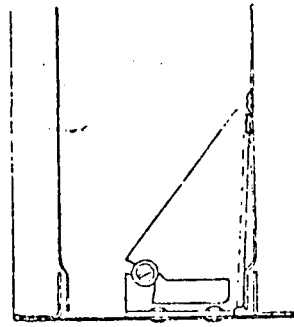
Modifications will be completed by June 10, 1980.



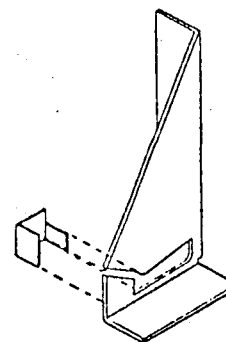
ORIGINAL INSTALLATION
(VERTICAL FIRE DAMPERS
WITH SPRING CLOSURE)



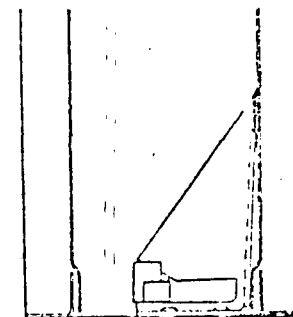
TOP EDGE OF BRACKET
TACKWELDED TO PROVIDE
EXTRA SUPPORT FOR
BRACKET & RESULTING
ALTERATION OF SPRING
SLOT



ORIGINAL FIX USING
#6 SCREW, WASHER, STAR
LOCKWASHER & HEX NUT



INSTALLATION OF
PROPOSED BRACKET
CLAMP (SEE DETAIL
ABOVE ALSO)



BRACKET WITH CLAMP
INSTALLED

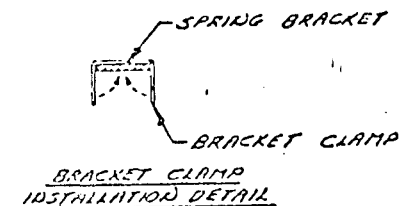
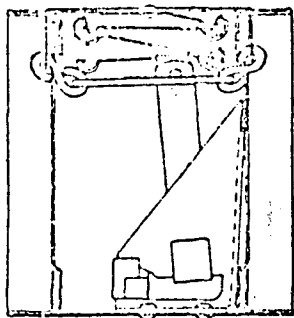
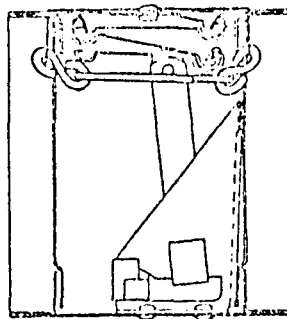


FIG. 1

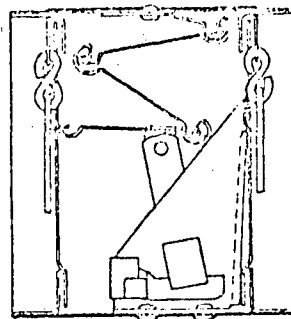
CHANGE LETTER	REVISION DESCRIPTION		CHK BY	APP'D BY	DATE
DATE 3-27-80	DATE 3-27-80	DATE 4-2-80	RUSKIN Mfg. Co.		DATE
P.O. Box 123			Grandview, Mo. 64020		DATE
TITLE			VERTICAL NIBD 23 SPRING BRACKET MODIFICATIONS		DATE
			5564		DATE



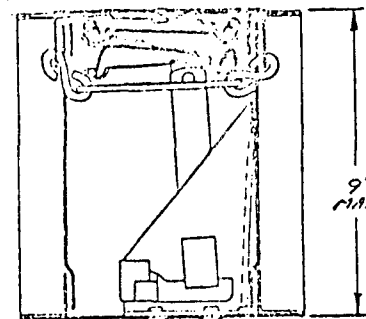
VERTICAL NIBBERS
AS SHOWN, THE DAMPER
WILL CLOSE COMPLETELY
AND CONSISTANTLY WHEN
THE FUSE LINK MELTS



ABOVE, THE BLADE PACKAGE
HAS BEEN SHIFTED ALLOWING
THE LEADING EDGE OF
THE BOTTOM BLADE TO BE
ABOVE THE TRAILING
EDGE - IF THE FUSE
LINK MELTS WITH THE
BLADES IN THIS POSITION,
THEY WILL JAM AS IN
THE NEXT DETAIL



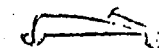
BLADE PACKAGE JAMMED



DAMPER WITH SNAP-IN
STRIP (SHOWN AT RIGHT)
INSTALLED. SINCE LEADING
EDGE IS HELD BELOW
TRAILING EDGE ON BOTTOM
BLADE, UNIT CLOSSES
COMPLETELY & CONSISTANTLY



.030" \pm $\frac{1}{4}$ " WIDE ST. STL.



SNAP-IN STRIP INSTALLED
ON BOTTOM BLADE

FIG. 2

			CHANGE LETTER	REVISION DESCRIPTION	OWN. BY	APP'D BY	DATE
DATE	DATE	DATE	RUSKIN Mfg. Co.				SCALE
3-25-80	5-28-80	4-2-80	P.O. Box 125 Grandview, Mo. 64030				ISSUE
			TITLE				DWG. NO.
			VERTICAL NIBBERS (9" HIGH 11112 1555) CLOSURE				5565