

Attachment A
WNP-1/4
Docket Nos. 50-460 and 50-513
Reportable Condition 10CFR50.55(e)
WKM Valve Cracks

INTERIM REPORT

Background

B&W notified WPPSS on October 8, 1979 of a defective condition which existed in the internal pressure relief valve of the WKM manufactured valves being supplied for WNP-1/4 (reportability of this defect is being evaluated by B&W). Due to this defect, all valves manufactured by WKM were shipped back to their factory in Houston for repair and WPPSS took this opportunity to perform the ASME Sec. XI visual exam of the large Sec. III, C1 1 valves in WKM's factory.

This examination revealed numerous linear indications in the conduit region of five (5) of the eight (8) valves examined and arc strikes on the gate and segment of six (6) valves.

Description of Deficiency

Unacceptable linear indications were subsequently confirmed on six (6) of the eight (8) valves through the use of liquid penetrant examination. These valves are: 1-DHR-V23A and 24B, and 4-DHR-V23A, 24B, 25A, 26B. B&W and WKM also informed WPPSS of cracks which were detected in valve 4-CFS-V31A. These cracks were confirmed by WPPSS and the WPPSS ANI and found to be extensive. The cause of these problems is unknown; however, adequate inspection would have identified the conditions during the manufacturing process.

Safety Implications

All rejectable indications and cracks found, to date, are in valves located in safety systems (Low Pressure Injection (LPI) and Core Flood System (CFS)). Failure of these valves in service due to a loss of pressure boundary integrity could result in;

- a) a loss of reactor coolant (DHR valves),
- b) loss of borated water in the core flood tank
- c) an inability of the systems to mitigate the consequences of a LOCA type accident.

The subject condition also represents deficiencies as described under both i and iii of 10CFR50.55(e).

Corrective Action Taken

Since these valves have already received an ASME N stamp, they fall under the jurisdiction of ASME XI and WPPSS, as the Owner, has the responsibility for all future examination and repair.

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Corrective Action Taken (Cont'd)

B&W and WKM are presently preparing the repair/inspection program for submittal to WPPSS. The repairs and additional examinations will be performed by B&W and WKM under WPPSS direction.

Further inspection on all WKM manufactured valves supplied to WPPSS is being planned.



2035

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TO: E. L. WEBRING
WASHINGTON PUBLIC POWER SUPPLY SYSTEM
RICHLAND, WASHINGTON

509: 377-2740, Verify, 1407

FROM: R. E. STEINKE - EXT. 2158

12/19/79

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NOTE: IF THERE IS A PROBLEM DURING
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COMPLETE, PLEASE CALL (804) 384 5111,
2742 OR EXT. 3711.

THANK YOU.....

ATTACHMENT B

R. R. Stine

Babcock & Wilcox

Power Generation Group

P.O. Box 1260, Lynchburg, Va. 24505

Telephone: (804) 384-5111

December 17, 1979

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

Attention: Mr. E. B. Blackwood

Gentlemen:

Pursuant with the requirements of 10 CFR 21, this written report is a follow-up of a verbal report made at 1:50 PM, December 14, 1979, to Mr. E. B. Blackwood by telecon concerning defects in a core flood system isolation valve and possible defects in six (6) decay heat removal isolation valves supplied to Washington Public Power Supply Systems. The report was made for Mr. J. H. MacMillan, Vice-President, Nuclear Power Generation Division, Babcock & Wilcox Company, Old Forest Road, P. O. Box 1260, Lynchburg, Virginia 24505, by D. Mars and T. L. Baldwin of the Company's Licensing Section. Mr. MacMillan was informed of this reportable concern at 8:20 AM, December 14, 1979.

The report was of two visual linear defects discovered by the manufacturer inside the body of a core flooding system isolation valve, ACF-V1A supplied to Washington Public Power Supply System by the WKM Division of ACF Industries, Houston, Texas, under B&W Company contract number 620-0032 for unit WNP 4. This valve had been returned to WKM by WPPSS at our direction for rework of an internal relief valve. The report is made under 10 CFR 21 of a defect in a basic component used to "mitigate the consequences of accidents which could result in potential offsite exposures."

Additionally, the report covers unacceptable indications in six (6) decay heat removal system isolation valves found by WPPSS by the ASME Section XI preservice baseline inspection. These indications were noted by visual inspection and/or penetrant tests in the inlet and outlet conduits of the following isolation valves:

Unit WNP 1

DH - V12A
DH - V12B

Unit WNP 4

4 DH - V11A
4 DH - V11B
4 DH - V12A
4 DH - V12B

Babcock & Wilcox

The Office of the Director
of Inspection and Enforcement

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December 17, 1979

These indications are being reported under 10 CFR 21 as possible defects in basic components designed "to assure the integrity of the reactor coolant pressure boundary". These valves were also supplied to WPPSS by WKM Division of ACF Industries, Houston, Texas under B&W Company contracts 620-0023 and 620-0032.

No WKM valves have been supplied by Babcock & Wilcox Company to any of our Operating Plants. B&W has supplied 48 valves manufactured by WKM for backlog contracts. They are:

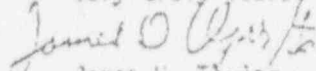
- 2 decay heat cooler outlet control valves for Power Authority of the State of New York under contract 620-0031
- 4 decay heat cooler outlet control valves for TVA under contract 620-0013 and 620-0016 - Bellefonte Units 1 and 2
- 12 isolation valves and 2 decay heat cooler control valves for Portland General Electric, under contracts 620-0024 and 620-0030 for Pebble Springs 1 and 2
- 24 isolation valves and 4 decay heat cooler outlet control valves supplied to WPPSS on contract 620-0023 and 620-0032 for WNP 1 & 2.

All customers who are being supplied WKM valves have been notified of this concern and will be kept advised of the progress of investigations and selected fixes.

A program is being developed and initiated by B&W Company, WPPSS, and WKM to attempt to determine probable cause and extent of these defects and indications and to determine acceptable fixes. The follow-up action plan will include assurance of the acceptability of all 48 valves supplied to B&W Company contracts by WKM.

A list of the WKM valves supplied by B&W with notation of the valves with defects or indications and a sketch showing core flood valve defects are attached.

Very truly yours,



James H. Taylor
Manager, Licensing

JHT:dsf

Attach.

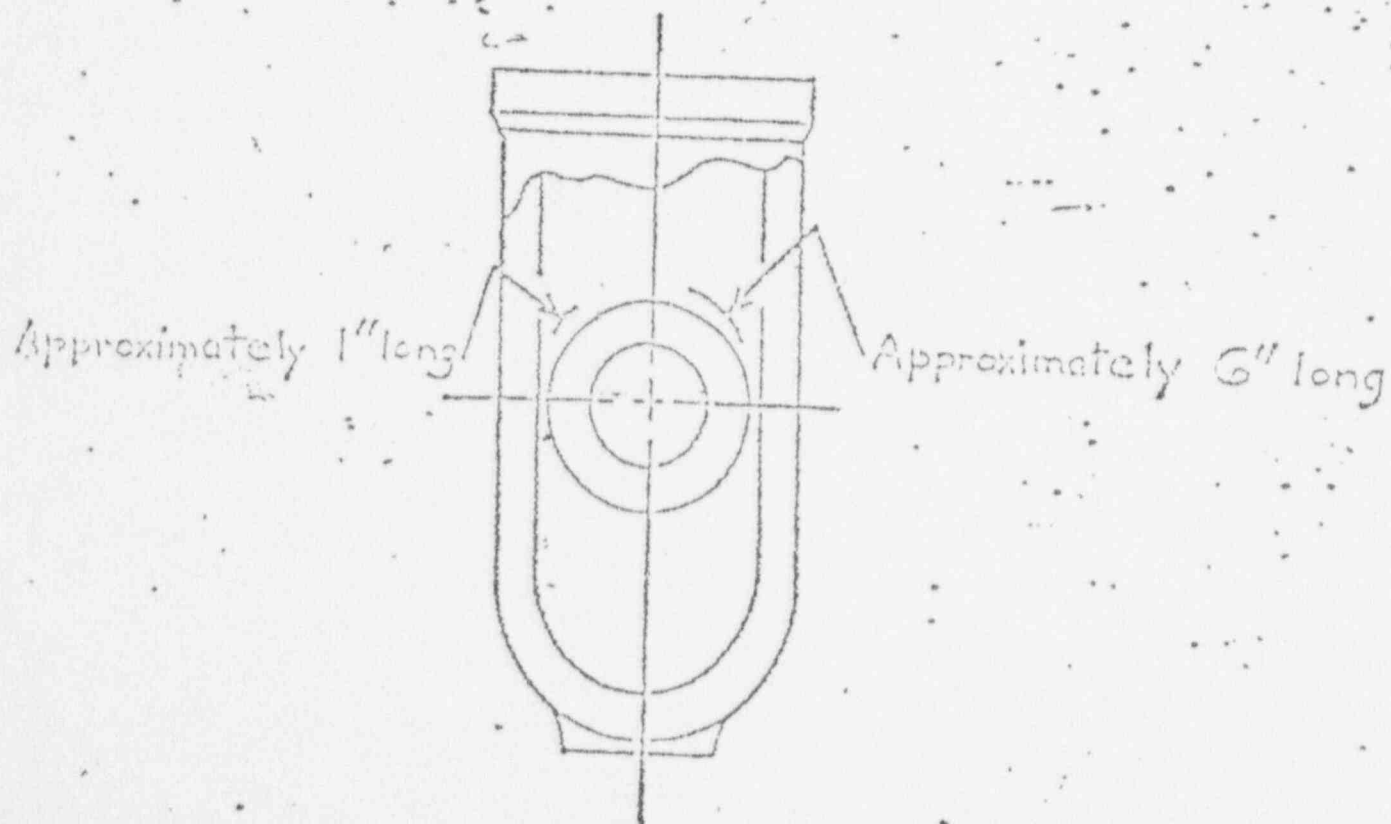
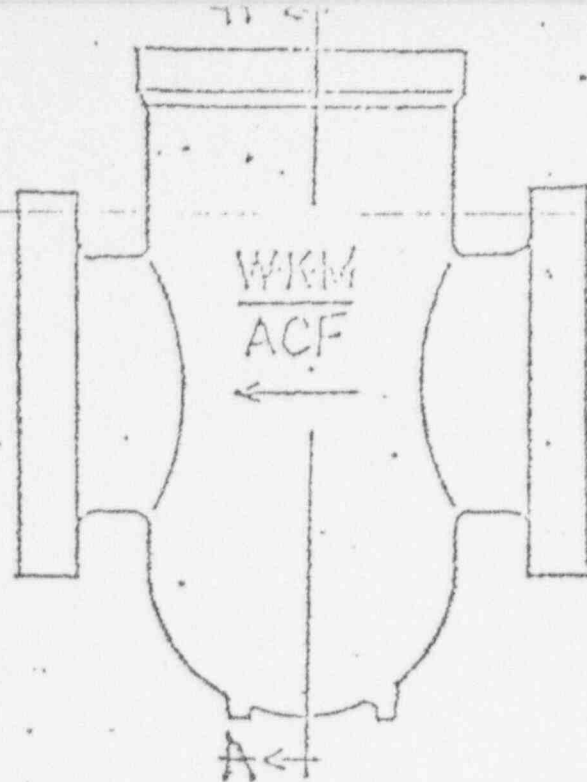
cc: R. D. Borsum (B&W)
J. R. MacMillan (B&W)

WKM Valves with Possible Defects

<u>Item</u>		<u>Valve Class</u>	<u>Valve Designation</u>	<u>System/Plant</u>	<u>Defect Noted By</u>
Decay Heat Removal System Isolation Valves	Case I - Discovered by WPPSS	Class 1	DH - V12A	DHR/Unit 1	Visual and PT
			DH - V12B	DHR/Unit 1	PT
		Class 1	4 DH - V11B	DHR/Unit 4	Visual and PT
			V11A	DHR/Unit 4	Visual and PT
			V12A	DHR/Unit 4	Visual and PT
			V12B	DHR/Unit 4	Visual and PT
Core Flooding System Isolation Valves	Case II Discovered by WKM	Class 2	4 CF - 1A	CF/Unit 4	Visual linear cracks plus radiography

WKM Total Valve Count Backlog Contracts

PASNY 2 - All decay heat cooler outlet control valves
 TVA 4 - All decay heat cooler outlet control valves
 PGE 14 - 12 isolation valves + 2 decay heat cooler outlet control valves
 WPPSS 28 - 24 isolation valves + 4 decay heat cooler outlet control valves
 48 WKM Valves



SECTION A-A