

**Borg-Warner Fluid Controls**

BORG-WARNER

7500 Tyrone Ave., Van Nuys, California 91409 • Telephone 213-781-4000  
Mailing Address: P. O. Box 2185, Van Nuys, California • TWX 910-495-172F

April 15, 1983

Refer to: Q-83-077/WRW

John B. Martin, Director Region V  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
1990 North California Blvd., Suite 202  
Walnut Creek, California 94596

Subject: Notification Under Rules of 10CFR21

Reference: Telecon on April 12, 1983, R. Dodds, NRC and P.L. Milinazzo, BW-NVD

Dear Mr. Martin:

The attached report serves as formal written notification supplementing the above referenced telecon of April 12, 1983, as required by 10CFR21.

This report is filed on the basis of one known potential ASME Section III and V violation reported to Borg-Warner by Cleveland Electric Illuminating, Perry Nuclear Station, Perry, Ohio 44081. The information presented herein should be considered preliminary without evaluation as to its potential safety hazard and scope.

If you require additional information, do not hesitate to call the undersigned.

Respectfully,

BORG-WARNER CORPORATION  
Nuclear Valve Division

*W. R. Wheaton*

W. R. Wheaton  
Director,  
Engineering and Quality Assurance

DESIGNATED ORIGINAL

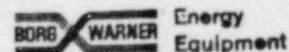
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**Nuclear Valve Division**

Borg-Warner Corporation  
7500 Tyrone Ave., Van Nuys, California 91409

**NOTIFICATION REPORT**

**to**  
**Nuclear Regulatory Commission**

PART NUMBER	Unknown	N/R No.	0006
PART NAME	Valve	CUSTOMER	Cleveland Electric Illuminating
MANUFACTURER	Nuclear Valve Division	PROJECT	Perry Nuclear Station
	Borg-Warner Corporation	DATE DEFECT DISCOVERED	4/6/83

**DESCRIPTION OF NONCONFORMANCE, ANALYSIS OF CONDITION, AND CORRECTIVE ACTION**  
**(ATTACH SUPPORTING DATA). SEE ALSO ATTACHMENT 1**

**NON-CONFORMANCE**

A review of radiographs supplied by NVD for valve weld end preparation has revealed that numerous radiographs exhibit sensitivity and density variations within the penetrameter images which are currently unexplainable utilizing the reported original technique.

**ANALYSIS OF CONDITION**

The valve body in question is made from a casting which is radiographed 100% in the as cast condition in accordance with Section III and V including the area of concern which is subsequently machined to the final weld prep configuration and re-radiographed in accordance with Section III and V. Although the penetrameter image on the radiographs taken after machining of the final weld prep configuration may be questionable as to their condition, the material covered by said questionable radiographs was deemed acceptable in the radiographs taken in the as cast condition.

**CORRECTIVE ACTION**

To be determined.

**QUANTITY AND LOCATION OF ALL SIMILAR ITEMS DELIVERED WITHIN THE U.S.A. THAT  
CONTAIN THE SAME NONCONFORMANCE.**

**QUANTITY AND LOCATION**

The scope of said condition is being evaluated by a committee chartered by the designated 10CFR21 reporting committee. An interim report will be issued when said committee has completed its evaluation.

*W. R. Wheaton*

Director, Quality Assurance

*4/14/83*  
Date

## Nuclear Valve Division

Borg-Warner Corporation

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April 15, 1983

### ATTACHMENT 1 (Supplemental Information) to Nuclear Valve Division Notification Report #0006 to Nuclear Regulatory Commission.

This information is being presented in its chronological order of events leading up to the decision to file a Part 21 Report with the Nuclear Regulatory Commission.

On Wednesday, April 6, 1983, Nuclear Valve Division (NVD) General Manager, R.R. Testwuide received a TWX from Mr. George H. Lockwood, Cleveland Electric Illuminating (CEI), Perry Nuclear Station, informing him of a potential problem regarding valves supplied by NVD to CEI. The problem as stated concerned radiographs of valve weld preps supplied by NVD. The radiographs in question exhibited sensitivity and density variations which could not be reconciled using the reported technique utilized.

A meeting was held at NVD at 10:00 am, April 6, 1983, in the office of Pete Milinazzo, Quality Assurance Manager. In attendance were Warren Wheaton, Quality Assurance Director, Norma Moore, Quality Engineering Manager and Tony Tartaglia, NDE Level III Supervisor. After some discussion, it was determined that insufficient information was available to discuss the problem thoroughly. At 10:30 am, NVD telephoned CEI, Perry Nuclear Station and talked to Hudson Walls, NDE Level III Supervisor and Tony Bradshaw, NDE Level III. Mr. Walls explained that radiographs supplied by NVD of valve weld end preps exhibited sensitivity and density variations within the penetrameter images which were unexplainable and not reproducible utilizing the reported technique. The examples included some radiographs with extreme contrast and dark 4T holes, and some radiographs which appeared to have a ring of lesser density around the 4T hole (a "Halo"). Mr. Walls indicated that a disinterested party (Magnaflux Corporation) was requested to attempt to duplicate the questionable radiographs utilizing the original technique, but could not, without changing the thickness of the penetrameter used. NVD was requested to meet with the CEI NDE personnel at the site to discuss the potential problem.

NVD suggested that Mr. Walls and his personnel come to NVD's facility to allow NVD to demonstrate the technique using the same equipment and conditions as were originally utilized.

On Friday, April 8, 1983, CEI's Hudson Walls and Tony Bradshaw visited NVD to discuss the potential problem. In attendance representing NVD at the opening meeting were Pete Milinazzo, Tony Tartaglia and Bill Klenner, Engineering Materials Specialist. Mr. Walls discussed in depth the problem as it was perceived by CEI and requested that NVD view the questionable radiographs. NVD's Level III reviewed the radiographs and concurred that the 4T hole was questionable as to its sensitivity and density. Mr. Walls also requested that NVD demonstrate the original technique in his presence. Three shots were taken, using the original technique, in an attempt to duplicate the penetrameter image on the questionable radiographs without complete success. The technique demonstrated in all three shots that the penetrameter image (outline) and the 4T hole could be derived from the original technique, although there was much less contrast and the 4T hole was not nearly as sharp as in the radiographs in question. CEI then requested that NVD make a shim out of 1/32 in. stock, drill .050 in., .060 in., and .070 in. diameter holes in it and attach the penetrameter to it, lining up the 4T hole with the .070 in. hole. NVD then placed said shim and penetrameter combination on the weld prep and shot it. This was done to show NVD one method of duplicating the penetrameter image as on the questionable radiographs. The results did show a similarity in the outline of the penetrameter and did achieve

continued . . . . .

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ATTACHMENT 1 (continued)

a similar sharpness in the T hole, but did not show the "Halo" as was seen on the radiographs in question.

NVD and CEI then adjourned to the conference room to discuss what had taken place and what future actions were to be taken by both parties. CEI informed NVD that they would be reporting a 10CFR50.55(E) incident on Monday, April 11, 1983.

On Monday, April 11, 1983, NVD's designated reporting committee convened to review the reportability of the problem and decided to file a Part 21 Report with the NRC on Tuesday. A preliminary report was issued to the NVD General Manager informing him of the committee's decision.

On Tuesday, April 12, 1983, Pete Milinazzo, NVD Quality Assurance Manager contacted NRC Representative Bob Dodds, Region V, Walnut Creek, California, filing a verbal preliminary report of the incident. Mr. Dodds reminded NVD that a formal report was due on or before Friday, April 15, 1983.

On April 15, 1983, NVD is hereby filing a Part 21 Report with the NRC.