



Nebraska Public Power District

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NLS8800447
September 9, 1988

U.S. Nuclear Regulatory Commission
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Subject: Response to NRC Bulletin No. 88-05
Nonconforming Materials Supplied by PSI and WJM
Cooper Nuclear Station
NRC Docket No. 50-298, DPR-46

References: 1. NRC Bulletin No. 88-05, dated May 6, 1988
2. NRC Bulletin No. 88-05, Supplement 1, dated June 15, 1988
3. NRC Bulletin No. 88-05, Supplement 2, dated August 3, 1988

Gentlemen:

The Nuclear Regulatory Commission (NRC) issued Bulletin 88-05 requiring licensees to conduct records reviews to identify materials supplied by Piping Supplies, Incorporated (PSI) and West Jersey Manufacturing Company (WJM). For identified materials, licensees were required to take actions necessary to assure that the materials comply with code and procurement specifications or are suitable for their intended service; or licensees were required to replace such materials. Supplement 1 to Bulletin 88-05 (Reference 2) reduced the scope of the Bulletin from "materials" to "flanges and fittings." Supplement 2 to the Bulletin temporarily suspended the actions required by Bulletin 88-05 and Supplement 1, as of August 3, 1988. In accordance with the Reporting Requirements contained in Supplement 2, the Nebraska Public Power District is submitting the results of records reviews, testing and analysis performed to date.

The District Quality Assurance Division completed the review of Purchase Orders, Contracts and associated documentation (CMTRs, C of C's, etc.) on August 2, 1988. The records search considered all procurement documentation dating back to January 1, 1976. The District has identified a total of fifty-four (54) flanges manufactured by WJM. No other suspect flanges or fittings were identified. Attachment A contains a list of the fifty four (54) WJM-supplied flanges, including the application, material specification, size and pressure rating. All fifty-four (54) of these flanges were purchased as safety-related from Chicago Tube and Iron Company of Chicago, Illinois, and were supplied to Chicago Tube and Iron by West Jersey Manufacturing.

Of the fifty-four (54) flanges supplied by WJM, fifty (50) have been found to be in stock in the Cooper Nuclear Station (CNS) warehouse. The fifty (50) WJM flanges in the warehouse have been segregated and placed in "QA Hold."

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Although Supplement 2 to Bulletin 88-05 suspended further testing, the District continued testing of the flanges in the warehouse. Equo-Tip hardness testing of the flanges in the warehouse was completed on August 15, 1988. A summary of the results is included in Attachment A. Detailed test records are on file for NRC inspection and the flanges on hold in the warehouse will be retained until advised further by the NRC, as required by Supplement 2.

Two (2) of the fifty-four (54) WJM flanges have been identified as installed in safety-related systems. One of the two is installed on the reactor vessel top head. This flange was used to cap the vessel penetration when the head spray line was removed. This flange is inaccessible. Accordingly, the District notified the NRC Operations Center on June 25, 1988, within 48 hours of identifying the location of the flange on June 23. Also, the District is maintaining on file an analysis which justifies continued operation of CNS with the WJM flange installed. The second of the two WJM flanges is installed in the South CRD Discharge Volume Header. This flange is accessible and was tested on July 14, 1988, using the Equo-Tip hardness tester. The result is a hardness of 144 Brinnell Hardness Number (BHN), which is acceptable for the material specified (See Attachment A).

To the extent possible, nonsafety-related procurements were considered during the review of purchasing documents and two of the fifty-four WJM flanges were identified as installed in nonsafety-related applications. One of these flanges was installed on the refueling bulkhead (platform) to blank off the penetration through the bulkhead left by removal of the head spray line. This is not a containment penetration and the flange only sees the pressure of the water head caused by flood-up during refueling. This flange is inaccessible for testing due to its application inside primary containment and no similar flanges are in stock in the CNS warehouse. The second nonsafety application is on a drain line near a reactor feed pump just upstream from Valve RF-V-152. This flange is inaccessible for testing due to fixed contamination and high temperature lines in close proximity to the flange. Nine other flanges of the same size, pressure rating, material and heat number, on hold in the CNS warehouse, were tested. Based on the NUMARC generic analysis results, where a Brinnell Hardness Number greater than 120 was found acceptable, all nine identical flanges were found acceptable. Pending additional guidance from the NRC to the contrary, the District believes that CNS and industry data show that the subject WJM flanges are adequate for these two nonsafety-related applications.

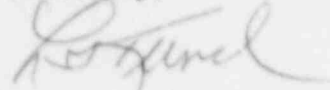
No further testing or removal of installed flanges is planned prior to the next refueling outage. The flange installed on the CRD Scram Discharge header has been shown to be acceptable by hardness testing. The inaccessible safety-related flange located on the reactor vessel head has been shown by analysis to be acceptable for continued operation. The District is prepared to replace this flange during the 1989 refueling outage, however, a final decision will be made based upon NRC resolution of the Bulletin 88-05 issue. The District considers the two nonsafety-related flanges to be acceptable for their intended service, based on NUMARC and CNS data. The District will re-assess the nonsafety flanges based upon the NRC disposition of the NUMARC analysis. The flanges on hold in the CNS warehouse will remain there until the NRC makes a final determination on the NUMARC analysis. At that time, a

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decision will be made as to whether the flanges will be released for use at CNS.

The information provided in this letter should address the requirements of Bulletin 88-05 and Supplements 1 and 2 to date, however, should you have any questions or require additional information, please contact this office.

Sincerely,



L. G. Kunc1
Nuclear Power Group Manager

LGK/mb:rh9/2(NEDC1B)

cc: Regional Administrator
NRC Region IV

NRC Senior Resident Inspector
Cooper Nuclear Station

September 9, 1988

STATE OF NEBRASKA)
) ss
PLATTE COUNTY)

L. G. Kunc1, being first duly sworn, deposes and says that he is an authorized representative of the Nebraska Public Power District, a public corporation and political subdivision of the State of Nebraska; that he is duly authorized to submit this report on behalf of Nebraska Public Power District; and that the statements contained herein are true to the best of his knowledge and belief.

L. G. Kunc1
L. G. Kunc1

Subscribed in my presence and sworn to before me this 9th day of September, 1988.

Colleen M. Kuta
Notary Public



WJM FLANGES IDENTIFIED AT CNS

<u>Group</u>	<u>Size of Flange</u>	<u>Heat No. (Note 1)</u>	<u>I.D. on Flange</u>	<u>CNS Stock No. on Flange</u>	<u>BHN</u>	<u>Test Temperature of Flange (°F)</u>	<u>NPPD P.O., Material and Type of Flange</u>	<u>Status of Flange</u>
A.	1/2 in. 900# (Typical of 10)	8602	CFY	16480-1	125*	110	Note 2	In Stock
				16480-2	115**	95		In Stock
				16480-3	124*	95		In Stock
				16480-4	126*	95		In Stock
				16480-5	125*	95		In Stock
				16480-6	122*	93		In Stock
				16480-7	129*	95		In Stock
				16480-8	125*	96		In Stock
				16480-9	126*	109		In Stock
				16480-10	121*	94		In Stock
B.	3/4 in. 900# (Typical of 9)	8602	CFY	16481-1	130*	89	Note 2	In Stock
				16481-2	137	90		In Stock
				16481-3	145	89		In Stock
				16481-4	133*	90		In Stock
				16481-5	134*	89		In Stock
				16481-6	134*	90		In Stock
				16481-7	133*	90		In Stock
				16481-8	128*	89		In Stock
				16481-9	132*	90		In Stock

<u>Group</u>	<u>Size of Flange</u>	<u>Heat No. (Note 1)</u>	<u>I.D. on Flange</u>	<u>CNS Stock No. on Flange</u>	<u>BHN</u>	<u>Test Temperature of Flange (°F)</u>	<u>NPPD P.O., Material and Type of Flange</u>	<u>Status of Flange</u>
C.	1 in. 900# (Typical of 10)	1533	CFW	16482-1	151	98	Note 2	In Stock
				16482-2	148	91		In Stock
				16482-3	147	98		In Stock
				16482-4	145	98		In Stock
				16482-5	149	92		In Stock
				16482-6	152	98		In Stock
				16482-7	162	98		In Stock
				16482-8	142	98		In Stock
				16482-9	152	92		In Stock
				16482-10	151	98		In Stock
D.	2 in. 900# (Typical of 10)	75065	COP	16484-1	138	93	Note 2	In Stock
				16484-2	138	92		In Stock
				16484-3	144	92		In Stock
				16484-4	144	92		In Stock
				16484-5	139	92		In Stock
				16484-6	139	92		In Stock
				16484-7	144	92		In Stock
				16484-8	144	92		In Stock
				16484-9	142	92		In Stock
				16484-10	137	92		In Stock

<u>Group</u>	<u>Size of Flange</u>	<u>Heat No. (Note 1)</u>	<u>I.D. on Flange</u>	<u>CNS Stock No. on Flange</u>	<u>BHN</u>	<u>Test Temperature of Flange (°F)</u>	<u>NPPD P.O., Material and Type of Flange</u>	<u>Status of Flange</u>
E.	1/2 in. 300# (Typical of 10)	CBL	CBL	16488-1	135*	92	Note 2	In Stock
				16488-2	120*	94		In Stock
				16488-3	128*	95		In Stock
				16488-4	121*	95		In Stock
				16488-5	132*	92		In Stock
				16488-6	128*	96		In Stock
				16488-7	143	93		In Stock
				16488-8	156	100		In Stock
				16488-9	122*	95		In Stock
				16488-10	137	92		In Stock
F.	3 in. 600#	GDDB	GDDB	11687	150	82	Note 3	In Stock
G.	3 in. 600#	GDDB	GDDB	----	144	103	Note 3	Installed (SDV Header)
H.	6 in. 1500#	6053209	Note 5	----	Inaccessible		Note 4	Installed (Reactor Vessel Head)
I.	6 in. 900#	6053209	Note 5	----	Inaccessible		Note 4	Installed (Bulkhead)
J.	3/4 in. 900#	8602	CFY	----	Note 6	Note 6	Note 2	Installed (Feed Pump Drain)

Notes:

- (1) Heat Number as indicated on WJM CMTR's.
- (2) P.O. 243742 dated July 11, 1985, SA-105 Raised Face Socket Weld Flanges. Purchased all flanges in Groups A, B, C, D, E and J under this P.O.
- (3) P.O. 188043 dated July 20, 1981, A-105 Raised Face Blind Flanges.
- (4) P.O. 231236 dated September 19, 1984, SA-350 Raised Face Blind Flanges.
- (5) Inaccessible...could not obtain I.D. on flange.
- (6) Tested 9 identical flanges - see Group B.
 - * Hardness value is below the minimum hardness of 137 BHN specified for SA-105/A-105 material, but is above the minimum allowed hardness value of 120 BHN established by NUMARC.
 - ** Hardness value is below the minimum allowed hardness of 120 BHN established by NUMARC.