



Consumers
Power
Company

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November 21, 1983

James G Keppler, Administrator
Region III
US Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

DOCKET 50-255 -- LICENSE DPR-20 -
PALISADES PLANT - RESPONSE TO IE BULLETIN 83-06 NONCONFORMING MATERIALS
SUPPLIED BY TUBE-LINE CORPORATION AT LONG ISLAND CITY, NEW YORK; HOUSTON,
TEXAS; AND CAROL STREAM, ILLINOIS

IE Bulletin No 83-06 dated July 22, 1983, advised that NRC inspections at Tube-Line (T-L) facilities indicated that there were potential generic safety implications in plants using T-L materials. The bulletin further requested that appropriate actions be taken to confirm the adequacy of affected components for the intended service or indicate that T-L materials will not be used in safety-related systems.

Consumers Power Company has performed an in-depth study of the potential problem with T-L material and has compiled the following information:

I. REVIEW RESULTS

A. Tube-Line Review

Tube-Line facilities were visited at Long Island City, NY, on August 15-17, 1983, and Carol Stream, IL, on August 30, 31 and September 1, 1983 to review the reported problems, identify suspect Heat Codes, track suspect materials to Big Rock Point, Palisades or Midland Plants, and to track such remaining suspect materials to other installations. This evaluation was conducted by reviewing Sales Orders, Purchase Specifications, Interplant Orders, Packing Lists, Certified Material Test Reports, Certificates of Compliance, Certificate of Conformance, Invoices, etc. The review indicated that approximately 2400 carbon steel A-105 flanges and seamless A-234 fittings were provided as nuclear materials from the Long Island City and Houston facilities during 1982. Houston shipments were isolated instances which occurred in early 1982. Approximately 12,500 stainless steel A-182 flanges and A-403 fittings were shipped as nuclear materials from the Carol Stream facility. The shipments started upon receipt of their ASME Quality Systems Certificates in July, 1981, and continued through mid February, 1983. The IE Bulletin 83-06

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I. REVIEW RESULTS

A. Tube-Line Review (Continued)

reported problems were traced to Consumers Power Company by Heat Code from the Tube-Line facility shown on the attached Review and Action Matrix.

B. Suspect Heat Codes

Tube-Line purchased rough forgings and fittings from foreign manufactures to ASTM requirements. The rough materials were machined and otherwise completed at T-L facilities as ASTM materials provided for nuclear applications. The materials manufactured in this manner lacked the objective evidence necessary to demonstrate compliance with the ASME requirements. There was no indication that the forgings and fittings failed to meet ASTM requirements. IE Bulletin 83-06 reported that some chemical and mechanical retests did not agree with the T-L reported values. Subsequent extensive T-L retests confirmed the validity of the originally reported data. The Suspect Heat Codes, reported problems and plant locations of the materials traced to Palisades and described on the attached Suspect Heat Code Summary.

II. IMPACT ON PALISADES

A. Tube-Line Materials Delivered To Palisades

Seventeen stainless steel fittings (Heat Codes AABD and ACKAS) were traced to Palisades as described on the attached Suspect Heat Code Summary. Nine stainless steel fittings have been returned to Tube-Line.

B. Installation Status

All Tube-Line fittings delivered, to Palisades and shown on the Suspect Heat Code Summary were returned to the supplier except for the following:

- 4 pieces (AABD), 6" 90 LR ELL (Installed in the AF System)
- 3 pieces (ACKAS), 6" 90 LR ELL (Installed in the AF System)
- 1 piece (ACKAS), 6" 90 LR ELLL (Secured in Hold Area)

C. Design Requirements

The seven installed fittings are located in the Auxiliary Feedwater Pump Suction Line which has a design pressure and temperature of 170 psig at 120°F. The normal pressure in the line is 15 psig which is the condensate storage tank head pressure. The system could see 170 psig only in an emergency situation when the backup fire protection system is valved in. The fluid in the line will normally be water from the condensate storage tank. The Auxiliary Feedwater Suction Line is safety-related.

D. Applicable Codes

The applicable code for modifications to the Palisades Plant is ASME Section XI, 1977 edition through Summer, 1978 addendum. The ASME Code, Section XI, IWB-7210 requires that replacements comply with the original Construction Code or, alternatively, may meet all or portions of the requirements of later editions of the Construction Code provided compatibility criteria are satisfied.

The original auxiliary feedwater pump suction line was constructed to B31.1 and Code Case N-7 which required that A-403 fittings be provided with all welds fully radiographed in accordance with UW51 of the ASME Code, Section VIII.

The auxiliary feedwater pump suction line fittings were procured to the requirements of ASME Code, Section III, Class 2, under the alternate replacement provisions of the ASME Code, Section XI because of their availability as a stock item. The auxiliary feedwater pump suction line fittings failed to comply with the ASME Code, Section III, Class 2 because of the problems reported in IE Bulletin 83-06 as traced to Heat Codes located at Palisades and described on the attached Suspect Heat Code Summary.

The problems reported for the installed fittings as shown on the attached Suspect Heat Code Summary relate to ASME Code, Section III materials and are not applicable to A-403 fittings. Documentation for A-403 fittings is not required unless specifically requested by the purchaser. The Manufacturer's symbol stamped on each piece provides certification of compliance for A-403 fittings.


E. Verification of Compliance

The installed fittings were verified based upon Tube-Line (T-L) subvendor documented evidence to satisfactorily comply with the ASTM A-403 requirements including materials, welding, weld, filler metal, radiography, heat treatment, chemistry and tensile requirements. Tube-Line subvendor documented evidence also indicated that the stainless steel fittings were solution annealed and quenched as required by A-403 to avoid the sensitized condition.

III. CONCLUSION

The installed Tube-Line fittings have been determined to be adequate for their intended service at Palisades for the following reasons:

- A. The installed fittings comply with the applicable code (B31.1 and Code Case N-7) for replacements. The reported problems violate the requirements of the ASME Code, Section III, which is not the original construction and is not applicable to replacements at Palisades.
- B. No evidence was found to indicate that T-L fittings failed to meet A-403 requirements.
- C. Compliance with ASTM A-403 requirements was satisfactorily verified.



Brian D Johnson
Staff Licensing Engineer

CC Director, Office of Nuclear Reactor Regulation
Director, Office of Inspection and Enforcement
NRC Resident Inspector - Palisades

Attachments

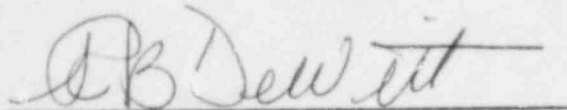
CONSUMERS POWER COMPANY
Palisades Plant
Docket 50-255 - License DPR-20

REPONSE TO IE BULLETIN 83-06

At the request of the Commission and pursuant to the Atomic Energy Act of 1954 and the Energy Reorganization Act of 1974, as amended, and the Commission's Rule and Regulations thereunder, Consumers Power Company submits our response to IE Bulletin 83-06 dated July 22, 1983, entitled, "Nonconforming Materials Supplied by Tube-Line Corporation Facilities at Long Island City, New York; Houston, Texas; and Carol Stream, Illinois." Consumers Power Company's response is dated November 21, 1983.

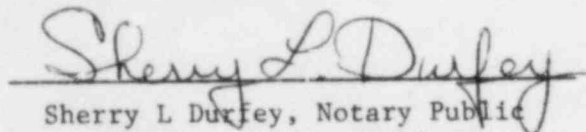
CONSUMERS POWER COMPANY

By



R B DeWitt, Vice President
Nuclear Operations

Sworn and subscribed to before me this 21st day of November 1983.



Sherry L. Durfey, Notary Public
Jackson County, Michigan

My commission expires November 5, 1986.

SHERRY LYNN DURFEY
Notary Public, Jackson County, Mich.
My Commission Expires Nov. 5, 1986

ATTACHMENT

Consumers Power Company
Palisades Plant - Docket 50-255

RESPONSE TO IE BULLETIN 83-06
REVIEW AND ACTION MATRIX

November 21, 1983

5 Pages

REVIEW AND ACTION MATRIX

The reported problems are related to stainless and carbon steel pipe fittings (caps, tees, and elbows) and flanges supplied by Tube-Line. Suspect Heat Codes are shown by CP C; Plant and Tube-Line facility. Materials having the reported problems are more fully described in the attached Suspect Heat Code Details.

<u>Reported Problem</u>	<u>IEB-83-06 Reference</u>	<u>Tube-Line Facility</u>				<u>Suspect Heat Codes</u>
		<u>Long Island City</u>	<u>Carol Stream</u>	<u>Houston</u>	<u>Plant</u>	
1. Product shipped from unapproved manufacturing source.	1.0	---	---	---	Big Rock Palisades Midland	NDUC, NDLC, EKP, EUUA
2. Failure to perform required heat treatment.	1.0	---	---	---	Big Rock Palisades Midland	EKP, EUUA
3. Failure to perform NDE to ASME Code.	1.0	---	X	---	Big Rock Palisades Midland	ACKAS, ABTU, AABD, AATR, AABC, AABA, AACA, AAVF
4. Strength properties of fittings & flanges below reported values.	2.0	---	---	---	Big Rock Palisades Midland	EKP, EUUA
5. Strength properties of fittings & flanges below specification minimum.	2.0	---	---	---	Big Rock Palisades Midland	EKP, EUUA
6. Strength properties of caps below specification requirements.	2.0	---	---	---	Big Rock Palisades Midland	EWPB
7. Chemical analysis of caps differs from that reported on the CMTR.	2.0	---	---	---	Big Rock Palisades Midland	EWPB

Reported Problem	IEB-83-06 Reference	Tube-Line Facility				Suspect Heat Codes
		Long Island City	Carol Stream	Houston	Plant	
8. Fittings welded with filler metal, not code stamped.	3.0 Attach 3	---	---	---	Big Rock Palisades Midland	ACKAS
9. Carbon steel materials were purchased from unapproved supplier and improperly certified to customers.	4a	---	---	---	Big Rock Palisades Midland	NDUC, NDLC, EKP, EUUA, EWPB
10. Stainless steel materials were purchased from unapproved supplier and improperly certified to customers.	4a	---	X	---	Big Rock Palisades Midland	ABABD, ABTU, AABD, AATR, AABC, AABA, AACA, AAVF
11. Vendors of materials and services approved based upon a self-evaluation.	4a	---	X	---	Big Rock Palisades Midland	ABABD, ACKAS, ABTU, AABD, AATR, AABC, AABA, AACA, AAVF
12. Commercial carbon steel materials were procured and furnished certified to comply with ASME Code.	4b	---	---	---	Big Rock Palisades Midland	NDUC, NDLC, EKP, EUUA, EWPB
13. Commercial stainless steel materials were provided and furnished certified to comply with ASME Code.	4b	---	X	---	Big Rock Palisades Midland	ABABD, ABTU, AABD, AATR, AABC, AABA, AACA, AAVF
14. Inappropriately heat treated 3" 600lb ASTM A105 carbon steel weld neck flange forgings (362 from Heat Code EUUA and 1480 from Heat Code EKP).	4c	---	---	X	Big Rock Palisades Midland	EKP, EUUA

<u>Reported Problem</u>	<u>IEB-83-06 Reference</u>	<u>Tube-Line Facility</u>				<u>Suspect Heat Codes</u>
		<u>Long Island City</u>	<u>Carol Stream</u>	<u>Houston</u>	<u>Plant</u>	
15. Documentation for solution annealing on 530 SA-182 stainless steel flanges was not available.	4c	---	---	---	Big Rock	ABABD, ABTU, AABD,
		---	X	---	Palisades	AATR, AABC, AABA,
		---	X	---	Midland	AACA, AAVF
16. Stainless Steel fittings (521) were furnished with vendor documentation that does not indicate compliance with ASME Code requirement in regard to the following:	4d	---	---	---	Big Rock	ACKAS
		---	X	---	Palisades	
		---	---	---	Midland	
a) Manufacture by NPT certificate holder using ASME accepted program.	4d(1)					
b) Use of qualified welders and procedures.	4d(2)					
c) Inspection by ANI and issuance of Partial Data Report (NM-1).	4d(3)					
17. Foreign Material Manufacturers were approved with the following shortcomings:	4e	---	---	---	Big Rock	NDUC, NDLG, EKP,
		---	---	---	Palisades	EUUA, EWPB
		X	---	X	Midland	
a) Manufacturers did not have documented QA program.	4e(1)					

<u>Reported Problem</u>	<u>IEB-83-06 Reference</u>	<u>Tube-Line Facility</u>				<u>Suspect Heat Codes</u>
		<u>Long Island City</u>	<u>Carol Stream</u>	<u>Houston</u>	<u>Plant</u>	
b) Documented programs not available in English and auditors were unable to read the foreign manuals.	4e(2)					
c) Manufacturers were retained on Qualified Suppliers List after notification that their QA programs were not in full compliance with the ASME Code.	4e(3)					
18. Material were procured without specification of the applicable ASME Code NDE requirements.	4f	---	---	---	Big Rock Palisades Midland	ACKAS
19. Subsequent Purchase Orders specified commercial or incomplete (approval of procedure omitted) NDE requirement.	4f	---	---	---	Big Rock Palisades Midland	ABTU, AABD, AATR, AABC, AABA, AACA, AAVF
20. Failure to assure use of approved NDE subcontractor procedures.	4f	---	---	---	Big Rock Palisades Midland	ABTU, AABD, AATR, AABC, AABA, AACA, AAVF
21. UT and PT records missing.	4f(1)	---	---	---	Big Rock Palisades Midland	ACKAS, ABTU, AABD, AATR
22. No records for Level II eye exam.	4f(2)	---	---	---	Big Rock Palisades Midland	

	<u>Reported Problem</u>	<u>IEB-83-06 Reference</u>	<u>Tube-Line Facility</u>				<u>Suspect Heat Codes</u>
			<u>Long Island City</u>	<u>Carol Stream</u>	<u>Houston</u>	<u>Plant</u>	
23.	Qualification records for NDE subcontractor personnel not available.	4f(3)	---	---	---	Big Rock Palisades Midland	ABTU
24.	Acceptance criteria for PT procedures was not addressed.	4f(4)	---	---	---	Big Rock Palisades Midland	
25.	T-L started supplying ASME Code component to the Nuclear Industry in 1981.	6.0	---	---	---	Big Rock Palisades Midland	Previously Identified Heat Codes

NOTE: There was no evidence to indicate that Tube-Line materials were provided to Big Rock.

Attachment

Consumers Power Company
Palisades Plant - Docket 50-255

RESPONSE TO IE BULLETIN 83-06
SUSPECT HEAT CODE SUMMARY

November 21, 1983

SUSPECT HEAT CODE SUMMARY

Suspect Heat Code	CP Co Plant	Supplier	Qty - Description	Reported Problems	Last Known Location
AABD	Palisades	Guyon Alloys	4 - 6" 90LR ELL 40S SA-403 WP 304L	US - 10, 11 HT - 15 NDE - 3, 19, 20, 21 CM - 13	Palisades*
AACBB	Palisades	Capitol Pipe	2 - 6" 90 LR ELL 40S 316L		Returned
AATR	Palisades	Guyon Alloys	4 - 6" 90 LR ELL 40S WP SA-403 316L-W	US - 10, 11 HT - 15 NDE - 3, 19, 20, 21 CM - 13	Returned
ABABD	Palisades	Capitol Pipe	1 - 3" CAP 80S 304L SA-403	US - 10, 11 HT - 15 CM - 13	Returned
ABTU	Palisades	Capitol Pipe	1 - 6" TEE SA-403 316L-W	US - 10, 11 HT - 15 NDE - 3, 19, 20, 21, 23 CM - 13	Returned
ACKAS	Palisades	Capitol Pipe	5 - 6" 90LR ELL 40S 316L	US - 11 NDE - 3, 18, 21 W - 8, 16	3 - Palisades* 1 - Returned 1 - Secured in Hold Area

Key - US - Unapproved Source
 USS - Unapproved Shipping Source
 HT - Heat Treatment
 NDE - Non-Destructive Test (Radiography)

W - Welding with Filler-metal
 CS - Chemicals or Strength
 CM - Commercial Material

*Installed in the Auxiliary Feedwater Pump Suction Line (Design Pressure and Temperature are 170 PSIG at 120°F)