

SSER

Task: Allegation A-168

Reference No.: 4-84-A-06-63

Characterization: It has been alleged that poor quality control by American Bridge (AB) resulted in a lack of traceability of 2300 pounds of non-safety weld rod and that this material may have been used in safety-related structures.

Assessment of Allegation: The lack of traceability of the non-safety weld rod was identified in nonconformance report (NCR) W3-5791 issued by EBASCO Services Incorporated on February 23, 1983. The NCR was closed by EBASCO on March 14, 1984. The 2300 pounds of non-safety E-7028 rod consisted of 1550 pounds of 5/32-inch diameter rods and 750 pounds of 3/16-inch diameter rods. These rods were purchased from Woodward Wight and Company on January 13, 1978 under EBASCO Purchase Order No. WP3-1098. The original order was for 1800 pounds of 5/32-inch diameter rod and 800 pounds of 3/16-inch diameter rod. However, the material received was damaged and 250 pounds of 5/32-inch diameter rod and 50 pounds of 3/16-inch diameter rod were returned to the supplier, a fact reflected in Supplement 1 to Purchase Order WP3-1098, February 6, 1978.

There are no records that directly link the weld rod used to a specific weldment. Of the two sizes of weld rods, EBASCO was able to obtain a sufficient amount of the 3/16-inch diameter material to have qualification tests performed on the material. The results of the tests, performed by Lucius Pitkin, Inc., are contained in a report submitted to EBASCO on March 31, 1983 (L.P. No. M-7150) and indicate that the 3/16-inch diameter material (heat number 1130BB) met the ASME Code requirements for safety-grade weld rod. Thus, the concern regarding the 3/16-inch diameter rods was eliminated.

Regarding the 5/32-inch diameter weld rods, two heat/lot numbers were purchased (10RR19 and 10RS21), although the material could not be located for qualification tests. However, the American Bridge "Weld Rod Control Issuing Oven Records" document the heat number and amount, in pounds, of weld rod issued daily to different welders, and the "Welders Daily Observation Log" shows the location where each welder worked. Review of these records by AB and EBASCO indicated that the 5/32-inch diameter weld rods were used on non-safety related structures, specifically on the metal deck plates in the turbine building. The NRC also reviewed these records and found a discrepancy between the total weight issued (1735 lbs) and the total weight of rods purchased (1550 lbs). The explanation given by EBASCO is that this discrepancy is the result of inaccuracy in recording the "issued" weights since the issued material for non-safety work is not closely controlled.

In addition to the above, the basic problem with the qualification of the E7028 weld rods originates from the fact that Woodward and Wight Co. is not an approved supplier. However, the welding rods in question were supplied in sealed canisters to Woodward and Wight Company by Lincoln Arc Welding, which is an approved supplier. Furthermore, it should be noted that the unique characteristic of the E 7028 weld rods is that they can be used only on horizontal welds. Welders would have great difficulty attempting to use these rods for vertical or overhead welds.

Based on this review, the NRC staff concludes that the E7028 weld rods were not used in safety-related structures. Therefore, this allegation has neither safety significance nor generic implications.

Potential Violations: None, since the use was in non-safety related structures.

Actions Required: None.

References:

1. Nonconformance Report 5741, Issued by EBASCO Services Incorporated, on February 23, 1983.
2. EBASCO Purchase order WP3-1098 dated January 13, 1978.
3. Supplement 1 to EBASCO Purchase Order WP3-1098 dated February 6, 1978.
4. Report L.P. No. M-7150 submitted to EBASCO Services Incorporated by Lucius Pitkin, Inc. on March 31, 1983.
5. American Bridge Weld Rod Control Issuing Oven Record F.Q.A.P. 6-3.
6. American Bridge Welders Daily Observation Log F.Q.A.P. 6-8.

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