ENCLOSURE HARTSVILLE NUCLEAR PLANT, ALL UNITS UNACCEPTABLE QA DOCUMENTATION FOR GLAZER STEEL MATERIAL 10CFR50.55(e) REPORT NO. 2 (FINAL) NCR HNP-A-058

On July 17, 1979, TVA informed NRC-OIE Inspector W. B. Swan of a potentially reportable condition under 10CFR50.55(e) regarding questionable QA documentation on steel received from Glazer Steel and Aluminum (Glazer), Knoxville, Tennessee. This is the final report on this deficiency.

Description of Deficiency

On July 5, 1979, two shipments (two truckloads) of steel procured to ASTM A-6 and A-36 requirements for general use as QA material arrived at Hartsville Nuclear Plant from Glazer with the steel in bundles but with no heat numbers attached. A Glazer driver proceeded to attach identification tags showing heat numbers to the bundles. TVA QC personnel questioned the driver and he indicated he did not know exactly which tag went with which bundle. TVA then refused to accept delivery of the two truckloads. The steel was then returned to Glazer, tagged by Glazer, and returned to Hartsville Nuclear Plant where it was placed in the nonconforming materials storage area.

Since Glazer indicated that one truckload was all one type of material (1 inch by 20 feet round bar) of one heat number, and the other truckload was three types of material (7/8 inch by 20 feet round bar, 1 inch by 20 feet round bar, and 3/8 inch by 8 inches by 20 feet flat bar) with one heat number per type, it is possible that the proper heat numbers could be or have been placed on the material bundles by properly authorized personnel. The truck drivers are not authorized personnel, however.

Glazer personnel indicated in discussions with TVA personnel that mill tags are removed upon receipt of steel at the Knoxville warehouse and Glazer tags are substituted with proper heat numbers noted thereon. Glazer further indicated that attachment of identification tags showing heat numbers on arrival at the destination point was standard practice.

This deficiency is reportable due to the questions TVA has about documentation and certification of material received at Hartsville and other TVA nuclear plants. TVA has no problem with material shipped directly from the steel mill to TVA nuclear plantsites wherein Glazer acted as an "arms length" broker. Direct or "drop shipped" material amounts to over 90 percent of all Glazer shipments to Hartsville Nuclear Plant.

Cause of the Deficiency

The cause of the deficiency is an inadequate material identification and control program at Glazer.

Safety Implication

Four bundles, approximately 13 tons of steel, do not completely conform to ASTM A.36 as required in accordance with the specifications of contract No. 79K72-535874-2. Therefore, if this nonconformance had remained undetected, up to 13 tons of steel which failed to meet specification requirements could have been used in QA applications.

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Corrective Action

TVA performed a QA survey of Glazer on June 25, 1979, and determined that the Glazer QA program was unacceptable due to insufficient procedures in material identification and control. From this survey, action was initiated to remove Glazer from the TVA listing provided to construction sites of suppliers approved to furnish QA materials requiring Certified Material ' Test Reports (CMTR).

All accessible material shipped by Glazer Steel to the Hartsville Nuclear Plant with questionable CMTR's, both before and after the subject incident, was placed on QC hold until certification could be verified. Documentation for approximately 740 tons of steel was examined by site personnel. Sixteen bundles, approximately 50 tons, were found to have questionable certification (i.e., were not shipped directly from the mill). Samples from each of these 16 bundles were submitted to Singleton Materials Engineering Laboratory for testing of conformance to ASTM A.36 requirements. Only four samples, representing 13 tons of steel, failed to conform exactly to requirements. The tests showed that the failure to conform to ASTM A.36 was due to a sulfur content slightly high than specified. The maximum sulfur content found was up to 0.02 percent higher than the 0.06 percent allowable. This excess sulfur might affect the weldability of the material. All material identified by Singleton Lab as not conforming to ASTM A.36 has been segregated and marked for non-QA use where no welding is required or to be shipped off the project for nonnuclear use at another TVA site.

Means Taken to Prevent Recurrence

Until an acceptable level of QA is achieved and maintained at the Glazer warehouse in Knoxville, Tennessee, QA material will be obtained from Glazer only when it is shipped directly from the steel mill to TVA construction sites. TVA construction sites have been directed to follow this policy as of September 1, 1979, until notice is received that QA program deficiencies at Glazer have been corrected.