

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

October 1, 1982

WBRD-50-390/82-96

WBRD-50-391/82-92

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

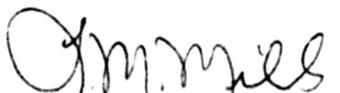
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - INTERPRETATION OF R. T. FILM
ON WELDED PIPE BY SWEPSCO TUBE CORPORATION - WBRD-50-390/82-96,
WBRD-50-391/82-92 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
D. Quick on September 1, 1982 in accordance with 10 CFR 50.55(e) as SWEPSCO
NCR-1. Enclosed is our first interim report. We expect to submit our next
report on or about February 19, 1983.

If you have any questions, please get in touch with R. H. Shell at
FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


L. M. Mills, Manager
Nuclear Licensing

Enclosure

cc: Mr. Richard C. DeYoung, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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USNRC REGION II
ATLANTA, GEORGIA

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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
INTERPRETATION OF R. T. FILM ON WELDED PIPE BY SWEPCO TUBE CORPORATION
SWEPCO NCR-1
WBRD-50-390/82-96, WBRD-50-391/82-92
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

SWEPCO, Clifton, NJ, (a sub-vendor) is furnishing ASME SA-358 T316L pipe to TVA on contracts 83015 which was let to Dravo, Marietta, OH and 825673 which was let to Capitol Pipe and Steel Products Company, Charlotte, NC. Welding was performed by use of SWEPCO Syncro process with filler metal. The pipe is scheduled for use on the Essential Raw Cooling Water (ERCW) system.

Radiographs were evaluated on July 12, 1982 at SWEPCO on an audit basis. At that time indications were noted. SWEPCO stated that they were aware of subject indications but consider them surface center line shrinkage, non-relevant and not detrimental to the product. TVA is not in agreement with SWEPCO's interpretation of the radiographs and was concerned with possible masking of subsurface indication. It was agreed by SWEPCO, TVA and Dravo that TVA and Dravo would select a sample lot of material. Welds would be ground and material re-radiographed. If indications could be removed without removing a significant amount of material, material would be acceptable.

Thirteen pipes judged the worst surface condition were selected for sampling. This consisted of 56 individual areas. Of the 56 areas selected for testing, after grinding and re-radiographing 55 areas were judged as surface conditions. Metal removed from the weld was 10 to 20 mils.

One area on pipe, Piece Mark #28 (6-7), showed an indication approximately 3" long running parallel with the weld. This area was ground and re-radiographed in increments of approximately 10 mils until the indication was removed. The indication was on the inside of the pipe. Reduction of the weld thickness was from 396 to 338 mils.

During the process of grinding it was noted that the indication decreased then increased in length prior to removal. Borescope evaluation showed a slightly irregular line running parallel with the weld with jagged edges approximately 10 mils wide with undetermined depth. Total wall thickness in the weld was reduced 58 mils.

Original film density was approximately 2.9. The density of the film used in the re-radiograph of areas in question was approximately 3.9. The contractor was requested to bring the radiograph film density in line with the original radiographs. This was done.

It was determined that a generic problem with interpretation of their film existed and that SWEPCO had been accepting a surface condition (called center line shrink) on their film. It has been determined that this surface condition did mask subsurface discontinuities and from TVA's view the existing condition on this pipe does not meet the requirements or the intent of the ASME Code.

Interim Progress

TVA is still evaluating the subject deficiency and will provide additional information in our next report.