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September 26, 1979

Mr. Boyce H. Grier, Director
U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Grier:

WELD WIRE DOCUMENTATION
10CFR50.55(e), "SIGNIFICANT DEFICIENCY"
NO. 1 AND 2 UNITS
HOPE CREEK GENERATING STATION

On August 31, 1979 a verbal report was made to Region 1, Office of Inspection and Enforcement representative Mr. L. Narrow, advising of a potential significant item regarding a discrepancy in the procurement of weld wire. This verbal report was provided in accordance with the provisions of 10CFR50.55(e).

The following supplemental information is hereby submitted pursuant to our initial report and in accordance with the requirements of 10CFR50.55(e).

1. Description of Problem

During a documentation review by Pittsburgh-DesMoines Steel Company (PDM) on July 23, 1979 a discrepancy was detected in the procurement of 8018-C3 SMAW filler metal.

The filler metal was purchased in accordance with PDM's Electrode Specification ES-7.5.1, Rev. A, which requires that the vendor supply test results in only the as-welded condition. However, the ASME Code (Section III, Subsections NE and NF, subparagraph 2431.2 (c)) requires that electrodes used in the post weld heat treated (PWHT) condition be tested in the PWHT condition. Some of the electrodes procured under Specification ES-7.5.1, Rev. A were used in PWHT conditions and were, therefore, not adequately tested.

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The problem was caused by PDM's failure to check the limitations of ES-7.5.1, Rev. A when it was invoked on Welding Procedure Specifications WPS 70-71, Rev 0; WPS 70-72, Rev. A; and WPS 73-73, Rev. G, all of which require post weld heat treatment and are used in certain areas of the primary containment fabrication. PDM's QA program requires that electrode specifications and welding procedure specifications (WPS) be reviewed by their welding engineer and project engineer prior to issuance. However, the discrepancy was not discovered during that review.

2. Analysis of the Safety Implications

Past experience with 8018-C3 filler metals indicates that the short (two hours) PWHT should not have significantly affected the material properties. Therefore, it is unlikely that this condition, had it not been detected, would have adversely affected the safety of the plant's operations. However, the final decision on the reportability of this condition cannot be made until PDM completes its evaluation of the filler metals as outlined in Section 4 (d) of this report.

3. Investigative Action

- a. All electrode specifications and weld procedure specifications were reviewed to check for similar inconsistencies. No other similar inconsistencies were found.
- b. PDM has determined the specific heats and lots of filler metal that were procured under Electrode Specification ES-7.5.1, Rev. A, some of which were improperly used in the primary containment fabrication.
- c. Based on its investigation to date, PDM has determined that the use of the subject filler metal is confined to structural elements welded to the vent line and vent line stiffening rings.

4. Corrective Action

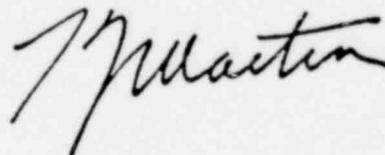
PDM intends to implement the following corrective actions.

- a. A new purchasing specification will be prepared by September 14, 1979. The new electrode specification will require testing of all 8018-C3 filler metal in the as-welded and PWHT conditions.
- b. All WPS's that call for the use of 8018-C3 filler metal in the PWHT condition will be revised by September 14, 1979 to allow only the use of material procured with the new electrode specification described above.

- c. All electrode specifications for both Units 1 and 2 have been reviewed for similar conditions. All have been found to comply with NF-2431.1.
- d. PDM will ascertain whether each of the filler metals procured under ES-7.5.1, Rev. A and used in the PWHT condition can meet the ASME code requirements by one of the following methods.
 - (1) The electrode vendor will be contacted to determine if test data in the PWHT condition are available.
 - (2) PDM will determine whether any of the material is still available for testing and recertification.
 - (3) Full thickness coupons will be extracted from completed welds and tested in accordance with NF-2431.1.

The investigation into the analysis of safety implications and corrective actions as described above are continuing with an expected completion date of January 18, 1980, at which time a complete report will be filed. Should you require additional information, we will be pleased to discuss it with you.

Very truly yours,



CC: Office of Inspection and Enforcement
Division of Reactor construction Inspection
Washington, D.C.

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