



THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

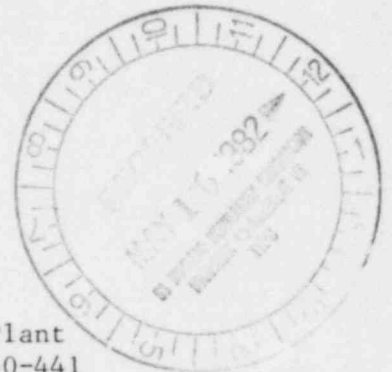
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Dalwyn R. Davidson
VICE PRESIDENT
SYSTEM ENGINEERING AND CONSTRUCTION

May 4, 1982

Mr. James G. Keppler
Regional Administrator, Region III
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137



RE: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Final Report on Three (3)
Sensitized Stainless Steel
Pipe Spools (RDC 38(81))

Dear Mr. Keppler:

This letter serves as a Final Report as required by 10CFR50.55(e) concerning three stainless steel piping sub-assemblies containing spool pieces that had been bent hot without benefit of subsequent annealing. This was first reported by W. J. Kacer of The Cleveland Electric Illuminating Company to L. McGregor of your office on September 24, 1981. Our Interim Report on this subject was dated October 22, 1981.

This report includes description of deficiency, corrective action taken and an analysis of safety implications.

DESCRIPTION OF DEFICIENCY

Three stainless steel pipe spools furnished under Pullman Power Products contract (SP527) for the fabrication and delivery of safety-class piping were found to be in noncompliance with specification requirements. They had not been solution heat treated after hot bending.

Our Interim Report stated that the two Schedule 10 spool pieces were brought into full compliance with specification requirements. The remaining pipe spool, Number 1G41-G-FC-250-RB, which had the same thermal history, required further evaluation to determine if conditions exist in the area of the spool to promote detrimental corrosion; and if so, whether the safety of the plant would be affected. This spool piece is Schedule 40 and is completely embedded in concrete. This spool piece is located in the portion of the Unit 1 Fuel Pool Cooling and Cleanup System which serves as a drain and fill line for the upper containment pool reactor well. This drain and fill line connects to the P11 Condensate Transfer and Storage System and is used for water management during refueling.

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ANALYSIS OF SAFETY IMPLICATIONS

The results of the evaluation conclude that the potential for failure of the spool is very remote. However, should significant leakage occur, the leakage would be readily noticed, the drain could be plugged, and corrective action would be completed before the safe operation of the plant was adversely affected.

CORRECTIVE ACTION TAKEN

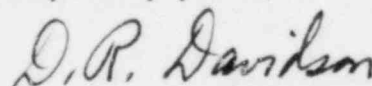
A site nonconformance report, No. NDS-0003, was written to identify the condition.

The Cleveland Electric Illuminating Company requested Gilbert Associates, our Architect/Engineer, to perform an extensive analysis on the above spool piece lacking solution annealing. This report is presently on file at Perry and available for inspection. Although many aspects of system operation were evaluated in this report, the primary conclusions are that the pipe in question has a low potential for failure and a "Use-As-Is" disposition is appropriate. The following is an excerpt from that report:

"The carbon content in the hot-bent portion of the spool is sufficiently low (0.042%) to conclude that the base metal has relatively low potential for sensitization and, therefore, a low susceptibility to intergranular stress corrosion cracking (IGSCC). This is especially true within the operating environment for this piping (low temperature, low pressure, completely supported by the encasing concrete). A recent Electric Power Research Institute report, NP-1991, indicates that a temperature threshold (266°F) exists, below which IGSCC is not a problem (even in severely-sensitized material). The service temperature for this piping (120°F) is below that threshold value."

All required corrective action has now been completed. If there are any questions, please feel free to call.

Very truly yours,



D. R. Davidson
Vice President
System Engineering and Construction

cc: Mr. M. L. Gildner
NRC Site Office

Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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