

ENCLOSURE

HARTSVILLE NUCLEAR PLANT - ALL UNITS  
GRIT BLASTING OF FABRICATED PIPING ASSEMBLIES  
10CFR50.55(e) - REPORT NO. 1 (INTERIM)  
NCR HNP-A-068

On October 19, 1979, TVA notified NRC-OIE Region II, Inspector R. W. Wright, of a potentially reportable condition under 10CFR50.55(e) regarding removal of excess base metal from elbows of prefabricated piping assemblies due to grit blasting without use of diffuser or deflection shields. This is the first interim report on the subject reportable condition. The final report will be submitted on or before January 31, 1980.

Description of Deficiency

TVA personnel working in the sandblast shop were cleaning interiors of small diameter (four inches or less) piping assemblies with the diffuser removed from the sandblaster nozzle.

The diffuser redirects the grit from straight out the nozzle to an angle roughly perpendicular to the nozzle against the interior wall of the pipe. Removing the diffuser caused the grit to be blown down the pipe and continuously impinge upon any pipe assembly elbow in its path as the blaster nozzle was pulled through the pipe. Continuous blasting of the elbow caused excessive base metal removal in some piping assembly elbows. Attention was directed to the situation when a grit blaster operator blew a hole through a schedule 40 pipe elbow. Eight Quality Control Investigation Reports (QCIR's) have been written to date to document the wall deficiencies resulting from grit blasting.

Samples of piping assemblies sandblasted by all crews are being surveyed for signs of excessive base metal removal. The extent of such practice and crews involved will be discussed in the final report.

Cause of the Deficiency

Sandblaster operators were trying to facilitate their cleaning of small diameter piping assemblies by removing the sandblaster diffusers.

Safety Implications

This will be provided in the final report.

Corrective Action

Shortly after the deficiency was brought to management's attention, the sandblast shop supervisor was verbally directed to cease sandblasting of piping four inches and smaller pending further investigations. Following that action, a memorandum was sent from the construction engineers to the general construction superintendent concerning preinstallation pipe cleaning.

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This memorandum directed that no future interior grit blasting of vendor prefabricated piping assemblies would be performed unless approved by construction project engineering and all future grit blasting would be controlled by a site procedure which was being prepared at that time. This procedure has been completed and reviewed and is in the process of being approved and issued. All future grit blasting at Hartsville Nuclear Plant will be performed according to this procedure.

Also, TVA is investigating grit blasting practices at its other nuclear sites to determine if grit blasting of piping has been done at any time or is being done without the use of the diffuser or proper protective measures and the extent of such occurrences.

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