

METROPOLITAN EDISON COMPANY SUBSIDIARY OF GENERAL PUBLIC UTILITIES CORPORATION

POST OFFICE BOX 542 READING, PENNSYLVANIA 19603

TELEPHONE 215 - 929-3601

September 26, 1973

Dr. D. F. Knuth  
Directorate of Regulatory Operations  
United States Atomic Energy Commission  
Washington, D. C. 20545

Dear Dr. Knuth:

Subject: Three Mile Island Nuclear Station Units 1 and 2  
Estimated Chemical Analyses  
Docket Nos. 50-289 and 50-320

You were notified on August 27, 1973 of a situation which could be considered reportable under 10CFR50.55(e)(1)(i), "Conditions of Construction Permits". This situation involved incomplete chemical analyses performed by Walworth/Aloyco Company on pressure boundary parts of stainless steel valves supplied for use on Three Mile Island.

On August 29, 1973 the AEC/DRO Region I office conducted an inspection of the Walworth/Aloyco plant, and on September 14, 1973 cited Metropolitan Edison Company for violation of the ASTM requirements.

Description of Incident

Cast pressure boundary parts for nuclear stainless steel valves were required to be produced and tested in accordance with the requirements of ASTM A-351. A GPU Service Corporation Quality Assurance audit of Walworth/Aloyco's foundry in Elizabeth, New Jersey, revealed that the vendor had not fully complied with ASTM A-351 testing requirements. In lieu of testing for and reporting actual percentages of phosphorus and sulfur in each heat of ASTM A-351 produced for castings, the vendor's practice was to report estimated values of these elements. There are 197 heats of material involved for Unit 1 procured by Babcock & Wilcox and Metropolitan Edison. For Unit 2 there are 40 heats of material involved in valves procured by Babcock & Wilcox.

Corrective Action

Metropolitan Edison Company has requested Walworth/Aloyco to locate archive samples representing heats provided for Three Mile Island from the Aloyco foundry. Walworth/Aloyco has found 130 out of 197 heats of material for Unit 1 and 34 out of 40 heats of material for Unit 2. These heats of material represent castings for bodies, bonnets and discs.

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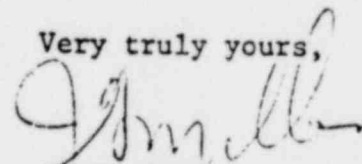
Metropolitan Edison and Babcock & Wilcox have directed Walworth/Aloyco to test or have tested the archive samples for actual values of sulfur and phosphorus content in order to evaluate those particular heats and establish a level of confidence which will assist in determining the manner that Metropolitan Edison will employ in accepting the balance of material heats and related valves for which there are no samples available. Walworth/Aloyco was also instructed to furnish the data identifying those values to which traceability to the tested specimens can be assigned. The testing and procedures shall be in accordance with ASTM E-353 and E-350 requirements. A portion of the testing will be witnessed by one metallurgist from Gilbert Associates, Inc., and a Quality Assurance representative from both the Metropolitan Edison and Babcock & Wilcox companies.

Preventative Measures

Walworth/Aloyco instituted corrective steps immediately after GPU Service Corporation brought this situation to their attention. On February 20, 1973, they had replaced the tungsten tube in the spectrographic analytical equipment with a filtered chrome tube. This tube has the capability of measuring sulfur and phosphorus. Your inspector reviewed the operation and results of the Aloyco spectrographic analytical equipment on August 29, 1973.

Results of the analysis of the archive samples is estimated for completion by October 5, 1973. Final disposition of the acceptability of the Walworth/Aloyco valves, based on available test reports, is estimated to be completed by October 15, 1973. You will be informed of the results of the archive samples and the disposition of the valves. These results will be available at the Three Mile Island site for your review.

Very truly yours,



J. G. Miller  
Vice President

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cc:H. M. Dieckamp  
J. P. O'Reilly  
W. A. Verrochi

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