GE Nuclear Energy

Nuclear Fuel & Components Manufacturing
General Electric Company
P.O. Box 780, Wilmington, NC 28402
919-675-5000

July 26, 1989

Mr. Steven M. Matthews
Quality Assurance Specialist
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

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Dear Steve:

Per our phone discussion, attached is Don MacMillan's report of the Chemet Lab MATAR Testing Evaluation conducted between April 26 through July 11, 1989. I trust this provides sufficient information to close the open item from your June 5-9, 1989 inspection.

If I can be of further asistance, please call me at 919-675-5886.

Sincerely,

J. H. Liberman

J. H. Liberman
Quality Audits & Customer Service

/sb

Attachment

cc: W. L. Baker
J. W. Currier
J. M. Downs
D. L. Pensinger
P. W. Sick

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GE Nuclear Energy
Fuel Engineering - Wilmington NC

July 17, 1989

DFM 89057

cc: J. W. Currier
D. L. Pensinger
P. W. Sick

J. H. Liberman
QC Engineer
Customer Liaison

Subject: Review of CheMet Lab Matar Testing

Reference: (1) External Audit Findings Report Item # 9063

I have reviewed the results of 32 "MATAR" test runs conducted during the time period of April 26 through July 11, 1989. The conclusions of this review are as follows:

o All deviations in gas influent or effluent observed were adequately reported, documented and reviewed on deviant test reports.

o Each run contained 2 (each) high and low corrosion controls. These controls were located at the extremes of the working area. The high control material must exhibit a level of corrosion equivalent to a visual rating of "G" or worse in order for the run to be considered valid and adequately conservative. For all 32 runs the high control was "G" or worse and in most cases worse. This is the most conclusive evidence that all 32 runs provided adequate corrosion testing of the material being evaluated.

o Beginning on June 14 (run 67) manual recordings of the gases were taken every hour during the test. Runs 67, 68 and 70 showed indications of high oxygen during the start of the low temperature prefilming cycle. This deviation, if occurring inside the test vessel, would be considered less than conservative and would indicate a retest should be performed. Further investigation of these runs determined that the high readings occurred at the very beginning of the run and were determined to be trapped air between the post vessel pressure valve and the gas analyzer. This air cannot back stream into the vessel as the pressure valve will not open except at test pressure. To correct these erroneous readings, test instructions have been changed to require a 30 minute purge of the line prior to a test reading.

o The remainder of the 32 runs were either OK or were considered conservative for various of the following reasons:

High hydrogen or high temperature readings during the high temperature cycle.

Low temperature readings during the low temperature cycle.

Extended cycle times due to low temperature or times during the high temperature cycle

o The gas analysis strip charts being used in this time period through June 28 were inadequately marked and it was not possible, looking at the chart alone, to determine the scale or range on which the gas analysis was recorded. On June 27 and 28 the gas analysis system was recalibrated and instruments were added and modified to provide range identification signals. Both the hydroger and oxygen strip charts now indicate both amount of gas and a voltage reading which indicates the scale or range. All applicable procedures for testing have been modified to provide for improved recording of gas analysis measurements.

D F MacMillan

D. F. MacMillan
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