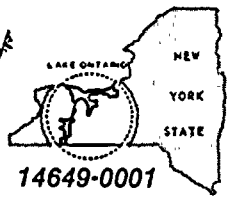

ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001

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September 19, 1984

Dr. Thomas E. Murley,
Regional Administrator
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Subject: Post Accident Sampling System
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Murley:

In our letter to you dated June 28, 1984, we explained that the testing of the Post Accident Sampling System (PASS) would be completed by the end of July with the ensuing data evaluation and closeout of the test program to be completed by the end of August.

The system testing has been completed successfully with two exceptions. Those exceptions are the determination of dissolved gasses in reactor coolant and the determination of pH in reactor coolant under normal operating conditions.

Measurement of dissolved hydrogen or gross activity in the coolant is required for determination of core damage and corrosion potential. Our design provides for gas sampling by gas stripping and analysis for hydrogen with a gas chromatograph and for gross activity by isotopic analysis.

In attempting to determine the dissolved hydrogen in reactor coolant by employing the gas stripping method, results indicate a repeatability deviation of more than 10%. This is beyond the limits established by NUREG-0737 for dissolved hydrogen. In our test program, we have demonstrated that we can determine total gaseous activity of stripped gas samples taken from the PASS within a factor of 2. We have informed the manufacturer of the system of the test results and he is currently scheduled to be on site in the near future to evaluate the situation. Until such time that the manufacturer of our PASS can determine the cause for poor dissolved H_2 results, we propose to rely on a total gas determination.

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Measurement of reactor coolant pH is also required. When testing with standard solutions, the monitor is accurate within the requirements of the NUREG 0737. However, when measuring the pH of the reactor coolant during normal operation, the PASS monitor does not respond with the required accuracy. Based on testing, our chemists have confirmed that this is due to the low ionic activity of the coolant during normal operation. During an emergency situation with failed fuel when the PASS must be used due to radiation exposure considerations, it is expected the ionic activity of coolant would be sufficient to provide accurate pH measurement. Based on comparison of PASS results with laboratory results of other samples, e.g., boron concentration measurement results, we do not believe that the pH measurement discrepancy during normal operation is one of lack of representativeness of the sample. Although we believe the current situation is acceptable based on laboratory analyses of "clean" reactor coolant and PASS analysis of highly radioactive samples, we are continuing to explore this situation with the manufacturer.

Statistical analyses of the final data are in progress, having been delayed by the difficulties identified above. All analyses, except for the dissolved hydrogen and any that may be required by a change in the pH analysis methodology, will be complete by October 15.

We have also experienced component failures recently. The failure rate has increased as the use of the PASS increases for training purposes and may also be attributable in part to the developmental nature of the system. A generic problem in the design of a regulating valve for the specific intended function has been identified. The manufacturer is supplying repair kits so that the system can be maintained operable and is pursuing other alternatives for this service.

Very truly yours,

Roger W. Kober

Roger W. Kober