



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379

October 11, 1995

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of)
Tennessee Valley Authority)

Docket Nos. 50-327
50-328

SEQUOYAH NUCLEAR PLANT (SQN) - UNITS 1 AND 2 - FACILITY OPERATING
LICENSES DPR-77 AND DPR-79 - TECHNICAL SPECIFICATION (TS) 3.3.3.10 - SPECIAL
REPORT 95-07

The enclosed special report provides details concerning the calibration of the waste gas analyzer. An earlier problem with the operation of the instrument, which was discussed in detail in LER 50-327/95006, resulted in a logic change being implemented. Previously, the alarm required both oxygen and hydrogen to exceed their respective setpoints before the alarm was initiated. The logic was reconfigured such that the hydrogen input is always energized. Calibration of the instrument was required following this logic change. This special report details the issues that delayed this calibration.

This report is being submitted in accordance with TS 3.3.3.10 Action Statement (b).

This report was originally signed on September 1, 1995. However, as the result of an administrative error, distribution of this report did not occur.

If you have any questions regarding this submittal, please telephone S. D. Gilley at (615) 843-7427.

Sincerely,

R. H. Shell
SQN Site Licensing Manager

Enclosure

cc: See page 2

170039

9510190011 951011
PDR ADDCK 05000327
S PDR

IE22
11

U.S. Nuclear Regulatory Commission
Page 2
October 11, 1995

cc (Enclosure):

Mr. D. E. LaBarge, Project Manager
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852-2739

NRC Resident Inspector
Sequoyah Nuclear Plant
2600 Igou Ferry Road
Soddy-Daisy, Tennessee 37379-3624

Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323-2711

ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2 SPECIAL REPORT 95-07

Description of Condition

On June 6, 1995, it was determined that the waste gas analyzer (WGA) that monitors hydrogen (H_2) concentrations was being operated incorrectly. The alarm was supposed to initiate for the condition where both the oxygen and hydrogen exceeded their respective setpoints. The hydrogen monitoring portion of the analyzer was being routinely operated on Range 3, which caused the setpoint calibration to be inaccurate. In order to correct this deficiency, the logic was reconfigured such that the hydrogen input to the alarm was always energized. This logic change allowed the instrument to be used on the Range 3 scale to monitor hydrogen concentrations and still maintain the required alarm function in compliance with technical specifications (TSs). This change required the calibration of Range 3. While the calibration was being completed, the TS calibrated oxygen analyzer portion of the WGA was being used to ascertain the oxygen concentrations. The calibration effort for Range 3 of the H_2 analyzer was delayed for several reasons.

During the initial attempt to calibrate the instrument, a temperature switch was not operating. A new switch was installed, but the new switch also failed to operate properly. A third switch had to be procured and installed. Following the installation of this third switch, the calibration process was able to be completed. After the steps for calibration had been completed, the results indicated that the voltage division methodology used to calibrate the instrument did not yield accurate readings. Following this determination, the calibration was completed by manually adjusting the Range 3 settings to coincide with the H_2 concentration levels as determined by grab samples. This was an unusual circumstance where relatively high concentrations were being analyzed; therefore, the grab samples had to be diluted to a much greater degree than normal in order to be able to determine the hydrogen concentration. Dilution was necessary because the instrument used to determine the concentration level was only capable of determining levels below 5 percent. Therefore, the sample had to be diluted until the concentration level was below 5 percent so that it could be measured. At these high dilution factors, the results are more sensitive to slight variations in the amount of diluting agent used. In some cases, variations between consecutive grab samples were not reflected in the corresponding analyzer readouts. Even though the grab sample results were within the acceptance criteria, additional attention was focused on the dilution methodology, which resulted in the reduction of the variation in grab sample results. As a result, Range 3 was successfully calibrated by comparing the analyzer readout to grab sample results.

Cause of Condition

The cause for the delay in returning the analyzer to service was the time required to obtain, install, and test parts that failed to operate properly. Delays were also incurred as a result of problems with the voltage division methodology and later because of the evaluation of variations that were introduced into the grab sample as a result of the high dilution factors.

Corrective Action

In accordance with Limiting Condition for Operation 3.3.3.10 Action Statement (b), this special report is being submitted to explain the delays in returning the WGA to service.

Corrective actions were completed, and the WGA was declared operable on August 26, 1995.