

DMB 0/6

MAY 21 1984

Docket No. 50-346

Mr. Richard P. Crouse  
Vice President, Nuclear  
Toledo Edison Company  
Edison Plaza - Stop 712  
300 Madison Avenue  
Toledo, Ohio 43652

Dear Mr. Crouse:

SUBJECT: VERIFICATION TESTING OF STATION ELECTRIC DISTRIBUTION  
SYSTEM VOLTAGES

On February 17, 1983, we issued a Safety Evaluation which, in addition to supporting Amendment 52, provided our evaluation of your analysis of station distribution voltage adequacy. We indicated that the analysis was acceptable but that a test was required to verify the voltage analysis.

By letter dated January 23, 1984 (No. 1022) Toledo Edison Company submitted the results of the test and concluded that the voltage analysis was conservative as a comparison of test vs. analytical data revealed all test values to be above the corresponding calculated values. Our review of the test results revealed substantial differences between the measured and calculated results. Under steady state conditions, the measured voltage at the 120 V class IE bus YE 1 was 9.3% higher than calculated. Under transient conditions induced by starting a reactor coolant pump and condensate pump, the measured voltages were 12% and 13.1% higher than the respective calculated values.

We discussed these differences with members of your staff, by telephone, on February 11, 1984 and on March 30, 1984. Your representatives stated that the differences between the measured and calculated values were the result of extreme conservatism used in the analysis. Also it was stated that the transformers supplying the YE 1 bus was considered to have a 480/120 V turn ratio. This was later determined to be in error and the actual turn ratio which should have been used is 460/120 V. This modeling error increased further the differences between the measured and calculated voltages for bus YE 1.

Toledo Edison Company submitted revised calculated results and other supporting data, by letter dated April 18, 1984 (No. 1046), as agreed

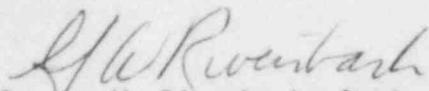
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Mr. Richard P. Crouse

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during the March 30, 1984 telephone conference. We have reviewed this latest submittal and find that the revised calculated values correlate closely to the test results. This completes our review of the adequacy of station electric distribution system voltages and verification testing.

Sincerely,

  
George W. Rivenbark, Acting Chief  
Operating Reactors Branch #4  
Division of Licensing

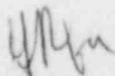
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