Q. Re: Project B-5 Unit 1 and Unit 2 Generator Stator Rewind

In the July 2011 report supporting this Project, at page 8, it is stated that Unit 1 passed the DC high potential leakage test. Reference is made on page 9 to a DC high potential leakage test on Unit 2, but it is not stated whether it passed or failed. Did Unit 2 also pass the test?

A.

A DC high potential test is potentially destructive, as it is possible for weakened stator winding insulation to fail during the testing. The reference to the testing performed on the Unit 1 stator windings on page 8 of the July 2011 report states that the test was performed at a lower voltage than the manufacturer recommends. This lower voltage was a consequence of the lack of confidence, both by Hydro and by GE, that the winding would survive the test with no insulation damage at full test voltage. Essentially, the winding for Unit 1 passed in the sense that there was no insulation damage resulting from the testing at lower voltage.

On page 9 of the report, reference is made to the Unit 2 windings showing that "all three phases had high leakage current and there was a large spread in the testing results between one phase and the other two phases". Based on this, it can be stated that the winding passed the test in the sense that there was no insulation failure due to the testing. However, the results did indicate that the right phase of the Unit 2 stator winding was considerably more deteriorated than the other two phases.