

1 Q. Reference: Gas Turbine Failure Analysis - Final Report, January 11, 2017, Alba Power
2 Ltd. Report, page 10-12. Alba Power's root cause analysis for Hardwoods arrived at
3 only one cause that was categorized as "likely" - controls. Alba Power further
4 observed that "the gas turbine ran on for a period of time when the controls system
5 should have shut down the gas turbine". This suggests that the controls system may
6 have been doubly at fault; first by allowing higher than expected temperatures and
7 second by not tripping the unit soon enough. Notwithstanding Alba Power's "likely"
8 determination, it does not appear that Hydro agrees, as Hydro dismissed this
9 potential factor with the observation on page 7 of the report that settings were
10 consistent with OEM recommendations. Please explain Hydro's position in this
11 regard and Hydro's reasons for not pursuing a more aggressive analysis of the
12 Hardwoods controls.

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15 A. The original Exhaust Gas Temperature (EGT) spread deviation settings were as per
16 the original Curtis Wright (package Original Equipment Manufacturer (OEM))
17 specifications. Thus, an EGT alarm would not be activated until EGT spread
18 deviation reached 50°C, and shut down would not be initiated until it reached 65°C.
19 The alarm acted as per the OEM specifications. Post failure, Hydro learned of the
20 Rolls Royce recommended settings for the engine portion of the Curtis Wright
21 package, which are more stringent than those set by Curtis Wright. Hydro
22 immediately updated the settings at both Hardwoods and Stephenville to reflect
23 the Rolls Royce settings (please refer to Hydro's response to PUB-NLH-651). A
24 further analysis of the settings for Hardwoods and Stephenville is being undertaken
25 in 2017.