

1 Q. Reference: Install Transformer On Line Gas Monitoring, Volume II, Tab 24, Page
2 6

3 *“As a minimum, Hydro takes an annual oil sample of each of its transformers to*
4 *measure the oil quality and conduct dissolved gases analysis (DGA). The annual oil*
5 *sample test can only provide an analysis of transformer condition at the time*
6 *when the sample is taken. The on line gas in oil monitoring will continuously*
7 *monitor the transformer and provide early fault detection.”*

8 If the on line gas monitoring equipment had been installed on transformer T1 at
9 Sunnyside, in Hydro’s opinion, would the fire on January 2nd, 2014 have occurred?
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12 A. Hydro cannot say for certain that if on line monitoring was installed on transformer
13 T1 at Sunnyside the fire which occurred on January 2, 2014 would have been
14 prevented. If the incipient fault was developing slowly then there is a high
15 probability that on line monitoring would give an indication in time to investigate
16 and remove the transformer from service before the significant event of the
17 transformer failing, and a subsequent fire occurring. For very quick developing
18 faults, there will be a lower probability of removing the transformer from service
19 due to the fact that the failure or fault event may have been the trigger point for
20 the gassing. On line monitoring is another gas monitoring method, along with
21 annual Dissolved Gas Analysis and the on line gas relay. That will all help in the
22 prevention of transformer failures and resulting fires.