

1 Q. Reference: *Improve Boiler Load Capacity – Units 1, 2 and 3, Holyrood, June 1,*
2 *2018, Page 3, Lines 20-23.*

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4 *“Some fouling normally occurs as a by-product of combustion; however, the current*
5 *levels of hard ash build up on the air heater hot end baskets and economizer tubes is*
6 *restricting air flow and reducing heat transfer to unacceptable levels.”*

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8 Are the current levels of hard ash build up a result of abnormal fouling and, if so,
9 what is Hydro’s understanding of why this is occurring?

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12 A. Yes, the current levels of hard ash build up are a result of abnormal fouling and
13 have accumulated over time to the point where it is limiting boiler capability. The
14 fouling that is occurring is due to the melting point of some of the combustion
15 byproducts that causes adherence to surfaces in the lower temperatures of the
16 back end of the boiler, namely the economizers and air heaters. Current analysis of
17 the recently developed hard ash in the back end of the boiler indicates that using a
18 targeted fuel additive will provide effective control to prevent the compounds from
19 forming and adhering. An investigation by B&W resulted in Magnesium Oxide
20 (MgO) being recommended as the preferred fuel additive to prevent the hard ash
21 compounds from forming in the back end of the boiler.