

1 Q. With reference to Exhibit 68; Air Emission Controls Assessment - Holyrood Thermal
2 Generating Station - Final Report p. 31 has four recommendations. The first
3 recommendation is as follows: *“adopt the use of fuel oils with one percent sulphur*
4 *content. This would achieve the objective of a 50 percent reduction in SO₂ emissions*
5 *using the least cost option as determined by a Net Present Worth analysis as*
6 *presented in Appendix B.”* With Nalcor’s switch to 0.7% sulphur No. 6 fuel at
7 Holyrood, have the emission targets identified in the study been met?

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10 A. The emissions targets in the study are:

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12 1. Reduce particulates by 20 percent from current levels, including fine
13 particulate matter (PM₁₀).

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15 Nalcor undertook standardized in-stack testing of emission rates before the
16 change in fuel specification in 2005; after a change in fuel specification to a
17 maximum 1% S content in 2007; and after a change in fuel specification to a
18 maximum 0.7% S in 2009. When the tested emission rates are normalized
19 for differences in production rates at the time of testing, the results confirm
20 that fine particulate rates were reduced by 20 percent or more as a result of
21 the changes in fuel specification.

- 22
23 2. Maintain opacity at not more than 20 percent during normal operation, soot
24 blowing or transients.

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26 This objective was not fully achieved as a result of the fuel specification
27 changes. Holyrood maintains continuous opacity monitoring in each stack

1 that records opacity levels at 6 minute intervals as required by the *Air*
2 *Pollution Control Regulations*. Although a very high percentage of the
3 opacity readings are well below the 20 percent level, opacity measurements
4 do continue to show short periods of greater than 20 percent opacity after
5 the change in fuel specification.

- 6
7 3. Maintain oxides of sulphur at no more than that equivalent to burning 1
8 percent sulphur content fuel.

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10 Holyrood conducts analysis of samples of all fuel shipments and has
11 confirmed that all shipments received since the change in fuel specification
12 have contained less than 1 percent sulphur. With confirmation that the fuel
13 contains less than 1 percent sulphur, this objective was achieved.

14
15 To summarize, while the change in fuel specification achieved the particulate and
16 SOx reduction objectives, it did not achieve the opacity reduction objective.